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ASBMR 2018 Annual Meeting Location
All ASBMR sessions will take place in the Palais des congrès de Montréal in Montréal, Québec, Canada, unless otherwise stated. The Palais des congrès de Montréal in Montréal is located at 1001 Jena Paul Riopelle Pl, Montreal, QC H2Z 1H5, Canada.

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The ASBMR 2018 Annual Meeting Evaluation will be accessible online starting Thursday, October 4. An email will be sent to all meeting attendees who provided their email addresses at the time of registration. The email will provide a hyperlink to the online evaluation site. It will also be accessible via the ASBMR website at www.asbmr2018.org. We strongly encourage and welcome all attendees to provide us with feedback on the meeting. Your input is very important to us.

Registration Hours
Registration desks will be open for new registrants and material pick-up in the Palais des congrès de Montréal in the Registration Hall – Viger Hall Level 2 during the following hours:

Thursday, September 27 ....................... 7:00 am – 6:00 pm
Friday, September 28 ........................... 7:00 am – 7:00 pm
Saturday, September 29 ....................... 7:00 am – 5:00 pm
Sunday, September 30 ......................... 7:30 am – 5:00 pm
Monday, October 1 ............................. 7:30 am – 2:30 pm

Discovery Hall Hours
Exhibits are located in the ASBMR Discovery Hall inside Exhibit Hall 220 B-E of the Palais des congrès de Montréal. Please note that children aged 12 and under are not permitted in Discovery Hall at any time. Lunch will be available for purchase in the hall during Exhibit hours.

Friday, September 28 ........................... 5:00 pm – 7:00 pm
Saturday, September 29 ....................... 9:30 am – 4:30 pm
Sunday, September 30 ......................... 9:30 am – 4:30 pm
Monday, October 1 ............................. 9:30 am – 2:30 pm

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The ASBMR Press Office will be in operation to facilitate press-related activities during the meeting. The Press Office will be located in Room 514 C in the Palais des congrès de Montréal.
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Future ASBMR Annual Meeting Dates

ASBMR 2019 Annual Meeting
Orange County Convention Center, Orlando, FL, USA
September 20-23, 2019

ASBMR 2020 Annual Meeting
Washington State Convention Center, Seattle, WA, USA
September 11-14, 2020

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Audio, Photo and Video Recording Policy
ASBMR expects that attendees respect each presenter’s willingness to provide free exchange of scientific information without the abridgement of his or her rights or privacy and without the unauthorized copying and use of the scientific data shared during his or her presentation. In addition, ASBMR expects that attendees will respect exhibitors’ desires not to have their products or booths photographed or video-recorded. The use of mobile devices, tablets, cameras, audio-recording devices, and video-recording equipment is strictly prohibited within all Scientific Sessions, the Discovery Hall, and Poster Sessions without the express written permission of both the ASBMR and the presenter/exhibitor. Unauthorized use of the recording equipment may result in the confiscation of the equipment or the individual may be asked to leave the session or Discovery Hall. These rules are strictly enforced.

Use of ASBMR Name and Logo
ASBMR reserves the right to approve the use of its name in all materials disseminated to the press, public and professionals. The ASBMR name, meeting name, and meeting logo may not be used without permission. Use of the ASBMR logo is prohibited without the express written permission of the ASBMR Executive Director. All ASBMR corporate supporters and exhibitors should share their media outreach plans with the ASBMR before release.

No abstract presented at the ASBMR 2018 Annual Meeting may be released to the press before its official presentation date and time. Press releases must be embargoed until one hour after the presentation.
CONTINUING MEDICAL EDUCATION CREDITS

This activity has been planned and implemented by Creighton University Health Sciences Continuing Education (HSCE) and The American Society for Bone and Mineral Research (ASBMR) for the advancement of patient care. Creighton University Health Sciences Continuing Education is accredited by the American Nurses Credentialing Center (ANCC), the Accreditation Council for Pharmacy Education (ACPE), and the Accreditation Council for Continuing Medical Education (ACCME) to provide continuing education for the healthcare team.

AMA PRA Statement
Creighton University Health Sciences Continuing Education designates this live activity for a maximum of 23.75 AMA PRA Category 1 Credit(s)™. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

AAPA accepts AMA category 1 credit for the PRA from organizations accredited by ACCME.

Online Evaluation to Receive CME
The online evaluation to receive CME will be available beginning Thursday, October 4.

Please Note: There is a $50 fee per application. This fee can be paid when you register for the Annual Meeting or added during the Meeting at the Registration Desk.

Meeting Objectives
Upon returning home from the meeting, participants should be able to:

- Identify and discuss the most current and significant advances in biomedical and clinical research in bone and mineral metabolism and better understand the interrelationship among basic research, clinical research and patient care.
- Improve the ability to treat and care for patients through an enhanced knowledge of osteoporosis, other diseases of bone, basic bone biology and its correlation to mineral metabolism.
- Develop and apply new and enhanced strategies for the assessment, diagnosis and treatment of patients at risk for or with osteoporosis and improve the ability to treat and care for patients.

Target Audience
The program is designed for researchers, physicians and other health and allied health professionals with interests in biomechanics, cell biology, dentistry, endocrinology, epidemiology, genetics, internal medicine, metabolism and musculoskeletal research, molecular biology, molecular genetics, nephrology, orthopaedics, pathology, pharmacology, physiology and rheumatology.
ASBMR Expectations of Authors and Presenters

Through ASBMR meetings, the Society promotes excellence in bone and mineral research. To that end, ASBMR expects that all authors and presenters affiliated with the ASBMR 2018 Annual Meeting and the 2018 Ancillary Program will provide informative and fully accurate content that reflects the highest level of scientific rigor and integrity.

ASBMR depends upon the honesty of the authors and presenters and relies on their assertions that they have had sufficient full access to the data and are convinced of its reliability.

Furthermore, ASBMR expects that:

- Authors and presenters will disclose any conflicts of interest, real or perceived.
- Authors of an abstract describing a study funded by an organization with a proprietary or financial interest must affirm that they had full access to all the data in the study. By so doing, they accept complete responsibility for the integrity of the data and the accuracy of the data analysis.
- The content of abstracts, presentations, slides and reference materials must remain the ultimate responsibility of the author(s) or faculty.
- The planning, content and execution of abstracts, speaker presentations, slides, abstracts and reference materials should be free from corporate influence, bias or control.
- All authors and presenters (invited and abstracts-based oral and poster presenters) should give a balanced view of therapeutic options by providing several treatment options, whenever possible, and by always citing the best available evidence.

In addition, ASBMR’s meeting evaluations will seek feedback regarding commercial bias at ASBMR 2018 Annual Meeting sessions, including the 2018 Ancillary Program.

Disclosure Policy

The ASBMR is committed to ensuring the balance, independence, objectivity and scientific rigor of all its individually sponsored or industry-supported educational activities. Accordingly, the ASBMR adheres to the requirement set by ACCME that audiences at jointly-sponsored educational programs be informed of a presenter’s (speaker, faculty, author, or planner) academic and professional affiliations, and the disclosure of the existence of any significant financial interest or other relationship a presenter or their spouse has with any proprietary entity over the past 12 months producing, marketing, re-selling or distributing health care goods or services, consumed by, or used on patients, with the exemption of non-profit or government organizations and non-health care related companies. When an unlabeled use of a commercial product, or an investigational use not yet approved for any purpose, is discussed during the presentation, it is required that presenters disclose that the product is not labeled for the use under discussion or that the product is still investigational. This policy allows the listener/attendee to be fully knowledgeable in evaluating the
information being presented. The On-Site Program book will note those speakers who have disclosed relationships, including the nature of the relationship and the associated commercial entity.

Disclosure should include any affiliation that may bias one’s presentation or which, if known, could give the perception of bias. This includes relevant financial affiliations of a spouse or partner. If an affiliation exists that could represent or be perceived to represent a conflict of interest, this must be reported in the abstract submission program by listing the name of the commercial entity and selecting the potential conflict(s) by clicking in the box next to the relationship type. Disclosures will be printed in the program materials. These situations may include, but are not limited to: 13. Grant/Research Support; 14. Consultant; 15. Speakers’ Bureau; 16. Major Stock Shareholder; 17. Other Financial or Material Support.

**ANNUAL MEETING RESOURCE MATERIALS**

**Abstracts Book**
The 2018 Abstracts Book is published as a supplement of the *Journal of Bone and Mineral Research (JBMR)*. Electronic copies are available on the ASBMR website, free of charge. Printed copies are only available to those who ordered in advance.

**Abstracts On-line and Itinerary Builder**
Only members and registered Annual Meeting attendees are able to access the 2018 Abstracts On-line Program. This tool can be used to help you search for and review abstract presentations, as well as plan your meeting itinerary. You may access this convenient program via the ASBMR website.

**ASBMR Annual Meeting Mobile App**
This free smartphone application is a mobile version of the on-site program book and includes the meeting abstracts. The app also features general meeting information, exhibitor listings and detailed maps of the convention center. To download the app, go to the app store on your smartphone or mobile device and search ASBMR 2018.

**Meet-the-Professor Handout Booklet**
The Meet-the-Professor Handout Booklet contains all the handouts supplied by the professors in one convenient PDF download. The MTP Handout Booklet PDF is free of charge, on the ASBMR website and in the mobile app.

**ADDITIONAL RESOURCES**

**Special Notices and Safety Tips**
- Remove your convention badge outside the meeting sites. Do not wear your badge outside or advertise that you’re a visitor and not familiar with your surroundings.
- Walk with another person rather than alone. Avoid alleys, walkways between buildings, and deserted parking lots.
• Remain alert, be aware of your surroundings, and carry your handbag in front of you.
• While in your hotel room, always lock your door. Know where emergency exits are in your hotel.
• Place any valuables in a hotel safety deposit box rather than leaving them in your room or carrying them with you.
• Keep a copy of your passport and travel papers in a safe place.

ASBMR Career Center

The ASBMR Career Center Service is easily accessible year-round online. You can access the most up-to-date job and candidate listings using the ASBMR Career Center Website. Simply submit your résumé or job announcement using the online forms at www.asbmr.org. After your forms are submitted and payment is received, you will be able to use your self-assigned login name and password to access the Online Placement Service database anytime you wish.

Employers enrolled in the service will be entitled to display unlimited job announcements online. In addition, employers will have access to candidates’ Curricula Vitae and to interview rooms.

Employers and candidates may request further information by accessing the ASBMR Career Center at www.asbmr.org.

Poster Tours

Annual Meeting Poster Session Tours will take place during each of the three poster sessions. These poster tours will be guided by a prominent scientist in the bone field to assist attendees in navigating the science within the poster hall. Participants will be able to choose between tours related to either basic or clinical science, or tours focused on specific research topics. Tours will begin near the ASBMR Networking Center located in the Discovery Hall in the Palais des congrès de Montréal and will last approximately 60 minutes.

<table>
<thead>
<tr>
<th>Poster Session</th>
<th>Tour Start Time</th>
<th>Start Location</th>
</tr>
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<tbody>
<tr>
<td>Poster Session I: Saturday, September 29</td>
<td>1:00 p.m.</td>
<td>ASBMR Networking Center, Discovery Hall</td>
</tr>
<tr>
<td>Poster Session II: Sunday, September 30</td>
<td>1:00 p.m.</td>
<td>ASBMR Networking Center, Discovery Hall</td>
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</table>
NIH Lounge

Representatives from the U.S. National Institutes of Health (NIH) and the Center for Scientific Review (CSR) will be available in the NIH Lounge in the Discovery Hall to discuss grant proposals and ideas. Program staff from the following institutes and centers will be available to talk with you:

- National Institute of Arthritis and Musculoskeletal and Skin Diseases (NIAMS)
- National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK)
- National Cancer Institute (NCI)
- National Institute of Dental and Craniofacial Research (NIDCR)
- National Institute on Aging (NIA)
- National Institute of Child Health and Human Development (NICHD)
- Center for Scientific Review (CSR)

Early Stage Investigator and Diversity Member Lounge

All early stage and diverse investigator attendees are invited to drop by the Early Stage Investigator and Diversity Member Lounge located in Discovery Hall. Don’t miss this opportunity to make new friends and expand your network of colleagues. Stop by the following times for roundtable discussions taking place in the Lounge:

- Saturday, September 29, 11:00AM – 11:45AM: “Mentoring research trainees: strategies, successes, and challenges”
- Saturday, September 29, 12:15PM – 1:00PM: “Dealing with unconscious bias and harassment”
- Sunday, September 30, 11:00AM – 11:45AM: “Job negotiations/finding a faculty position”
- Sunday, September 30, 12:15PM – 1:00PM: “Inclusion activities at ASBMR listening session”

INFORMATION FOR SPEAKERS AND POSTER PRESENTERS

Speaker Ready Room

Speakers must check into the Speaker Ready Room 24 hours in advance of their presentation. At that time, speakers may review their slides. The Speaker Ready Room is located in Room 514A in the Palais des congrès de Montréal. Review of slides must occur at least 24 hours prior to your presentation. The Speaker Ready Room will be open during the following times:

Speaker Ready Room Hours

Thursday, September 27 ......................... 7:30 am – 5:00 pm
Friday, September 28 ............................. 7:00 am – 5:00 pm
Saturday, September 29 ....................... 7:00 am – 5:30 pm
Sunday, September 30 ......................... 7:00 am – 5:30 pm
Monday, October 1 .............................. 7:00 am – 2:30 pm
**Poster Sessions**

All poster sessions will be held in Discover Hall-Exhibit Hall 220 B-E in the Palais des congrès de Montréal. Authors must be at their posters for the designated poster sessions on Saturday through Monday and must be available to answer questions during this period. Please adhere to the presentation times to maximize interaction with other attendees.

**Presenters should mount their posters on the board bearing their assigned numbers, disregarding the letter prefix. ASBMR accepts no liability for posters or poster materials and will not adjudicate disputes between abstract presenters.**

Please note that children 12 years of age and under will not be permitted in the poster area or the Discovery Hall at any time.

**Presenter Check-in:**

Since only poster presenters are allowed in the ASBMR Discovery Hall during the below poster set-up and dismantle hours, please go to the Poster Presenter Check-in Table at the entrance door to Discovery Hall of the Palais des congrès de Montréal to receive a security pass. To speed the check-in process, please have your poster board number ready.

- **NOTE: Posters remaining after Poster Dismantling times will be discarded.**
- **Young Investigator Award Posters remain up through Monday, October 1 at 3:00 pm.**
Please adhere to these scheduled times to maximize interaction for other attendees:

**POSTER SESSION PRESENTATION SCHEDULE**

<table>
<thead>
<tr>
<th>Poster Set-Up</th>
<th>Posterers Open</th>
<th>Presentation Time</th>
<th>Dismantle Posters</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Friday, September 28</strong>&lt;br&gt;Welcome Reception and Plenary Poster Session&lt;br&gt;Palais des congrès de Montréal, Discovery Hall – Room 220 B-E</td>
<td>3:30 pm – 4:30 pm&lt;br&gt;All Plenary Posters</td>
<td>5:00 pm – 7:00 pm&lt;br&gt;All Friday Poster Presenters&lt;br&gt;Anyone with a “FRI” poster number</td>
<td>Do not dismantle. All posters remain on the poster boards through 2 pm Monday, October 1</td>
</tr>
<tr>
<td><strong>Saturday, September 29</strong>&lt;br&gt;Poster Session I&lt;br&gt;Palais des congrès de Montréal, Discovery Hall – Room 220 B-E</td>
<td>7:30 am – 8:30 am&lt;br&gt;All Posters</td>
<td>9:30 am – 4:30 pm&lt;br&gt;All Saturday Poster Presenters&lt;br&gt;Anyone with a “SAT” poster number</td>
<td>Do not dismantle. All posters remain on the poster boards through 2 pm Monday, October 1</td>
</tr>
<tr>
<td><strong>Sunday, September 30</strong>&lt;br&gt;Poster Session II&lt;br&gt;Palais des congrès de Montréal, Discovery Hall – Room 220 B-E</td>
<td>9:30 am – 4:30 pm&lt;br&gt;All Posters</td>
<td>12:30 p.m. – 2:30 p.m.&lt;br&gt;All Sunday Poster Presenters&lt;br&gt;Anyone with a “SUN” poster number</td>
<td>Do not dismantle. All posters remain on the poster boards through 2 pm Monday, October 1</td>
</tr>
<tr>
<td><strong>Monday, October 1</strong>&lt;br&gt;Poster Session III&lt;br&gt;Palais des congrès de Montréal, Discovery Hall – Room 220 B-E</td>
<td>9:30 am – 2:00 pm&lt;br&gt;All Posters</td>
<td>12:00 p.m. – 2:00 p.m.&lt;br&gt;All Monday Poster Presenters&lt;br&gt;Anyone with a “MON” poster number</td>
<td>2:00 – 2:30 pm&lt;br&gt;All posters must be removed from the boards at this time</td>
</tr>
</tbody>
</table>
HOW THE PROGRAM WAS SELECTED

The ASBMR Annual Meeting continues to be the leading scientific program in the field of bone, mineral and musculoskeletal research where the best science is presented on a broad range of topics, and where attendees come together to collaborate and network. It is a time to meet with friends and colleagues and to renew the creative spirit. For those of you who are like me and have attended many ASBMR annual meetings (this is my 31st consecutive meeting), welcome back. If this is your first time attending, you are in for a treat.

The program committee and I have worked hard to ensure that the best and most current science is presented. The description of the process for creating the 2018 Annual Meeting program is outlined in the following paragraphs. This description will provide you with a sense of how the speakers were selected and how the scientific presentations were chosen from the many abstract submissions. As in prior years, the meeting will “come alive” because the attendees will be engaged and ask tough questions. We want to have rigorous scientific debate, which is the cornerstone of outstanding science. Honorable people can, and will, disagree, but let us remember that rigorous debate can, and must be, respectful. That said; let me describe how the program was selected.

The Program Co-Chairs

Starting back over a year ago, my first task was to nominate the meeting co-chairs. I was fortunate to have an outstanding group of scientists agree to co-chair the meeting (little did they know how much work they were signing up for). Dr. Merry Jo Oursler (basic), Dr. Marja Hurley (translational), and Dr. Douglas Bauer (clinical) have been an outstanding group to work with and have put together a great meeting. This committee chose the Gerald D. Aurbach and Louis V. Avioli lecturers and chose symposia topics and speakers. We were assisted in putting the meeting together by Angela Belusik and Lauren Anderson, who did a lot of the heavy lifting to make sure that things went smoothly.

The Program Advisory Committee

In addition to the Program Committee, we enlisted the Program Advisory Committee, who was tasked with brainstorming and advising the program co-chairs and me. We not only used several of their ideas for sessions in the meeting, but also ran several ideas past them, some of which they encouraged us to do (e.g. the new Challenge the Expert Clinical sessions) and pointed out problems with other ideas, which we terminated. Members of the Program Advisory Committee are listed below:

- Tamara Alliston Ph.D., Professor of Orthopaedic Surgery, University of California, San Francisco, USA
- Teresita Bellido Ph.D., Professor, Indiana University School of Medicine, USA
Daniel Bikle M.D., Ph.D. Professor, Endocrine Research Unit, Division of Endocrinology UCSF and VAMC, USA
Sarah Dallas Ph.D., Professor, University of Missouri - Kansas City, USA
Ghada El-Hajj Fuleihan MD, MPH, Professor, American University of Beirut, Lebanon
Renny Franceschi Ph.D., Professor, University of Michigan, USA
Seiji Fukumoto M.D., Ph.D., Associate Faculty, University of Tokyo, Japan
David Goltzman M.D., Professor, McGill University, Canada
Francesca Gori Ph.D., Assistant Professor of Medicine, Harvard School of Dental Medicine, USA
Loren Greene M.D., Professor, NYU, USA
Mark Horowitz Ph.D., Professor & Vice Chair for Research, Yale School of Medicine, USA
Suzanne Jan De Beur M.D., Associate Professor, Johns Hopkins University, USA
Melissa Kacena Ph.D., Associate Professor, Indiana University School of Medicine, USA
Meryl LeBoff M.D., Professor of Medicine, Harvard Medical School, USA
Joe Lorenzo M.D., Professor of Medicine, UConn Health, USA
Ken Lyles M.D., Professor of Medicine, Duke, USA
Meghan McGee Lawrence Ph.D., Assistant Professor, Medical College of Georgia, Augusta University, USA
Charles O’Brien Ph.D., Professor, Central Arkansas VA Healthcare System, University of Arkansas for Medical Sciences, USA
Nicola Partridge Ph.D., Professor and Chair, New York University College of Dentistry, USA
Ian Reid M.D., MBChB, Professor, University of Auckland, New Zealand
Vicki Rosen Ph.D., Professor and Chair, Harvard School of Dental Medicine, USA
Joe Shaker M.D., Professor of Medicine, Medical College of Wisconsin, USA
Elizabeth Shane M.D., Professor of Medicine, Columbia University College of Physicians and Surgeons, USA
Dolores Shoback M.D., Professor of Medicine, VA Medical Center, USA
Eileen Shore Ph.D., Professor, University of Pennsylvania, USA
Natalie Sims Ph.D, Associate Professor, St. Vincent’s Institute of Medical Research, Australia
Anna Teti Ph.D., Professor, University of L’Aquila, Italy
Andre Uitterlinden Ph.D., Professor Complex Genetics, Head Laboratory, Erasmus University Medical Center, The Netherlands
Johannes van Leeuwen Ph.D., Professor, Erasmus University Medical Center, The Netherlands
Abstract Reviews:

As in previous years, abstracts submitted for the regular deadline were divided into categories and scored by several reviewers, who were blinded to the authors’ names and institutions (see the program book for the list of reviewers). Reviewers were required to recuse themselves from reviewing abstracts from their labs or those of their collaborators. Many thanks to all of the reviewers, who did an incredible job evaluating so many excellent abstracts.

For late breaking abstracts, the program committee reviewed the abstracts with assistance from some members of next year’s program committee. Members recused themselves from providing any input on abstracts from their own lab or those of collaborators. Due to my conflict of interest with burosumab, I recused myself from evaluating any of the rare bone disease abstracts. These abstracts were reviewed by the other committee members assisted by Dr. Suzanne Jan De Baer, next year’s program committee chair.

Final numbers

Here are the final numbers for our meeting:

1304 Abstract Submissions
118 Late Breaking Submissions
157 Oral Presentations
208 Plenary Poster Presentations
19 Late Breaking Oral Presentations (we had to expand the late breakers into 4 oral sessions because there were so many excellent abstracts submitted).
>1,200 Posters

If I take a step back to look at this year’s annual meeting, the combination of the invited speakers, symposia, special sessions, meet the professors, abstracts, etc what I see is a meeting with outstanding science that pushes the musculoskeletal and mineral field forward and will change some of what we do in the lab and in the clinic. I can’t wait to see and hear these presentations.
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FRIDAY, SEPTEMBER 28, 2018
DAY-AT-A-GLANCE

Time/Event/Location

7:00 am - 5:00 pm

Registration Open
Viger Hall - Level 2

7:15 am - 8:15 am

Peer to Peer Networking Breakfast
Room 510

8:00 am - 9:30 am

Gerald D. Aurbach Lecture and Presentation of Esteemed Awards: Building Bone by Targeting the Schnurri3 Pathway
Room 210 A-F

9:30 am - 10:00 am

Networking Break
Viger Hall

10:00 am - 11:30 am

Highlights of the ASBMR 2018 Annual Meeting
Room 210 A-F

11:30 am - 12:30 pm

New! Challenge the Experts: Difficult Cases in Osteoporosis
Room 517 D

New! Plans to Improve NIH-funded Clinical Trials and Other Research
Room 517 A

New! Cutting Edge Technologies: Emerging Applications in Single Cell Genomics/Proteomics
Room 517 C

12:30 pm - 1:00 pm

Meet the Professor Sessions

12:30 pm - 1:30 pm

Networking Luncheon with ASBMR Leaders, NIH and International Funders
Room 510

1:00 pm - 2:00 pm

Concurrent Orals: Osteocytes
Room 517 B

1:00 pm - 2:00 pm

Concurrent Orals: Adverse Effects of Treatment
Room 210 A-F

1:00 pm - 2:00 pm

Concurrent Orals: Bone Marrow Microenvironment and Niches
Room 517 D
<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>1:00 pm</td>
<td>Concurrent Orals: Genetic Models of Musculoskeletal Diseases</td>
<td>Room 517 A</td>
</tr>
<tr>
<td>2:00 pm</td>
<td>Networking Break</td>
<td>517 Foyer</td>
</tr>
<tr>
<td>2:15 pm</td>
<td>Concurrent Orals: Regulation of Precursor Differentiation</td>
<td>Room 517 D</td>
</tr>
<tr>
<td>2:15 pm</td>
<td>Concurrent Orals: Treatment Gap</td>
<td>Room 210 A-F</td>
</tr>
<tr>
<td>2:15 pm</td>
<td>Concurrent Orals: Energy Metabolism, Bone, Muscle and Fat I</td>
<td>Room 517 A</td>
</tr>
<tr>
<td>3:30 pm</td>
<td>Concurrent Orals: Musculoskeletal Aging</td>
<td>Room 517 B</td>
</tr>
<tr>
<td>3:45 pm</td>
<td>Networking Break</td>
<td>517 Foyer</td>
</tr>
<tr>
<td>4:00 pm</td>
<td>Basic Science Session: Mechanobiology Mechanisms of Biomechanical Responses</td>
<td>Room 517 A</td>
</tr>
<tr>
<td>5:00 pm</td>
<td>ASBMR/ECTS Clinical Debate: Is Treatment for Osteoporosis Associated with Improved Mortality?</td>
<td>Room 210 A-F</td>
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<tr>
<td>5:00 pm</td>
<td>Welcome Reception and Poster Session</td>
<td>ASBMR Discovery Hall - Exhibit Hall 220 B-E</td>
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<tr>
<td>7:15 pm</td>
<td>New Investigator Reception</td>
<td>ASBMR Discovery Hall - Exhibit Hall 220 B-E</td>
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<tr>
<td>7:15 pm</td>
<td>Early Stage Investigator Networking Happy Hour</td>
<td>Le Westin, Viger Room</td>
</tr>
<tr>
<td>8:00 pm</td>
<td>Muscle and Bone Working Group</td>
<td>Room 520 A</td>
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<tr>
<td>8:00 pm</td>
<td>Adult Bone and Mineral Working Group</td>
<td>Room 520 D</td>
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<tr>
<td>8:30 pm</td>
<td>Women in Bone and Mineral Research Evening Networking Reception</td>
<td>Le Westin Hotel, Palais Room</td>
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<tr>
<td>10:00 pm</td>
<td>Early Stage Investigator after Hours Happy Hour</td>
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</tbody>
</table>
FRIDAY, SEPTEMBER 28, 2018

REGISTRATION OPEN
7:00 am - 5:00 pm  Palais des congrès de Montréal
Viger Hall - Level 2

PEER TO PEER CAREER NETWORKING BREAKFAST
Supported in part by Ultragenyx Pharmaceutical.
7:15 am - 8:15 am  Palais des congrès de Montréal
Room 510

The Peer to Peer Career Networking Breakfast is a ticketed event that is part Emerging Investigator’s Program and requires advance registration. Registration is not available onsite.

GERALD D. AURBACH LECTURE AND PRESENTATION OF ESTEEMED AWARDS
8:00 am - 9:30 am  Palais des congrès de Montréal
Room 210 A-F

Join your colleagues to celebrate the ASBMR 2018 Esteemed Award Winners of the Louis V. Avioli Founders Award, Fuller Albright Award, Lawrence G. Raisz Award, Stephen M. Krane Award, and a Special President’s Recognition Award.

8:30 am  Building Bone by Targeting the Schnurri3 Pathway
Laurie Glimcher, MD
Dana-Farber Cancer Institute, United States
Disclosures:
Board of Directors: GlaxoSmithKline plc and Waters Corporation
Co-founder and chair of Scientific Committee: Quentis Therapeutics
Scientific Advisory Board: Repare Therapeutics

NETWORKING BREAK
9:30 am - 10:00 am  Palais des congrès de Montréal
Viger Hall

HIGHLIGHTS OF THE ASBMR 2018 ANNUAL MEETING
10:00 am - 11:30 am  Palais des congrès de Montréal
Room 210 A-F

This special session is of interest to all health professionals, first time meeting attendees, young investigators, individuals new to the field, nurses, clinical research study coordinators, physical therapists and/or those seeking guidance in navigating through the extensive ASBMR program. The recipients of the Fund for Research and Education Betsy Love McClung, RN, MN Travel Grant will be recognized during this session.

Co-Chairs
Marja Marie Hurley, MD
UCONN Health School of Medicine, United States
Disclosures: None
10:00 am Clinical Science Meeting Overview
John Bilezikian, MD
Columbia University College of Physicians and Surgeons, United States
Disclosures: Consultant

10:45 am Basic Science Meeting Overview
Roland Baron, DDS, PhD
Harvard Medical School and School of Dental Medicine, United States
Disclosures: Shire: None

NEW! CHALLENGE THE EXPERTS: DIFFICULT CASES IN OSTEOPOROSIS
This activity is supported in part by educational funding donations provided by Amgen and Radius Health

11:30 am - 12:30 pm Palais des congrès de Montréal
Room 517 D
Chair:
Nelson Watts, M.D.
Mercy Health Osteoporosis and Bone Health Services, United States

Panelist:
Juliet Compston, MD
University of Cambridge School of Clinical Medicine, United Kingdom
Disclosures: None

Panelist:
E. Michael Lewiecki, MD
New Mexico Clinical Research & Osteoporosis Center, United States
Disclosures: Consultant: Amgen and Radius
Speakers’ Bureau: Radius
Grant/Research Support: Amgen and Radius

Panelist:
Michael McClung, MD
Oregon Osteoporosis Center, United States
Disclosures: Consultant: Amgen Grant/Research Support: Radius Health, Inc.

PLANS TO IMPROVE NIH-FUNDED CLINICAL TRIALS AND OTHER RESEARCH

11:30 am - 12:30 pm Palais des congrès de Montréal
Room 517 A

11:30 am Plans to Improve NIH-funded Clinical Trials and Other Research
Michael Lauer, MD
National Institute of Health, United States
Disclosures: None
NEW! CUTTING EDGE TECHNOLOGIES: EMERGING APPLICATIONS IN SINGLE CELL GENOMICS/PROTEOMICS
Session presented in collaboration with the International Federation of Musculoskeletal Research Societies (IFMRS)

11:30 am - 12:30 pm  Palais des congrès de Montréal
Room 517 C

Powerful new tools in genomics and proteomics are enabling development of our understanding of musculoskeletal disease. This session will highlight the most recent developments in these two quickly emerging areas and how they are currently being utilized in the field.

11:30 am  An Overview of the Most Popular Single-cell omic Analyses and Workflows Enabled by the C1
Katy Richards-Hrdlicka Ph.D.
Fluidigm, United States
Disclosures: Employee, Fluidigm

11:45 am  Tools for Performing Single Cell Genomics
Francesca Meschi PhD
10X Genomics, United States
Disclosures: Employee, 10X Genomics

12:00 pm  Single Cell Genomics
Matthew Greenblatt, MD, PhD
Weill Cornell Medical College, United States
Disclosures: None

12:15 pm  Single Cell Proteomics
Ugur Ayturk, PhD
Boston Children’s Hospital, United States
Disclosures: None

MEET THE PROFESSOR SESSIONS
11:30 am - 12:30 pm  Palais des congrès de Montréal

Meet the Professor: Biology of the Periosteum
Room 518 A
Regis O’Keefe, MD, PhD
Washington University, United States
Disclosures: None

Meet the Professor: The Bone Microenvironment and Cancer Progression
Room 525
Roberta Faccio, PhD
Washington University in St Louis School of Medicine, United States
Disclosures: None

Meet the Professor: Osteomacs
Room 522
Allison Pettit, PhD
The University of Queensland, Australia
Disclosures: None
Meet the Professor: Mechanisms of Age-related Bone Loss, Osteoporosis, Sarcopenia and Frailty
Room 519 B
Gustavo Duque, MD, PhD
University of Melbourne, Australia
Disclosures: None

Meet the Professor: Diabetes and Skeletal Health
Room 518 C
Ann Schwartz, PhD
University of California, San Francisco, United States
Disclosures: None

Meet the Professor: Extracellular Matrix and Bone
Room 518 B
Clarissa Craft, PhD
Washington University in St. Louis, School of Medicine, United States
Disclosures: None

Meet the Professor: Challenges in Treating Renal Bone Disease
Room 519 A
Susan Ott, MD
University of Washington Medical Center, United States
Disclosures: None

Meet the Professor: Factors that Influence Mouse Model Variability
Room 521
Clifford Rosen, MD
Maine Medical Center, United States
Disclosures: None

NETWORKING BREAK
12:30 pm - 1:00 pm
Palais des congrès de Montréal
517 Foyer

NETWORKING LUNCHEON WITH ASBMR LEADERS, NIH AND SENIOR INVESTIGATORS
Supported in part by Ultragenyx Pharmaceutical
12:30 pm - 1:30 pm
Palais des congrès de Montréal
Room 510

The Networking Luncheon with ASBMR Leaders, NIH and Senior Investigators is a ticketed event that is part of Emerging Investigator’s Program and requires advance registration. Registration is not available onsite.
**CONCURRENT ORALS: OSTEOCYTES**

1:00 pm - 2:00 pm

**Moderators**

Stefano Zanotti, PhD
University of Connecticut School of Medicine, Saint Francis Hospital and Medical Center

Bettina Willie, PhD
McGill University, Canada

1:00 pm

**1001**

The skeletal actions of irisin are mediated through alpha V integrin receptors on osteocytes.

Bruce Spiegelman*, Hyconwoo Kim1, Christianne Wrann2, Roland Baron3, Mary Bouxsein4, Lynda Bonewald1, Clifford Rosen6. 1Dana Farber Cancer Center, United States, 2mass general hospital, United States, 3harvard dental school, United States, 4beth israel deaconess hospital, United States, 5indiana university, United States, 6maine medical center, United States

**Disclosures:** Bruce Spiegelman, None

1:15 pm

**1002**

Bone corticalisation requires suppression of glycoprotein 130 signalling in osteocytes, and occurs by region-specific imbalances in bone formation and resorption

Emma Walker*, Kim Truong, Narelle Mcgregor, T John Martin, Natalie A Sims. St. Vincent’s Institute of Medical Research, Australia

**Disclosures:** Emma Walker, None

1:30 pm

**1003**

ASBMR 2018 Annual Meeting Young Investigator Award

Ablation of Osteopontin in Osteomalacic Hyp Mice Partially Rescues the Deficient Mineralization without Correcting Hypophosphatemia

Betty Hoac*, Tchilalo Boukpessi2, Daniel J Buss3, Catherine Chaussain2, Monzur Murshed1, Marc D Mckee1. 1Faculty of Dentistry, McGill University, Canada, 2School of Dentistry University Paris Descartes Sorbonne Paris Cité, France, 3Department of Anatomy and Cell Biology, McGill University, Canada

**Disclosures:** Betty Hoac, None

1:45 pm

**1004**

TGFβ regulation of perilacunar/canalicular remodeling is sexually dimorphic

Neha S. Dole *, Cristal S. Yee1, Claire Acevedo2, Courtney M. Mazur1, Tamara Alliston1. 

1University of California San Francisco, United States, 2University of Utah, United States

**Disclosures:** Neha S. Dole, None

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**CONCURRENT ORALS: ADVERSE EFFECTS OF TREATMENT**

1:00 pm - 2:00 pm

**Moderators**

Lorenz Hofbauer, MD
TU Dresden University Medical Center, Germany

Aliya Khan, MD
McMaster University, Canada
1:00 pm  Do Drug Holidays Reduce Atypical Femur Fracture Risk?: Results from the Southern California Osteoporosis Cohort Study (SOCS)

Annette L. Adams*, Bonnie H. Li, Denison S. Ryan, Erik J. Geiger, Richard M. Dell, Dennis M. Black. 1Kaiser Permanente Southern California, United States, 2University of California, San Francisco, United States

Disclosures: Annette L. Adams, Merck, Grant/Research Support

1:15 pm  The Impact of Bisphosphonate Drug Holidays on Fracture Rates

Jeffrey Curtis*, Rui Chen, Zixu Li, Tarun Arora, Kenneth Saag, Nicole Wright, Shanette Daigle, Meredith Kilgore, Elizabeth Delzell. University of Alabama at Birmingham, United States

Disclosures: Jeffrey Curtis, Amgen, Grant/Research Support, Radius, Consultant, Amgen, Consultant, Radius, Grant/Research Support

1:30 pm  Bisphosphonate Use and Risk of AFF Varies by Pre-treatment BMD Level: Results from the Southern California Osteoporosis Cohort Study (SOCS)

Dennis M. Black*, Erik J. Geiger, Bonnie H. Li, Denison S. Ryan, Richard M. Dell, Annette L. Adams. 1University of California, San Francisco, United States, 2Kaiser Permanente Southern California, United States

Disclosures: Dennis M. Black, Asahi-Kasei, Consultant, Radius Pharma, Grant/Research Support

1:45 pm  Clinical features of 35 patients with 172 spontaneous vertebral fractures after denosumab discontinuation: a single center observational study

Elena Gonzalez-Rodriguez*, Berengere Aubry-Rozier, Delphine Stoll, Didier Hans, Olivier Lamy. Lausanne University Hospital, Switzerland

Disclosures: Elena Gonzalez-Rodriguez, None

CONCURRENT ORALS: BONE MARROW MICROENVIRONMENT AND Niches

1:00 pm - 2:00 pm  Palais des congrès de Montréal

Room 517 D

Moderators
Rhonda Prisby, PhD
University of Texas at Arlington, United States

Stan Gronthos, PhD
University of Adelaide, Australia

1:00 pm  ASBMR 2018 Annual Meeting Young Investigator Award

Targeting skeletal endothelium to ameliorate bone loss

Ren Xu*, Alisha Yallowitz, Shawn Debnath, Jung-Min Kim, Kazuki Inoue, Baohong Zhao, Jae-Hyuck Shim, Laurie Glimcher, Matthew Greenblatt. 1Weill Cornell Medical College, United States, 2University of Massachusetts Medical School, United States, 3Hospital for Special Surgery, United States, 4Dana-Farber Cancer Institute and Harvard University Medical School, United States

Disclosures: Ren Xu, None

1:15 pm  Intermittent Parathyroid Hormone does not expand type H cell population but impacts transitional vessels by reducing their Coverage by Leptin Receptor Positive Pericytes and Upregulating their Expression of Collagen Type 18/Endostatin.

Robin Caire*, Bernard Roche, Tiphanie Picot, Zhiguo He, Carmen M Anaei, Mireille Thomas, Lydia Campos, Laurence Vico, Marie-Hélène Lafage-Proust. 1INSERM 1059, Université de Lyon, France, 2University Hospital Hematology Lab, France, 3BIIGC, Université de Lyon, France

Disclosures: Robin Caire, None
1:30 pm  
1011  
**Hypoxia/HIF Signaling Contributes to Bone Homeostasis by Preventing Premature Senescence and Apoptosis of Multipotent Mesenchymal Progenitor Cells**  
Kassandra Spiller*, Yinshi Ren, Colleen Wu. Duke University, United States  
*Disclosures: Kassandra Spiller, None*

1:45 pm  
1012  
**Mineralizing Bone Surfaces Drive Blood Vessel Redistribution Through Asymmetric Angiogenesis**  
Robert Tower*, Chamith Rajapakse, Xi Jiang, Wei Tong, Nathaniel Dyment, Ling Qin.  
1University of Pennsylvania, United States, 2Xiehe Hospital, China  
*Disclosures: Robert Tower, None*

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**CONCURRENT ORALS: GENETIC MODELS OF MUSCULOSKELETAL DISEASES**

1:00 pm - 2:00 pm  
**Palais des congrès de Montréal**  
Room 517 A

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**Moderators**  
Michael Collins, MD  
National Institutes of Health, United States  
Cheryl Ackert-Bicknell, PhD  
Center for Musculoskeletal ResearchUniversity of Rochester, United States

1:00 pm  
1013  
**The lysosomal protein arylsulfatase B is a key enzyme involved in skeletal turnover**  
1Department of Osteology and Biomechanics, University Medical Center Hamburg-Eppendorf, Germany, 2Department of Biochemistry, Children’s Hospital, University Medical Center Hamburg-Eppendorf, Germany  
*Disclosures: Gretl Hendrickx, None*

1:15 pm  
1014  
**ASBMR 2018 Annual Meeting Young Investigator Award**  
**Positive effects of intermittent PTH on growing bone and dystrophic muscle in Mdx mouse model of Duchenne Muscular Dystrophy**  
1University of Toronto, Canada, 2Lunenfeld-Tanenbaum Research Institute, Canada  
*Disclosures: Sung-Hee Seanna Yoon, None*

1:30 pm  
1015  
**Deletion of PKA Regulatory Subunit 1A to Increase PKA Activity in Osteoblasts Causes Dramatic Expansion of Trabecular Bone at the Expense of Cortical Bone**  
1New York University, college of dentistry, United States, 2Molecular Pharmacology Training Program, Sackler Institute of Graduate Biomedical Sciences, New York University School of Medicine, United States, 3Endocrine Unit, Massachusetts General Hospital, Harvard Medical School, United States, 4Department of Cancer Biology and Genetics, Internal Medicine, The Ohio State University, Division of Endocrinology, Diabetes, and Metabolism, Department of Internal Medicine, The Ohio State University Wexner Medical Center, United States  
*Disclosures: Carole Le Henaff, None*

1:45 pm  
1016  
**Low bone mass in mice with conditional Wnt1 deletion and a Wnt1 mutation causing early-onset osteoporosis**  
Nele Vollersen, Tim Rolvien, Felix Schmidt, Michael Amling, Thorsten Schinke, Timur Yorgan.  
Department of Osteology and Biomechanics, University Medical Center Hamburg-Eppendorf, Germany  
*Disclosures: Timur Yorgan, None*
CONCURRENT ORALS: REGULATION OF PRECURSOR DIFFERENTIATION

2:15 pm - 3:30 pm
Palais des congrès de Montréal
Room 517 D

Moderator
Ivo Kalajzic, MD, PhD
University of Connecticut Health Center, United States

Moderator
Paola Divieti Pajevic MD, PhD
Goldman School of Dental Medicine, Boston University, United States

2:15 pm
1017
ASBMR 2018 Annual Meeting Young Investigator Award
Loss of Hypoxia Inducible Factor-2 Alpha in Mesenchymal Progenitors Increases Bone Mass Accrual and Osteoblastogenesis
Christophe Merceron*, Kavitha Raganathan, Elizabeth Wang, Zachary Tata, Laura Mangiavini, Mohd Parvez Khan, Benjamin Levi, Ernestina Schipani. 1Department of Orthopedic Surgery, School of Medicine, University of Michigan, United States, 2Division of Plastic and Reconstructive Surgery, Department of Surgery, University of Michigan, United States
Disclosures: Christophe Merceron, None

2:30 pm
1018
ASBMR 2018 Annual Meeting Young Investigator Award
Periosteal skeletal stem cells are a functionally and genetically distinct subset of skeletal stem cells necessary for bone healing
Laura Ortinau*, Hamilton Wang, Kevin Lei, Yannis Hara, Bredan Lee, David Scadden, Dongsu Park. 1Baylor College of Medicine, United States, 2Harvard University, United States
Disclosures: Laura Ortinau, None

2:45 pm
1019
ASBMR 2018 Annual Meeting Young Investigator Award
Cfp1 is Essential for the Initiation of Chondrogenesis and Growth Plate Development
Diana Carlone*, Emanuele Pignatti, Lijie Jiang, Manasvi Shah, David Breault. Boston Children’s Hospital, United States
Disclosures: Diana Carlone, None

3:00 pm
1020
The Role of GATA4 in Mesenchymal Stem Cell Proliferation and Differentiation
Susan Miranda*, Aysha Khalid, Alexandria Slayden, Jerusha Kumpati, Gustavo Miranda. University of Tennessee, United States
Disclosures: Susan Miranda, None

3:15 pm
1021
The TGFβ Receptor ALK5 is an Essential Regulator of BMP Signaling in the Growth Plate
Weiguang Wang*, Hyelim Chun, Karen Lyons. University of California, Los Angeles, United States
Disclosures: Karen Lyons, None
CONCURRENT ORALS: TREATMENT GAP

2:15 pm - 3:30 pm  
Palais des congrès de Montréal  
Room 210 A-F

Moderators  
Robert Adler, MD  
McGuire VA Medical Center, United States

Maria Danila, MD, MPH, MS  
University of Alabama at Birmingham, United States

2:15 pm  
1022  
**Post-Fracture Care gap in Canada from 2000-2001 to 2011-2012: A Nationwide Population-based Analysis**  
Suzanne N Morin*1, Siobhan O’Donnell2, Sonia Jean3, Susan Jaglal4, Kerry Siminoski5, Alexandra Papaioannou6, Jacques Brown7, Lisa M Lix8, William D Leslie8. 1McGill University, Canada, 2Public Health Agency of Canada, Canada, 3Institut national de santé publique du Québec, Canada, 4University of Toronto, Canada, 5University of Alberta, Canada, 6McMaster University, Canada, 7Université Laval, Canada, 8University of Manitoba, Canada

**Disclosures:** Suzanne N Morin, Amgen, Grant/Research Support

2:30 pm  
1023  
**Hip fractures rates and time trends in use of anti-osteoporosis medications in Denmark for the period 2005 to 2015**  
Bo Abrahamsen*1,2, Michael K Skjødt1, Peter Vesteragaard1. 1Holbæk Hospital, Dept of Medicine, Denmark, 2Univ of Southern Denmark, OPEN, Denmark, 3Aalborg University and University Hospital, Steno Diabetes Center North Jutland, Denmark

**Disclosures:** Bo Abrahamsen, UCB, Grant/Research Support, Novartis, Grant/Research Support

2:45 pm  
1024  
**A Comparison of U.S. and Canadian Osteoporosis Screening and Treatment Strategies: What proportions of postmenopausal women are identified for screening and treatment?**  
Carolyn Crandall*1, Joseph Larson2, Joann Manson3, Jane Cauley4, Kristine Ensrud3, Andrea Lacroix5, Jean Wactawski-Wende7, Mridul Datta8, Maryam Sattari9, John Schousboe9, William Leslie11. 1University of California, Los Angeles, United States, 2Fred Hutchinson Cancer Research Center, United States, 3Harvard Medical School, United States, 4University of Pittsburgh, United States, 5University of Minnesota, United States, 6University of California, San Diego, United States, 7the State University of New York, United States, 8Purdue University, United States, 9University of Florida, United States, 10Park Nicollet Institute, United States, 11University of Manitoba, Canada

**Disclosures:** Carolyn Crandall, None

3:00 pm  
1025  
**ASBMR 2018 Annual Meeting Young Investigator Award**  
Screening of high fracture risk in primary care not effective  
Thomas Merlijn*1, Karin Swart1, Coen Netelenbos2, Petra Elders1. 1Department of General Practice and Elderly Care Medicine, VU University Medical Center, Netherlands, 2Department of Internal Medicine, Endocrine Section, VU University Medical Center, Netherlands

**Disclosures:** Thomas Merlijn, None

3:15 pm  
1026  
**Identification of Prevalent Vertebral Fracture Increases Utilization of Pharmacologic Fracture Prevention Therapy**  
John Schousboe*1, Lisa Lix2, Suzanne Morin3, Sheldon Derkatch2, Mark Bryant2, Mashael Alhrbi2, William Leslie2. 1Park Nicollet Clinic & HealthPartners Institute, United States, 2University of Manitoba, Canada, 3McGill University, Canada

**Disclosures:** John Schousboe, None
2:15 pm

1027 The role of apolipoprotein E in fracture healing and osteoblast differentiation
Xiaohua Zong*, Puviindran Nadesan, James White, Phillip White, Gurpreet Baht.
1Department of Orthopaedic Surgery, Duke Molecular Physiology Institute, Duke University, United States, 2Department of Orthopaedic Surgery, Duke University, United States, 3Department of Medicine, Duke Molecular Physiology Institute, Duke University, United States, 4Department of Orthopaedic Surgery, Department of Pathology, Duke Molecular Physiology Institute, Duke University, United States
Disclosures: Xiaohua Zong, None

2:30 pm

1028 ASBMR 2018 Annual Meeting Young Investigator Award
Osteoblasts Mediate the Adverse Effects of High-fat Diets on Bone and Fat Metabolism Through Glucocorticoid Signalling
Sarah Kim*, Holger Henneicke, Sylvia J. Gasparini, Lee Thai, Markus J. Seibel, Hong Zhou. Bone Research Program, ANZAC Research Institute, The University of Sydney, Australia
Disclosures: Sarah Kim, None

2:45 pm

1029 Bone marrow adipose tissue: white, brown or beige?
Hero Robles*, Madelyn Lorenz, Eric Hilker, Kristann Magee, Jesse D Procknow, Zhaohua Wang, Charles A Harris, Clarissa S Craft, Erica L Scheller. 1Department of Internal Medicine, Division of Bone and Mineral Diseases, Washington University, United States, 2Department of Internal Medicine, Division of Endocrinology, Metabolism and Lipid Research, Washington University, United States
Disclosures: Hero Robles, None

3:00 pm

1030 Lrp4 expression by adipocytes and osteoblasts modulates endocrine actions of sclerostin
Soohyun Kim*, Hao Da, Priyanka Kushwaha, Zhu Li, Thomas Clemens, Ryan Riddle. 1Johns Hopkins University School of Medicine, United States, 2Johns Hopkins University School of Medicine, Baltimore VA Medical Center, United States
Disclosures: Soohyun Kim, None

3:15 pm

1031 Maternal Obesity-Mediated Epigenetic Regulation of Osteoblast Differentiation through SATB2
Jin-Ran Chen*, Haijun Zhao, Oxana P. Lazarenko, Kartik Shankar. Arkansas Children’s Nutrition Center and the Department of Pediatrics, University of Arkansas for Medical Sciences, United States
Disclosures: Jin-Ran Chen, None
CONCURRENT ORALS: MUSCULOSKELETAL AGING
2:15 pm - 3:30 pm
Palais des congrès de Montréal
Room 517 B

Moderator
Dana Gaddy, PhD
College of Veterinary Medicine, Texas A&M University, United States

Moderator
Elizabeth Zimmermann MS, PhD
Shriners Hospital for Children Canada, Canada

2:15 pm

1032 Cellular Senescence in Tendon Aging and Pathology
Anne Gingery*, Tamara Tchkonia, James C Kirkland, Peter C Amadio. Mayo Clinic, United States
Disclosures: Anne Gingery, None

2:30 pm

1033 ASBMR 2018 Annual Meeting Young Investigator Award
p18 is required and regulated by BMP4 in Muscle-Derived Stem Cell-mediated Osteogenesis and Bone Regeneration during aging
Haizi Cheng*, Xueqin Gao, Aiping Lu, Johnny Huard. 1The University of Texas Health Science Center at Houston, Houston, TX; Steadman Philippon Research Institute, Vail, CO, United States, 2University of Pittsburgh, Pittsburgh, PA, United States
Disclosures: Haizi Cheng, None

2:45 pm

1034 Male-Female Spatio-Temporal Differences of Age-Related Bone Loss
Julio Carballido-Gamio*, Elisa A Marques, Sigurdur Sigurdsson, Kristin Siggeirsdottir, Alexandria Jensen, Gunnar Sigurdsson, Thor Aspelund, Gudny Eiriksdottir, Vilmundur Gudnason, Thomas F Lang, Tamara B Harris. 1Department of Radiology, School of Medicine, University of Colorado Denver, Denver, CO, United States, 2National Institute on Aging, Intramural Research Program, Laboratory of Epidemiology and Population Sciences, Bethesda, MD, United States, 3Icelandic Heart Association Research Institute, Kópavogur, Iceland, 4Department of Biostatistics & Informatics, Colorado School of Public Health, Aurora, CO, United States, 5University of Iceland, Reykjavik, Iceland, 6Landspitalinn University Hospital, Reykjavik, Iceland, 7Centre of Public Health Sciences, University of Iceland, Reykjavik, Iceland, 8Department of Radiology and Biomedical Imaging, University of California, San Francisco, CA, United States
Disclosures: Julio Carballido-Gamio, None

3:00 pm

1035 RANKL produced by osteocytes is required for cortical, but not cancellous, bone loss with age
Jinhu Xiong*, Keisha Cawley, Ryan Macleod, Maria Almeida, Charles Obrien. University of Arkansas for Medical Sciences, United States
Disclosures: Jinhu Xiong, None

3:15 pm

1036 RANKL+ plasmacytic B and TGFβ+ myeloid cells are attracted to bone marrow during aging by a TRAF3-dependent mechanism to increase bone resorption, decrease bone formation and promote osteoporosis
Jinbo Li*, Akram Ayoub, Zhenqiang Yao, Brendan Boyce. University of Rochester Medical Center, United States
Disclosures: Jinbo Li, None
NETWORKING BREAK
3:30 pm - 4:00 pm  
Palais des congrès de Montréal
517 Foyer

BASIC SCIENCE SESSION: MECHANOBIOLOGY MECHANISMS OF
BIOMECHANICAL RESPONSES
3:45 pm - 5:00 pm  
Palais des congrès de Montréal
Room 517 A

Co-Chairs:
Jenneke Klein-Nulend, PhD
ACTA-University of Amsterdam and Vrije Universiteit Amersand, The Netherlands
Disclosures: None

Alexander Robling, PhD
Indiana University, United States
Disclosures: None

3:45 pm  
Mechanosensation Mechanisms in Bone
Meghan McGee-Lawrence, PhD
Medical College of Georgia, Augusta University, United States
Disclosures: None

4:10 pm  
The Role of Gap Junctions in Coordinating Tissue Response to Mechanical Signals
Henry Donahue, PhD
Virginia Commonwealth Univeristy, United States
Disclosures: None

4:35 pm  
Multiscale Mechanobiology of TGF-beta in the Skeleton
Tamara Alliston, PhD
University of California, San Francisco, United States
Disclosures: None

ASBMR/ECTS CLINICAL DEBATE: TREATMENT FOR OSTEOPOROSIS
IS ASSOCIATED WITH IMPROVED MORTALITY
4:00 pm - 5:00 pm  
Palais des congrès de Montréal
Room 210 A-F

Co-Chairs
Jane Cauley, PhD
University of Pittsburgh Graduate School of Public Health, United States
Disclosures: None

Bente Langdahl MD, PhD
Aarhus University Hospital, Denmark
Disclosures: Speakers' Bureau: Amgen, Eli Lilly, UCB, Teva
Grant/Research Support: Amgen, Novo Nordisk
Consultant: Amgen, UCB, Merck, Eli Lilly

For the Motion
Roland Chapurlat, MD, PhD
E. Herriot Hospital, France
Disclosures: None
WELCOME RECEPTION AND PLENARY POSTER SESSION
5:00 pm - 7:00 pm
ASBMR Discovery Hall - Exhibit Hall 220 B-E

Attendees and registered guests are invited to celebrate ASBMR’s 2018 Annual Meeting during our Welcome Reception and Poster Session in the ASBMR Discovery Hall. Simply display your badge for admission. Guests may purchase a badge for $50 at the ASBMR Registration Counter for entrance to the Welcome Reception. For the full Plenary Poster listing, please refer to the plenary poster section located in the back of the Onsite Program Book.

NEW INVESTIGATOR RECEPTION
5:00 pm - 7:00 pm
ASBMR Discovery Hall - Exhibit Hall 220 B-E

EARLY STAGE INVESTIGATOR NETWORKING HAPPY HOUR
Sponsored by the ASBMR Early Stage Investigator Subcommittee and Membership Engagement and Education Committee (Part of the Emerging Investigator Program supported by a donation from Ultragenyx)
7:15 pm - 8:30 pm
Le Westin Hotel
Viger Room

Muscle and Bone Working Group
Supported by educational grants from Novotec Medical and Stratec Medizintechnik
7:15 pm – 9:45 pm
Palais des congrès de Montréal
Room 520 A

7:30 pm
Opening Remarks and Dinner

8:00 pm
Lifelong skeletal benefits of physical activity when young: an exercise in structure
Stuart Warden, PhD
Indiana University—Purdue University, United States

8:30 pm
Whole-body vibration intervention studies for musculoskeletal health: what has been learned and where are we heading?
Louis-Nicolas Veilleux, Ph.D.
Adjunct Professor, Department of Surgery, McGill University, Canada

9:00 pm
Physical capability, muscle force and power in older UK Adults - relationships to bone and falls.
Kat Ward, PhD
Associate Professor, MRC Lifecourse Epidemiology, University of Southampton, Southampton General Hospital, United Kingdom
9:30 pm Concluding Remarks

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**ADULT BONE AND MINERAL WORKING GROUP**

**7:15 pm - 10:00 pm Palais des congrès de Montréal**

**Room 520 D**

7:15 pm Opening Remarks and Dinner

**Introduction of Co-Chairs**

Ann Kearns, MD PhD, Mayo Clinic, USA, Suzanne Marie Jan de Beur MD, John’s Hopkins, USA, Michael Collins MD, National Institute of Health, USA

7:30 pm Historical Vignette: hypn’ and hoppin’ down the rickety road of FGF23

Michael Collins MD, National Institute of Health, USA

8:00 pm Successful treatment of osteoporosis with intermittent parathyroid hormone related peptide (Tymlos) injections in patients with Ehlers-Danlos syndrome.

Julianna Barsony. Georgetown University Medical Center USA

8:15 pm A Case of Hypoparathyroidism with Unusual Treatment Challenges: Refractory Hyperphosphatemia and Open Epiphyses.

Wu KC1, Murphy EJ1, Kim S1, Arasu A1, Schafer AL12, Shoback DM1. 1Division of Endocrinology and Metabolism, Department of Medicine, University of California, San Francisco, 2Endocrine Research Unit, San Francisco Veterans Affairs Health Care System, University of California, San Francisco, CA. 3Division of Endocrinology and Metabolism, Department of Medicine, University of California, Los Angeles

8:30 pm Effect of prolonged use of rhPTH (1-34) on bone and mineral metabolism in Postsurgical Hypoparathyroidism.

Neeru Gera, Sudhakar Rao, Ambrish Mithal, Sanjay Kumar Bhadada

8:45 pm Tumor-induced osteomalacia: a long and winding road for a cure.

Namki Hong1*, Jooyeon Lee1*, Inho Cha2, Byung-mun Kim3, Dong-jun Kim3, Mijn Yun4, Jong-in Yook4, Yumie Rhee1, 1Department of Internal Medicine, Severance Hospital, Endocrine Research Institute, Yonsei University College of Medicine, Seoul 120-752, Korea., 2Department of Oral and Maxillofacial Surgery, Yonsei University College of Dentistry, 50-1 Yonsei-ro, Seodaemoon-gu, Seoul, 03722, Korea., 3Department of Radiology, Yonsei University College of Medicine Severance Hospital, 250, 4Department of Nuclear Medicine, Yonsei University College of Medicine, Seoul, Korea., 5Department of Dental Pathology, Yonsei University College of Medicine, 50 Yonsei-ro, Seodaemun-gu, Seoul, 120-752, Korea.

9:00 pm Case Report: Double trouble in Pregnancy.

Bhadada SK, Anshita Aggarwal, Aditya Dutta, Anupam Lal, Anil Bhansali. Post Graduate Institute of Medical Education & Research, Chandigarh. Correspondence Address: Room No. 2, Block- F, 4th Floor, Dept of Endocrinology, Nehru Hospital, PGIMER, Chandigarh

9:15 pm Possible Osteogenesis Imperfecta in an Elderly Man.

Cheng Cheng MD, Anna Schafer MD, Dolores Shoback MD1. 1Division of Endocrinology and Metabolism, University of California San Francisco, San Francisco California

9:30 pm Osteoporosis as a Presenting Manifestation of Cushing’s Disease.

Rebecca Simon, Lena Yassine, Shiri Levy, Sharon Lahiri, Arti Bhan, Sudhaker D. Rao. Division of Endocrinology, Diabetes, and Bone & Mineral Disorders, and Bone & Mineral Research Laboratory, Henry Ford Hospital, Detroit, Michigan

9:45 pm Presentation of the Boy Frame Award to Dr Michael Collins.

10:00 pm Adjourn
The Women in Bone and Mineral Research Committee invites all colleagues to attend their Networking & Dessert Reception. Moderated by the ASBMR Women’s Committee Chair, Roberta Faccio, panelists including Douglas Kiel, MD, Emma Duncan, MBBS, PhD, Johannes van Leeuwen, PhD, and Laurie McCauley, DDS, PhD will discuss this year’s topic, “Bridging the Gender Gap: The Female Academic Experience.” With time for networking before & after, the panelists discussion will focus around what current department chairs are doing to help make the academic work environment more open and equal for women in science.

Early Stage Investigators are invited to continue networking at an off-site location in Old Montreal. Join your peers to continue building a network of career-long contacts in a relaxed and fun environment.
**Saturday, September 29, 2018**

**Day-At-A-Glance**

<table>
<thead>
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<th>Time/Event/Location</th>
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<td>7:00 am - 5:00 pm...</td>
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<td><strong>Registration Open</strong></td>
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<td><em>Viger Hall - Level 2</em></td>
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<td>8:00 am - 9:30 am...</td>
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<tr>
<td><strong>Louis V. Avioli Lecture and Presentation of Esteemed Awards</strong></td>
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<td><em>Room 210 A-F</em></td>
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<td>9:30 am - 9:45 am...</td>
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<td><strong>Networking Break</strong></td>
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<td>9:30 am - 4:30 pm...</td>
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<td><strong>Discovery Hall Open</strong></td>
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<td><em>ASBMR Discovery Hall - Exhibit Hall 220 B-E</em></td>
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<td>9:45 am - 11:00 am...</td>
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<td><strong>Plenary Orals: Clinical Highlights</strong></td>
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<td><em>Room 210 A-F</em></td>
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<td>9:45 am - 11:00 am...</td>
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<td><strong>Plenary Orals: Osteoblast and Osteocyte Biology</strong></td>
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<td><strong>Plenary Orals: Translational Highlights I</strong></td>
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<td><em>Room 517 A</em></td>
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<td>11:00 am - 12:00 pm...</td>
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<td><strong>New! Challenge the Experts: Mineral Disorders (Calcium and Phosphate)</strong></td>
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<td><em>Room 517 B</em></td>
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<td>11:00 am - 12:00 pm...</td>
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<td><strong>ASBMR-IOF-FFN Joint Session: Closing the Treatment Gap</strong></td>
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<td><em>Room 517 C</em></td>
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<td>11:00 am - 12:00 pm...</td>
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<td><strong>Meet the Professor Sessions</strong></td>
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<td>11:00 am - 12:15 pm...</td>
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<td><strong>Publications Workshop</strong></td>
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<td><em>Room 510</em></td>
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<td><strong>Networking Break</strong></td>
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<td><em>ASBMR Discovery Hall - Exhibit Hall 220 B-E</em></td>
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<td>12:30 pm - 2:30 pm...</td>
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<td><strong>Poster Session I and Poster Tours</strong></td>
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ASBMR 2018 Annual Meeting
12:30 pm - 2:30 pm

Late-Breaking Posters I
  ASBMR Discovery Hall - Exhibit Hall 220 B-E
  2:45 pm - 4:00 pm

Symposium: Fall Assessment and Prevention
  Room 517 D
  2:45 pm - 4:00 pm

ASBMR/ECTS Symposium: Speaking from the Gut: Bone and the Microbiome
  Room 517 A
  4:00 pm - 4:30 pm

Networking Break
  ASBMR Discovery Hall - Exhibit Hall 220 B-E
  4:30 pm - 6:00 pm

Concurrent Orals: Hormonal and Growth Factor Responses
  Room 517 B
  4:30 pm - 6:00 pm

Concurrent Orals: Osteoporosis Treatment
  Room 517 A
  4:30 pm - 6:00 pm

Concurrent Orals: Rare Bone Diseases: Translational
  Room 517 D
  6:30 pm - 8:30 pm

Basic Evening: Epigenetics and Osteoimmunology
  Room 510
  6:30 pm - 8:30 pm

Clinical Evening: Personalized Medicine vs Evidenced Based Medicine
  Room 210 A-F
  8:30 pm - 11:30 pm

Networking Event
  Room 710 A
SATURDAY, SEPTEMBER 29, 2018

REGISTRATION OPEN
7:00 am - 5:00 pm  
Palais des congrès de Montréal  
Viger Hall - Level 2

LOUIS V. AVIOLI LECTURE AND PRESENTATION OF ESTEEMED AWARDS
8:00 am - 9:30 am  
Palais des congrès de Montréal  
Room 210 A-F

Join your colleagues to congratulate the ASBMR 2018 Esteemed Award Winners of the new Adele L. Boskey Award, William F. Neuman Award, Frederic C. Bartter Award, Paula Stern Acheivement Award, and Gideon A. Rodan Award.

8:30 am  
From Rare Skeletal Diseases to Genetic Determinants of Skeletal Homeostasis  
Brendan Lee, MD, PhD  
Baylor College of Medicine, United States  
Disclosures: None

NETWORKING BREAK
9:30 am - 9:45 am  
Palais des congrès de Montréal  
ASBMR Discovery Hall - Exhibit Hall 220 B-E

DISCOVERY HALL OPEN
9:30 am - 4:30 pm  
Palais des congrès de Montréal  
ASBMR Discovery Hall - Exhibit Hall 220 B-E

POSTERS OPEN
9:30 am - 4:30 pm  
Palais des congrès de Montréal  
ASBMR Discovery Hall - Exhibit Hall 220 B-E

All posters will be displayed in the ASBMR Discovery Hall - Exhibit Hall 220 B-E on Saturday, September 29 - Monday, October 1 during exhibit hall hours. For a full listing of all poster and late-breaking poster presentations, please refer to the poster section located in the back of the Onsite Program Book.

PLENARY ORALS: CLINICAL HIGHLIGHTS
9:45 am - 11:00 am  
Palais des congrès de Montréal  
Room 210 A-F

Moderator
Suzanne Jan De Beur, MD  
Johns Hopkins University, United States
Moderator
Ghada El-Hajj Fuleihan MD
American University of Beirut-Medical Center, Lebanon

9:45 am  ASBMR 2018 Annual Meeting Most Outstanding Basic Abstract
1037 Investigating the influence of adult hip shape genetic variants across the life course: findings from a population-based study in adolescents
Monika Frysz*, Denis Baird†, Jenny Gregory‡, Richard Aspden§, Jonathan Tobias∥, Lavinia Paternoster (Cox)‡. 1Population Health Sciences, Bristol Medical School, University of Bristol, United Kingdom, 2MRC Integrative Epidemiology Unit at the University of Bristol, United Kingdom, 3Institute of Medical Science, School of Medicine, Medical Sciences & Nutrition, Aberdeen, United Kingdom, 4Musculoskeletal Research Unit, Bristol Medical School, University of Bristol, United Kingdom
Disclosures: Monika Frysz, None

10:00 am  Changes in the Risk of Subsequent Major Osteoporotic Fractures over Time in Men and Women: A Population-Based Observational Study with 25-year Follow Up
Suzanne N Morin*, Lin Yan†, Lisa M Lix‡, William D Leslie§. 1McGill University, Canada, 2University of Manitoba, Canada
Disclosures: Suzanne N Morin, None

10:15 am  Advanced glycation endproduct content is increased in cortical bone of the femoral neck in men with type 2 diabetes mellitus
Pablo Palomino*, Heather Hunt†, Eric Marty‡, Rehan Saiyed§, Matthew Cohn∥, Joseph Lane¶, Robert Ritchie#, Bernd Gludovatz$, Eve Donnelly%. 1Cornell University, United States, 2Hospital for Special Surgery, United States, 3University of California, Berkeley, United States, 4UNSW, Australia
Disclosures: Pablo Palomino, None

10:30 am  Definitions of sarcopenia as predictors of fracture risk independent of FRAX, falls and BMD: A meta-analysis of the Osteoporotic Fractures in Men (MrOS) Study
Nicholas Harvey*, Anders Oden†, Eric Orwoll‡, Timothy Kwok§, Magnus Karlsson∥, Bjorn Rosengren¶, Eva Ribom#, Peggy Cautton$, Kristine Ensrud$, Cyrus Cooper$, John Kanis%, Claes Ohlsson%, Dan Mellstrom¶, Helena Johansson#, Eugene Meckesky%. 1MRC Lifecourse Epidemiology Unit, University of Southampton, Southampton SO16 6YD, United Kingdom, 2Centre for Bone and Arthritis Research (CBAR), Sahlgrenska Academy, University of Gothenburg, Gothenburg, Sweden, 3Oregon Health & Science University, Portland, OR, United States, 4Department of Medicine & Therapeutics and School of Public Health, The Chinese University of Hong Kong, HK, Hong Kong, 5Clinical and Molecular Osteoporosis Research Unit, Department of Clinical Sciences Malmo, Lund University and Department of Orthopedics, Skane University Hospital, Malmo, Sweden, 6Department of Surgical Sciences, University of Uppsala, Uppsala, Sweden, 7Research Institute, California Pacific Medical Center, San Francisco, CA, United States, 8Medicine and Epidemiology & Community Health, University of Minnesota, MN, United States, 9Centre for Metabolic Bone Diseases, University of Sheffield, Sheffield, United Kingdom
Disclosures: Nicholas Harvey, None

10:45 am  Muscle mass assessed by D3Cr dilution and incident fractures in older men
Peggy Cautton*, Katherine Peters†, Steven Cummings‡, Eric Orwoll§, Andrew Hoffman∥, Kristine Ensrud¶, Jane Cauley#, William Evans% 1California Pacific Medical Center, United States, 2OHSU, United States, 3Stanford, United States, 4University of Minnesota, United States, 5University of Pittsburgh, United States, 6University of California, Berkeley, United States
Disclosures: Peggy Cautton, None
PLENARY ORALS: OSTEOSTABL AND OSTEOCYTE BIOLOGY
9:45 am - 11:00 am Palais des congrès de Montréal
Room 517 D

Moderators
Jean Vacher, PhD
Institut De Recherches Cliniques De Montréal, Canada

Lilian Plotkin, PhD
Indiana University School of Medicine, United States

9:45 am
ASBMR 2018 Annual Meeting Most Outstanding Basic Abstract Award
1042
Osteoblast-derived NOTUM Reduces Cortical Bone Mass in Mice and the NOTUM Locus is Associated with Bone Mineral Density in Humans
Karin Nilsson*, Sofia Movérare-Skrtic1, Petra Henning1, Thomas Funck-Brentano1, Maria Nethander1, Fernando Rivadeneira2, Antti Koskela3, Juha Tuukkanen3, Jan Tuckermann4, Christine Perret5, Ulf Lerner5, Claes Ohlsson1. 1Centre for Bone and Arthritis Research at the Sahlgrenska Academy, 41345 Gothenburg, Sweden, 2Department of Internal Medicine, Erasmus University Rotterdam, Rotterdam, The Netherlands, Netherlands, 3Institute of Cancer Research and Translational Medicine, Department of Anatomy and Cell Biology, Faculty of Medicine, University of Oulu, Finland, 4Institute of General Zoology and Endocrinology, Universitu of Ulm, Germany, 5Inserm, Institut Cochin, Paris, France
Disclosures: Karin Nilsson, None

10:00 am
ASBMR 2018 Annual Meeting President’s Award
1043
Role of Osterix (SP7) in Regulating Osteocyte Biology and Dendrite Formation
Fatemeh Mirzamohammadi*, Hironori Hojo2, Tetsuya Enishi1, Nicolas Govea1, Henry M. Kronenberg1, Marc N. Wein1. 1Center for Skeletal Research, Endocrine Unit, Department of Medicine, Massachusetts General Hospital, Harvard Medical School, 50 Blossom Street, Boston, Massachusetts 02114, United States, 2Center for Disease Biology and Integrative Medicine, The University of Tokyo Graduate School of Medicine, 7-3-1 Hongo, Bunkyo-ku, Tokyo 113-8656, Japan
Disclosures: Fatemeh Mirzamohammadi, None

10:15 am
Hypermineralization of bones by Col2a1-expressing osteoblasts
1044
Yukiko Kuroda*, Koichi Matsuo. Laboratory of Cell and Tissue Biology, Keio University School of Medicine, Japan
Disclosures: Yukiko Kuroda, None

10:30 am
In vivo cell fates of CXCL12+ perisinusoidal bone marrow mesenchymal stromal stem cells
1045
Yuki Matsushita*, Noriaki Ono. University of Michigan School of Dentistry, United States
Disclosures: Yuki Matsushita, None

10:45 am
Osteocyte-Specific CXCL12 Expression Is Critical for Load-Induced Bone Formation in Adult Mice
1046
Pamela Cabahug-Zuckerman*, Chao Liu, Emily Fang, Alesha Castillo. New York University, United States
Disclosures: Pamela Cabahug-Zuckerman, None
PLENARY ORALS: TRANSLATIONAL HIGHLIGHTS I

9:45 am - 11:00 am
Palais des congrès de Montréal
Room 517 A

Moderator
Allison Pettit, PhD
The University of Queensland, Australia

Moderator
Genevieve Mailhot, PhD
Research Center, Sainte-Justine University Hospital University of Montreal, Canada

9:45 am
ASBMR 2018 Annual Meeting Young Investigator Award
1047
Cyclic and Alternating Parathyroid Hormone (PTH) and Alendronate Treatment Regimens Further Improve Bone Microarchitecture and Strength Beyond Daily and Cyclic PTH Regimens
Wei-Ju Tseng, Hongbo Zhao, Tien-Jung Lee, Wonsae Lee, Yihan Li, Chantal de Bakker, X. Sherry Liu. 1University of Pennsylvania, United States, 2National Central University, Taiwan
Disclosures: Hongbo Zhao, None

10:00 am
ASBMR 2018 Annual Meeting Most Outstanding Translational Abstract
1048
Osteocalcin Function On Energy Metabolism Is Conserved In Humans: Results of a 5 Year Prospective Cohort of Diabetes Onset
Cyrille Confavreux*1, Pawel Szulc2, Matthieu Wargny3, Marie Christine Carlier2, Elisabeth Sornay-Rendu2, Matthieu Pichelin1, Bertrand Cariou3. 1INSERM UMR1033 - University of Lyon - Department of Rheumatology, Hospices Civils de Lyon, France, 2INSERM UMR1033 - University of Lyon, France, 3INSERM UMR 6291- Department of Endocrinology, University Hospital of Nantes, France
Disclosures: Cyrille Confavreux, None

10:15 am
RANK Ligand inhibitors improve muscle function and glucose homeostasis
1050
Nicolas Bonnet*, Lucie Bourgoin, Emmanuel Biver, Thierry Chevalley, Melany Hars, Andrea Trombetti, Serge Ferrari. Service of Bone Diseases, Faculty of Medicine (UNIGE), Switzerland
Disclosures: Nicolas Bonnet, None

10:30 am
Sympathetic Outflow Regulates Bone Metabolism in Humans: Evidence from Cellular, Epidemiological, and Direct Interventional Studies
1051
Sundeep Khosla*1, Matthew Drake1, Tammie Volkman1, Brianne Thicke1, Sara Achenbach1, Elizabeth Atkinson1, Michael Joyner1, Clifford Rosen2, David Monroe1, Joshua Farr1, 1Mayo Clinic, United States, 2Maine Medical Center Research Institute, United States
Disclosures: Sundeep Khosla, None
NEW! CHALLENGE THE EXPERTS: MINERAL DISORDERS (CALCIUM AND PHOSPHATE)
Supported by Ultragenyx Pharmaceutical

11:00 am - 12:00 pm  
Palais des congrès de Montréal  
Room 517 B

Chair:
Ghada El-Hajj Fuleihan MD  
American University of Beirut-Medical Center, Lebanon
Disclosures: None

Panelist:
Erik Imel, MD, MS  
Indiana University School of Medicine, United States
Disclosures: Consultant: Ultragenyx Pharmaceutical Inc.  
Grant/Research Support: Ultragenyx Pharmaceutical Inc.  
Other Financial or Material Support: Ultragenyx Pharmaceutical Inc.

Panelist:
Thomas Carpenter, MD  
Yale University School of Medicine, United States
Disclosures: Grant/Research Support: Ultragenyx Pharmaceutical Inc.  
Consultant: Ultragenyx Pharmaceutical Inc.  
Other Financial or Material Support: Ultragenyx Pharmaceutical Inc.

Panelist:
Suzanne Jan De Beur, MD  
Johns Hopkins University, United States
Disclosures: Grant/Research Support: Mereo BioPharma Group Ltd, Shire plc, Ultragenyx Pharmaceutical Inc.  
Consultant: Ultragenyx Pharmaceutical Inc.

ASBMR-IOF-FFN JOINT SESSION: CLOSING THE TREATMENT GAP

11:00 am - 12:00 pm  
Palais des congrès de Montréal  
Room 517 C

Co-Chairs
Sundeep Khosla, MD  
Mayo Clinic College of Medicine, United States
Disclosures: None

Nicholas Harvey, PhD  
MRC Lifecourse Epidemiology Unit, University of Southampton, United Kingdom
Disclosures: None

Paolo Falaschi, MD  
Sapienza Universita di Roma, Italy
Disclosures: None

11:00 am  
ASBMR Secondary Fracture Prevention Initiative
Douglas Kiel, MD  
Institute for Aging Research Hebrew SeniorLife, United States
Disclosures: None
11:20 am  Closing the Treatment Gap Worldwide: An IOF Perspective  
Cyrus Cooper, PhD  
University of Southampton, United Kingdom  
Disclosures: None  

11:40 am  Global Call to Action to Improve the Care of People with Fragility Fractures  
Paul Mitchell, MS  
University of Notre Dame Australia, New Zealand  
Disclosures: None  

MEET THE PROFESSOR SESSIONS  
11:00 am - 12:00 pm  
Palais des congrès de Montréal  

Meet the Professor: AFF, Drug Holiday  
Room 521  
Bo Abrahamsen, MD, PhD  
University of Southern Denmark, Denmark  
Disclosures: Grant/Research Support: UCB and Novartis  

Meet the Professor: Mechanosensitive Osteocytes: Insights into How the Osteocytes Control the Bone Response to Bone Loading and Unloading  
Room 518 A  
Jean Jiang, PhD  
University of Texas Health Science Center at San Antonio, United States  
Disclosures: None  

Meet the Professor: Bone Muscle Interactions  
Room 522  
Lynda Bonewald, PhD  
Indiana University School of Medicine, United States  
Disclosures: None  

Meet the Professor: Effects of Cancer on the Skeleton  
Room 518 C  
Matthew Drake, MD, PhD  
College of Medicine, Mayo Clinic, United States  
Disclosures: None  

Meet the Professor: Nutrition and Fragility  
Room 519 B  
Shivani Sahni, PhD  
Harvard Medical School, United States  
Disclosures: None  
Marian Hannan, PhD  
HSL Institute for Aging Research and Harvard Medical School, United States  
Disclosures: None  

Meet the Professor: Function of Extracellular Vesicles and Exosomes in Cell-Cell Communication in Bone Cells  
Room 518 B  
Sarah Dallas, PhD  
University of Missouri - Kansas City, United States  
Disclosures: None
Meet the Professor: Reversal Phase in Bone Remodeling
Room 519 A
Jean-Marie Delaisse, PhD
Vejle/Lillebælt Hospital, IRS, University of Southern Denmark, Denmark
Disclosures: None

Meet the Professor: miRNAs and Bone
Room 525
Anne Delaney, PhD
UConn Health, United States
Disclosures: None

PUBLICATIONS WORKSHOP
11:00 am - 12:15 pm
Palais des congrès de Montréal
Room 510

New this year! The 2018 Publications Workshop will feature new interactive roundtable sessions with the JBMR® and JBMR® Plus Editors. Meet with JBMR® Editor-in-Chief Dr. Roberto Civitelli, M.D. and JBMR® Plus Editor-in-Chief Dr. Peter Ebeling, AO, as well as Deputy and Associate Editors from both journals to discuss topics such as title optimization, figure preparation, improving manuscript quality, getting selected as a new reviewer, and many other subjects. All of the roundtable discussions will be fully collaborative, so make sure to bring your questions on navigating the submission process, maximizing visibility for your paper, and the latest technologies in scholarly publishing, or anything else you want to know!

NETWORKING BREAK
12:00 pm - 12:30 pm
Palais des congrès de Montréal
ASBMR Discovery Hall - Exhibit Hall 220 B-E

POSTER SESSION I AND POSTER TOURS
12:30 pm - 2:30 pm
Palais des congrès de Montréal
ASBMR Discovery Hall - Exhibit Hall 220 B-E

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SYMPOSIUM: FALL ASSESSMENT AND PREVENTION
2:45 pm - 4:00 pm
Palais des congrès de Montréal
Room 517 D

Co-Chairs
Stephen Robinovitch, PhD
Simon Fraser University, Canada
Disclosures: None

Elsa Strotmeyer MPH, PhD
University of Pittsburgh, United States
Disclosures: None
2:45 pm  
**Fall Risk Factors and Assessment**  
Nathalie van der Velde, MD, PhD  
University of Amsterdam, The Netherlands  
*Disclosures: None*

3:10 pm  
**Sarcopenia and Falls**  
Peggy Cawthon, PhD, MPH  
San Francisco Coordinating Center, United States  
*Disclosures: None*

3:35 pm  
**Falls Prevention**  
David Reuben, MD  
UCLA Medical Center, United States  
*Disclosures: None*

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**ASBMR/ECTS SYMPOSIUM: SPEAKING FROM THE GUT: BONE AND THE MICROBIOME**

2:45 pm - 4:00 pm  
Palais des congrès de Montréal  
Room 517 A

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**Co-Chairs**  
Laura McCabe, PhD  
Michigan State University, United States  
*Disclosures: None*

Roberto Pacifici, MD  
Emory University School of Medicine, United States  
*Disclosures: None*

2:45 pm  
**Microbiome, IGF-1 and Bone Formation**  
Julia Charles, MD, PhD  
Brigham and Women's Hospital and Harvard School of Medicine, United States  
*Disclosures: None*

3:10 pm  
**Bone Strength and the Microbiome**  
Christopher Hernandez, PhD  
Cornell University, United States  
*Disclosures: None*

3:35 pm  
**Osteomicrobiology**  
Andre Uitterlinden, PhD  
Rm Ee 575, Genetic Laboratory, Netherlands  
*Disclosures: None*
**NETWORKING BREAK**

4:00 pm - 4:30 pm  
Palais des congrès de Montréal  
ASBMR Discovery Hall - Exhibit Hall 220 B-E

**CONCURRENT ORALS: HORMONAL AND GROWTH FACTOR RESPONSES**

4:30 pm - 6:00 pm  
Palais des congrès de Montréal  
Room 517 B

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**Moderators**

- David Monroe, PhD  
  Mayo Foundation, United States
- Ling Qin, PhD  
  University of Pennsylvania, United States

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**4:30 pm**

1052  
**ASBMR 2018 Annual Meeting Young Investigator Award**  
DMP1 overexpression prevents bone alterations, FGF23 elevations and cardiac hypertrophy in mice with chronic kidney disease

Corey Dussold*, Claire Gerber¹, Samantha White¹, Xueyan Wang¹, Connor Francis¹, Lixin Qi², Ying Liu², Chaoyuan Li², Jian Q Feng², Myles Wolf³, Valentin David¹, Aline Martin¹.  
¹Division of Nephrology and Hypertension, and Center for Translational Metabolism and Health, Northwestern University Feinberg School of Medicine, Chicago, IL, United States,  
²Department of Biomedical Sciences, Baylor College of Dentistry, Texas A&M University, Dallas, TX, United States,  
³Division of Nephrology, Duke University, Durham, NC, United States

**Disclosures:** Corey Dussold, None

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**4:45 pm**

1053  
**Overexpression of PTHrP in Transgenic Mammary Tumors Causes Hypercalcemia and Rapid Fat Wasting but does not Increase Energy Expenditure.**

Pamela Dann*, Farzin Takyar¹, Kellen Bean², Rachel Perry¹, Gerald Shulman¹, John Wyosolmerski¹.  
¹Yale University, United States, ²Yale College, United States

**Disclosures:** Pamela Dann, None

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**5:00 pm**

1054  
**A novel regulatory network mediated by the miR182-PKR-IFN-β axis plays a key role in osteoclastogenesis and osteoprotection**

Kazuki Inoue*, Zhonghao Deng¹, Yufan Chen³, Gregory Vitone², Eugenia Giannopoulou¹, Ren Xu¹, Shiaoching Gong³, David G. Kirsch³, Matthew Greenblatt³, Anil K. Sood³, Liang Zhao¹, Baohong Zhao¹.  
¹Hospital for Special Surgery, Weill Cornell Medical College, United States,  
²Hospital for Special Surgery, United States,  
³Nanfang Hospital, Southern Medical University, China,  
⁴New York City College of Technology, City University of New York, United States,  
⁵Weill Cornell Medical College, United States,  
⁶Department of Molecular Biology, The Rockefeller University, United States,  
⁷Duke University Medical Center, United States,  
⁸The University of Texas MD Anderson Cancer Center, United States

**Disclosures:** Kazuki Inoue, None

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**5:15 pm**

1055  
**Transcriptional Co-factor Jab1 is Vital for Mouse Chondrocyte Differentiation**

Murali Mamidi*, William Samsa, Ricky Chan, Guang Zhou. Case Western Reserve University, United States

**Disclosures:** Murali Mamidi, None
ASBMR 2018 Annual Meeting Young Investigator Award

1056
Targeting the Hedgehog Signaling Pathway to Ameliorate Metachondromatosis
Jiahui Huang*, Douglas Moore, Michael Ehrlich, Wentian Yang. Department of Orthopaedics, Brown University Alpert Medical School and Rhode Island Hospital, United States
Disclosures: Jiahui Huang, None

5:45 pm
Teasing Apart Endocrine and Inflammatory Control of Cyp27b1 Expression Reveals Vital Relationships of Vitamin D3 Metabolites and Enzyme Levels to Skeletal Health
Mark Meyer*, Nancy Benkusky¹, Seong Min Lee¹, Melda Onal², Martin Kaufmann², Glenville Jones², J. Wesley Pike¹. ¹University of Wisconsin - Madison, United States, ²Queen's University, Canada
Disclosures: Mark Meyer, None

CONCURRENT ORALS: OSTEOPOROSIS TREATMENT
4:30 pm - 6:00 pm
Palais des congrès de Montréal
Room 517 A

Moderators
Amna Khan, MD, MBBS
University of Pennsylvania and Philadelphia VA medical center, United States

Jan Bruder, MD
University of Texas Health Science Center at San Antonio, United States

4:30 pm
1058 Change in Bone Turnover as a Surrogate for Fracture Outcomes: A Novel Individual-level Analysis of Pooled Anti-resorptive Trials from the FNIH Bone Quality Study
Douglas Bauer*, Eric Vittinghoff³, Dennis Black¹, Mary Bouxsein², Li-Yung Lui³, Jane Cauley¹, Anne De Papp¹, Andreas Grauer³, Sundeep Khosla⁴, Bruce Mitlak³, Charles McCulloch¹, Richard Eastell⁵. ¹University of California, San Francisco, United States, ²Harvard Medical School, United States, ³California Pacific Medical Center, United States, ⁴University of Pittsburgh, United States, ⁵Merck & Co., Inc., United States, ⁶Amgen Inc., United States, ⁷Mayo Clinic College of Medicine, United States, ⁸Radius Health, United States, ⁹University of Sheffield, United Kingdom
Disclosures: Douglas Bauer, None

4:45 pm
1059 Effect of Denosumab and High-Dose Teriparatide on Peripheral Bone Mineral Density and Microarchitecture
Joy Tsai¹, Amy Yuan¹, Natalie David¹, Hang Lee¹, Mary Bouxsein², Benjamin Leder¹. ¹Massachusetts General Hospital, United States, ²Beth Israel Deaconess Medical Center, United States
Disclosures: Joy Tsai, None

5:00 pm
1060 Effect of Dual-Task Functional Power and Mobility Training on Falls and Physical Function in Older People Living in Retirement Villages: A Cluster Randomised Controlled Trial
Robin Daly*, Rachel Duckham¹, Jamie Tait¹, Timo Rantalainen¹, Caryl Nowson¹, Dennis Taaffe³, Keith Hill³, Lucy Busija⁴, Kerrie Sanders⁵. ¹Institute for Physical Activity and Nutrition, Deakin University, Australia, ²Gerontology Research Centre, University of Jyväskylä, Finland, ³School of Medical and Health Sciences, Edith Cowan University, Australia, ⁴School of Physiotherapy and Exercise Science, Curtin University, Australia, ⁵Mary MacKillop Institute for Health Research, Australian Catholic University, Australia, ⁶Department of Medicine, University of Melbourne, Australia
Disclosures: Robin Daly, None
5:15 pm 1061  
**Skeletal Benefit/risk of Long-term Denosumab Therapy: A Virtual Twin Analysis of Fractures Prevented To Skeletal Safety Events Observed**  
Serge Ferrari*1, E Michael Lewiecki2, Peter W Butler2, David L Kendler2, Nicola Napoli2, Shuang Huang1, D Barry Crittenden1, Nicola Pannacciuilli1, Ethel Siris4, Neil Binkley7.  
1Geneva University Hospital, Switzerland, 2New Mexico Clinical Research & Osteoporosis Center, United States, 3Amgen Inc., United States, 4University of British Columbia, Canada, 5Università Campus Bio-Medico di Roma, Italy, 6Columbia University Medical Center, United States, 7University of Wisconsin-Madison, United States  
*Disclosures: Serge Ferrari, AMGEN, UCB, Labatec, Agnovos, Consultant, UCB, MSD, Grant/Research Support*

5:30 pm 1062  
**The Calgary Vitamin D Study: Bone Microarchitecture Effects of Three-Year Supplementation With 400, 4000 or 10000 IU Daily**  
Lauren A Burt*1, Marianne S Rose2, Emma O Billington1, Duncan A Raymond1, David A Hanley1, Steven K Boyd1.  
1McCaig Institute for Bone and Joint Health, Cumming School of Medicine, University of Calgary, Canada, 2Research Facilitation, Alberta Health Services, Canada  
*Disclosures: Lauren A Burt, None*

5:45 pm 1063  
**Physiotherapy Rehabilitation for Osteoporotic Vertebral Fracture - A randomised controlled trial and economic evaluation (PROVE trial): ISRCTN 49117867**  
Karen Barker*1, Meredith Newman2, Nigel Stallard3, Jose Leal1, Catherine Minns Lowe2, Muhammad Javid1, Angela Noufaily1, Anish Adhikari1, David Smith1, Varsha Gandhi1, Cyrus Cooper1, Sarah Lamb1.  
1University of Oxford, United Kingdom, 2Oxford University Hospitals Foundation Trust, United Kingdom, 3University of Warwick, United Kingdom  
*Disclosures: Karen Barker, None*

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**CONCURRENT ORALS: RARE BONE DISEASES: TRANSLATIONAL**

4:30 pm - 6:00 pm  
Palais des congrès de Montréal  
Room 517 D

**Moderators**  
Joan Marini, MD, PhD  
National Institute of Child Health and Human Development, United States

Francis Glorieux, MD, PhD  
Shriners Hospital for Children and McGill University, Canada

4:30 pm 1064  
**Impaired Dendritic Cell Function and Bacterial Load Increase in the Oral Microenvironment as Contributing Factors to the Induction of MRONJ**  
Ranya Elsayed*, Esteban Celis2, Hussein Sultan2, Christopher Cutler1, Mahmoud Elashiry1, Mohamed Meghil3, Zoya Kurago1, Mohamed Awad1, Mohey Eldin El-Shikh1, Mohammed Elsalanty1, Riham El Sayed1.  
1Department of Oral Biology, Dental College of Georgia, Augusta University, United States, 2Biochemistry and Molecular Biology, Georgia Cancer Center, Medical College of Georgia, Augusta University, United States, 3Queen Mary, University of London, United Kingdom  
*Disclosures: Ranya Elsayed, None*

4:45 pm 1065  
**ASBMR 2018 Annual Meeting Young Investigator Award**  
Niambi Brewer*, John T Fong2, Deyu Zhang2, Frederick S Kaplan2, Robert J Pignolo1, Eileen M Shore1.  
1Departments of Orthopaedic Surgery and Genetics, Perelman School of Medicine, University of Pennsylvania, United States, 2Department of Orthopaedic Surgery, Perelman School of Medicine, University of Pennsylvania, United States, 3Division of Geriatric Medicine and Gerontology, Mayo Clinic College of Medicine, United States  
*Disclosures: Niambi Brewer, None*
Prevention of Zoledronate-Induced MRONJ with Indocyanine Green (ICG) Labeled Bisphosphonates
Shuting Sun*1, Akishige Hokugo1, Frank H. (Hal) Ebetino1, Keivan Sadrerafi1, Philip Cherian1, Charles E. McKenna1, Ichiro Nishimura2. 1Biovinc, United States, 2UCLA School of Dentistry, United States, 3Chemistry Department, University of Southern California, United States
Disclosures: Shuting Sun, BioVinc, Major Stock Shareholder

The Effect of Androgens on Renal Calcium and Phosphate Handling, Independent of Bone and in Circumstances of Low Dietary Calcium
Rougin Khalil*1, Na Ri Kim1, Ferran Jardi1, Frank Claessens2, Dirk Vanderschueren1, Brigitte Decallonne1. 1KU Leuven, Department of Chronic Diseases, Metabolism & Ageing (CHROMETA), Clinical and Experimental Endocrinology, Leuven, Belgium, 2KU Leuven, Department of Cellular and Molecular Medicine, Molecular Endocrinology, Leuven, Belgium
Disclosures: Rougin Khalil, None

PPARγ in cells of the mesenchymal lineage is dispensable for the age-dependent decline of bone mass and hematopoietic changes in the appendicular skeleton
Maria Almeida*, Michela Palmieri, Ha-Neui Kim, Li Han, Xin Zhang, Wen Li, Yonghan He, Robert Weinstein, Daohong Zhou, Stavros Manolagas, Robert Jilka. UAMS, United States
Disclosures: Maria Almeida, None

An Antibody against Oxidized Phospholipids Promotes Bone Anabolism by Preventing their Binding to the Scavenger Receptor ScrB1 and thereby their Pro-Apoptotic Effect on Osteoblasts
Elena Ambrogini*1, Michela Palmieri1, Li Han1, Xuchu Que2, Sotirios Tsimikas2, Joseph L Witztum2, Stavros C Manolagas1, Robert L Jilka3. 1Center for Osteoporosis and Metabolic Bone Diseases, University of Arkansas for Medical Sciences and the Central Arkansas Veterans Healthcare System, United States, 2Department of Medicine, University of California San Diego, United States, 3Center for Osteoporosis and Metabolic Bone Diseases, Center for Osteoporosis and Metabolic Bone Diseases, University of Arkansas for Medical Sciences and the Central Arkansas Veterans Healthcare System, United States
Disclosures: Elena Ambrogini, None

BASIC EVENING: EPIGENETICS AND OSTEOIMMUNOLOGY
6:30 pm - 8:30 pm
Palais des congrès de Montréal
Room 510

Space is limited and available on a first-come, first-served basis. Attendees must be registered for the ASBMR 2018 Annual Meeting.

Co-Chairs
Mark Horowitz, PhD
Yale School of Medicine, United States
Disclosures: None

Joseph Lorenzo, MD
University of Connecticut Health Center, United States
Disclosures: None

6:30 pm
Dinner

7:00 pm
Epigenetic Regulation of Myeloid Cells
Lionel Ivashkiv, MD
Weill Cornell Medicine, United States
Disclosures: None
7:30 pm  Regulation of Chromatin Landscape During RANKL-induced Osteoclastogenesis  
Sakae Tanaka, MD, PhD  
The University of Tokyo, Japan  
Disclosures: Consultant: Amgen Astellas, MSD, AbbVie, Daiichi Sankyo, Eli Lilly, Ono, Asahi Kasei Pharma, Teijin Pharma

8:00 pm  Role of Histone Deacetylases in Bone Development and Skeletal Disorders  
Jennifer Westendorf, PhD  
Mayo Clinic, United States  
Disclosures: None

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**CLINICAL EVENING: PERSONALIZED MEDICINE VS EVIDENCED BASED MEDICINE**

6:30 pm - 8:30 pm  
Palais des congrès de Montréal  
Room 210 A-F

Space is limited and available on a first-come, first-served basis. Attendees must be registered for the ASBMR 2018 Annual Meeting.

**Co-Chairs**

- Johannes Van Leeuwen, PhD  
  Erasmus University Medical Center, Netherlands  
  Disclosures: None

- Emma Duncan FRACP, MBBS, PhD  
  Royal Brisbane and Women's Hospital, Australia  
  Disclosures: None

6:30 pm  Dinner

7:00 pm  Challenges in Implementation of Personalized Therapeutics  
Mark Ratain, MD  
The University of Chicago, United States  
Disclosures: None

7:30 pm  Evidence-based Medicine: Will the Pyramid Fall Down?  
Carolyn Crandall, MD, MS  
University of California, Los Angeles, United States  
Disclosures: None

8:00 pm  Vitamin D: Impact of Genetic Variations on Circulating Levels, Tissue Access, and Physiologic Response  
Daniel Bikle, MD, PhD  
Endocrine Research Unit, Division of Endocrinology UCSF and VAMC, United States  
Disclosures: None

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**NETWORKING EVENT**

8:30 pm - 11:30 pm  
Palais des congrès de Montréal  
Room 710 A

Join us for an evening of food, drinks and dancing at the ASBMR Networking Event! Connect with colleagues, both old and new, and help us celebrate the American Society for Bone and Mineral Research! Admission is included with Annual Meeting registration.
Sunday, September 30, 2018
Day-At-A-Glance

Time/Event/Location

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The PROMIS® of Improved Bone Health in Older Adults
Room 510

7:00 am - 5:00 pm ................................................................. 39
Registration Open
Viger Hall - Level 2

8:00 am - 9:15 am ................................................................. 39
Symposium: FGF Signaling in Bone Growth, Chondrodysplasia Syndromes, and Osteoarthritis: Basic Mechanisms and Therapeutic Approaches
Room 210 A-F

8:00 am - 9:15 am ................................................................. 39
Symposium: The Athlete’s Skeleton: Going the Distance
Room 517 A

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Networking Break
ASBMR Discovery Hall - Exhibit Hall 220 B-E

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Posters Open
ASBMR Discovery Hall - Exhibit Hall 220 B-E

9:30 am - 4:30 pm ................................................................. 40
Discovery Hall Open
ASBMR Discovery Hall - Exhibit Hall 220 B-E

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Plenary Orals: John H. Carstens Memorial Session: Osteoporosis Treatment
Room 210 A-F

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Plenary Orals: Translational Highlights II
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Hands-On Workshop: Histomorphometry: An Interactive Introduction
Room 520 BE

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New! Cutting Edge Technologies: Using 3-D Cell Culture for In vitro/Ex Vivo Approaches to Study Communication Among Bone/Bone Marrow Cells
Room 510

11:00 am - 12:00 pm ............................................................. 43
New! Challenge the Experts: Other Rare Bone Diseases
Room 517 B

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Genomics for Clinicians
517 C

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Meet the Professor Sessions
12:00 pm - 12:30 pm
Networking Break
ASBMR Discovery Hall - Exhibit Hall 220 B-E

12:30 pm - 2:30 pm
Poster Session II and Poster Tours
ASBMR Discovery Hall - Exhibit Hall 220 B-E

12:30 pm - 2:30 pm
Late-Breaking Posters II
ASBMR Discovery Hall - Exhibit Hall 220 B-E

2:30 pm - 4:00 pm
Concurrent Orals: Pediatrics
Room 210 A-F

2:30 pm - 4:00 pm
Concurrent Orals: Osteoblasts
Room 517 D

2:30 pm - 4:00 pm
Concurrent Orals: Osteocytes and Bone Development
Room 517 B

2:30 pm - 4:00 pm
Concurrent Orals: Preclinical Models: Nutrition and Pharmacology
Room 517 A

4:00 pm - 4:30 pm
Networking Break
ASBMR Discovery Hall - Exhibit Hall 220 B-E

4:30 pm - 5:45 pm
Concurrent Orals: Regulation of Bone Formation and Mineralization
Room 517 B

4:30 pm - 5:45 pm
Concurrent Orals: Bone Imaging
Room 517 D

4:30 pm - 5:45 pm
Concurrent Orals: Epidemiology
Room 517 C

4:30 pm - 5:45 pm
Concurrent Orals: Energy Metabolism, Bone, Muscle and Fat II
Room 517 A

6:00 pm - 7:00 pm
ASBMR Town Hall Meeting
Room 510

7:00 pm - 8:30 pm
Diversity in Bone and Mineral Research Networking Reception
Le Westin, Palais

7:15 pm - 9:15 pm
Bone Turnover Markers Working Group
Room 520 C

7:15 pm - 9:30 pm
Working Group on Aging
Room 520 F

7:15 pm - 9:30 pm
Pediatric Bone and Mineral Working Group
520 B-E
INDUSTRY SUPPORTED SYMPOSIUM: THE PROMIS® OF IMPROVED BONE HEALTH IN OLDER ADULTS

Sponsoring/Organizing Company: CME Outfitters, LLC
Supporting Company: Pfizer Inc.

6:00 am - 7:45 am
Palais des congrès de Montréal
Room 510

Agenda

- Changing the “Who” in How We Think About Individuals At-Risk for Osteoporosis
  - Objective: Recognize the prevalence and impact of osteoporosis in older men and initiate an assessment of bone health.
  - Risk among men for fractures related to osteoporosis
  - Individual and global burden
  - TUG: Assessing all older adults for osteoporosis

- Calcium and Vitamin D Supplementation to Improve Bone Health and Decrease Fracture Risk: What are the Data?
  - Objective: Assess the safety and efficacy data for calcium and vitamin D supplementation in reducing fracture risk.
  - Present safety and efficacy data for supplementation in patients who do not meet dietary needs
  - What is the controversy?
  - Making informed treatment decisions about supplementation

- Integrating Patient-Reported Outcomes into Clinical Workflow
  - Objective: Implement PROs into clinical workflow to measure change in function and quality of life in patients with osteoporosis.
  - PROMIS measure
  - OP-AQ-PH
  - Tips and tricks for integrating PROs into practice and engaging patients in their recognition and care

- SMART Goals/Conclusions/Q&A

Accreditation Statements:

CME Outfitters, LLC, is accredited by the Accreditation Council for Continuing Medical Education (ACCME) to provide continuing medical education for physicians.

CME Outfitters, LLC, designates this live activity for a maximum of 1.25 AMA PRA Category 1 Credit(s)™. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

Successful completion of this CME activity, which includes participation in the evaluation component, enables the participant to earn up to 1.25 MOC points in the American Board of Internal Medicine’s (ABIM) Maintenance of Certification (MOC) program. Participants will earn MOC points equivalent to the amount of CME credits claimed for the activity. It is the CME activity provider’s responsibility to submit participant completion information to ACCME for the purpose of granting ABIM MOC credit.

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Enduring: 0376-0000-18-019-H01-P
Provider approved by the California Board of Registered Nursing, Provider Number CEP 15510, for 1.25 contact hours

Note to Nurse Practitioners and Clinical Nurse Specialists: the content of this activity pertains to pharmacology. Earn up to 1.25 contact hours of pharmacotherapeutic contact hours.

Note to Nurse Practitioners: Nurse practitioners can apply for *AMA PRA Category 1 Credit™* through the American Academy of Nurse Practitioners (AANP). AANP will accept *AMA PRA Category 1 Credit™* from organizations accredited by the Accreditation Council for Continuing Medical Education. Nurse practitioners can also apply for credit through their state boards.

Note to Physician Assistants: AAPA accepts certificates of participation for educational activities certified for *AMA PRA Category 1 Credit™* from organizations accredited by the Accreditation Council for Continuing Medical Education.

Faculty:
Joseph M. Lane, MD-moderator
Professor, Orthopaedic Surgery
Assistant Dean, Medical Students (HSS)
Weill Cornell Medical College
Chief, Metabolic Bone Disease Service
Hospital for Special Surgery
New York, NY

Disclosures:
Grants: National Institutes of Health (NIH) - subcontract with Helen Hayes Hospital
Research Support: Novartis – Clinical Trial Hip Fracture Study
Consultant: ON Foundation; CollPlant Inc.

Richard S. Bockman, MD, PhD
Chief, Endocrine Service
Attending Physician
Senior Scientist
Hospital for Special Surgery
Professor of Medicine, Endocrine Division
Weill Cornell Medical College
New York, NY

Emily Margaret Stein, MD, MS
Associate Attending Physician
Associate Research Scientist
Internal Medicine, Endocrinology, Metabolic Bone
Hospital for Special Surgery
New York, NY

Kirsten Grueter, RN
Fracture Liaison Nurse
Office of Joseph Lane, MD
Hospital for Special Surgery
New York, NY
REGISTRATION OPEN
7:00 am - 5:00 pm
Palais des congrès de Montréal
Viger Hall - Level 2

SYMPOSIUM: FGF SIGNALING IN BONE GROWTH, CHONDRODYSPLASIA SYNDROMES, AND OSTEOARTHRITIS: BASIC MECHANISMS AND THERAPEUTIC APPROACHES
8:00 am - 9:15 am
Palais des congrès de Montréal
Room 210 A-F

Co-Chairs
Kenneth White, PhD
Indiana University School of Medicine, United States
Disclosures: Other Financial or Material Support: Kyowa Hakko Kirin Co. Ltd
Liping Xiao, PhD
UConn Health, United States
Disclosures: None

8:00 am FGFs Bone Homeostasis
David Ornitz, MD, PhD
Washington University, United States
Disclosures: None

8:25 am Therapeutic Approaches for Achondroplasia and Hypochondroplasia
Laurence Legeai-Mallet, PhD
INSERM U1163 - Imagine Institute-Paris Descartes university, France
Disclosures: None

8:50 am FGF-18 in Osteoarthritis
Jeffrey Kraines, MD
EMD Serono Research and Development Institute, United States
Disclosures: None

SYMPOSIUM: THE ATHLETE’S SKELETON: GOING THE DISTANCE
8:00 am - 9:15 am
Palais des congrès de Montréal
Room 517 A

Co-Chairs
Laura Tosi, MD
Children’s National Medical Center, United States
Disclosures: None
Mary Leonard, MD
Stanford School of Medicine, United States
Disclosures: None

8:00 am Stress Fractures in Athletes
Stuart Warden, PhD
Indiana University School of Health and Rehabilitation Sciences, United States
Disclosures: None
8:25 am  Female Athlete Triad  
Catherine Gordon, MD  
Cincinnati Children’s Hospital, United States  
Disclosures: None

8:50 am  Limiting Activity in Patients with Metabolic Bone Disorders  
Frank Rauch, MD  
Shriners Hospital for Children, Montreal, Canada  
Disclosures: Other Financial or Material Support: Ultragenyx Pharmaceutical Inc.

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**NETWORKING BREAK**

9:15 am - 9:45 am  
Palais des congrès de Montréal  
ASBMR Discovery Hall - Exhibit Hall 220 B-E

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**POSTERS OPEN**

9:30 am - 4:30 pm  
Palais des congrès de Montréal  
ASBMR Discovery Hall - Exhibit Hall 220 B-E

All posters will be displayed in the ASBMR Discovery Hall - Exhibit Hall 220 B-E on Saturday, September 29 - Monday, October 1 during exhibit hall hours. For a full listing of all poster and late-breaking poster presentations, please refer to the poster section located in the back of the Onsite Program Book.

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**DISCOVERY HALL OPEN**

9:30 am - 4:30 pm  
Palais des congrès de Montréal  
ASBMR Discovery Hall - Exhibit Hall 220 B-E

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**PLENARY ORALS: JOHN H. CARSTENS MEMORIAL SESSION: OSTEOPOROSIS TREATMENT**

9:45 am - 11:00 am  
Palais des congrès de Montréal  
Room 210 A-F

**Moderators**

Juliet Compston, MD  
University of Cambridge School of Clinical Medicine, United Kingdom

Michael McClung, MD  
Oregon Osteoporosis Center, United States
9:45 am  
Change in BMD as a Surrogate for Fracture Risk Reduction in Osteoporosis Trials: Results from Pooled, Individual-level Patient Data from the FNIH Bone Quality Project  
Dennis Black*, Eric Vittinghoff¹, Richard Eastell², Douglas Bauer³, Li-Yung Lui², Lisa Palermo¹, Charles Mcculloch¹, Jane Cauley⁴, Sundee Khosla⁵, Fernando Marín⁶, Anne De Papp⁷, Andreas Grauer⁸, Mary Bouxsein⁹. ¹University of California, San Francisco, United States, ²University of Sheffield, United Kingdom, ³California Pacific Medical Center, United States, ⁴University of Pittsburgh, United States, ⁵Mayo Clinic, United States, ⁶Eli Lilly and Company, Switzerland, ⁷Merck & Co., Inc., United States, ⁸Amgen, Inc., United States, ⁹Harvard Medical School, United States  
Disclosures: Dennis Black, Radius Pharmaceutical, Consultant, Asahi-Kasei, Consultant, Roche Diagnostics, Speakers’ Bureau

10:00 am  
Probiotic Treatment Using a Mix of Three Lactobacillus Strains Protects Against Lumbar Spine Bone Loss in Healthy Early Postmenopausal Women  
Claes Ohlsson*, Dan Curiac³, Klara Sjögren¹, Per-Anders Jansson³. ¹Centre for Bone and Arthritis Research, Institute of Medicine, the Sahlgrenska Academy at University of Gothenburg, Sweden, ³CTC, Gothia Forum, Sahlgrenska University Hospital, Sweden, ²Department of Molecular and Clinical Medicine, the Sahlgrenska Academy, University of Gothenburg, Sweden 
Disclosures: Claes Ohlsson, None

10:15 am  
ASBMR 2018 Annual Meeting Most Outstanding Clinical Abstract  
VK5211, a Novel Selective Androgen Receptor Modulator (SARM), Significantly Improves Lean Body Mass in Hip Fracture Patients: Results of a 12 Week Phase 2 Trial  
Branko Ristic*, Vladimir Harhaji², Paul Dan Sirbu³, Moises Irizarry-Roman⁴, Gabor Bucs⁵, Istvan Sztanyi⁶, Neil Binkley⁷, Denise Orwig⁷, Joel Neutel⁸, Ken Homer⁹, Marianne Mancini⁹, Hiroko Masamune⁹, Geoff Barker⁹, Brian Lian⁹. ²Clinical Center Kragujevac, Clinic for Orthopedics and Traumatology, Serbia, ³Clinical Center of Vojvodina, Clinic for Orthopedic Surgery and Traumatology, Serbia, ⁴County Hospital for Emergency Sfintul Spiridon Iasi, Clinical Section of Orthopedics and Traumatology, Romania, ⁵Infinite Clinical Research, United States, ⁶PTE ÁK Traumatology and Clinical Surgery, Hungary, ⁷University of Wisconsin School of Medicine and Public Health, United States, ⁸Department of Epidemiology and Public Health, University of Maryland School of Medicine, United States, ⁹Integrium Clinical Research, United States, ¹¹Viking Therapeutics, Inc., United States 
Disclosures: Branko Ristic, None

10:30 am  
Rapid and Large BMD Increases in Postmenopausal Women Treated With Combined High-Dose Teriparatide and Denosumab: The DATA-HD Randomized Controlled Trial  
Benjamin Leder*, Hang Lee², Natalie David², Richard Eastell¹, Tsai Joy². ¹Harvard Medical School, Massachusetts General Hospital, United States, ²Massachusetts General Hospital, United States, ³Mellanby Centre for Bone Research, United Kingdom  
Disclosures: Benjamin Leder, Amgen, Grant/Research Support, Lilly, Grant/Research Support, Amgen, Consultant

10:45 am  
T-score as an Indicator of Fracture Risk on Therapy: Evidence From Romosozumab vs Alendronate Treatment in the ARCH Trial  
Felicia Cosman*, E. Michael Lewiecki², Peter R. Ebeling³, Eric Hesse⁴, Nicola Napoli⁵, Daria B. Crittenden⁶, Maria Rojeski⁶, Wenjing Yang⁶, Cesar Libanati⁷, Serge Ferrari⁸. ²Columbia University, United States, ³New Mexico Clinical Research & Osteoporosis Center, United States, ⁴Monash University, Australia, ⁵University Medical Center Hamburg-Eppendorf, Germany, ⁶Campus Bio-Medico University of Rome, Italy, ⁷Amgen Inc., United States, ⁸UCB Pharma, Belgium, ⁹Geneva University Hospital, Switzerland  
Disclosures: Felicia Cosman, Amgen, Eli Lilly, Grant/Research Support, Amgen, Eli Lilly, Speakers’ Bureau, Advisory Boards Amgen, Eli Lilly, Merck, and Radius, Other Financial or Material Support, Merck, Radius, Tarsa, Consultant
PLENARY ORALS: TRANSLATIONAL HIGHLIGHTS II
9:45 am - 11:00 am
Palais des congrès de Montréal
Room 517 A

Moderators
Jean Jiang, PhD
University of Texas Health Science Center at San Antonio, United States

Hiroshi Kawaguchi, MD
Japan Community Health Care Organization (JCHO) Tokyo Shinjuku Medical Center, Japan

9:45 am

1075
ASBMR 2018 Annual Meeting Young Investigator Award
Breast Cancer Bone Metastases are Attenuated in a Tgif1-deficient Bone Microenvironment
Marie-Therese Haider*, Hiroaki Saito, Eric Hesse, Hanna Taipaleenmäki. Molecular Skeletal Biology Laboratory, Department of Trauma, Hand and Reconstructive Surgery, University Medical Center Hamburg-Eppendorf, Hamburg, Germany
Disclosures: Marie-Therese Haider, None

10:00 am

1076
TGF-beta inhibition restores the responsiveness to osteoanabolic PTH treatment in the Crtap-/- model of recessive Osteogenesis Imperfecta
Ingo Grafe*, Jennifer Zieba, Elda Munivez, Yuqing Chen, Ming-Ming Jiang, Brian Dawson, Carrie Jiang, Alexis Castellon, Joseph Sliepka, Sandesh Nagamani, Brendan Lee. Department of Molecular and Human Genetics, Baylor College of Medicine, United States
Disclosures: Ingo Grafe, None

10:15 am

1077
Osteocyte Senescence Underlies the Increase in RANKL in Aged Mice via a GATA4 Mediated Mechanism
Ha-Neui Kim,*1, Srividhya Iyer2, Jianhui Chang2, Li Han1, Aaron Warren1, Stavros Manolagas1, Charles O’Brien1, Daohong Zhou2, Maria Almeida1. 1University of Arkansas for Medical Sciences and Central Arkansas Veterans Healthcare System, United States, 2University of Arkansas for Medical Sciences, United States
Disclosures: Ha-Neui Kim, None

10:30 am

1078
BLU-782; a highly selective ALK2 inhibitor, designed specifically to target the cause of fibrodysplasia ossificans progressiva
Alison Davis*, Brian Houdou2, Timothy Labranche1, Michael Sheets1, Natasja Brooijmans1, Joseph Kim1, Brett Williams1, Sean Kim1, Lan Xu1, John Vassiliadis1, Julia Zhu1, Ruduan Wang1, Rachel Stewart1, Paul Fleming1, Chris Graul1, Elliot Greenblatt1, Keith Bouchard6, Vivek Kadambi1, Timothy Guizi4, Jeffrey Hunter6, Christoph Lengauer1, Marion Dorsch1, Andrew Garner1. 1Blueprint Medicines, United States, 2Accent Therapeutics, United States, 3Foghorn Therapeutics, United States, 4Invicro, United States, 5Akebia Therapeutics, United States, 6Alexion Pharmaceuticals, United States
Disclosures: Alison Davis, Blueprint Medicines, Major Stock Shareholder

10:45 am

1079
Estrogen Deficiency and Cellular Senescence Represent Independent Mechanisms in the Pathogenesis of Osteoporosis: Evidence from Studies in Mice and Humans
Joshua Farr*, David Monroe, Daniel Fraser, Brittany Negley, Brianne Thicke, Jennifer Onken, Robert Pignolo, Tamar Tchkonia, James Kirkland, Sundeep Khosla. Mayo Clinic, United States
Disclosures: Joshua Farr, None
HANDS-ON WORKSHOP: HISTOMORPHOMETRY: AN INTERACTIVE INTRODUCTION
11:00 am - 12:00 pm

Palais des congrès de Montréal
Room 520 BE

Hands-on Workshops are ticketed events and require advance registration. Registration is not available onsite.

NEW! CUTTING EDGE TECHNOLOGIES: USING 3-D CELL CULTURE FOR IN VITRO/EX VIVO APPROACHES TO STUDY COMMUNICATION AMONG BONE/BONE MARROW CELLS
11:00 am - 12:00 pm

Palais des congrès de Montréal
Room 510

Co-Chairs
Teresita Bellido, PhD
Indiana University School of Medicine, United States
Disclosures: None

Liyun Wang PhD, University of Delaware, United States
Disclosures: None

11:00 am In vitro 3D Cultures to Reproduce the Bone Marrow Niche
Michaela Reagan, PhD
Maine Medical Center Research Institute, United States
Disclosures: None

11:20 am Ex vivo Bone Organ Cultures to Maintain the 3D Osteocyte Network
Jesus Delgado-Calle, PhD
Indiana University School of Medicine, United States
Disclosures: None

11:40 am 3D Ex Vivo Bone Models and Extracellular Vesicles Release
X Guo PhD, Columbia University, United States
Disclosures: None

NEW! CHALLENGE THE EXPERTS: OTHER RARE BONE DISEASES
11:00 am - 12:00 pm

Palais des congrès de Montréal
Room 517 B

Co-Chairs
Dolores Shoback MD
VA Medical Center, United States
Consultant: Shire

Janet Lee, MD, MPH
University of California, San Francisco, United States
Disclosures: None

Panelist:
Michael Whyte, MD
Shriners Hospital for Children, United States
Disclosures: Grant/Research Support: Ultragenyx Pharmaceutical Inc.
Consultant: Ultragenyx Pharmaceutical Inc.
Panelist:
Leanne Ward, MD
Children’s Hospital of Eastern Ontario, Canada
Disclosures: Grant/Research Support: Ultragenyx Pharmaceutical Inc.

Panelist:
Rachel Gafni, MD
National Institutes of Health, United States
Disclosures: None

GENOMICS FOR CLINICIANS
Session presented in collaboration with the International Federation of Musculoskeletal Research Societies (IFMRS)
11:00 am - 12:00 pm
Palais des congrès de Montréal
Room 517 C

The session will give clinicians a basic idea of how genomics and knowing their patient’s genome and potential mutations can assist in their diagnosis and treatment.

Co-Chairs
Lynda Bonewald, PhD
Indiana University School of Medicine, United States
Disclosures: None

Fernando Rivadeneira MD, PhD
Erasmus University Medical Center, the Netherlands
Disclosures: None

11:00 am
Next Generation Sequencing: Moving Beyond the Exome
Emily Farrow, PhD
Children’s Mercy Hospital, United States
Disclosures: None

11:30 am
Genomics for Clinicians
Emma Duncan, PhD, MBBS
Royal Brisbane and Women’s Hospital, Australia
Disclosures: None

MEET THE PROFESSOR SESSIONS
11:00 am - 12:00 pm
Palais des congrès de Montréal

Meet the Professor: The Spectrum of Fundamental Basic Discoveries Contributing to Organismal Aging
Room 518 B

Joshua Farr PhD
Mayo Clinic, United States
Disclosures: None

Maria Jose Almeida PhD
Central Arkansas VA Healthcare System, Univ of Arkansas for Medical Sciences, United States
Disclosures: None

American Society for Bone and Mineral Research
Meet the Professor: Intravital Imaging of Osteoclast Dynamics  
Room 518 A  
Michelle McDonald, PhD  
The Garvan Institute of Medical Research, Australia  
Disclosures: None

Meet the Professor: Skeletal Regeneration: Stem Cell Therapy  
Room 519 B  
Pamela Robey, PhD  
National Institute of Dental and Craniofacial Research, United States  
Disclosures: None

Meet the Professor: Osteocyte Perilacunar-Canalicular Remodeling  
Room 519 A  
Anna Teti  
University of L Aquila, Italy  
Disclosures: None

Meet the Professor: Mineral Balance and Tracer Methodologies in Clinical Research on Nutrition in Bone Health  
Room 518 C  
Kathleen Hill Gallant, PhD  
Purdue University, United States  
Disclosures: Grant/Research Support: Chugai Pharmaceutical

Meet the Professor: Risk Prediction Models  
Room 525  
John Schousboe, MD, PhD  
Park Nicollet ClinicHealthPartners InstituteUniversity of Minnesota, United States  
Disclosures: None

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All posters will be displayed in the ASBMR Discovery Hall - Exhibit Hall 220 B-E on Saturday, September 29 - Monday, October 1 during exhibit hall hours. For a full listing of all poster and late-breaking poster presentations, please refer to the poster section located in the back of the Onsite Program Book.

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Moderators  
Craig Langman, MD  
Ann & Robert H Lurie Childrens Hospital of Chicago, United States  

Janet Crane, MD  
Johns Hopkins University, United States
2:30 pm  ASBMR 2018 Annual Meeting Young Investigator Award
1080 Lower CYP27B1 expression impairs osteoblasts activity in adolescent idiopathic scoliosis – a new insight to improve bone quality by vitamin D supplementation
Jia Jun Zhang*1,2, Yujia Wang1,2, Carol Cheng1,2, Tsz Ping Lam1,2, Bobby Kin-Wah Ng1,2, Jack Chun-Yiu Cheng1,2, Wayne Yuk-Wai Lee1,2. 1Department of Orthopaedics and Traumatology, SH Ho Scoliosis Research Laboratory, The Chinese University of Hong Kong, Hong Kong, 2Joint Scoliosis Research Center of the Chinese University of Hong Kong and Nanjing University, The Chinese University of Hong Kong, Hong Kong
Disclosures: Jia Jun Zhang, None

2:45 pm  ASBMR 2018 Annual Meeting Young Investigator Award
1081 Age at Peak Fracture Rate Depends on Fracture Type and Trabecular/Cortical Dominance of Fracture Site – Expanding Explanations of Peak Fracture Rate beyond Lag in Mineralization
Bjorn Rosengren*, Daniel Jerrhag, Magnus Karlsson. Clinical and Molecular Osteoporosis Research Unit, Departments of Orthopedics and Clinical Sciences, Skane University Hospital and Lund University, Sweden
Disclosures: Bjorn Rosengren, None

3:00 pm  ASBMR 2018 Annual Meeting Young Investigator Award
1082 The COLIA1 Sp1 Variant and Bone Accrual in Childhood
Diana Cousminer*1, Shana Mccormack1, Jonathan Mitchell1, Alessandra Chesi1, Joan Lappe2, Heidi Kalkwarf3, Sharon Oberfield3, Vicente Gilsanz4, John Shepherd5, Andrea Kelly1, Benjamin Voight1, Babette Zemel1, Struan Grant1. 1Children’s Hospital of Philadelphia, United States, 2Creighton University, United States, 3Cincinnati Children’s Hospital, United States, 4Columbia University, United States, 5Children’s Hospital of Los Angeles, United States, 6University of Hawaii, United States, 7University of Pennsylvania, United States
Disclosures: Diana Cousminer, None

3:15 pm  ASBMR 2018 Fund for Research and Education Young Investigator Award
1083 Reliability of annual changes and monitoring time intervals for bone strength, size, density and micro-architectural development at the distal radius and tibia in children: A 1-year HR-pQCT follow-up
Amy Bunyamin*1, Kelsey Björkman2, Chantal Kawalilak1, Seyedmahdi Hosseinitabatabaei3, Adrian Teare1, James Johnston1, Saija Kontulainen2. 1Department of Mechanical Engineering, College of Engineering, University of Saskatchewan, Canada, 2College of Kinesiology, University of Saskatchewan, Canada, 3Division of Biomedical Engineering, College of Engineering, University of Saskatchewan, Canada
Disclosures: Amy Bunyamin, None

3:30 pm  ASBMR 2018 Fund for Research and Education Young Investigator Award
1084 Glycemic Control Influences Trabecular Microarchitecture in Youth with Type 1 Diabetes
Deborah Mitchell*1, Signe Caksa2, Amy Yuan2, Mary Bouxsein3, Madhusmita Misra3. 1Pediatric Endocrine Unit, Massachusetts General Hospital, United States, 2Endocrine Unit, Massachusetts General Hospital, United States
Disclosures: Deborah Mitchell, None

3:45 pm  ASBMR 2018 Fund for Research and Education Young Investigator Award
1085 A common SNP in the CYP2R1 promoter decreases transcriptional activity and is associated with low serum 25(OH)D levels and reduced responsiveness to vitamin D supplementation.
Jeffrey Roizen*1, Alex Casella2, Caela Long1, Zahra Tara1, Meizan Lai1, Hakon Hakonarson1, Michael Levine1. 1The Children’s Hospital of Philadelphia, United States, 2University of Maryland, United States
Disclosures: Jeffrey Roizen, None
2:30 pm 1086 YAP and TAZ deletion in mature osteoblasts reduce bone formation and increase marrow adipocyte accumulation
Mengrui Wu*, Joshua Chou, Dorothy Hu, Kenichi Nagano, Daniel Brooks, Mary Bouxsein, Francesca Gori, Roland Baron. 1Harvard School of Dental medicine, United States, 2University of Technology Sydney, Austria, 3Beth Israel Deaconess Medical Center, United States 
Disclosures: Mengrui Wu, None

2:45 pm 1087 ASBMR 2018 Annual Meeting Young Investigator Award
The Wnt Agonist R-spondin 3: An Unexpected Negative Regulator of Bone Formation
Kenichi Nagano*, Kei Yamana, Hiroaki Saito, Virginia Parkman, Jun Guo, Henry Kronenberg, Francesca Gori, Roland Baron. 1Endocrine Unit, Massachusetts General Hospital, United States, 2Division of Bone and mineral Research, Harvard Medical School and Harvard School of Dental Medicine., United States 
Disclosures: Kenichi Nagano, None

3:00 pm 1088 EZH2 is Regulated by the MiR-23a Cluster to Maintain Bone Mass In Vivo
Benjamin Wildman*, Tanner Godfrey, Mohammad Rehan, Yuechuan Chen, Quamarul Hassan. University of Alabama at Birmingham, Institute of Oral Health Research, United States 
Disclosures: Benjamin Wildman, None

3:15 pm 1089 Versatile Transcriptional Co-Factor Jab1 is Required for Osteoblast Differentiation and Postnatal Bone Growth
William Samsa*, Murali Mamidi, Lindsay Bashur, David Danielpour, Guang Zhou. Case Western Reserve University, United States 
Disclosures: William Samsa, None

3:30 pm 1090 Transcription Factor 7 like 2 (TCF7L2) is a Novel Regulator of Osteoblast Functions and Peak Bone Mass in Mice
Chandrasekhar Kesavan*, Nagraj Puppali, Nikita Bajwa, Subburaman Mohan. 1VA Loma Linda Healthcare System, Loma Linda University, United States, 2VA Loma Linda Healthcare System, United States 
Disclosures: Chandrasekhar Kesavan, None

3:45 pm 1091 Osteoblast-intrinsic IRE1a/XBP1s Signaling Regulates Bone Development and Bone Marrow Homeostasis
Hongjiao Ouyang*, Shankar Revu, Kai Liu, Yuqiao Zhou, Qi Han, Faisal Alshalawy, Yuji Mishina, Alejandro Almarza, Donna Stolz, Konstantinos Verdelis, Randal Kaufman. 1Texas A&M University, United States, 2University of Pittsburgh, United States, 3University of Michigan, United States, 4Sanford-Burnham-Prebys Medical Discovery Institute, United States 
Disclosures: Hongjiao Ouyang, None
CONCURRENT ORALS: OSTEOCYTES AND BONE DEVELOPMENT
2:30 pm - 4:00 pm  
Palais des congrès de Montréal  
Room 517 B

Moderators
Angela Bruzzaniti, PhD  
Indiana University School of Dentistry, United States

Daniel Perrien, PhD  
Vanderbilt University Medical Center, United States

2:30 pm  
1092  
Osteocyte Notch3 is Responsible for the Osteopenia of Lateral Meningocele Syndrome (LMS)  
Ernesto Canalis*, Jungeun Yu, Lauren Schilling, Stefano Zanotti. UConn Health, United States  
Disclosures: Ernesto Canalis, None

2:45 pm  
1093  
Tgif1-mediated Repression of PAK3 Supports Osteocyte Spreading  
Simona Bollamperti*1, Hiroaki Saito1, Antonio Virgilio Failla2, Hanna Taipaleenmäki1, Eric Hesse1.  
1Molecular Skeletal Biology Laboratory, Department of Trauma, Hand and Reconstructive Surgery, University Medical Center Hamburg-Eppendorf, Germany,  
2Microscopy Imaging Facility, University Medical Center Hamburg-Eppendorf, Germany  
Disclosures: Simona Bollamperti, None

3:00 pm  
1094  
Osteocytic Kindlin-2 regulates bone mass accrual and maintenance and mediates skeletal response to mechanical loading and PTH anabolism  
Huiling Cao*1, Qinnan Yan1, Dong Wang2, Yumei Lai2, Simin Lin2, Yimin Lei1, Liting Ma1, Yuxi Guo1, Yishu Wang1, Yilin Wang1, Huanqing Gao1, Xiaochun Bai1, Chuanju Liu1, Jian Q. Feng2, Chuanyue Wu1, Di Chen2, Guozhi Xiao1.  
1Department of Biology and Guangdong Provincial Key Laboratory of Cell Microenvironment and Disease Research, Southern University of Science and Technology, China,  
2Department of Orthopedic Surgery, Rush University Medical Center, United States,  
3Department of Cell Biology, School of Basic Medical Sciences, Southern Medical University, China,  
4Department of Orthopedic Surgery, New York University School of Medicine, United States,  
5Department of Biomedical Sciences, Texas A&M University College of Dentistry, United States  
Disclosures: Huiling Cao, None

3:15 pm  
1095  
ASBMR 2018 Annual Meeting Young Investigator Award  
Specific Gut Bacterium Alters Commensal Microbiota Immunomodulatory Actions Regulating Skeletal Development  
Jessica Hathaway-Schrader*, Nicole Poulides, Sakamuri Reddy, Caroline Westwater, Chad Novince. Medical University of South Carolina, United States  
Disclosures: Jessica Hathaway-Schrader, None

3:30 pm  
1096  
ASBMR 2018 Annual Meeting Young Investigator Award  
Haploid Embryonic Stem Cell-Mediated Targeted Genetic Screening In Vivo Identifies Novel Factors for Bone Development  
Yujiao Han*, Weiguo Zou. Shanghai Institute of Biochemistry and Cell Biology, China  
Disclosures: Yujiao Han, None

3:45 pm  
1097  
A Novel In Vitro Fluidic Approach to Measuring the Apoptotic Bystander Effect in Osteocyte Networks  
Sean Mccutcheon*, Robert Majeska2, David Spray1, Maribel Vazquez2, Mitchell Schaffler2.  
1Albert Einstein College of Medicine, United States,  
2The City College of New York, United States  
Disclosures: Sean Mccutcheon, None
CONCURRENT ORALS: PRECLINICAL MODELS: NUTRITION AND PHARMACOLOGY

2:30 pm - 4:00 pm
Palais des congrès de Montréal
Room 517 A

Moderator
Jesus Delgado-Calle, PhD
Indiana University School of Medicine, United States

Moderator
Mary Bouxsein PhD
Beth Israel Deaconess Medical Center, Harvard Medical School, United States

2:30 pm
1098
ASBMR 2018 Annual Meeting Young Investigator Award
Fracture targeted PTHR1 agonists for accelerated bone repair
Stewart Low*, Jeffery Nielsen, Philip Low. 1Purdue, United States, 2Purdue University, United States
Disclosures: Stewart Low, None

2:45 pm
1099
Mechanical stimulation prevents the decline in anabolic response to prolonged Sclerostin-neutralizing antibodies exposure
Maude Gerbaix*, Serge Ferrari. Division of Bone Diseases, Geneva University Hospitals and Faculty of Medicine, Switzerland
Disclosures: Maude Gerbaix, None

3:00 pm
1100
ASBMR 2018 Annual Meeting Young Investigator Award
An Anti-Angiogenic Agent Induced Osteonecrosis of the Jaw-Like Lesions in Rice Rats (Oryzomys palustris)
Jonathan Messer*, Jessica Jiron, Abel Abraham, Evelyn Castillo, Josh Yarrow, Don Kimmel, J Ignacio Aguirre. University of Florida, United States
Disclosures: Jonathan Messer, None

3:15 pm
1101
Spinal loading regulates bone remodeling and angiogenesis in a mouse model of postmenopausal osteoporosis
Xinle Li*, Jie Li, Daquan Liu, Hiroki Yokota, Ping Zhang. 1Department of Anatomy and Histology, School of Basic Medical Sciences, Tianjin Medical University, Tianjin 300070, China, 2Department of Biomedical Engineering, Indiana University-Purdue University Indianapolis, IN 46202, United States
Disclosures: Xinle Li, None

3:30 pm
1102
ASBMR 2018 Annual Meeting Young Investigator Award
Low Affinity Bisphosphonate Exerts a Strong Anabolic Effect on Trabecular Bone
Abigail Coffman*, Robert J. Majeska, Jelena Basta-Pljakic, Mark W. Lundy, Frank H. Ebetino, Mitchell B. Schaffler. 1City College of New York, United States, 2Indiana University School of Medicine, United States, 3University of Rochester, United States
Disclosures: Abigail Coffman, None

3:45 pm
1103
Siglec-15-Targeting Therapy Increases Bone Mass in Rats and Is a Potential Therapeutic Strategy for Juvenile Osteoporosis
Dai Sato*, Masahiko Takahata, Masahiro Ota, Chie Fukuda, Eisuwe Tsuda, Tomohiro Shimizu, Hiroki Hamano, Sigeto Hiratsuka, Akiko Okada, Ryo Fujita, Norio Amizuka, Tomoka Hasegawa, Nrimasa Iwasaki. 1Department of Orthopaedic Surgery, Faculty of Medicine and Graduate School of Medicine, Hokkaido University, Japan, 2Rare Disease Laboratories, Daiichi Sankyo Co., Ltd., Japan, 3Hokkaido University, Department of Developmental Biology of Hard Tissue, Graduate School of Dental Medicine, Japan
Disclosures: Dai Sato, Daiichi Sankyo Co., Ltd, Other Financial or Material Support
CONCURRENT ORALS: REGULATION OF BONE FORMATION AND MINERALIZATION

4:30 pm - 5:45 pm
Palais des congrès de Montréal
Room 517 B

Moderator
Richard Kremer, MD, PhD
McGill University Health Center, Royal Victoria Hospital, Canada

Moderator
Kurt Hankenson DVM, PhD
University of Michigan, United States

4:30 pm
1104
Peri-Lacunar/Canalicular (PLC) Remodeling Enhances Mechano-Sensitivity in Rat Maternal Bone when Subjected to Estrogen Deficiency
Yihan Li*1, Chantal De Bakker1, Wei-Ju Tseng1, Hongbo Zhao1, Ashutosh Parajuli2, Liyun Wang2, X. Sherry Liu1. 1University of Pennsylvania, United States, 2University of Delaware, United States
Disclosures: Yihan Li, None

4:45 pm
1105
Deletion of Prostaglandin E2 (PGE2) Receptor EP4 in Myeloid Lineage Cells Restores the Anabolic Effects of Continuous PTH in Mice
Shilpa Choudhary*, Joseph Lorenzo, Carol Pilbeam. Musculoskeletal Institute & Department of Medicine, UConn Health, United States
Disclosures: Shilpa Choudhary, None

5:00 pm
1106
The Gut Microbiota Is Required For The Anabolic And Catabolic Effects Of PTH In Bone
Jau-Yi Li*, Mingcan Yu, Abdul Malik Tyagi, Chiara Vaccaro, Jonathan Adams, Rheinallt M. Jones, Roberto Pacifici. School of Medicine, Emory University, United States
Disclosures: Jau-Yi Li, None

5:15 pm
1107
Impaired 1,25 dihydroxyvitamin D action underlies the development of enthesopathy in the Hyp mouse model of XLH
Eva Liu*1, Janaina Martins2, Marie Demay2. 1Brigham and Women’s Hospital, MGH, and Harvard Medical School, United States, 2Massachusetts General Hospital and Harvard Medical School, United States
Disclosures: Eva Liu, None

5:30 pm
1108
ASBMR 2018 Annual Meeting Young Investigator Award
Irisin Deficiency Disturbs Bone Metabolism
Zoe (Xiaofang) Zhu*1,2, Jake (Jinkun) Chen3,4, Guofang Shen3, Qisheng Tu1. 1Tufts University School of Dental Medicine, United States, 2Shanghai Jiaotong Univ., China, 3Division of Oral Biology Tufts University School of Dental Medicine, United States, 4Department of Developmental, Molecular and Chemical Biology Sackler School of Graduate Biomedical Sciences Tufts University School of Medicine, United States, Shanghai Jiaotong Univ., China
Disclosures: Zoe (Xiaofang) Zhu, None
CONCURRENT ORALS: BONE IMAGING

4:30 pm - 5:45 pm  
Palais des congrès de Montréal  
Room 517 D

Moderators
Didier Hans, PhD  
Lausanne University Hospital, Switzerland

Andrew Burghardt  
University of California, San Francisco, United States

4:30 pm  
1109

Deficits in cortical and trabecular bone microarchitecture increase short-term risk of fracture independently of DXA BMD and FRAX: The Bone Microarchitecture International Consortium (BoMIC)

1Institute for Aging Research, Hebrew SeniorLife, Harvard Medical School, United States, 2Department of Biostatistics, Boston University School of Public Health, United States, 3Division of Bone Diseases, Geneva University Hospitals and Faculty of Medicine, Switzerland, 4McCaig Institute for Bone and Joint Health, Canada, 5INSERM UMR 1033, Université de Lyon, Hospices Civils de Lyon, Lyon, France, 6Departments of Medicine, McGill University and McGill University Health Centre, Canada, 7Boston University School of Public Health, United States, 8Geriatric Medicine, Centre for Bone and Arthritis Research, Institute of Medicine, University of Gothenburg, Sweden, 9Department of Biomedical Engineering, Eindhoven University of Technology, Netherlands, 10Toronto General Hospital, Canada, 11Institute for Aging Research, Hebrew SeniorLife, United States, 12Dept of Orthopedic Surgery, Harvard Medical School, Center for Advanced Orthopedic Studies, BIDMC, United States

Disclosures: Elizabeth Samelson, None
4:45 pm  Prediction of Incident Hip Fracture: Can we do Better than Femoral Neck aBMD? A Comprehensive Image-Based Assessment in Men and Women
Julio Carballido-Gamio*, Sigurdur Sigurdsson¹, Kristín Siggeirsdottir², Alexandria Jensen¹, Gunnar Sigurdsson³,¹, Thor Aspelund²,³, Gudny Eiriksdottir², Vilmundur Gudnason², Ab, Thomas F Lang³, Tamara B Harris⁴. ¹Department of Radiology, School of Medicine, University of Colorado Denver, Denver, CO, United States, ²Icelandic Heart Association Research Institute, Kópavogur, Iceland, ³Department of Biostatistics & Informatics, Colorado School of Public Health, Aurora, CO, United States, ⁴University of Iceland, Reykjavik, Iceland, ⁵Landspitalinn University Hospital, Reykjavik, Iceland, ⁶Centre of Public Health Sciences, University of Iceland, Reykjavik, Iceland, ⁷Department of Radiology and Biomedical Imaging, University of California, San Francisco, CA, United States, ⁸National Institute on Aging, Intramural Research Program, Laboratory of Epidemiology and Population Sciences, Bethesda, MD, United States
Disclosures: Julio Carballido-Gamio, None

5:00 pm  Deterioration of Bone Microstructure Identifies Women at Imminent Risk of Fragility Fractures
Roland Chapurlat*, Elisabeth Sornay-Rendu¹, Roger Zebaze², Minh Bui², Eric Lespessailles³, Ego Seeman². ¹INSERM UMR 1033, France, ²University of Melbourne, Australia, ³IPROS, France
Disclosures: Roland Chapurlat, None

5:15 pm  Prevalent Vertebral Fracture Identified on Densitometric Images Predict Incident Fractures in Routine Clinical Practice
John Schousboe*, Lisa Lix², Suzanne Morin¹, Sheldon Derkatch², Mark Bryant⁵, Mashael Alhrbi², William Leslie². ¹Park Nicollet Clinic and HealthPartners Institute, United States, ²University of Manitoba, Canada, ³McGill University, Canada
Disclosures: John Schousboe, None

5:30 pm  ASBMR 2018 Annual Meeting Young Investigator Award
Screening for Incomplete Atypical Femur Fractures in Bone Density Laboratories
Sameh Melk*, Robert Bleakney, Lianne Tile, Rowena Ridout, Heather Mcdonald-Blumer, Angela Cheung, Moira Kapral, Judite Scher, Alice Demaras. UHN, Canada
Disclosures: Sameh Melk, None

CONCURRENT ORALS: EPIDEMIOLOGY
4:30 pm - 5:45 pm  Palais des congrès de Montréal
Room 517 C

Moderators
Sarah Berry, MD, MPH
Hebrew SeniorLife/Beth Israel Deaconess Medical Center, United States

Roger Bouillon, MD, PhD
Katholieke Universiteit Leuven, Belgium
4:30 pm  Genomic Prediction of Osteoporosis Using 426,000 Individuals from UK Biobank
1114  Vincenzo Forgetta*, Julyan Keller-Baruch, Marie Forest, Audrey Durand, Sahir Bhatnagar, John Kemp, John Morris, John Kanis, Douglas Kiel, Eugene Mccloskey, Helena Johansson, Nicholas Harvey, Dave Evans, Joelle Pineau, William Leslie, Celia M T Greenwood, J Brent Richards. 1Centre for Clinical Epidemiology, Lady Davis Institute, Jewish General Hospital, McGill University, Canada, 2Department of Human Genetics, McGill University, Canada, 3School of Computer Science, McGill University, Canada, 4Centre for Clinical Epidemiology, Lady Davis Institute, Jewish General Hospital, Canada, 5University of Queensland Diamantina Institute, Translational Research Institute, MRC Integrative Epidemiology Unit, University of Bristol, Australia, 6Centre for Metabolic Bone Diseases, University of Sheffield, United Kingdom, 7Australian Catholic University, United Kingdom, 8Institute for Aging Research, Hebrew SeniorLife, Harvard Medical School, Broad Institute of MIT & Harvard, United States, 9Mellanby Centre for Bone Research, Centre for Integrated Research in Musculoskeletal Ageing, University of Sheffield, United Kingdom, 10Medical Research Council Lifecourse Epidemiology Unit, University of Southampton, United Kingdom, 11Department of Medicine (Endocrinology), Department of Radiology (Nuclear Medicine), University of Manitoba, Canada
Disclosures: Vincenzo Forgetta, None

4:45 pm  Excess intra-abdominal adipose tissue accumulation increases the risk of fragility fracture: A Mendelian randomization study with Genome-wide association meta-analysis on fracture
1115  Yi-Hsiang Hsu*, Chia-Yen Chen, Ching-Ti Li, Douglas Kiel. 1Harvard Medical School and Broad Institute of MIT and Harvard, United States, 2Dept. Biostatistics, School of Public Health, Boston Univ., United States, 3Hebrew SeniorLife and Harvard Medical School, United States
Disclosures: Yi-Hsiang Hsu, None

5:00 pm  ASBMR 2018 Annual Meeting Young Investigator Award
1116  Serum 25-Hydroxyvitamin D Values and Risk of Incident Cardiovascular Disease: A Population-Based Retrospective Cohort Study
Daniel Dudenkov*, Kristin Mara, Tanya Petterson, Julie Maxson, Tom Thacher. Mayo Clinic, United States
Disclosures: Daniel Dudenkov, None

5:15 pm  ASBMR 2018 Annual Meeting Young Investigator Award
1117  Estradiol and Follicle Stimulating Hormone as Predictors of Onset of Menopause Transition- related Bone Loss in Pre- and Perimenopausal Women
Albert Shieh*, Gail Greendale, Jane Cauley, Carrie Karvonen-Gutierrez, Carolyn Crandall, Arun Karlamangla. 1University of California, Los Angeles, United States, 2University of Pittsburgh, United States, 3University of Michigan, United States
Disclosures: Albert Shieh, None

5:30 pm  The Association between Objectively Measured Physical Activity and Bone Strength and Microarchitecture Among Older Men
1118  Lisa Langsetmo*, Andrew Burghardt, John Schousboe, Peggy Cawthon, Jane Cauley, Nancy Lane, Kristine Ensrud, Eric Orwell. 1University of California, San Francisco, United States, 2University of Pittsburgh, United States, 3University of California, Davis, United States, 4University of Minnesota, Minneapolis VA Health Care System, United States, 6Oregon Health and Science University, United States
Disclosures: Lisa Langsetmo, None
CONCURRENT ORALS: ENERGY METABOLISM, BONE, MUSCLE AND FAT II

4:30 pm - 5:45 pm

Palais des congrès de Montréal
Room 517 A

Moderators
Elaine Yu, MD
Massachusetts General Hospital, United States

Yousef Abu-Amer, PhD
Washington University in St. Louis School of Medicine, United States

4:30 pm  1119  Lower Insulin Sensitivity in Patients With High Bone Mass due to a LRP5T253I mutation
Jens-Jacob Lindegaard Lauterlein*, Anne Pernille Hermann, Moustapha Kassem, Kurt Højlund, Morten Frost. Department of Endocrinology and Metabolism, Odense University Hospital, Odense, Denmark

Disclosures: Jens-Jacob Lindegaard Lauterlein, None

4:45 pm  1120  Genetic and epigenetic defects at the GNAS locus lead to distinct patterns of skeletal growth but similar early-onset obesity
Patrick Hanna*1, Harald Jüppner2, Guiomar Perez De Nanclares3, Giovanna Mantovani4, Alessia Usardi5, Susanne Thiele6, Agnès Linglart7. 1INSERM U1169 and Paris Sud Paris-Saclay university, Bicêtre Paris Sud hospital, France, 2Endocrine Unit and Pediatric Nephrology Unit, Massachusetts General Hospital and Harvard Medical School, United States, 3Molecular (Epi)Genetics LaboratoryBioAraba National Health Institute, OSI Araba University Hospital, Spain, 4Fondazione IRCCS Ca’ Granda Ospedale Maggiore Policlinico Endocrinology and Diabetology Unit, Department of Clinical Sciences and Community Health, University of Milan, Italy, 5APHP, Reference Center for rare disorders of the calcium and phosphate metabolism, filière OSCAR and Plateforme d’Expertise Maladies Rares Paris-Sud, Bicêtre Paris Sud hospital, France, 6Division of Experimental Pediatric Endocrinology and Diabetes Department of Pediatrics, Center of brain, behavior and metabolism, University of Lübeck, Germany, 7APHP, Endocrinology and diabetes for children, Bicêtre Paris Sud hospital, France

Disclosures: Patrick Hanna, None

5:00 pm  1121  Sclerostin Resistance Protects Bone Mass and Improves Insulin Sensitivity in a Mouse Model of Type 1 Diabetes
Giulia Leanza*1,2, Francesca Fontana2, Rocky Strollo1, Paolo Pozzilli1, Nicola Napoli1,2, Roberto Civitelli2. 1Campus Bio-Medico University, Italy, 2Washington University in St Louis, United States

Disclosures: Giulia Leanza, None

5:15 pm  1122  AdipoRon, an Adiponectin Receptor Agonist, Ameliorates Diabetic Bone Disorders by Inhibiting Osteoclastogenesis and Promoting Bone Formation
Xingwen Wu*1,2, Maxwell Tu1, Wei Qiu1, Junxiang Lian1, Youcheng Yu2, Jake Chen1,3. 1Division of Oral Biology, Tufts University School of Dental Medicine, United States, 2Department of dentistry, Zhongshan hospital, Fudan University, China, 3Department of Developmental, Molecular and Chemical Biology Sackler School of Graduate Biomedical Sciences Tufts University School of Medicine, United States

Disclosures: Xingwen Wu, None
Selective Deletion of Marrow Adipocytes Leads to Increased Mesenchymal Precursors, a Shift in Lineage Allocation, and Increased Bone Mass with Improved Bone Biomechanics

Steven Tommasini*1, Tracy Nelson1, Chad Faulkner-Filosa1, Matthew Rodeheffer1, Clifford Rosen2, Dieter Lindskog1, Mark Horowitz1. 1Yale University School of Medicine, United States, 2Maine Medical Center Research Institute, United States

Disclosures: Steven Tommasini, None

ASBMR TOWN HALL MEETING AND RECEPTION

6:00 pm - 7:00 pm
Palais des congrès de Montréal
Room 510

You are invited to attend the ASBMR Town Hall Meeting and Reception at which you will learn about the Society, including the year in review, planned activities, strategic directions and leadership opportunities. Come learn more about ASBMR, meet with ASBMR leadership, ask questions during an “open-mic” time and enjoy a wine and cheese reception.

DIVERSITY IN BONE AND MINERAL RESEARCH NETWORKING RECEPTION

Sponsored by the ASBMR Diversity Subcommittee and Membership Engagement and Education Committee

7:00 pm - 8:30 pm
Le Westin Hotel
Palais Room

This reception provides attendees the opportunity to meet other attendees and ASBMR leadership, including the ASBMR Diversity in Bone and Mineral Research Subcommittee, in an interactive environment. Come to network, celebrate diverse members of ASBMR, and learn how the Diversity in Bone and Mineral Research Subcommittee is working to promote inclusiveness and participation of the Society’s diverse members, particularly focusing on individuals from underrepresented racial and ethnic groups and individuals with disabilities. This year’s event will also feature a short presentation, “How Diversity Became My Strong Power,” by Patricia Juárez Camacho, Ph.D. Assistant Professor at the Center for Scientific Research and Higher Education in Ensenada, México, and 2016 ASBMR Rising Star Award recipient.

BONE TURNOVER MARKERS WORKING GROUP

7:15 pm - 9:15 pm
Palais des congrès de Montréal
Room 520 C

Debate on advances in bone markers.
This year the Working Group Meeting will address the development of potential bone markers such as microRNAs as well as the current advances in harmonization of methods of different assays for the measurement of PINP and CTX. Also, the clinical utility of bone turnover markers will be discussed. A lively debate on these topics is expected.

7:15 pm Welcome and Introduction
Richard Eastell, MD. Mellanby Centre for Bone Research, University of Sheffield, UK., Núria Guàñabens, MD., Hospital Clinic, University of Barcelona, Spain.

7:20 pm Non-coding RNAs as prediction tools in osteoporosis.
Matthias Hackl, PhD., TAmiRNA, Vienna, Austria.

7:50 pm Progress with the harmonization of CTX and PINP assays by IOF/IFCC
Etienne Cavalier, PhD., Department of Clinical Chemistry, University of Liège, Belgium.
8:20 pm  Clinical utility of bone turnover markers: update on NBHA initiatives
Stuart Silverman, MD., Cedars-Sinai Medical Center and UCLA School of Medicine, CA, USA.

9:00 pm  Closing Remarks

2018 WORKING GROUP ON AGING
7:15 pm - 9:30 pm  Palais des congrès de Montréal
Room 520 F

Moderated by: Lynda Bonewald, Ph.D. and Sundeep Khosla, M.D.

7:15 pm  Sit down Dinner and informal discussions

7:30 pm  Novel Biomarkers for Aging
Eric Orwoll, Oregon Health Sciences University, USA

8:00 pm  Age-Related Frailty and Muscle Dysfunction
Nathan LeBresseur, Mayo Clinic, USA

8:30 pm  Effects of Aging on the Osteocyte Lacunocanalicular Network
Sarah Dallas, University of Missouri, USA

9:00 pm  Open Discussion

PEDIATRIC BONE AND MINERAL WORKING GROUP
Supported by educational grants from Biomarin and Ultragenyx
7:15 pm - 9:30 pm  Palais des congrès de Montréal
Room 520 B-E

7:15 pm  Opening Remarks and Dinner

7:20 pm  Tribute to Professor Judith Adams
Kate Ward PhD, BSc(Hons)Associate Professor MRC Lifecourse Epidemiology Unit, University of Southampton

7:25 pm  “The Natural History of Achondroplasia: The largest multicenter registry to date and its insights into growth and surgical burden.”
Michael B. Bober, M.D., PhD. Director, Skeletal Dysplasia Program A.I. DuPont Hospital for Children Professor of Pediatrics Stanley Kimmel Medical College of Thomas Jefferson University

8:05 pm  “Differentiating abusive from accidental trauma in children with suspected bone fragility”
Mary Clyde Pierce, MD Professor of Pediatrics Feinberg School of Medicine-Northwestern University Ann & Robert H. Lurie Children’s Hospital of Chicago

8:45 pm  Oral Scientific Abstracts Presentation

9:25 pm  Closing Remarks
<table>
<thead>
<tr>
<th>Time/Event/Location</th>
<th>Location</th>
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</thead>
<tbody>
<tr>
<td>6:00 am - 7:45 am Industry Supported Symposium: X-Linked Hypophosphatemia: Integrating New Evidence to Optimize Diagnosis and Treatment</td>
<td>Room 510</td>
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<tr>
<td>7:30 am - 2:00 pm Registration Open</td>
<td>Viger Hall - Level 2</td>
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<tr>
<td>8:00 am - 9:30 am Concurrent Orals: Musculoskeletal Development</td>
<td>Room 517 C</td>
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<tr>
<td>8:00 am - 9:30 am Concurrent Orals: Osteoclasts and Osteoblasts</td>
<td>Room 517 B</td>
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<tr>
<td>8:00 am - 9:30 am Concurrent Orals: Greg Mundy Memorial Session - Bone Tumors and Metastasis</td>
<td>Room 517 D</td>
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<tr>
<td>8:00 am - 9:30 am Concurrent Orals: Secondary Causes of Skeletal Fragility</td>
<td>Room 517 A</td>
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<tr>
<td>9:30 am - 9:45 am Networking Break</td>
<td>ASBMR Discovery Hall - Exhibit Hall 220 B-E</td>
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<tr>
<td>9:30 am - 2:00 pm Posters Open</td>
<td>ASBMR Discovery Hall - Exhibit Hall 220 B-E</td>
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<tr>
<td>9:45 am - 11:00 am Discovery Hall Open</td>
<td>ASBMR Discovery Hall - Exhibit Hall 220 B-E</td>
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<tr>
<td>11:00 am - 11:15 am Networking Break</td>
<td>Room 517 D</td>
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<tr>
<td>11:15 am - 12:00 pm Late-Breaking Concurrent Orals: Basic</td>
<td>Room 517 C</td>
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<tr>
<td>11:15 am - 12:00 pm Late-Breaking Concurrent Orals: Clinical</td>
<td>Room 517 A</td>
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Late-Breaking Concurrent Orals: Clinical Rare Bone Diseases
Room 517 D

11:15 am - 12:00 pm ................................................................. 71
Late-Breaking Concurrent Orals: Translational
Room 517 B

12:00 pm - 2:00 pm ................................................................. 71
Poster Session III
ASBMR Discovery Hall - Exhibit Hall 220 B-E

12:00 pm - 2:00 pm ................................................................. 71
Late-Breaking Posters III
ASBMR Discovery Hall - Exhibit Hall 220 B-E

2:00 pm - 3:15 pm ................................................................. 72
Symposium: Senescence and Aging Bone
Room 517 D

2:00 pm - 3:15 pm ................................................................. 72
Symposium: Multimorbidity and Its Impact on Clinical Management
Room 517 A

3:15 pm - 4:00 pm ................................................................. 72
Closing Reception
Foyer 510-511
### Activity Overview

X-linked hypophosphatemia (XLH) is a rare hereditary form of non-nutritional rickets that does not respond to vitamin D ingestion or ultraviolet radiation treatment. Recognizing, diagnosing, and managing XLH. Greater understanding of the underlying pathophysiology of XLH, including involvement of PHEX and FGF-23, has led to the development and FDA approval of the first agent specifically developed for XLH - burosumab. Early treatment may lead to positive clinical outcomes, including improved bone mineralization and improved rickets in children, and improved healing of fractures in adults. This symposium will provide current information about the genetics, diagnosis, consequences, and treatment of XLH in children and adults.

### LEARNING OBJECTIVES

Upon completion of the educational activity, participants should be able to:

- Discuss the epidemiology, clinical presentation, and signs and symptoms of XLH
- Describe renal phosphate wasting and the role of fibroblast growth factor 23 (FGF23) in XLH
- Describe the diagnostic evaluation of XLH
- Identify treatment options and strategies for XLH across the age span
Featured Faculty
Thomas O. Carpenter, MD
Professor of Pediatrics (Endocrinology) and of Orthopaedics and Rehabilitation; Director, Yale Center for X-Linked Hypophosphatemia

Karl L. Insogna, MD
Ensign Professor of Medicine (Endocrinology) at the Yale School of Medicine; Director, Yale Bone Center; Associate Director, Yale Center for X-Linked Hypophosphatemia

Anthony A. Portale, MD
Director, Pediatric Dialysis Program, UCSF Medical Center Mount Zion, UCSF Medical Center Parnassus

Accreditation
AKH Inc., Advancing Knowledge in Healthcare is accredited by the Accreditation Council for Continuing Medical Education to provide continuing medical education for physicians.

AKH Inc., Advancing Knowledge in Healthcare designates this live activity for a maximum of 1.5 AMA PRA Category 1 Credit™. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

Successful completion of this CME activity, which includes participation in the evaluation component, enables the participant to earn up to 1.5 MOC points and 0 patient safety MOC credit in the American Board of Internal Medicine’s (ABIM) Maintenance of Certification (MOC) program. Participants will earn MOC points equivalent to the amount of CME credits claimed for the activity. It is the CME activity provider’s responsibility to submit participant completion information to ACCME for the purpose of granting ABIM MOC credit.

Successful completion of this CME activity, which includes participation in the activity, with individual assessments of the participant and feedback to the participant, enables the participant to earn 1.5 MOC points in the American Board of Pediatrics’ (ABP) Maintenance of Certification (MOC) program. It is the CME activity provider’s responsibility to submit participant completion information to ACCME for the purpose of granting ABP MOC credit.

REGISTRATION OPEN
7:30 am - 2:00 pm
Palais des congrès de Montréal
Viger Hall - Level 2

CONCURRENT ORALS: MUSCULOSKELETAL DEVELOPMENT
8:00 am - 9:30 am
Palais des congrès de Montréal
Room 517 C

Moderators
Jonathan Lowery, PhD
Marian University College of Osteopathic Medicine, United States

Eileen Shore, PhD
University of Pennsylvania, United States
8:00 am A novel crosstalk between TGF-β/BMP and Wnt families through Smad4 in endochondral ossification
Sho Tsukamoto¹, Mai Kuratani¹, Noriko Sekine¹, Misato Okubo¹, Yutaka Nakachi¹, Shinya Tanaka², Eijiro Jimi³, Hiromi Oda², Takenobu Katagiri¹. ¹Division of Pathophysiology, Research Center for Genomic Medicine, Saitama Medical University, Japan, ²Department of Orthopedic Surgery, Saitama Medical University, Japan, ³Faculty of Dental Science, Oral health • Brain health • Total health Research Center, Kyushu University, Japan
Disclosures: Sho Tsukamoto, None

8:15 am GDF11 Locally Controls Axial Skeletal Patterning and Systemically Improves Bone Formation As Opposed to Myostatin
Joonho Suh*¹, Je-Hyun Eom¹, Na-Kyung Kim¹, Joo-Cheol Park², Kyung-Mi Woo¹, Jeong-Hwa Baek¹, Hyun-Mo Ryoo¹, Se-Jin Lee¹, Yun-Sil Lee¹. ¹Department of Molecular Genetics & Dental Pharmacology, School of Dentistry and Dental Research Institute, Seoul National University, Republic of Korea, ²Department of Oral Histology-Developmental Biology, School of Dentistry and Dental Research Institute, Seoul National University, Republic of Korea, ³Department of Genetics and Genome Sciences, University of Connecticut School of Medicine, United States
Disclosures: Joonho Suh, None

8:30 am Conditional Disruption of the Osterix (Osx) Gene in Chondrocytes During Early Postnatal Growth Impairs Secondary Ossification in the Mouse Tibial Epiphysis.
Weirong Xing*¹, Catrina Godwin², Sheila Pourteymoor², Subburaman Mohan¹. ¹VA Loma Linda Healthcare System, Loma Linda University, United States, ²VA Loma Linda Healthcare System, United States
Disclosures: Weirong Xing, None

8:45 am ASBMR 2018 Annual Meeting Young Investigator Award
Mechanical Signals Preserve Bone and Muscle While Suppressing Adiposity in a Murine Model of Complete Estrogen Deprivation
Gabriel M. Pagnotti*¹, Ryan Pattyn², Laura E. Wright², Sutha K. John², Sreemala Murthy², Trupti Trivedi², Yun She², Clinton T. Rubin¹, William R. Thompson², Khalid S. Mohammad², Theresa A. Guise². ¹IUPUI, United States, ²Indiana University, United States, ³Stony Brook University, United States
Disclosures: Gabriel M. Pagnotti, None

9:00 am Alpha-Ketoglutarate Ameliorated the Age-related Osteoporosis via Regulating Histone Methyllations of Mesenchymal Stem Cells
Yuan Wang*, Liang Xie, Jing Xie, Yuchen Guo, Yuting Liu, Yunshu Wu, Rixin Zheng, Hongke Luo, Xiaofei Zheng, Quan Yuan. State Key Laboratory of Oral Diseases, West China Hospital of Stomatology, Sichuan University, China
Disclosures: Yuan Wang, None

9:15 am Improving Mitochondrial Function via CypD Deletion is Effective in Stimulating Bone Formation
Brianna Shares*, Roman Eliseev. University of Rochester, United States
Disclosures: Brianna Shares, None

CONCURRENT ORALS: OSTEOCLASTS AND OSTEOBLASTS
8:00 am - 9:30 am Palais des congrès de Montréal Room 517 B

Moderator
Kent Soe, PhD, MS
Dept. of Clinical Cell Biology, Vejle Hospital, University of Southern Denmark, Denmark

Moderator
Laetitia Michou MD, PhD
Université Laval, Canada
<table>
<thead>
<tr>
<th>Time</th>
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<th>Authors</th>
<th>Affiliations</th>
<th>Disclosures</th>
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<tbody>
<tr>
<td>8:00 am</td>
<td>TRAP as a Novel Regulator of Bone Formation in Osteoblasts at Sites of Bone Remodeling</td>
<td>Diana Metz-Estrella*, Tzong-Jen Sheu, J Edward Puzas. University of Rochester, United States</td>
<td>Disclosures: Diana Metz-Estrella, None</td>
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<tr>
<td>8:15 am</td>
<td>Osteoclast-derived autotaxin is a characteristic factor controlling bone degradation upon inflammation.</td>
<td>Olivier P*1, Sacha Flammier1, Fanny Bouguillaud1, François Duboeuf2, Gabor Tigyi2, Fabienne Coury1, Irma Machuca-Gayet1. 1INSERM U1033, France, 2University of Memphis, United States</td>
<td>Disclosures: Olivier P, None</td>
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<tr>
<td>8:30 am</td>
<td>Protease-activated receptor 1 (PAR1) deletion causes enhanced osteoclastogenesis in response to inflammatory signals through a Notch 2-dependent mechanism</td>
<td>Judy Kalinowski*1, Sandra Jastrzebski1, Hicham Drissi2, Archana Sanjay1, Sun-Kyeong Lee1, Ernesto Canalis1, Joseph Lorenzo1. 1UConn Health, United States, 2Emory University School of Medicine, United States</td>
<td>Disclosures: Judy Kalinowski, None</td>
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<tr>
<td>8:45 am</td>
<td>Examining the influence of senescent cells on PTH/PTHrP signaling in bone</td>
<td>Joseph Gardinier*, Chunbin Zhang. Henry Ford Hospital, United States</td>
<td>Disclosures: Joseph Gardinier, None</td>
<td></td>
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<tr>
<td>9:00 am</td>
<td>Argininosuccinate lyase deficiency as a model to study nitric oxide function in Bone</td>
<td>Zixue Jin*1, Jordan Kho1, Brian Dawson1, Monica Grover2, Ming-Ming Jiang1, Yuqing Chen1, Brendan Lee1. 1Baylor College of Medicine, United States, 2Stanford University, United States</td>
<td>Disclosures: Zixue Jin, None</td>
<td></td>
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<tr>
<td>9:15 am</td>
<td>Activin type 1 receptor ALK4 regulates postnatal bone mass</td>
<td>Shek Man Chim*, David Maridas, Laura Gamer, Vicki Rosen. Harvard School of Dental Medicine, United States</td>
<td>Disclosures: Shek Man Chim, None</td>
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**CONCURRENT ORALS: GREG MUNDY MEMORIAL SESSION - BONE TUMORS AND METASTASIS**

8:00 am - 9:30 am  
Palais des congrès de Montréal  
Room 517 D

**Moderators**

Larry Suva, PhD  
Texas Veterinary Medical Center, United States  

Rachelle Johnson, PhD  
Vanderbilt University, United States  

8:00 am | ASBMR 2018 Annual Meeting Young Investigator Award  
1136 | A Novel Osteolineage-Derived Cancer Associated Fibroblast Population In Primary Tumors Expresses Dkk1 And Enhances Tumor Growth | Biancamaria Ricci*, Francesca Fontana, Sahil Mahajan, Roberto Civitelli, Roberta Faccio. Washington University in St Louis, United States | Disclosures: Biancamaria Ricci, None                                          |
8:15 am Notch2 is a new marker of breast cancer stem cell and is involved in bone marrow cellular dormancy
Mattia Capulli1, Dayana Hristova2, Zoe Valbret1, Kashmala Carys1, Ronak Arjan1, Antonio Maurizi1, Francesco Masedu1, Nadia Rucci1, Anna Teti1. 1University of L’Aquila, Italy, 2University of Cambridge, United Kingdom
Disclosures: Mattia Capulli, None

8:30 am Circulating osteoprogenitor cells provide a novel diagnostic biomarker for bone metastasis
Hyun Jin Sun1, Kyung-Hun Lee1, Kyoung Jin Lee2, Seok In Park2, Young Joo Park1, Seock-Ah Lim1, Sun Wook Cho3. 1Seoul National University Hospital, Republic of Korea, 2Korea University College of Medicine, Republic of Korea
Disclosures: Hyun Jin Sun, None

8:45 am An IAP Antagonist Inhibits Breast Cancer Metastasis to Bone by Killing Cancer Cells, Inhibiting Osteoclast and Enhancing Osteoblast Differentiation
Wei Lei1, Rong Duan, Brendan Boyce, Zhenqiang Yao. University of Rochester Medical Center, United States
Disclosures: Wei Lei, None

9:00 am Bone-targeting Bortezomib significantly increases its efficacy in the treatment of human multiple myeloma in vitro and in vivo in mice
Jianguo Tao1, Venkatesan Srinivasan, Xichao Zhou, Frank Ebetino, Robert Boeckman, Brendan Boyce, Lianping Xing. University of Rochester, United States
Disclosures: Jianguo Tao, None

9:15 am FGFR and mTOR Signaling Cooperate in Osteosarcoma Pathogenesis and Metastasis
Arshiya Banu1, Sorrel Bunting1, Carolina Zandueta2, Susana Martinez-Canarias2, Haritz Moreno2, Beatriz Moreno2, Fernando Lecanda2, Agamemnon Grigoriadis1. 1King’s College London, United Kingdom, 2CIMA Pamplona, Spain
Disclosures: Arshiya Banu, None

CONCURRENT ORALS: SECONDARY CAUSES OF SKELETAL FRAGILITY
8:00 am - 9:30 am Palais des congrès de Montréal Room 517 A

Moderator
Susan Ott, MD
University of Washington Medical Center, United States

Moderator:
Annegreet Veldhuis-Vlug MD, PhD
Academic Medical Center Amsterdam, Netherlands

8:00 am Off-treatment Bone Mineral Density Changes in Postmenopausal Women after 5 Years of Anastrozole
Ivana Sestak1, Jack Cuzick1, Glen Blake2, Rajesh Patel2, Robert Coleman2, Richard Eastell4. 1Centre for Cancer Prevention, Queen Mary University London, United Kingdom, 2Division of Imaging Sciences, King’s College London, United Kingdom, 3Imperial College London, United Kingdom, 4Academic Unit of Bone Metabolism, Metabolic Bone Centre, Northern General Hospital, United Kingdom, 5Academic Unit of Clinical Oncology, Weston Park Hospital, United Kingdom
Disclosures: Ivana Sestak, None
Patients with prostate cancer and androgen deprivation therapy have increased risk of fractures – a study from the Fractures and fall injuries in the elderly cohort (FRAILCO)

Marit Wallander*1, Kristian F Axelsson2, Dan Lundh3, Mattias Lorentzon4. 1Department of Medicine Huddinge, Karolinska Institute, Sweden, 2Department of Orthopaedic Surgery, Skaraborg Hospital, Sweden, 3School of Health and Education, University of Skovde, Sweden, 4Geriatric Medicine, Department of Internal Medicine and Clinical Nutrition, Center for Bone Research at the Sahlgrenska Academy, Sweden

Disclosures: Marit Wallander, None

Low Parathyroid Hormone Levels are Associated with Increased Hazards of Fracture and Death in Stage 3 and 4 Chronic Kidney Disease

Karen Hansen*1, Sinong Geng2, Zhaobin Kuang2, Peggy Peissig3. 1University of Wisconsin School of Medicine & Public Health, United States, 2University of Wisconsin, United States, 3Marshfield Clinic, United States

Disclosures: Karen Hansen, None

Prevalence and risk of vertebral fractures in primary hyperparathyroidism: A nested case-control study

Henriette Ejlsmark-Svensson*1,2, Lise Sofie Bislev1,2, Siv Lajlev2, Torben Harsslof2, Lars Rolighed1, Tanja Sikjær2, Lars Rejnmark1,2. 1Department of Clinical Medicine, Aarhus University, Denmark, 2Department of Endocrinology and Internal Medicine, Aarhus University Hospital, Denmark, 3Department of Otorhinolaryngology, Head and Neck Surgery, Aarhus University Hospital, Denmark

Disclosures: Henriette Ejlsmark-Svensson, None

Fracture Risk Assessment in Women with Breast Cancer Initiating Aromatase Inhibitor Therapy: A Registry-Based Cohort Study

William Leslie*1, Suzanne Morin2, Lisa Lix1, Eugene Mccloskey3, Helena Johansson1, Nicholas Harvey4, John Kamis1. 1University of Manitoba, Canada, 2McGill University, Canada, 3Centre for Metabolic Bone Diseases, United Kingdom, 4MRC Lifecourse Epidemiology Unit, United Kingdom

Disclosures: William Leslie, None

Towards a physiologically-based definition of hypogonadism: Dose-response relationships between testosterone and bone density in older men

Elaine Yu*, Benjamin Leder, Hang Lee, Laura Krivicich, Emily Gentile, Sarah Hirsch, Karin Darakananda, David Lin, Joel Finkelstein. Massachusetts General Hospital, United States

Disclosures: Elaine Yu, None

NETWORKING BREAK

9:30 am - 9:45 am
Palais des congrès de Montréal
ASBMR Discovery Hall - Exhibit Hall 220 B-E

POSTERS OPEN

9:30 am - 2:00 pm
Palais des congrès de Montréal
ASBMR Discovery Hall - Exhibit Hall 220 B-E

All posters will be displayed in the ASBMR Discovery Hall - Exhibit Hall 220 B-E on Saturday, September 29 - Monday, October 1 during exhibit hall hours. For a full listing of all poster and late-breaking poster presentations, please refer to the poster section located in the back of the Onsite Program Book.
9:45 am - 11:00 am
PLENARY ORALS: MESENCHYMAL STEM CELL DEVELOPMENT AND PATHOGENESIS
Palais des congrès de Montréal
Room 517 D

Moderators
Louis Gerstenfeld, PhD
Boston University School of Medicine, United States

Christa Maes, PhD
KU Leuven, Belgium

9:45 am
1148
ASBMR 2018 Annual Meeting Felix Bronner Award
Mettl3-mediated m6A regulates the fate of bone marrow mesenchymal stem cells and osteoporosis
Yunshu Wu*, Liang Xie¹, Mengyuan Wang¹, Yuchen Guo¹, Rui Sheng¹, Jing Li¹, Peng Deng¹, Rixin Zheng¹, Quichan Xiong¹, Yizhou Jiang², Ling Ye¹, Xuedong Zhou¹, Shuibin Lin¹, Quan Yuan¹. ¹State Key Laboratory of Oral Diseases & National Clinical Research Center for Oral Diseases, West China Hospital of Stomatology, Sichuan University, China, ²Institute for Advanced Study, Shenzhen University, China, ³Center for Translational Medicine, The First Affiliated Hospital, Sun Yat-sen University, China
Disclosures: Yunshu Wu, None

10:00 am
1149
ASBMR 2018 Annual Meeting Young Investigator Award
Fat Regulates Inflammatory Arthritis
Yongjia Li*, Wei Zou¹, Jonathan Brestoff¹, Nidhi Rohatgi¹, Xiaobo Wu², John Atkinson², Charles Harris³, Steven Teitelbaum¹,² ¹Department of Pathology and Immunology, Washington University School of Medicine, St. Louis, United States, ²Division of Rheumatology, Department of Medicine, Washington University School of Medicine, St. Louis, United States, ³Division of Endocrinology, Metabolism and Lipid Research, Department of Medicine, Washington University School of Medicine, St. Louis, United States, ⁴Division of Bone and Mineral Diseases, Department of Medicine, Washington University School of Medicine, St. Louis, United States
Disclosures: Yongjia Li, None

10:15 am
1150
Deletion of Ror2 Promotes Bone Formation by Attenuating IL-6 Signaling
Hiroaki Saito*, Jonathan Gordon², Josech R. Boyd², Michiru Nishita¹, Yasuhiro Minami¹, Jane Lian², Gary Stein², Hanna Taipaleenmäki¹, Eric Hesse¹. ¹Molecular Skeletal Biology Laboratory, Department of Trauma, Hand and Reconstructive Surgery, University Medical Center Hamburg-Eppendorf, Germany, ²Department of Biochemistry, College of Medicine, University of Vermont, United States, ³Department of Physiology and Cell Biology Kobe University Graduate School of Medicine, Japan
Disclosures: Hiroaki Saito, None

10:30 am
1151
ASBMR 2018 Annual Meeting Young Investigator Award
BMP2-CXCL12 Axis Regulates Prx1 Expression During Fracture Repair
Alessandra Esposito*, Lai Wang, Tieshi Li, Jie Jiang, Xin Jin, Anna Spagnoli. Rush University Medical Center, United States
Disclosures: Alessandra Esposito, None
10:45 am  Methylation Of 4-aminobutyrate Aminotransferase (Abat) by Dnmt3b Regulates Chondrocyte Metabolism and the Development of OA
Jie Shen*, Cuicui Wang, Daofeng Li, Ting Wang, Audrey Mcalinden, Regis O’Keefe.
Washington University in St Louis, United States
Disclosures: Jie Shen, None

PLENARY ORALS: RARE BONE DISEASES
9:45 am - 11:00 am  Palais des congrès de Montréal
Room 517 A

Moderator
Alison Boyce, MD
National Institutes of Health, United States

Moderator
Elisabeth Eekhoff MD, PhD
VU University Medical Center, Amsterdam, The Netherlands

9:45 am  Burosumab Improved Serum Phosphorus, Osteomalacia, Mobility, and Fatigue in the 48-Week, Phase 2 Study in Adults with Tumor-induced Osteomalacia Syndrome
Suzanne Jan De Beur*1, Paul D. Miller2, Thomas J. Weber3, Munro Peacock4, Karl L. Insogna5, Rajiv Kumar6, Frank Rauch7, Diana Luca8, Christina Theodore-Oklota9, Kathy Lampil9, Javier San Martin9, Thomas O. Carpenter1. 1Johns Hopkins University School of Medicine, United States, 2Colorado Center for Bone Research, United States, 3Duke University, United States, 4Indiana University School of Medicine, United States, 5Yale University School of Medicine, United States, 6Mayo Clinic College of Medicine, United States, 7McGill University, Canada, 8Ultradynx Pharmaceutical Inc., United States
Disclosures: Suzanne Jan De Beur, Ultradynx Pharmaceutical Inc., Consultant, Ultradynx Pharmaceutical Inc.

10:00 am Efficacy and Safety of Burosumab, a Fully Human Anti-FGF23 Monoclonal Antibody, for Children 1-4 Years Old with X-linked Hypophosphatemia (XLH)
Michael P. Whyte*1, Erik Imel2, Gary S. Gottesman1, Meng Mao3, Alison Skrinar1, Javier San Martin1, Thomas O. Carpenter4. 1Shriners Hospitals for Children, United States, 2Indiana University School of Medicine, United States, 3Ultragenyx Pharmaceutical Inc., United States, 4Yale University School of Medicine, United States
Disclosures: Michael P. Whyte, Ultragenyx Pharmaceutical Inc., Consultant, Ultragenyx Pharmaceutical Inc., Grant/Research Support

10:15 am Incidence of Malignancies in Fibrous Dysplasia: Data from a National Pathology Cohort
Marlous Rotman*, Neveen Hamdy, Bas Majoer, Michiel Van De Sande, Judith Bovee, Sander Dijkstra, Olaf Dekkers, Natasha Appelman-Dijkstra. LUMC, Netherlands
Disclosures: Marlous Rotman, None

10:30 am ASBMR 2018 Annual Meeting Young Investigator Award
Emilie Barruet*, Blanca M Morales1, Tania Moody1, Corey J Cain1, Kelly Wentworth1, Tea V Chan1, Amy Ton1, Tom Hm Ottenhoff2, Marielle C. Haks2, Judith Hellman1, Mary Nakamura1, Edward C Hsiao1. 1UCSF, United States, 2Leiden University Medical Center, Netherlands, 3UCSF/VAMC, United States
Disclosures: Emilie Barruet, None
10:45 am  Albright Hereditary Osteodystrophy (AHO): autosomal dominant shortening of metacarpals and -tarsals caused by a novel splice-site mutation in PTHLH  
Monica Reyes*, Bert Bravenboer2, Harald Jüppner1. 1Endocrine Unit, Massachusetts General Hospital, United States, 2Department of Endocrinology, Universitair Ziekenhuis Brussel, Belgium  
Disclosures: Monica Reyes, None

NETWORKING BREAK
11:00 am - 11:15 am  
Palais des congrès de Montréal  
ASBMR Discovery Hall - Exhibit Hall 220 B-E

LATE-BREAKING CONCURRENT ORALS: BASIC
11:15 am - 12:00 pm  
Palais des congrès de Montréal  
Room 517 C

Moderator
Lidan You, PhD  
University of Toronto, Canada

Moderator
Thomas Levin Andersen, PhD  
Vejle Hospital - Lillebaelt Hospital, IRS, University of Southern Denmark, Denmark

11:15 am  Bone marrow-derived CXCL12 is indispensable for the loss of cortical bone mass caused by estrogen deficiency  
Filipa Ponte*, Aaron Warren, Ha-Neui Kim, Iyer Srividhya, Li Han, Maria Almeida, Stavros Manolagas. UAMS, United States  
Disclosures: Filipa Ponte, None

11:24 am  Marrow adiposity and vascular morphology are regulated by EBF1 in adult bone  
Seham Alruwaili*, Steven Tommasini2, Ben-Hua Sun2, Jackie Fretz2. 1Quinnipiac University, United States, 2Yale School of Medicine, United States  
Disclosures: Seham Alruwaili, None

11:33 am  Conditional ablation of Prx1 expressing cells impairs endochondral ossification in postnatal bone repair  
Lai Wang*, Alessandra Esposito1, Joseph Temple1, Tieshi Li1, Jie Jiang1, Xin Jin1,2, Anna Spagnoli1. 1Department of Pediatrics, Rush University Medical Center, Chicago, United States, 2Department of Orthopaedics, Union Hospital, Tongji Medical College, Huazhong University of Science and Technology, Wuhan, 430022, P.R. China  
Disclosures: Lai Wang, None

LB-1161  WITHDRAWN

11:42 am  LRP5-deficiency in OsxCreERT2 mice recapitulates intervertebral disc degeneration from aging and mechanical compression  
Jiannong Dai*, Matthew Silva2, Nilsson Holguin1. 1IUPUI, United States, 2Washington University in St. Louis, United States  
Disclosures: Jiannong Dai, None

ASBMR 2018 Annual Meeting
LATE-BREAKING CONCURRENT ORALS: CLINICAL
11:15 am - 12:00 pm
Palais des congrès de Montréal
Room 517 A

Moderator
Julie Paik, MD
Brigham and Women’s Hospital, Harvard Medical School, United States

Moderator
Kristina Akesson, MD, PhD
Skane University Hospital, Malmo, Lund University, Sweden

11:15 am
LB-1163
Childhood Obesity and and up to 11 Years of Follow-up
Daniel Prieto-Alhambra*, Katherine Butler, Jose Poveda, Daniel Martinez-Laguna, Carlen Reyes, Jennifer Lane, Jeroen De Bont, M Kassim Javaid, Cyrus Cooper, Jennifer Logue, Talita Duarte-Salles, Dominic Furniss.

Disclosures:
Daniel Prieto-Alhambra, Consultant, Amgen, Speakers’ Bureau, Servier, Grant/Research Support, Amgen, Grant/Research Support, UCB, Grant/Research Support

11:24 am
LB-1164
Does Cortical Porosity Predict Incident Fractures in Postmenopausal Women?
Camilla Andreasen*, Åshild Bjørnerem.

Disclosures:
Camilla Andreasen, None

11:33 am
LB-1165
Nursing Home Trends in Hip Fracture Rates Follow the Plateau Observed in U.S. Women
Sarah Berry*, Lori Daiello, Andrew Zullo, Kevin Mcconeghy, Tingting Zhang, Yoojin Lee, Jeffrey Curtis, Nicole Wright, Vincent Mor, Douglas Kiel.

Disclosures:
Sarah Berry, Walters Kluwer, Other Financial or Material Support

11:42 am
LB-1166
Fracture Prevention in Osteopenic Postmenopausal Women with Zoledronic Acid Every 18 Months, a Randomized Controlled Trial
Ian Reid*, Anne Horne, Borislav Mihov, Mark Bolland, Sonja Bastin, Greg Gamble.

Disclosures: Ian Reid, Novartis, Other Financial or Material Support
**Fracture Risk after Stopping Adjuvant Denosumab in Hormone Receptor Positive Breast Cancer Patients on Aromatase Inhibitor Therapy – an Analysis of 3,425 Postmenopausal Patients in the Phase III ABCSG-18 trial**

Georg Pfeiler*, Guenther G. Steger, Daniel Egle, Richard Greil, Florian Fitzal, Viktor Wette, Marija Balic, Ferdinand Haslbauer, Elisabeth Melbinger-Zeinitzer, Vesna Bjelic-Radisic, Jonas Bergh, Raimund Jakesz, Christian Marth, Paul Sevelda, Brigitte Minz, Ruth Exner, Christian F. Singer, Michael Gnant, 1Medical University of Vienna/ Department of Obstetrics and Gynecology and Comprehensive Cancer Center, Austria, 2Medical University of Vienna/ Department of of Internal Medicine I/Oncology, Austria, 3Medical University Innsbruck/ Department of Gynecology, Austria, 4Paracelsus Medical University Salzburg/ Department of Internal Medicine III and Salzburg Cancer Research Institute, Austria, 5Medical University of Vienna/ Department of Surgery and Comprehensive Cancer Center, Austria, 6Breast Center St. Veit/ Glan/ Doctor’s Office Wette, Austria, 7Medical University Graz/ Department of Oncology, Austria, 8Hospital Vöcklabruck/Department of Internal Medicine, Austria, 9Hospital Wolfsberg/ Department of Surgery, Austria, 10Medical University Graz/ Department of Gynecology, Austria, 11Department of Oncology-Pathology, Karolinska Institutet and Cancer Theme, Karolinska University Hospital, 17176-Stockholm, Sweden, 12Karl Landsteiner Institute for Gynecologic Oncology and Senology, Austria, 13Paracelsus Medical University Salzburg/ Department of Internal Medicine III, Austria, 14Austrian Breast & Colorectal Cancer Study Group/ Statistic Department, Austria

Disclosures: Georg Pfeiler, Novartis, Grant/Research Support, Pfizer, Grant/Research Support, AstraZeneca, Grant/Research Support, Amgen, Consultant

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**LATE-BREAKING CONCURRENT ORALS: CLINICAL RARE BONE DISEASES**

11:15 am - 12:00 pm

**Palais des congrès de Montréal Room 517 D**

**Moderator:**

Natasha Appelman-Dijkstra, MD
LUMC Centre for Bone Quality Deptment of Endocrinology, The Netherlands

**Moderator:**

Diala El-Maouche, MD, MS
National Institute of Health, United States

**11:15 am Burosumab Improved Rickets, Phosphate Metabolism, and Clinical Outcomes Compared to Conventional Therapy in Children with XLH**

Erik Imel*, Michael P. Whyte, Craig Munns, Anthony A. Portale, Leanne Ward, Ola Nilsson, Jill H. Simmons, Raja Padidela, Noriyuki Namba, Hae I. Cheong, Meng Mao, Chao-Yin Chen, Alison Skrinar, Javier San Martin, Francis Glorieux. 1Indiana University School of Medicine, United States, 2Shriners Hospitals for Children, United States, 3The Children’s Hospital at Westmead, Australia, 4University of California, San Francisco, United States, 5University of Ottawa, Canada, 6Karolinska Institutet, Sweden, 7Vanderbilt University School of Medicine, United States, 8Royal Manchester Children’s Hospital, United Kingdom, 9Osaka Hospital, Japan Community, Healthcare Organization; Osaka University Graduate School of Medicine, Japan, 10Seoul National University Children’s Hospital, Republic of Korea, 11Ultragenyx Pharmaceutical Inc., United States, 12Shriners Hospital for Children-Canada, McGill University, Canada

Disclosures: Erik Imel, Ultragenyx Pharmaceutical Inc., Other Financial or Material Support, Ultragenyx Pharmaceutical Inc., Grant/Research Support, Ultragenyx Pharmaceutical Inc., Consultant
Continued Improvement in Clinical Outcomes in the Phase 3 Randomized, Double-Blind, Placebo-Controlled Study of Burosumab, an Anti-FGF23 Antibody, in Adults with X-Linked Hypophosphatemia (XLH)
Anthony A. Portale*, Karl L. Insogna, Karine Briot, Erik Imel, Peter Kamenicky, Thomas Weber, Pisit Pitukcheewanont, Hae I. Cheong, Suzanne Jan De Beur, Yasuo Imanishi, Nobuaki Ito, Robin Lachmann, Hiroyuki Tanaka, Farzana Perwad, Lin Zhang, Christina Theodore-Okola, Matt Mealiffe, Javier San Martin, Thomas O. Carpenter. 1University of California, San Francisco, United States, 2Yale School of Medicine, United States, 3Centre d’Evaluation des Maladies Osseuses, Hôpital Cochin, France, 4Indiana University School of Medicine, United States, 5Université Paris-Sud, France, 6Duke University Medical Center, United States, 7Children’s Hospital Los Angeles, University of Southern California Keck School of Medicine, United States, 8Seoul National University Children’s Hospital, Republic of Korea, 9Johns Hopkins University, United States, 10Osaka City University Graduate School of Medicine, Japan, 11Tokyo University Hospital, Japan, 12University College London Hospitals, United Kingdom, 13Okayama Saiseikai General Hospital, Japan, 14University of California, San Francisco, United States, 15Ultragenyx Pharmaceutical Inc., United States, 16Yale University School of Medicine, United States

Disclosures: Anthony A. Portale, Ultragenyx Pharmaceutical Inc., Other Financial or Material Support, Ultragenyx Pharmaceutical Inc., Consultant, Ultragenyx Pharmaceutical Inc., Grant/Research Support

Oral Iron Therapy Normalizes Fibroblast Growth Factor 23 (FGF23) in Patients with Autosomal Dominant Hypophosphatemic Rickets
Erik Imel, Ziyue Liu, Melissa Coffman, Dena Acton, Michael Econs. 1Indiana University School of Medicine, United States, 2Indiana University School of Public Health, United States

Disclosures: Erik Imel, None

Digenic Inheritance of Heterozygous SLC34A3 and SLC34A1 Mutations in Hereditary Hypophosphatemic Rickets with Hypercalciuria
Rebecca Gordon, Daniel Doyle, Joshua Zaritsky, Michael Levine. 1The Children’s Hospital of Philadelphia, United States, 2Alfred I. duPont Hospital for Children, United States

Disclosures: Rebecca Gordon, None

LRP6 Mutation: A New Cause of Autosomal Dominant High Bone Mass
Michael P. Whyte*, Gary S. Gottesman, Elizabeth L. Lin, William H. Mcalister, Angela Nenninger, Vinith N. Bijanki, Margaret Huskey, Shenhui Duan, Steven Mumm. 1Center for Metabolic Bone Disease and Molecular Research, Shriners Hospitals for Children, United States, 2Division of Bone and Mineral Diseases, Department of Internal Medicine, Washington University School of Medicine at Barnes-Jewish Hospital, United States, 3Mallinckrodt Institute of Radiology, Washington University School of Medicine at St. Louis Children’s Hospital, United States

Disclosures: Michael P. Whyte, None
Moderator
Joel Boerckel, PhD
University of Pennsylvania, United States

Moderator
Paula Stern, PhD
Northwestern University Feinberg School of Medicine, Depart of Molecular Phar, United States

11:15 am
**LB-1173**
Short-Term Intermittent PTH (1-34) Administration, Angiogenesis, and Matrix Metalloproteinase-9 in Femora of Mature and Middle-Aged C57BL/6 Mice
Seungyong Lee*, Rhonda Prisby. The University of Texas at Arlington, United States
Disclosures: Seungyong Lee, None

11:24 am
**LB-1174**
Cathepsin K (Ctsk) restrains the peristin (Postn)-mediated increase in cortical size induced by RANKL
Nicolas Bonnet*, Eleni Douni2, Serge Ferrari1. 1University Geneva Hospital (HUG), Switzerland, 2Biomedical Sciences Research Center “Alexander Fleming”, Department of Biotechnology, Agricultural University of Athens, Greece, 3University Geneva Hospital (HUG), Switzerland
Disclosures: Nicolas Bonnet, None

11:33 am
**LB-1175**
Multi-omics approach reveals novel pathogenic indicators of DISH
Matthew Veras1, Neil Tenn1, Miljan Kuljanin2, Gilles Lajoie2, James Hammond1, S. Jeffrey Dixon1, Cheryle Séguin1. 1Bone & Joint Institute, The University of Western Ontario, Canada, 2The University of Western Ontario, Canada, 3University of Alberta, Canada
Disclosures: Matthew Veras, None

11:42 am
**LB-1176**
Identification of a Novel Selective Small-Molecule Inhibitor of the BMP Type I Receptor Kinase ACVR1/ALK2 with Disease-Modifying Potential for On-Target Therapy of Fibrodysplasia Ossificans Progressiva (FOP)
Ina Kramer*, Luca Arista2, Victoria Head3, Michaela Kneissel1, Thomas Ullrich2, Sabine Guth-Gundel1, 1Musculoskeletal Disease Area, Novartis Institutes for BioMedical Research, Switzerland, 2Global Discovery Chemistry, Novartis Institutes for BioMedical Research, Switzerland, 3Translational Medicine, Novartis Institutes for BioMedical Research, Switzerland
Disclosures: Ina Kramer, Novartis Pharma AG, Other Financial or Material Support

11:51 am
**LB-1177**
Activin A (ActA) Expression by Fibroadipoprogenitors (FAPs), But Not Myeloid Cells, Is Necessary for Endochondral Heterotopic Ossification (HO) in Fibrodysplasia Ossificans Progressiva (FOP) Mice
Cody M. Elkins*, Chuanmin Cheng, Heather Durai, Nikash Hari, Daniel S. Perrien. Vanderbilt Center for Bone Biology, Division of Clinical Pharmacology, Department of Medicine, Vanderbilt University Medical Center, United States
Disclosures: Cody M. Elkins, None

**POSTER SESSION III AND POSTER TOURS**

12:00 pm - 2:00 pm
All posters will be displayed in the ASBMR Discovery Hall - Exhibit Hall 220 B-E on Saturday, September 29 - Monday, October 1 during exhibit hall hours. For a full listing of all poster and late-breaking poster presentations, please refer to the poster section located in the back of the Onsite Program Book.
**SYMPOSIUM: SENESCENCE AND AGING BONE**

2:00 pm - 3:15 pm  
Palais des congrès de Montréal  
Room 517 D

**Co-Chairs**  
Joshua Farr, PhD  
Mayo Clinic, United States  
*Disclosures: None*

2:00 pm  
**Senescence-Associated Intrinsic Mechanisms of Osteoblast Dysfunctions**  
Moustapha Kassem, MD, PhD  
Odense University Hospital, Denmark  
*Disclosures: None*

2:25 pm  
**Age-related Stromal Changes Drive Increased Bone Metastasis**  
Sheila Stewart, PhD  
Washington University School of Medicine, United States  
*Disclosures: None*

2:50 pm  
**Therapeutic Opportunities to Target Senescence to Prevent Age-related Bone Loss**  
Megan Weivoda, PhD  
University of Michigan, United States  
*Disclosures: None*

**SYMPOSIUM: MULTIMORBIDITY AND ITS IMPACT ON CLINICAL MANAGEMENT**

2:00 pm - 3:15 pm  
Palais des congrès de Montréal  
Room 517 A

**Co-Chairs**  
Tamara Harris MD, MS  
Intramural Research Program, National Institute on Aging, United States  
*Disclosures: None*

Marian Hannan PhD  
HSL Institute for Aging Research and Harvard Medical School, United States  
*Disclosures: None*

2:00 pm  
**Complexities of Managing Osteoporosis in Older Adults with Multimorbidity**  
Sarah Berry, MD, MPH  
Hebrew SeniorLife/Beth Israel Deaconess Medical Center, United States  
*Disclosures: Other Financial or Material Support: Walters Kluwer*

2:25 pm  
**Multimorbidity and Hip Fracture Prediction-Impact of Competing Mortality Risk**  
Kristine Ensrud, MD, MPH  
University of Minnesota and Minneapolis VA Health Care System, United States  
*Disclosures: None*

2:50 pm  
**Management and Guidelines**  
Cynthia Boyd, MD  
Johns Hopkins Center on Aging and Health, United States  
*Disclosures: None*

**CLOSING RECEPTION**

3:15 pm - 4:00 pm  
Palais des congrès de Montréal  
Foyer 510-511
Attendees and registered guests are invited to celebrate ASBMR’s 2018 Annual Meeting during our Welcome Reception and Poster Session in the ASBMR Discovery Hall. Simply display your badge for admission. Guests may purchase a badge for $50 at the ASBMR Registration Counter for entrance to the Welcome Reception.

**ADULT METABOLIC BONE DISORDERS**

**FRI-0001**  
**Acute Kidney Injury in Primary Hyperparathyroidism**  
Cristiana Cipriani*1, Jessica Pepe1, Federica Biamonte1, Valeria Fassino1, Luciano Colangelo1, Valentina Piazzolla1, Carolina Clementelli1, Luciano Nieddu2, Salvatore Minisola1. 1Sapienza University of Rome, Italy, 2UNINT University, Italy  
Disclosures: Cristiana Cipriani, None

**FRI-0002**  
**Changes in Skeletal Microstructure Through Four Years of rhPTH(1-84) Therapy in Hypoparathyroidism**  
Natalie Cusano*, Mishaela Rubin2, John Williams2, Sanchita Agarwal2, Gaia Tabacco2, Yu-Kwang Donovan Tay2, Rukshana Majeed2, Beatriz Omeragic2, John Bilezikian2. 1Lenox Hill Hospital, United States, 2Columbia University Medical Center, United States  
Disclosures: Natalie Cusano, Shire, Speakers’ Bureau, Shire, Grant/Research Support

**FRI-0003**  
**Greater Visceral Adipose Tissue is Associated with Impairment of Bone Strength Assessed with HR-pQCT: the OFELY Study**  
Francois Duboeuf*, Elisabeth Sornay-Rendu, Roland Chapurlat. INSERM UMR 1033, Université de Lyon, France  
Disclosures: Francois Duboeuf, None

**FRI-0004**  
**Effects of parathyroidectomy on the biology of bone tissue in patients with chronic kidney disease and secondary hyperparathyroidism**  
Geovanna O. Pires*, Itamar O. Vieira1, Fabiana R. Hernandez1, Andre L. Teixeira1, Ivone B. Oliveira1, Wagner V. Dominguez1, Luciene M. Dos Reis1, Fabio M. Montenegro1, Rosa M. Moyes1, Aluizio B. Carvalho1, Vanda Jorgetti1. 1Laboratório de Investigação Médica 16, Hospital das Clínicas da Faculdade de Medicina da Universidade de São Paulo, Brazil, 2Hospital Samaritano Américas Serviços Médicos, Brazil, 3Nephrology Division, Federal University of São Paulo, Brazil, 4Disciplina de Cabeça e Pescoço, Hospital das Clinicas da Faculdade de Medicina da Universidade de São Paulo, Brazil, 5Post-Graduate Medicine Program, UNINOVE, Brazil  
Disclosures: Geovanna O. Pires, None

**FRI-0005**  
**Overweight and Underweight Are Risk Factors for Vertebral Fractures in Patients with Type 2 Diabetes Mellitus**  
Ippei Kanazawa*, Masakazu Notsu, Ken-Ichiro Tanaka, Toshitsugu Sugimoto. Shimane University Faculty of Medicine, Japan  
Disclosures: Ippei Kanazawa, None

**FRI-0006**  
**Cinacalcet restores bone quality in CKD-MBD mice by modulating Wnt10b and klotho signaling in bone cells**  
Jia-Fwu Shyu*, Tzu-Hui Chu1, Yi-Jun Lin1, Lo-Wei Chen2, Cheng-Yuan Hsiao1, Wen-Chih Liu1. 1Department of Biology and Anatomy, National Defense Medical Center, Taiwan, 2Department of Biology and Anatomy, National Defense Medical Center, United Republic of Tanzania, 3Graduate Institute of Clinical Medicine, College of Medicine, Taipei Medical University, Taiwan  
Disclosures: Jia-Fwu Shyu, None
**FRI-0007**

Bone Material Strength Index as Measured by Impact Microindentation in Patients with Primary Hyperparathyroidism and Hypoparathyroidism

Jessica Starr*, Gaia Tabacco1, Rukshana Majeed1, Beatriz Omeragic1, Maximo Gomez1, Leonardo Bandeira1, Mishaela Rubin1. COLUMBIA UNIVERSITY, United States, 2University Campus Bio-Medico, Italy, 3Instituto FBandeira de Endocrinologia, United States

Disclosures: Jessica Starr, None

**FRI-0008**

ASBMR 2018 Annual Meeting Young Investigator Award

Parathyroid Gland Localization in Primary Hyperparathyroidism: Evaluation of a Novel Imaging Protocol and Direct Head-to-Head Comparison of Parathyroid 4D-CT and Sestamibi SPECT/CT

Randy Yeh*, Yu-Kwang Donovan Tay, Gaia Tabacco, Laurent Dercle, Jennifer Kuo, Leonardo Bandeira, Catherine McManus, James Lee, John Bilezikian. Columbia University Medical Center, United States

Disclosures: Randy Yeh, None

**BIOMECHANICS AND BONE QUALITY**

**FRI-0053**

Slc20a2, encoding the phosphate transporter PiT2, is a novel genetic determinant of bone quality and strength

Sarah Beck-Cormier*, Christopher J. Lelliott2, John G. Logan3, David T. Lafont1, Victoria D. Leitch1, Natalie C. Butterfield1, Hayley J. Protheroe1, Peter I. Croucher4, Paul A. Baldo1, Alina Gaultier-Lintia, Gael Nicolas4, Nina Bon1, Sophie Source2, Jérôme Guicheux1, Laurent Beck1, Graham R. Williams3, J. H. Duncan Bassett3. 1Inserm, UMR 1229, RMES, Regenerative Medicine and Skeleton, Université de Nantes, UFR Odontologie, ONIRIS, Nantes, F-44042, France, 2Mouse Pipelines, Wellcome Trust Sanger Institute, Hinxton, CB10 1SA, United Kingdom, 3Molecular Endocrinology Laboratory, Department of Medicine, Imperial College London, London W12 0NN, United Kingdom, 4The Garvan Institute of Medical Research, Sydney, NSW 2010, Australia, 5CHU Nantes, Laennec Hospital, Nantes, F-44093, France, 6Normandie Univ, UNIROUEN, Inserm U1245 and Rouen University Hospital, Department of Genetics and CNR-MAJ, F 76000, Normandy Center for Genomic and Personalized Medicine, Rouen, France

Disclosures: Sarah Beck-Cormier, None

**FRI-0054**

Bone strength and mineralization are regulated independently of bone mass by ephrinB2-dependent autophagic processes in osteocytes

Vrahnas Christina*, Toby Dite1, Yifang Hu2, Huynh Nguyen3, Mark R Forwood1, Keith R Bambery2, Mark J Tobin4, Gordon K Smyth2, T John Martin1, Natalie A Sims1. 1St. Vincent’s Institute of Medical Research, Australia, 2Walter and Eliza Hall Institute of Medical Research, Australia, 3Griffith University, Australia, 4Australian Synchrotron, Australia

Disclosures: Natalie Sims, None

**FRI-0055**

ASBMR 2018 Annual Meeting Young Investigator Award

Non-invasive Localized Cold Therapy as a New Mode of Bone Repair Enhancement

Marianne Comeau-Gauthier*, Daniel Castano, Jose Luis Ramirez-Garcia Luna, Justin Drager, Jake Barralet, Geraldine Merle, Edward Harvey. McGill University, Canada

Disclosures: Marianne Comeau-Gauthier, None

**FRI-0056**

A Novel FEM Approach for Evaluating the Fracture Resistance of Human Cortical Bone Demonstrates that Material Heterogeneity Distributes and Attenuates Damage in Cortical Bone from Human Iliac Crest Biopsies

Ahmet Demirtas*, Erik Taylor2, Eve Donnelly2, Ani Ural1. 1Villanova University, United States, 2Cornell University, United States

Disclosures: Ahmet Demirtas, None
FRI-0057 Aging and Chronic Kidney Disease differently diminish bone mechanics from the nano- to whole-bone scales
Chelsea M Heveran*, Charles Schurman, Claire Acevedo, Eric Schaible, Eric W Livingston, Moshe Levi, Ted Bateman, Tamara Alliston, Karen B King, Virginia L Ferguson. 1Department of Mechanical Engineering, University of Colorado at Boulder, United States, 2Department of Orthopaedic Surgery, University of California San Francisco, United States, 3Department of Mechanical Engineering, University of Utah, United States, 4Lawrence Berkeley National Laboratory, United States, 5Department of Biomedical Engineering, University of North Carolina, United States, 6Department of Biochemistry and Molecular & Cellular Biology, Georgetown University, United States, 7UC Berkeley/UCSF Graduate Program in Bioengineering, United States, 8Department of Orthopaedics, University of Colorado School of Medicine, United States
Disclosures: Chelsea M Heveran, None

FRI-0058 ASBMR 2018 Fund for Research and Education Young Investigator Award in Honor of Adele L. Boskey
The Effect of Vitamin D3 Supplementation on Distal Radius Fracture Healing: A Randomized Controlled HR-pQCT Trial
Disclosures: F.L. Heyer, None

FRI-0059 Differences in Microarchitectural and Nano-mechanical Properties of Bone Between Patients with and without Atypical Femoral Fracture after Prolonged Bisphosphonate Treatment
Shijing Qiu*, Lanny Griffin, George Divine, Mahalakshmi Honasoge, Arti Bhan, Shiri Levy, Elizabeth Warner, Sudhaker Rao. 1Henry Ford Hospital, United States, 2California Polytechnic State University, United States
Disclosures: Shijing Qiu, None

FRI-0060 Effect of Exercise and Weight on Bone Health in 8-9 Year Old Children
Sandra Shefelbine*, Vineel Kondiboyina, Lauren Raine, Arthur Kramer, Naiman Khan, Charles Hillman. 1Northeastern University, United States, 2University of Illinois at Urbana-Champaign, United States
Disclosures: Sandra Shefelbine, None

FRI-0061 ASBMR 2018 Annual Meeting Young Investigator Award
Uncontrolled hyperglycemia delays bone healing and disrupts the microstructure and gene expression of cartilaginous and bony cells at the growth plate, metaphyseal and subchondral bone in diabetic rats
Ariane Zamarioli*, Beatriz P Trani, Maysa S Campos, João Paulo B Ximenez, Raquel A Silva, José B Volpon. 1School of Medicine of Ribeirão Preto, Brazil, 2School of Pharmaceutical Sciences of Ribeirão Preto, Brazil, 3School of Dentistry of Ribeirão Preto, Brazil
Disclosures: Ariane Zamarioli, None

BONE ACQUISITION AND PEDIATRIC BONE DISORDERS

FRI-0110 Identification of a Non-Linear Maturational Trajectory During Adolescence
Melanie Boeyer*, Emily Leary, Dana Duren. University of Missouri, United States
Disclosures: Melanie Boeyer, None
FRI-0111  Sexual Dimorphism in Cortical and Trabecular Bone Microstructure Appears During Puberty in Chinese Children
Ka Yee Cheuk*, Xiao-Fang Wang, Ji Wang, Zhendong Zhang, Fiona Wp Yu, Vivian Wy Hung, Wayne Yw Lee, Ali Ghasem-Zadeh, Roger Zebaze, Tracy Y Chu, X Edward Guo, Jack Cy Cheng, Tsu Ping Lam, Ego Seeman. 1Department of Orthopaedics and Traumatology, The Chinese University of Hong Kong, Hong Kong, 2Departments of Endocrinology and Medicine, Austin Health, University of Melbourne, Australia, 3Bone Bioengineering Laboratory, Department of Biomedical Engineering, Columbia University, United States
Disclosures: Ka Yee Cheuk, None

FRI-0112  Elucidating the Mechanism of JAGGED1-mediated Osteoblast Commitment during Maxillary Development
Archana Kamalakar*, Melissa Oh, Samir Ballestas, Yvonne Coretha Stephenson, Steven Goudy. Emory University, United States
Disclosures: Archana Kamalakar, None

FRI-0113  Menstrual abnormalities and cortical bone deterioration in young female athletes: an analysis by HR-pQCT
Yuriko Kitajima*, Ko Chiba, Yusaku Isobe, Narihiro Okazaki, Naoko Murakami, Michio Kitajima, Kiyonori Miura, Makoto Osaki, Hideaki Masuzaki. 1Department of Obstetrics and Gynecology, Nagasaki University Graduate School of Biomedical Sciences, Japan, 2Department of Orthopedic Surgery, Nagasaki University Graduate School of Biomedical Sciences, Japan
Disclosures: Yuriko Kitajima, MARUSAN-AI Co., Ltd., Grant/Research Support

FRI-0114  Body mass is important, but so is its distribution: associations between body composition and bone health measures in 11-12 year old children
Peter Simm*, Dorothea Dumuid, Susan Clifford, Grace Gell, Timothy Olds, Melissa Wake. 1Dept of Endocrinology, Royal Children's Hospital Mlebourne, Australia, 2Alliance for Research in Exercise, Nutrition and Activity, University of South Australia, Australia, 3Murdoch Children's Research Institute, Australia
Disclosures: Peter Simm, None

BONE INTERACTIONS WITH MUSCLE AND OTHER TISSUES

FRI-0135  ASBMR 2018 Annual Meeting Young Investigator Award
Osteocalcin is necessary and sufficient to mount an acute stress response
Julian Berger*, Lori Khrimian, Karsenty Gerard. Columbia University, United States
Disclosures: Julian Berger, None

FRI-0136  Mice with reduced visceral and bone marrow adipose tissue have increased bone mass
Louise Grahnemo*, Karin L. Gustafsson, Klara Sjögren, Petra Henning, Vikte Lionikaitė, Antti Koskela, Juha Tuukkanen, Claes Ohlsson, Ingrid Wernstedt Astholm, Marie K. Lagerquist. 1Centre for Bone and Arthritis Research, Department of Internal Medicine and Clinical Nutrition, Institute of Medicine, The Sahlgrenska Academy, University of Gothenburg, Sweden, 2Medical Research Center, University of Oulu, Finland, Sweden, 3Unit of Metabolic Physiology, Department of Physiology, Institute of Neuroscience and Physiology, The Sahlgrenska Academy, University of Gothenburg, Sweden
Disclosures: Louise Grahnemo, None

Yukiko Kitase*, Lynda Bonewald. Indiana University, United States
Disclosures: Yukiko Kitase, None
FRI-0138  Fam210a is a Novel Determinant of Bone and Muscle
Ken-Ichiro Tanaka*1, Yingben Xue1, Loan Nguyen-Yamamoto1, John A Morris2, Ippei
Kanazawa1, Toshitsugu Sugimoto2, Simon S Wing2, J Brent Richards2, David Goltzman1.
1Calcium Research Laboratory, Metabolic Disorders and Complications Program, Research
Institute of the McGill University Health Centre, Canada, 2Departments of Medicine,
Human Genetics, Epidemiology and Biostatistics, McGill University, Jewish General
Hospital, Canada, 3Internal Medicine 1, Shimane University Faculty of Medicine, Japan,
4Division of Endocrinology, Department of Medicine, McGill University, Canada
Disclosures: Ken-Ichiro Tanaka, None

FRI-0139  The direct transdifferentiation of tendon cells into bone cells during bone modeling and
remodeling
Ke Wang*1, Chi Ma1, Minghao Zheng2, Xiaohua Liu1, Jian Feng1, Yan Jing1. 1Texas A&M
University College of Dentistry, United States, 2The University of Western Australia,
Australia
Disclosures: Ke Wang, None

BONE MARROW MICROENVIRONMENT AND NICHES

FRI-0169  Low bone mass and high marrow adiposity in congenic 6T mice are related to shifts in
metabolic flexibility within the bone marrow niche.
Maine Medical Center Research Institute, United States
Disclosures: Sheila Bornstein, None

FRI-0170  Activation of β-catenin signaling in mature osteoblasts versus osteoblast progenitors
defines a transcriptional and mutational profile for the transformation of MDS to AML.
Álvaro Cuesta-Domínguez*, Ioanna Mosialou1, Junfei Zhao2, Akihide Yoshimi3, Konstantinos Panitsas2, Richard A. Friedman3, Omar Abdel-Wahab1,6, Raúl Rabadán7, Stavroula Kousteni1. 1Department of Physiology and Cellular Biophysics, College of
Physicians and Surgeons, Columbia University Medical Center, United States, 2Department of Systems Biology, Columbia University Medical Center, United States, 3Human
Oncology and Pathogenesis Program, Memorial Sloan Kettering Cancer Center, United
States, 4Department of Physiology and Cellular Biophysics, College of Physicians and
Surgeons, Columbia University, United States, 5Biomedical Informatics Shared Resource,
Department of Biomedical Informatics, Herbert Irving Comprehensive Cancer Center,
College of Physicians and Surgeons, Columbia University Medical Center, United States,
6Weill Cornell Medical College and Leukemia Service, Dept. of Medicine, Memorial Sloan
Kettering Cancer Center, United States, 7Department of Systems Biology and Department of
Biomedical Informatics, Columbia University Medical Center, United States
Disclosures: Álvaro Cuesta-Domínguez, None

FRI-0171  Pharmacological Targeting of Osteoblast-Induced MDS and AML
Ioanna Mosialou*, Marta Galan-Diez, Andrew Vandenberg, Abdullah Ali, Azra Raza,
Stavroula Kousteni. Columbia University, United States
Disclosures: Ioanna Mosialou, None

FRI-0172  Single-cell proteomics reveal bone marrow stromal cell drivers of blood regeneration
Nicolas Severe*, Murat Karabacak2, Karin Gustafsson1, Ninib Baryawno1, Gabriel
Courties1, Youmna Kfoury1, Elizabeth Scadden1, Matthias Nahrendorf2, Mehmet Toner2,
David Scadden1. 1Massachusetts General Hospital, United States, 2Shriners Hospital for
Children, United States
Disclosures: Nicolas Severe, None
FRI-0187  ERRa in primary breast tumours promotes tumour cell dissemination to bone by regulating RANK
Geoffrey Vargas*a, Mathilde Bouchetb, Casina Kanb, Claire Benetollc, Martine Crosset, Martine Mazelc, Laure Cayrefourqc, Sophie Vacheres, Francesco Pantanos, Keitouma Driouch, Ivan Bieche, William Jacots, Jane Aubins, Catherine Alix-Panabieres, Philippe Clezardin, Edith Bonnely, 1INSERM-U1033, France, 2ENS-Lyon, France, 3INSERM U1033, Australia, 4INSERM U 1028-CNRS UMR 5292-UCBL Lyon 1, France, 5Institut Universitaire de Recherche Clinique (IURC)- Montpellier, France, 6Institut Curie, France, 7University Campus Bio-Medico-Roma, Italy, 8University of Toronto, Canada
Disclosures: Geoffrey Vargas, None

FRI-0188  ASBMR 2018 Annual Meeting Young Investigator Award
S100A4 Released from Highly Bone-metastatic Breast Cancer Cells Plays a Critical Role in Osteolysis
Haemin Kim*a, Sang Il Kimb, Hyung Joon Kimc, Brian Y. Ryud, Junho Chung, Zang Hee Lee, Hong-Hee Kim. 1Hospital for Special Surgery, United States, 2Seoul National University, Republic of Korea, 3Pusan National University, Republic of Korea
Disclosures: Haemin Kim, None

FRI-0189  Granulocyte Colony Stimulating Factor impacts on osteomacs and bone marrow macrophages – implications for prostate cancer osteoblastic lesion formation
Susan Millard*, Andy Wu, Simran Kaur, Yaowu He, Lena Batoom, John Hooper, Allison Pettit. Mater Research - UQ, Australia
Disclosures: Susan Millard, None

FRI-0190  Serum levels of RANKL are increased in primary breast cancer patients in the presence of disseminated tumor cells in the bone marrow.
Tilman Rachner*a, Martina Raunerb, Andy Göbeb, Oliver Hoffmann, Lorenz Hofbauer, Rainer Kimmig, Sabine Kasimir-Bauer, Ann-Kathrin Bittner. 1Universitätsklinikum Dresden, Germany, 2University Hospital Dresden, Germany, 3University Hospital Essen, Germany
Disclosures: Lorenz Hofbauer, None

FRI-0191  Suppression of Breast Cancer Bone metastasis by Osteocytic Connexin Hemichannels, a Potential Therapeutic Target
Manuel Riquelme*a, Sumin Gu, Zhiqiang An, Jean Jing. 1Department of Biochemistry and Structural Biology, University of Texas Health Science Center at San Antonio, United States, 2Brown Foundation, Institute of Molecular Medicine, UT Health Houston, United States
Disclosures: Lorenz Hofbauer, None

FRI-0192  HDAC inhibitors directly stimulate LIFR and induce pro-dormancy effects in breast cancer cells
Miranda Sowder*a, Lauren Holtslanderb, Vera Mayhewc, Samuel Dooyema, Rachelle W. Johnson. 1Vanderbilt University, United States, 2Vanderbilt University Medical Center, United States
Disclosures: Miranda Sowder, None

FRI-0193  Pharmacological Inhibition of Sclerostin Protects From Breast Cancer-induced Osteolytic Disease and Muscle Weakness
Eric Hesse*, Saskia Schröder, Diana Zarecneva, Jenny Pamperin, Hiroaki Saito, Hanna Taipaleemäki. Molecular Skeletal Biology Laboratory, Department of Trauma, Hand and Reconstructive Surgery, University Medical Center Hamburg-Eppendorf, Germany
Disclosures: Eric Hesse, None

CHONDROCYTES

FRI-0226  DDRGK1, an essential component of the ufmylation process, regulates osteochondroprogenitor fate determination
Yangjin Bae*, Adetutu Egunsola, Monika Weisz-Hubshman, Ming-Ming Jiang, Brendan Lee. Baylor College of Medicine, United States
Disclosures: Yangjin Bae, None
FRI-0227  The role of mitochondrial dysfunction in the development of post-traumatic osteoarthritis
Katherine Escalera-Rivera*, Sarah Catheline, Roman Eliseev, Jennifer Jonason. University of Rochester, United States
Disclosures: Katherine Escalera-Rivera, None

FRI-0228  Postnatal inactivation of Dot1L histone methyltransferase in growth plate cartilage impairs longitudinal bone growth
Sangita Karki*, Rosa M. Guzzo. UConn Health, United States
Disclosures: Sangita Karki, None

FRI-0229  Ciliary IFT80 Plays a Critical and Necessary Role in Fracture Healing through Regulating IGFβ Signaling Pathway
Min Liu*1, Mohammed Alharbi2, Jormay Lim1, Dana Graves2, Shuying Yang1. 1Dept. of Anatomy and Cell Biology, School of Dental Medicine, University of Pennsylvania, United States, 2Dept. of Periodontics, School of Dental Medicine, University of Pennsylvania, United States
Disclosures: Min Liu, None

FRI-0230  PTHrP Targets Salt-induced Kinases to Regulate Chondrocyte Differentiation
Shigeki Nishimori*1, Marc Wein1, Kei Sakamoto2, Marc Foretz3, Rebecca Berdeaux4, Henry Kronenberg1. 1Massachusetts General Hospital, United States, 2Nestlé Institute of Health Sciences, Switzerland, 3INSERM, France, 4University of Texas, United States
Disclosures: Shigeki Nishimori, None

FRI-0231  Direct transdifferentiation of ligament cells into articular chondrocytes that is regulated by Indian hedgehog (IHH) signaling and phosphate levels
Jun Wang*1, Chi Ma1, Hui Li1, Zhanjun Li2, Liangxue Lai2, Yan Jing1, Jian Q. Feng1. 1Texas A&M College of Dentistry, United States, 2Jilin Provincial Key Laboratory of Animal Embryo Engineering, Jilin University, China
Disclosures: Jun Wang, None

ENERGY METABOLISM, BONE, MUSCLE AND FAT

FRI-0255  Undercarboxylated Osteocalcin Downregulates Pancreatic Lipase Expression in CREB2-Dependent Manner in Pancreatic Acinar Cells
Danbi Park*1, Ye-Won Kwon1, Jeong-Hwa Baek2, Kyunghwa Baek1. 1Department of Pharmacology, College of Dentistry and Research Institute of Oral Science, Gangneung-Wonju National University, Republic of Korea, 2Department of Molecular Genetics, School of Dentistry and Dental Research Institute, Seoul National University, Republic of Korea
Disclosures: Danbi Park, None

FRI-0256  Pparγ inhibition in osteoblast / osteocyte (OB/OCY) restores PTH bone anabolism in high fat diet model, importance of glycolysis versus mitochondrial oxidation ratio
Lucie Bourgoin*1, Beatrice Desvergne2, Nicolas Bonnet1. 1Service of Bone Diseases, Faculty of Medicine (UNIGE), Switzerland, 2Genopode Science & medical University, Switzerland
Disclosures: Lucie Bourgoin, None

FRI-0257  Allocation of Bone Marrow Stromal Cells into the Adipogenic Lineage is Marked by Enhanced Expression of the Mitophagy Receptor Bel2L13
Makoto Fujiwara*1, Anyonya Guntur1, Phuong Le1, Victoria Demambro1, Mark Horowitz2, Clifford Rosen1. 1Maine Medical Center Research Institute, United States, 2Yale University School of Medicine, United States
Disclosures: Makoto Fujiwara, None

FRI-0258  Metformin Facilitates Fracture Healing in Type-2 Diabetes Mice
Yuqi Guo*, Xin Li. NYU College of Dentistry, United States
Disclosures: Yuqi Guo, None
FRI-0259  KLF10 regulates skeletal muscle metabolism in mice
Malek Kammoun*, Vladimir Veksler, Jérôme Piquereau, Lydie Nadal-Desbarats, Philippe Pouletaut, Molly Nelson Holte, Malayannan Subramaniam, Sabine Bensamoun, John Hawse. 1Université de Technologie de Compiègne, France, 2Univ. Paris-Sud, France, 3Université de Tours, France, 4Mayo Clinic, United States
Disclosures: Malek Kammoun, None

FRI-0260  Fatty acid oxidation is essential for osteoclast development and skeletal homeostasis
Priyanka Kushwaha*, Conor Beil, Michael J. Wolfgang, Ryan C. Riddle. 1Johns Hopkins University School of Medicine, United States, 2Johns Hopkins University, United States
Disclosures: Priyanka Kushwaha, None

FRI-0261  Metabolic characterization of the OCN-Cre;iDTR mouse model supports a relationship between bone health, bone marrow adipose tissue, and overall fitness
Heather Fairfield*, Samantha Costa, Calvin Vary, Victoria Demambro, Marie Demay, Clifford Rosen, Michaela Reagan. 1Maine Medical Center Research Institute, United States, 2Center for Skeletal Research, Massachusetts General Hospital, United States
Disclosures: Heather Fairfield, None

FRI-0262  Complexity in Neuropeptide Y’s effects on the skeleton
Natalie Ky Wee*, Benjamin P Sinder, Sanja Novak, Xi Wang, Brya G Matthews, Boris Zemelman, Ivo Kalajzic. 1Department of Reconstructive Sciences, University of Connecticut Health Center, United States, 2Department of Molecular Medicine, University of Auckland, New Zealand, 3Center for Learning and Memory, The University of Texas at Austin, United States
Disclosures: Natalie Ky Wee, None

GENETIC MODELS OF MUSCULOSKELETAL DISEASES

FRI-0295  Biochemical and phenotypic characterization of mice constitutively expressing epitope-tagged PIT1 transporter in all tissues
Clemens Bergwitz*, Sampada Chande, Bryan Ho, Shumayi Syed, Jonathan Fentene. Yale University School of Medicine, United States
Disclosures: Clemens Bergwitz, None

FRI-0296  The role of inorganic pyrophosphate in the pathogenesis of PXE caused by ABCC6 mutations
Qiaoli Li*, Joulii Uitto. Thomas Jefferson University, United States
Disclosures: Qiaoli Li, None

FRI-0297  BMP2 is Required for Enthesal Bone Formation in Antigen-Induced Arthritis
Yukiko Maeda*, Catherine Manning, Ellen Gravallese. University of Massachusetts Medical School, United States
Disclosures: Yukiko Maeda, Abbvie, Grant/Research Support

FRI-0298  COPB2 Loss of Function Leads to Disrupted Collagen Trafficking and Juvenile Osteoporosis
Ronit Marom*, Lindsay C Burrage, Mahim Jain, Ingo Grafe, Daryl A Scott, Jill A Rosenfeld, Jason D Heaney, Denise Lanza, Xiaohui Li, Kyu-Sang Joeng, Yi-Chien Lee, I-Wen Song, Joseph M Sliepka, Dominyka Batkovskyte, Zixue Jin, Brian C Dawson, Shan Chen, Yuqing Chen, Ming-Ming Jiang, Elda M Munivez, Vernon R Sutton, Cole Kuzawa, Rossella Venditti, Maryann Weis, Aurélie Clément, Brenna Tremp, Bernardo Blanco-Sánchez, Monte Westerfield, David Eyre, Catherine G Ambrose, Antonella De Matteis, Brendan Lee. 1Baylor College of Medicine, United States, 2Kennedy Krieger Institute, United States, 3University of Texas Health Science Center at Houston, United States, 4TIGEM (Telethon Institute of Genetics and Medicine), Italy, 5University of Washington, United States, 6University of Oregon, United States
Disclosures: Ronit Marom, None
FRI-0299  PIN1 is a new therapeutic target of craniosynostosis
Hye-Rim Shin*, Han-Sol Bae1, Bong-Su Kim1, Heein Yoon1, Young-Dan Cho1, Woo-Jin Kim1, Kang Young Choi1, Yun-Sil Lee1, Kyung-Mi Woo1, Jeong-Hwa Baek1, Hyun-Mo Ryoo1. 1Seoul National University, Republic of Korea, 2Kyungpook National University, Republic of Korea
Disclosures: Hye-Rim Shin, None

FRI-0300  Identifying Genetic Modifiers in Patients with Mild Fibrodysplasia Ossificans Progressiva using Whole Exome Sequencing
Kelly Wentworth*, Tania Moody1, Kim Taylor1, Niambi Brewer2, Fred Kaplan2, Robert Pignolo1, Eileen Shore2, Edward Hsiao1. 1UCSF, United States, 2UPenn, United States
Disclosures: Kelly Wentworth, Clementia Pharmaceuticals, Other Financial or Material Support

FRI-0325  A high resolution Capture-C promoter ‘interactome’ implicates causal genes at BMD GWAS loci
Alessandra Chesi*, Yadav Wagley1, Matthew E. Johnson1, Sumei Lu1, Michelle E. Leonard1, Kenyaita M. Hodge1, James A. Pippin1, Elisabetta Manduchi1, Andrew D. Wells1, Struan F.A. Grant1, Kurt D. Hankenson2. 1The Children’s Hospital of Philadelphia, United States, 2University of Michigan, United States
Disclosures: Alessandra Chesi, None

FRI-0326  Assessing Clinical Utility of Genetic Profiling in Fracture Risk Assessment: A Decision Curve Analysis
Thao P. Ho-Le*, Jacqueline R. Center1, John A. Eismann1, Hung T. Nguyen1, Tuan V. Nguyen1,2,3,4. 1Bone Biology Division, Garvan Institute of Medical Research, 2School of Biomedical Engineering, University of Technology, Sydney, Australia, 3St Vincent Clinical School, UNSW Australia, Australia, 4School of Medicine, Notre Dame University, Australia
Disclosures: Thao P. Ho-Le, None

FRI-0327  Bioinformatics Informs GWAS: An Osteoporosis and Epigenetics Study
Hui Shen*, Xiao Zhang, Fangtang Yu, Hong-Wen Deng, Melanie Ehrlich. Tulane University, United States
Disclosures: Hui Shen, None

HORMONAL REGULATORS

FRI-0343  Regulation of FGF23 and Bone Mass by the Proprotein Convertase Furin
Omar Al Rifai*, Rachid Essalmani1, John Creemers2, Nabil G. Seidah1, Mathieu Ferron1. 1Institut de recherches cliniques de Montreal, Canada, 2KU Leuven, Belgium
Disclosures: Omar Al Rifai, None

FRI-0344  WITHDRAWN

FRI-0345  Bone-Targeted Pharmacological Inhibition of Notch Signaling PotentiatesPTH-induced Bone Gain.
Jesus Delgado-Calle*, Gerald Wu1, Mathew E. Olson1, Kevin Mcandrews2, Jessica H. Nelson1, Ashley L. Daniel1, Noriyoshi Kurihara1, Emily G. Atkinson2, Venkat Srinivasan2, Lifeng Xiao1, Frank H. Ebbini1, G. David Roodman1, Robert K. Bocockman Jr1, Teresita Bellido1. 1Indiana University School of Medicine, Dept. of Medicine, Hematology/ Oncology, United States, 2Indiana University School of Medicine, Dept. of Anatomy and Cell Biology, United States, 3University of Rochester, Dept. of Chemistry, United States
Disclosures: Jesus Delgado-Calle, None

FRI-0346  Overexpression of Sirt1 in Mesenchymal Stem Cells Protects against Glucocorticoid-Induced Osteoporosis by Inhibiting Oxidative Stress and Osteocyte Senescence
Qinghe Geng*, Xiaoping Hu, Jun Wu, Dengshun Miao. Nanjing Medical University, China
Disclosures: Qinghe Geng, None
FRI-0347  Sustained Klotho delivery reduces serum phosphate in a model of diabetic nephropathy
Julia Hum*, Linda O’Bryan2, Arun Tatiparthi1, Erica Clinkenbeard1, Pu Ni1, Martin Cramer2, Manoj Bhaskaran2, Robert Johnson3, Jonathan Wilson4, Rosamund Smith2, Kenneth White1. 1Marian University, United States, 2Eli Lilly and Company, United States, 3Covance Inc, United States, 4Indiana University School of Medicine, United States
Disclosures: Julia Hum, None

FRI-0348  WITHDRAWN

FRI-0349  ASBMR 2018 Annual Meeting Young Investigator Award
1,25-Dihydroxyvitamin D Retards Osteoporosis by Activating Nrf2-Antioxidant Signaling and Inactivating P16 Senescence Signaling
Wanxin Qiao*, Lulu Chen1, Weimei Sun1, David Goltzman2, Dengshun Miao1. 1Nanjing Medical University, China, 2McGill University, Canada
Disclosures: Wanxin Qiao, None

FRI-0350  Estrogen-stimulated pleiotrophin functions to stimulate osteoblast differentiation and maintain bone mass in IGF binding protein-2 knockout mice
Susan D’Costa*, Gang Xi1, Victoria Demambro2, Clifford Rosen2, David Clemmons1. 1University of North Carolina at Chapel Hill, United States, 2Maine Medical Center Research Institute, United States
Disclosures: Susan D’Costa, None

FRI-0351  Overexpression of Sirt1 in Mesenchymal Stem Cells Protects against Estrogen Deficiency-Induced Osteoporosis
Qian Zhang*, Rong Wang, Jianliang Jin, Dengshun Miao. Nanjing Medical University, China
Disclosures: Qian Zhang, None

MECHANOBIOLOGY

FRI-0392  Gambogic amide, a TrkA agonist, augments skeletal adaptation to mechanical loading through sensory nerve signaling
Phuong Hua*, Ryan Tomlinson. Thomas Jefferson University, United States
Disclosures: Phuong Hua, None

FRI-0393  Knockout p16 Protects against Unloading-Induced Intervertebral Disc Degeneration by Inhibiting Oxidative Stress And Cell Senescence
Yongxin Ren*, Hui Che. The First Affiliated Hospital of Nanjing Medical University, China
Disclosures: Yongxin Ren, None

FRI-0394  FAK expression in osteocytes is dispensable for bone accrual and for the anabolic response of cortical and cancellous bone to mechanical loading in female mice.
Amy Y Sato*, Troy Li1, Kevin McAndrews1, Alexander G Robling2, Teresita Bellido3. 1Department of Anatomy & Cell Biology, Indiana University School of Medicine, United States, 2Department of Anatomy & Cell Biology, Indiana University School of Medicine, Roudebush Veterans Administration Medical Center, United States, 3Department of Anatomy & Cell Biology, Department of Medicine, Division of Endocrinology, Indiana University School of Medicine, Roudebush Veterans Administration Medical Center, United States
Disclosures: Amy Y Sato, None

FRI-0395  ASBMR 2018 Annual Meeting Young Investigator Award
IGF1R Deficiency in Periosteal Osteoprogenitors Inhibits Bone Response to Mechanical Loading
Tianlu Wang*, Faming Tian, Yongmei Wang, Daniel Bikle. Endocrine Unit, University of California, San Francisco and San Francisco VA Health Care System, United States
Disclosures: Tianlu Wang, None

FRI-0396  Mechanical Loading Induces Bone Formation from Pre-Existing Osterix Expressing Cells
Heather Zannit*, Matthew Silva. Washington University in St. Louis, United States
Disclosures: Heather Zannit, None
FRI-0419 Short-term pharmacologic inhibition of RAGE suppresses bone turnover and muscle atrophy in aging
Hannah M. Davis*1,2, Mohammad W. Aref3, Alyson L. Essex1, Sinai Valdez1, Alexandra Aguilar-Perez1,2, Padmini Deoosthale1,2, Fletcher White1,4,5, Jolene Windle6, Matthew R. Allen1,2,5, Lillian I. Plotkin 1,2,5. 1Department of Anatomy & Cell Biology, Indiana University School of Medicine, United States, 2Indiana Center for Musculoskeletal Health, United States, 3Department of Anesthesia, Indiana University School of Medicine, United States, 4Stark Neuroscience Research Institute, Indiana University School of Medicine, United States, 5Roudebush Veterans Administration Medical Center, United States, 6Department of Human and Molecular Genetics, Virginia Commonwealth University, Richmond, VA, United States
Disclosures: Hannah M. Davis, None

FRI-0420 Anti-Sost/Dkk1 Antibody Therapy Increases Bone Formation in Old Mice, but Does Not Enhance Their Modest Response to Tibial Loading
Lisa Lawson*, Michael Brodt, Matthew Silva. Washington University in St. Louis, United States
Disclosures: Lisa Lawson, None

FRI-0421 Association of trajectories of change in bone, lean mass and physical performance with mortality in older men
Jian Shen*, Neeta Parimi, Peggy Cawthon, Lisa Langsetmo, Kris Ensrud, Jane Cauley. 1University of California, San Diego, United States, 2California Pacific Medical Center Research Institute, United States, 3University of Minnesota, United States, 4University of Pittsburgh Graduate School of Public Health, United States, 5University of California, United States
Disclosures: Jian Shen, None

FRI-0422 Fibroblast growth factor receptor 3 inhibits progression of degeneration in the intervertebral disc in mice
Yangli Xie*, Xiaolan Du, Lin Chen, Zuqiang Wang. Department of Rehabilitation Medicine, Center of Bone Metabolism and Repair, State Key Laboratory of Trauma, Burns and Combined Injury, Trauma Laboratory, Daping Hospital, Army Medical University, China
Disclosures: Yangli Xie, None

MUSCULOSKELETAL DEVELOPMENT

FRI-0438 Novel Genetic Loci Control L5 Vertebral Trabecular Bone and the Response to Low Calcium Intake in Growing BXD Recombinant Inbred Mice
Krittikan Chanpaisaeng*, Sarah Mace, Perla Reyes-Fernandez, James Fleet. 1Department of Nutrition Science, Purdue University, United States, 2Department of Biological Sciences, Purdue University, United States
Disclosures: Krittikan Chanpaisaeng, None

FRI-0439 The large variant of the stimulatory G protein alpha-subunit XLαs regulates bone formation by promoting Wnt signaling
Qing He*, Julia Matthias, Lauren Shumate, Murat Bastepe. Massachusetts General Hospital and Harvard Medical School, United States
Disclosures: Qing He, None

FRI-0440 BMP9 stimulates synovial joint regeneration in mice
Ken Muneoka*, Ling Yu, Mingquan Yan, Lindsay Dawson. Texas A&M University, United States
Disclosures: Ken Muneoka, None

FRI-0441 Microtubule-Actin Crosslinking Factor 1 Is Essential for Bone Formation in Mice
Fan Zhao*, Xiaoli Ma, Wuxia Qiu, Lifang Hu, Airoing Qian. 1Northwestern Polytechnical University, China, 2Northwestern Polytechnical, China
Disclosures: Fan Zhao, None
FRI-0442 Epigenetic regulator, Uhrf1, positively controls skeletal muscle differentiation
Yuichiro Sawada*,1, Tadahiko Kikugawa1, Iori Sakakibara2, Yusuke Ono3, Yuta Yanagihara4, Noritaka Saeki5, Hiroyuki Ito1, Takashi Saika1, Yuuki Imai2. 1Department of Urology, Ehime University Graduate School of Medicine, Japan, 2Research Center for Advanced Science and Technology, The University of Tokyo, Japan, 3Musculoskeletal Molecular Biology Research Group, Nagasaki University Graduate School of Biomedical Sciences, Japan, 4Division of Integrative Pathophysiology, Proteo-Science Center, Ehime University, Japan
Disclosures: Yuichiro Sawada, None

MUSCULOSKELETAL PROGENITOR CELLS AND LINEAGE DETERMINATION

FRI-0464 Targeted epigenetic modulation of bone-specific enhancers regulates mesenchymal cell fate and controls osteoblastic differentiation
Jonathan Gordon*,1, Coralee Tye1, Joseph Boyd1, Andre Van Wijnen2, Janet Stein1, Gary Stein1, Jane Lian1. 1Department of Biochemistry, Larner College of Medicine, University of Vermont, United States, 2Department of Orthopedic Surgery, Mayo Clinic, United States
Disclosures: Jonathan Gordon, None

FRI-0465 Glutamine metabolism is required in skeletal stem cells for appropriate bone regeneration.
Yilin Yu*, Anthony Miranda, Leyao Shen, Matthew Hilton, Courtney Karner. Duke University, United States
Disclosures: Yilin Yu, None

FRI-0466 Zinc Finger Protein 467 Is a Major Determinant of Lineage Allocation and Bone Turnover in Female Mice
Phuong Le*,1, Weiqing Liu2, Tj Martin3, Beate Lanske4, Roland Baron2, Clifford Rosen1. 1Maine Medical Center Research Institute, United States, 2Harvard School of Dental Medicine, United States, 3St. Vincent’s Institute Medical Research, Australia, 4Radius Health, Inc, United States
Disclosures: Phuong Le, None

FRI-0467 Effects of Notch1 signaling on bone fracture healing
Sanja Novak*,1, Emilie Roeder1, Brya G Matthews1, Douglas J Adams2, Ivo Kalajzic1. 1Department of Reconstructive Sciences, University of Connecticut Health Center, United States, 2Department of Orthopaedic Surgery, University of Connecticut Health Center, United States
Disclosures: Sanja Novak, None

FRI-0468 Aberrant muscle tissue repair by mutant ACVR1 FOP muscle stem cells – implications for heterotopic ossification
Alexandra Stanley*,1, Elisia Tichy2, Foteini Mourkioti1, Eileen M. Shore1. 1Perelman School of Medicine, University of Pennsylvania, Department of Orthopaedic Surgery, Cell and Developmental Biology Graduate Program, United States, 2Perelman School of Medicine, University of Pennsylvania, Department of Orthopaedic Surgery, United States, 3Perelman School of Medicine, University of Pennsylvania, Departments of Orthopaedic Surgery and Cell and Developmental Biology, United States, 4Perelman School of Medicine, University of Pennsylvania, Departments of Orthopaedic Surgery and Genetics, United States
Disclosures: Alexandra Stanley, None

FRI-0469 New Insight into SHP2 regulation of Osteogenic Commitment of Mesenchymal Progenitors
Lijun Wang*,1, Jiahui Huang2, Chunlin Zuo2, Douglas Moore3, Matthew Warman1, Michael Ehrlich1, Wentian Yang1. 1Department of Orthopaedics, Brown University Alpert Medical School and Rhode Island Hospital, United States, 2Brown University Alpert Medical School and Rhode Island Hospital, United States, 3Orthopaedic Research Laboratories and Howard Hughes Medical Institute, Boston Children’s Hospital and Harvard Medical School, United States
Disclosures: Lijun Wang, None
FRI-0470  PDGFRβ signaling regulates osteogenesis of αSMA labeled periosteal cells.  
Xi Wang*, 1, Sanja Novak1, Danko Grcic2, Brya G Matthews1, Ivo Kalajzic1. 1UConn Health, United States, 2University of Zagreb, Croatia  
Disclosures: Xi Wang, None

OSTEOARTHRITIS AND OTHER JOINT DISORDERS

FRI-0501  Drug-induced modulation of gp130 signaling prevents articular cartilage degeneration and promotes repair  
Ruzanna Shkhyan*, Ben Van Handel, Jacob Bogdanov, Denis Evseenko. University of Southern California, United States  
Disclosures: Ruzanna Shkhyan, None

FRI-0502  Tissue Mechanical Deficiencies Detected in Both Articular Cartilage and Subchondral Trabecular Bone in Osteoarthritic Human Knees  
Yizhong Hu*, 1, Eric Y. Yu, 1, Ariana Moini1, Zexi Wang1, Matthew Scott Heller2, Akshay Lakra2, Herbert John Cooper2, Roshan Pradip Shah2, Jeffrey Albert Geller2, X. Lucas Lu1, X. Edward Guo1. 1Bone Bioengineering Laboratory, Columbia University, United States, 2Department of Orthopaedic Surgery, Columbia University Medical Center, United States, 3Department of Mechanical Engineering, University of Delaware, United States  
Disclosures: Yizhong Hu, None

FRI-0503  ASBMR 2018 Annual Meeting Young Investigator Award  
Reliable change index in the evaluation of joint space loss: a novel method for assessing osteoarthritis progression data from the Osteoarthritis Initiative  
Camille Parsons*, 1, Andy Judge2, Kirsten Leyland2, Hazel Inskip1, Cyrus Cooper1. 1MRC Lifecourse Epidemiology Unit, University of Southampton, United Kingdom, 2University of Bristol, United Kingdom  
Disclosures: Camille Parsons, None

FRI-0504  Predicting total hip replacement for symptomatic osteoarthritis using radiographs or clinical computed tomography: a prospective case-control study  
Kenneth Poole*, 1, Ilya Burkov1, Graham Treece1, Andrew Gee1, Thomas Turmezei1, Fjola Johannesdottir1, Sigurdur Sigurdsdottir2, Tamara Harris2, Helgi Jonsson2, Vilmundur Gudnason2. 1University of Cambridge, United Kingdom, 2The Icelandic Heart Association, Iceland, 3University of Occupational and Environmental Health, Japan, 4Kindai University Nara Hospital, Japan, 5Institute of Rheumatology Tokyo Women’s Medical University, Japan, 6Osaka University Graduate School of Dentistry, Japan, 7The University of Tokyo, Japan, 8Daiichi Sankyo Co. Ltd, Japan, 9University of California, United States, 10Leiden University Medical Center, Netherlands, 11Keio University School of Medicine, Japan  
Disclosures: Kenneth Poole, None

FRI-0505  Beneficial effects of Denosumab on bone loss and bone erosion from results of long-term treatment in the phase 3, DESIRABLE study in patients with rheumatoid arthritis (RA) on background csDMARDs  
Yoshiya Tanaka*, 1, Satoshi Soen2, Hisashi Yamanaka1, Toshiyuki Yoneda1, Sakae Tanaka1, Takaya Nitta1, Naoki Okubo9, Harry Genant3, Désirée van Der Heijde4, Tsutomu Takeuchi5. 1University of Occupational and Environmental Health, Japan, 2Kindai University Nara Hospital, Japan, 3Institute of Rheumatology Tokyo Women’s Medical University, Japan, 4Osaka University Graduate School of Dentistry, Japan, 5The University of Tokyo, Japan, 6Daiichi Sankyo Co. Ltd, Japan, 7University of California, United States, 8Leiden University Medical Center, Netherlands, 9Keio University School of Medicine, Japan  
Disclosures: Yoshiya Tanaka, Mitsubishi Tanabe, Takeda, Bristol-Myers, Chugai, Astellas, Abbvie, MSD, Daiichi Sankyo, Pfizer, Kyowa Hakko Kirin, Eisai, Ono, Grant/Research Support, Daiichi-Sankyo, Astellas, Pfizer, Mitsubishi Tanabe, Bristol-Myers, Chugai, YL Biologics, Eli Lilly, Sanofi, Janssen, UCB, Speakers’ Bureau

FRI-0506  WITHDRAWN
OSTEOBLASTS

FRI-0537 Conditional deletion of Dock7 in the early limb bud results in reduced trabecular bone in both sexes with increased fat mass only in male mice
1. Maine Medical Center Research Institute, United States, 2. Beth Israel Deaconess Medical Center, Harvard Medical School, United States, 3. Maine Medical Center Research Institute, Maine Medical Center, United States
Disclosures: Kathleen A Becker, None

FRI-0538 The Role of VEGFA from Osteoblast Lineage Cells during Fracture and Cortical Defect Repair
Evan Buettmann*, Nicole Migotsky, Susumu Yoneda, Pei Hu, Jennifer McKenzie, Matthew Silva. Washington University in St. Louis, United States
Disclosures: Evan Buettmann, None

FRI-0539 Gene regulatory landscape in primary human mesenchymal stem cell (MSC) during BMP2-induced osteoblast differentiation
1. The Children’s Hospital of Philadelphia, United States, 2. University of Michigan, United States
Disclosures: Alessandra Chesi, None

FRI-0540 Ablation of Gjc1 in the Chondro-Osteogenic Lineage Inhibits Osteoclastogenesis Leading to High Trabecular Bone Mass
Francesca Fontana*, Marcus Watkins, Song Dah Woon, Giulia Leanza, Roberto Civitelli.
Washington University School of Medicine, United States
Disclosures: Francesca Fontana, None

FRI-0541 A novel role for tissue nonspecific alkaline phosphatase in cranial bone progenitor cells.
Hwa Kyung Nam*, Iva Vesela, Nan Hatch. University of Michigan, School of Dentistry, United States
Disclosures: Hwa Kyung Nam, None

FRI-0542 Global Expression of miR-29 Decoy Decreases Bone Formation and Alters Cortical Bone Morphology in Young Mice
Henry Hrdlicka*, Bongjin Shin, Anne Delany, Sun-Kyeong Lee. UConn Health, United States
Disclosures: Henry Hrdlicka, None

FRI-0543 TNAP Deficiency Is the Major Contributor to the Loss of the Mineralization Potential of Trps1 Deficient Osteogenic Cells
Sana Khalid*, Byungsoo Chae, Daisy Monier, MairobyS Socorro, Victoria Smethurst, Dobrawa Napierala. Center for Craniofacial Regeneration, Dept. of Oral Biology, McGowan Institute for Regenerative Medicine, University of Pittsburgh School of Dental Medicine, United States
Disclosures: Sana Khalid, None

FRI-0544 Macrophage-secreted Emilin2 Stimulates Chemotaxis and Differentiation in Stromal/Osteoblastic Cells
Yukihiro Kohara*, Atsushi Watanabe, Noboru Ogiso, Sunao Takeshita. National Center for Geriatrics and Gerontology, Japan
Disclosures: Yukihiro Kohara, None

FRI-0545 Trapidil induces osteogenesis by upregulating the signaling of bone morphogenetic proteins
Bongjun Kim*, Hong-Hee Kim, Zang Hee Lee. Department of Cell and Developmental Biology, School of Dentistry, Seoul National University, Republic of Korea
Disclosures: Bongjun Kim, None
FRI-0546 Regulator of G protein signaling protein 12 is required for osteoblast differentiation through controlling calcium channel/Gαi-calcium oscillation-ERK signaling
Ziqing Li*, Tongjun Liu2, Alyssa Gilmore2, Néstor Más Gómez3, Claire H Mitchell2,3, Yi-Ping Li1, Merry J Oursler2, Shuying Yang1,2. 1Department of Anatomy and Cell Biology, University of Pennsylvania, School of Dental Medicine, United States, 2Department of Oral Biology, School of Dental Medicine, University of Buffalo, State University of New York, United States, 3Department of Pathology, University of Pennsylvania, School of Medicine, United States, 4Department of Pathology, University of Alabama in Birmingham, United States, 5Department of Medicine, Endocrine Research Unit, Mayo Clinic, United States
Disclosures: Ziqing Li, None

FRI-0547 Lnc-DIF inhibits bone formation via targeting mir-489-3p
Zhiping Miao*, Yong Yin, Yan Zhang, Ye Tian, Lifang Hu, Airong Qian. Northwestern Polytechnical University, China
Disclosures: Zhiping Miao, None

FRI-0548 Conditional Deletion of the Glucocorticoid Receptor in Osteoprogenitors Reveals Complex Roles for Glucocorticoid Signaling in Caloric Restriction-Induced Bone Marrow Fat Accumulation
Jessica Pierce*, Ke-Hong Ding, Jianrui Xu, Kanglun Yu, Anuj Sharma, Mark Hamrick, William Hill, Xing-Ming Shi, Carlos Isales, Meghan Mcgee-Lawrence. Augusta University, United States
Disclosures: Jessica Pierce, None

FRI-0549 BAF Chromatin Remodelling Epigenetically Controls Osteogenesis in vivo
Tanner Godfrey**, Mohammad Rehan*, Benjamin Wildman, Yuechuan Chen, Quamarul Hassan. University of Alabama at Birmingham, United States
Disclosures: Tanner Godfrey*, None

FRI-0550 The N6-methyladenosine demethylase FTO functions in bone to protect osteoblasts from age-related DNA damage
Qian Zhang1, Ryan Riddle1, Marie-Claude Faugere2, Clifford Rosen3, Charles Farber4, Thomas Clemens1. 1Department of Orthopaedic Surgery, Johns Hopkins University, United States, 2Department of Medicine, University of Kentucky, United States, 3Maine Medical Center, United States, 4University of Virginia, United States
Disclosures: Qian Zhang, None

OSTEOCLASTS

FRI-0596 ASBMR 2018 Annual Meeting Young Investigator Award
Cell Autonomous Sfrp4-Dependent Inhibition of Non-Canonical Wnt Signaling in Osteoclasts Prevents Osteoclastogenesis, Ensuring Normal Cortical Bone Development
Kun Chen*, Pei Ying Ng1, Dorothy Hu1, Roland Baron1,2, Francesca Gori1. 1Division of Bone and Mineral Research, Harvard Medical School and Harvard School of Dental Medicine, United States, 2Endocrine Unit, Massachusetts General Hospital, United States
Disclosures: Kun Chen, None

FRI-0597 Autocrine actions of high mobility group box 1 protein (HMGB1) on osteocytes and osteoclasts regulate osteoclastogenesis
Hannah M. Davis1,2, Sinai Valdez3, Leland J. Gomez1, Angela Bruzzaniti1,2,3, Lilian I. Plotkin1,2,4. 1Department of Anatomy & Cell Biology, Indiana University School of Medicine, United States, 2Indiana Center for Musculoskeletal Health, United States, 3Biomedical and Applied Sciences, Indiana University School of Dentistry, United States, 4Roudebush Veterans Administration Medical Center, United States
Disclosures: Hannah M. Davis, None
FRI-0598  EOMES is a novel and essential co-partner of PU.1 and MITF in regulating osteoclast differentiation  
Blake E. Hildreth Iii*1, Heather A. Carey2, Devadoss J. Samuvel1, Katie A. Thies1, Jennifer A. Geisler2, Thomas J. Rosol3, Ramiro E. Toribio4, Julia F. Charles5, Michael C. Ostrowski1, Sudarshana M. Sharma1. 1Medical University of South Carolina Department of Biochemistry and Molecular Biology and Hollings Cancer Center, United States, 2Ohio State University Department of Cancer Biology and Genetics and Comprehensive Cancer Center, United States, 3Ohio State University College of Veterinary Medicine, United States, 4B Brigham and Women’s Hospital and Harvard Medical School Department of Medicine, Division of Rheumatology, Immunology and Allergy, United States  
Disclosures: Blake E. Hildreth Iii, None

FRI-0599  ASBMR 2018 Annual Meeting Young Investigator Award  
RANKL-Sensitive Super-Enhancer Activities Determine Cell Identity During Osteoclastogenesis  
Min Joon Lee*1, Sungho Park2, Keunsoo Kang4, Jiyoungh Ahn3, Ye-Ji Lee1, Sehwan Mun1, Seyeon Bae1, Kaichi Kaneko3, Kyung-Hyun Park-Min2. 1University of Toronto Faculty of Medicine, Canada, 2Arthritis and Tissue Degeneration Program, David Z. Rosensweig Genomics Research Center, Hospital for Special Surgery, United States, 3Arthritis and Tissue Degeneration Program, Hospital for Special Surgery, United States, 4Department of Microbiology, Dankook University, Republic of Korea  
Disclosures: Min Joon Lee, None

FRI-0600  IDH2 is a novel regulator of osteoclast differentiation and function through osteoblastic modulation of ATF-NFATc1-RANKL signaling axis  
Suk-Hee Lee*, Seung-Hoon Lee, Soon-Young Kim, Eun-Hye Lee, Yeon-Ju Lee, Jung-Eun Kim. Department of Molecular Medicine, CMRI, BK21 Plus KNU Biomedical Convergence Program, School of Medicine, Kyungpook National University, Republic of Korea  
Disclosures: Suk-Hee Lee, None

FRI-0601  Cortistatin Directly Binds to RANK and Protects Against Osteoporosis in Mice  
Weiwei Li*1, Ruize Qu2, Xiaomin Chen2, Wenhan Wang2, John Hayball3, Krasimir Vasilev3, Yunpeng Zhao1. 1Shandong University Qilu Hospital, China, 2Shandong University, China, 3University of South Australia, Australia  
Disclosures: Weiwei Li, None

FRI-0602  Hdac3 promotes bone robustness by suppressing osteoclast responsiveness to RANKL and enhancing bone formation  
Anna Mattson*1, David Molstad1, Dana Begun1, Jennifer Westendorf4, Merry Jo Oursler1, Meghan Mcgee-Lawrence2, Bradley Elizabeth1. 1Mayo Clinic, United States, 2Augusta University, United States  
Disclosures: Anna Mattson, None

FRI-0603  Collagen Type VI α2 Chain Deficiency Causes Trabecular Bone Loss by Promoting Osteoclast Differentiation through Enhanced TNFα Signaling  
Hai Pham*1, Ainnie Dar1, Vardit Kram2, Li Li1, Tina Kilts3, Marian Young2. 1Craniofacial and Skeletal Diseases Branch, National Institute of Dental and Craniofacial Research, National Institutes of Health, United States, 2Collagen Type VI α2 Chain Deficiency Causes Trabecular Bone Loss by Promoting Osteoclast Differentiation through Enhanced TNFα Signaling, United States  
Disclosures: Hai Pham, None

FRI-0604  ASBMR 2018 Annual Meeting Young Investigator Award  
Dual specificity of the Inpp4b phosphatase in bone remodeling  
Lina Saad*, Monica Pata, Jean Vacher. IRCM, Canada  
Disclosures: Lina Saad, None

FRI-0605  An Unanticipated Role for Sphingosine Kinase-2 in Bone Anabolism  
Joanne Walker*, Gang-Qing Yao, Meiling Zhu, Ben-Hua Sun, Christine Simpson, Karl Insogna. Yale University School of Medicine, United States  
Disclosures: Joanne Walker, None
OSTEOCYTES

FRI-0655  
**Osteocyte Sirt6 has crucial roles in bone and phosphate metabolism**  
Aikebaier Aobulikasimu*1, Zulipiya Aibibula1, Jinying Piao1, Shingo Sato2, Hiroki Ochi2, Kunikazu Tsuji3, Atsushi Okawa4, Yoshinori Asou1.  
1Department of Orthopedics Surgery, Tokyo Medical and Dental University, 1-5-45 Yushima Bunkyo-Ku Tokyo Japan, 113-8519, Japan, 2Department of Physiology and Cell Biology, Tokyo Medical and Dental University, 1-5-45 Yushima Bunkyo-Ku Tokyo Japan, 113-8519, Japan, 3Department of Cartilage Regeneration, Tokyo Medical and Dental University, 1-5-45 Yushima Bunkyo-Ku Tokyo Japan, 113-8519, Japan  
Disclosures: Aikebaier Aobulikasimu, None

FRI-0656  
**PPARα is a negative regulator of sclerostin production in osteocytes**  
Amit Chougule*, Lance Stechschulte, Beata Lecka-Czernik. University of Toledo, United States  
Disclosures: Amit Chougule, None

FRI-0657  
**Microgravity exposure in growing mice is detrimental to osteocyte lacunar volume and shape**  
1Department of Mechanical Engineering, University of Colorado, Boulder CO, United States, 2Department of Applied Mathematics, University of Colorado, Boulder CO, United States, 3BioServe Space Technologies, University of Colorado, Boulder, CO, United States  
Disclosures: Jennifer C. Coulombe, None

FRI-0658  
**Sex divergent role of osteocytic miR21 in the maintenance of osteocyte viability and regulation of bone turnover**  
Hannah M. Davis*1,2, Rafael Pacheco-Costa1,2, Mohammad W. Aref1,2, Alyson L. Essex1, Emily G. Atkinson1,2, Julian E. Dilley1, Carmen Herrera1, Padmini Deosthale1,2, Mircea Ivan1, Matthew R. Allen1,2, Teresita M. Bellido1,2,4, Lilian I. Plotkin1,2,4.  
1Department of Anatomy & Cell Biology, Indiana University School of Medicine, United States, 2Indiana Center for Musculoskeletal Health, United States, 4Department of Hematology/Oncology, Indiana University School of Medicine, United States, 5Roudebush Veterans Administration Medical Center, United States  
Disclosures: Hannah M. Davis, None

FRI-0659  
**Osteocyte Density and Viability in Postmenopausal Women after Long-term Bisphosphonate Therapy**  
Shijing Qiu*, George Divine, Mahalakshi Honasoge, Arti Bhan, Shiri Levy, Elizabeth Warner, Sudhaker D Rao. Henry Ford Hospital, United States  
Disclosures: Shijing Qiu, None

OSTEOPOROSIS - ASSESSMENT

FRI-0680  
**Normative Data for Trabecular Bone Score in Men and Women**  
Kara Anderson*, Kara Holloway-Kew, Mark Kotowicz, Natalie Hyde, Julie Pasco. Deakin University, Australia  
Disclosures: Kara Anderson, None

FRI-0681  
**Time since fracture and number of previous fractures are independently associated with risk of new clinical fracture**  
Kristian Axelsson*, Dan Lundh2, Mattias Lorentzon1.  
1Department of Geriatrics, Sahlgrenska Academy, Gothenburg University, Sweden, 2School of Bioscience, University of Skovde, Sweden  
Disclosures: Kristian Axelsson, None
FRI-0682 Development of Thresholds for Assessing Radius and Tibia Fragility Fracture Risk Using HR-pQCT – The CaMos Cohort
Syed Jafri*,1, Lauren Burt2, Leigh Gabel2, David Hanley3, Steven Boyd2. 1University of Calgary, Canada, 2McCaig Institute for Bone and Joint Health, Department of Radiology, Cumming School of Medicine, University of Calgary, Calgary, Canada, 3McCaig Institute for Bone and Joint Health, Departments of Community Health Sciences and Oncology, Cumming School of Medicine, University of Calgary, Calgary, Canada
Disclosures: Syed Jafri, None

FRI-0683 Automated Identification of Vertebral Compression Fractures Using Artificial Intelligence Convolutional Neural Networks Predicts Incident Non-vertebral and Hip Fracture: The Manitoba BMD Registry
Sheldon Derkatch*,1, Christopher Kirby2, Douglas Kimelman3, Mohammad Jafari Jozani1, J Michael Davidson1, William Leslie1. 1University of Manitoba, Canada, 2St-Boniface Hospital Albrechtsen Research Centre, Canada
Disclosures: Sheldon Derkatch, None

FRI-0684 Clinical Performance of a Beta Version of Trabecular Bone Score (TBS) Including Thickness-based Correction for Soft Tissue Effects: The Manitoba BMD Cohort
William D. Leslie*,1, Enisa Shevroja2, Lisa M. Lix3, Didier Hans4. 1Department of Medicine (W.D.L.), University of Manitoba, Canada, 2Center of Bone Diseases, DAL-RHU - Lausanne University Hospital, Switzerland
Disclosures: William D. Leslie, None

FRI-0685 Usefulness of the Trabecular Bone Score in dialysis patients
Oliver Malle*, Astrid Fahrleitner-Pammer. Medical University of Graz, Dpt. of Internal Medicine, Div. of Endocrinology and Diabetology, Austria
Disclosures: Oliver Malle, None

FRI-0686 Assessment of Age Related Changes in Bone Metabolism Using 18F–Sodium Fluoride PET/CT
Sylvia Rhodes*, Alexandra Batzdorf, Austin Alexih, Jonathan Guntin, Matthew Peng, Amanda Jankelovits, Justin Kim, Julia Hornyk, Poul Flemming, Abass Alavi, Chamith Rajapakse. University of Pennsylvania, United States
Disclosures: Sylvia Rhodes, None

FRI-0687 Serum levels of DKK2 and sFRP1 are associated to incident fragility fractures in older women
Ana Maria Rodrigues*,1, Mónica Eusébio2, Ana Catarina Rodrigues1, Joana Caetano-Lopes2, Inês Lopes1, Jorge M Mendes3, Pedro Simões Coelho4, João Eurico Fonseca5, Jaime Cunha Branco2, Helena Canhão1. 1EpiDoc Unit – Unidade de Epidemiologia em Doenças Crónicas, CEDOC, Nova Medical School, Lisboa, Portugal, 2Sociedade Portuguesa de Reumatologia, Lisboa, Portugal, 3Faculdade de Medicina da Universidade de Lisboa, Lisboa, Portugal, 4Department of Orthopaedic Research, Boston Children’s Hospital, Boston, MA, USA; Department of Genetics, Harvard Medical School, Boston, MA, United States, 5Unidade de Investigação em Reumatologia, Instituto de Medicina Molecular, Faculdade de Medicina, Universidade de Lisboa, Centro Académico de Medicina de Lisboa, Portugal, 6NOVA IMS, Universidade Nova de Lisboa, Lisboa, Portugal, 7Centro de Estudos de Doenças Crónicas (CEDOC) da NOVA Medical School, Universidade Nova de Lisboa (NMS/UNL), Lisboa, Portugal
Disclosures: Ana Maria Rodrigues, None

FRI-0688 Bone Endosteal But Not Periosteal Changes During Aging At The Distal Radius And Tibia Significantly Differ Between Men And Women As Determined From HRpQCT Images Using A Novel 3D Rigid-Registration Approach
Bert Van Rietbergen*,1, Emmanuel Biver2, Thierry Chevalley2, Keita Ito3, Roland Chapurlat4, Serge Ferrari2. 1Dept. Biomed. Eng. Eindhoven University of Technology / Dept. Orthopaedics Maastricht University Medical Centre, Netherlands, 2Division of Bone Diseases, University Hospitals and Faculty of Medicine, Switzerland, 3Orthopaedic Biomechanics, Dept. Biomed. Eng. / Dept. Orthopaedics, University Medical Center Utrecht, Netherlands, 5INSERM UMR 1033, Université de Lyon, France
Disclosures: Bert Van Rietbergen, Scanco Medical AG, Consultant
FRI-0689  Off-Treatment Bone Mineral Density Changes in Postmenopausal Women after 5 Years of Anastrozole
Ivana Sestak*, Jack Cuzick. Centre for Cancer Prevention, Queen Mary University London, United Kingdom
Disclosures: Ivana Sestak, None

OSTEOPOROSIS - EPIDEMIOLOGY

FRI-0738  Microvascular Complications and Risk of Incident Hip Fracture in Type 2 Diabetes: A National Cohort
Po-Yin Chang*, Yi-Ting Wang, Rodrigo J. Valderrábano, Yi-Wen Tsai, Jennifer S. Lee.
1Stanford University School of Medicine, United States, 2National Yang-Ming University Institute of Health and Welfare Policy, Taiwan, 3Univeristy of Miami Miller School of Medicine, United States
Disclosures: Po-Yin Chang, None

FRI-0739  Cancer Patients who Suffer Fractures are Rarely Assessed or Treated for Osteoporosis: Population-based Data from Manitoba
1Central Texas Veterans Healthcare System, United States, 2University of Manitoba, Canada, 3University of Manitoba, CancerCare Manitoba, Canada
Disclosures: Beatrice Edwards, None

FRI-0740  ASBMR 2018 Annual Meeting Young Investigator Award
Risk Factors for Atypical Femur Fractures in a Large, Prospective Cohort Study: A Multivariable Analysis from the Southern California Osteoporosis Cohort Study (SOCS)
1University of California, San Francisco, United States, 2Kaiser Permanente Southern California, United States
Disclosures: Erik J. Geiger, None

FRI-0741  ASBMR 2018 Annual Meeting Young Investigator Award
Treatment with Statins Is Associated with Higher Volumetric Bone Mineral Density and Lower Cortical Porosity in Older Women
Berit Larsson*, Anna Nilsson, Dan Mellstrom, Daniel Sundh, Mattias Lorentzon.
1Department of Geriatric Medicine, Institute of Medicine, Sahlgrenska Academy, University of Gothenburg, Sweden, 2Head of Geriatric Medicine, Institute of Medicine, Sahlgrenska Academy, University of Gothenburg, Sweden
Disclosures: Berit Larsson, None

1New Mexico Clinical Research & Osteoporosis Center, United States, 2Optum, United States, 3Radius Health, Inc., United States, 4UAB Arthritis Clinical Intervention Program, University of Alabama at Birmingham, United States
FRI-0743  
**An Atlas of Human and Murine Genetic Influences on Osteoporosis**


1Department of Human Genetics, McGill University, Canada, 2University of Queensland Diamantina Institute, Translational Research Institute, Australia, 3Garvan Institute of Medical Research, Australia, 4Molecular Endocrinology Laboratory, Department of Medicine, Imperial College London, United Kingdom, 5Institute for Systems Genetics, New York University Langone Medical Center, United States, 6Centre for Clinical Epidemiology, Lady Davis Institute, Jewish General Hospital, Canada, 7Department of Research, 23andMe, United States, 8Department of Internal Medicine, Erasmus Medical Center, Netherlands, 9Department of Public Health and Primary Care, University of Cambridge, United Kingdom, 10MRC Lifecourse Epidemiology Unit, University of Southampton, United Kingdom, 11NIHR Musculoskeletal Biomedical Research Unit, Botnar Research Centre, Nuffield Department of Orthopaedics, Rheumatology and Musculoskeletal Sciences, United Kingdom, 12Department of Hygiene and Epidemiology, University of Ioannina Medical School, Greece, 13Department of Internal Medicine and Clinical Nutrition, University of Gothenburg, Sweden, 14Institute for Aging Research, Hebrew SeniorLife, United States, 15Center for Musculoskeletal Research, Department of Orthopaedics, University of Rochester, United States, 16Musculoskeletal Research Unit, Department of Translational Health Sciences, University of Bristol, United Kingdom, 17Wellcome Trust Sanger Institute, Wellcome Genome Campus, United Kingdom

Disclosures: John Morris, None

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FRI-0744  
**ASBMR 2018 Annual Meeting Young Investigator Award**

**Risk of fracture after bariatric surgery in France: population based, retrospective cohort study**


1Lille University Hospital, France, 2Université d’Orléans, France

Disclosures: Julien Paccou, None

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FRI-0745  
**Secular trends in the initiation of therapy in secondary fracture prevention: widening treatment gaps in Denmark and Spain**


1Nuffield Department of Orthopaedics, Rheumatology, and Musculoskeletal Sciences (NDORMS), Oxford NIHR Biomedical Research Centre, University of Oxford, United Kingdom, 2OPEN, Institute of Clinical Research, Oxford University, Oxford, United Kingdom, 3GREMPAL Research Group (Idiap Jordi Gol Primary Care Research Institute) and CIBERFes, Universitat Autònoma de Barcelona and Instituto de Salud Carlos III, Spain, 4Lifecourse Epidemiology Unit, Southampton University, United Kingdom, 5UCB Biopharma Sprl, Belgium, 6Holbæk Hospital, Dept of Medicine, Denmark

Disclosures: Daniel Prieto-Alhambra, UCB, Grant/Research Support, Servier, Grant/Research Support, Pharmo Institute, Grant/Research Support, Amgen, Grant/Research Support

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FRI-0746  
**Temporal Trends and Factors Associated with Bisphosphonate Drug Holidays**

Jeffrey Curtis*, Rui Chen, Tarun Arora, Shantee Daigle, Robert Matthews, Huifeng Yun, Nicole Wright, Ayesha Jaleel, Elizabeth Delzell, Kenneth Saag.

University of Alabama at Birmingham, United States

Disclosures: Jeffrey Curtis, Radius, Grant/Research Support, Radius, Consultant, Amgen, Grant/Research Support, Amgen, Consultant
FRI-0747  Type 2 Diabetes and HR-pQCT Parameters in Older Men
Ann Schwartz*, Neeta Parimi1, Andrew Burghardt1, Mary Bouxsein2, Elsa Strotmeyer3, 
Eric Vittinghoff1, Eric Orwoll4, Gina Woods1, Dennis Black1, Nancy Lane5, Kristine Ensrud6, 
Nicola Napoli7, 1University of California, San Francisco, United States, 2Harvard Medical 
School, United States, 3University of Pittsburgh, United States, 4Oregon Health and Science 
University, United States, 5University of California, San Diego, United States, 6University 
of California, Davis, United States, 7University of Minnesota and Minneapolis VA Health 
System, United States, 8Universita Campus Bio-Medico di Roma, Italy
Disclosures: Ann Schwartz, None

FRI-0748  Cluster Analysis of High Resolution Peripheral Quantitative Computed Tomography 
Parameters Identifies Bone Phenotypes Associated With High Rates of Prevalent 
Fracture
Kate Ward*, Mark Edwards, Leo Westbury, Cyrus Cooper, Elaine Dennison. MRC 
Lifecourse Epidemiology, University of Southampton, United Kingdom
Disclosures: Kate Ward, None

OSTEOPOROSIS - HEALTH SERVICES RESEARCH

FRI-0804  ASBMR 2018 Annual Meeting Young Investigator Award 
The Long-term Impact of Incident Low-trauma Fractures on Health-related Quality of 
Life of Older People: The Canadian Multicentre Osteoporosis Study
Asm Borhan*, Alexandra Papaioannou1, Olga Gajic-Veljamiski2, Courtney Kennedy1, 
George Ioannidis1, Claudie Berger1, Wilma Hopman1, David Goltzman1, Robert Josse1, 
Christopher S Kovacs1, David A Hanley1, Jerilynn C Prior2, Suzanne N Morin2, Stephanie 
M Kaiser3, Angela M Cheung3, Lehana Thabane4, Jonathan D Adachi5, The Camos 
Research Group, 1McMaster University & GERS Centre, Canada, 2GERAS Centre, 
Canada, 3Camos – McGill University, Canada, 4Kingston General Hospital, Canada, 5McGill 
University, Canada, 6St. Michael Hospital, Canada, 7Memorial University of Newfoundland, 
Canada, 8University of Calgary, Canada, 9University of British Columbia, Canada, 
10Dalhousie University, Canada, 11McMaster University & St. Joseph’s Healthcare Hamilton, 
Canada, 12University of Toronto & University Health Network, Canada
Disclosures: Asm Borhan, None

FRI-0805  Inappropriate Use of Cost-effectiveness Thresholds as Intervention Thresholds – 
Potential for Overtreatment of Low Risk Individuals
Eugene Mccloskey*, Helena Johansson1, Nicholas Harvey1, Juliet Compston1, Cyrus 
Cooper1, John Kanis1, 1Mellanby Centre for Bone Research, University of Sheffield, United 
Kingdom, 2Centre for Metabolic Bone Diseases, University of Sheffield, United Kingdom, 
3MRC Lifecourse Epidemiology Unit, University of Southampton, United Kingdom, 
4Department of Medicine, Cambridge Biomedical Campus, United Kingdom
Disclosures: Eugene Mccloskey, None

FRI-0806  Bending the Curve with Patient Identification and Treatment in Osteoporosis
E. Michael Lewiecki*, Jesse D. Ortedahl2, Jacqueline Vanderpuye-Orgle3, Andreas 
Grauer3, Amanda L. Harmon2, Andrea J. Singer1, 1New Mexico Clinical Research & 
Osteoporosis Center, United States, 2Partnership for Health Analytic Research, LLC, United 
States, 3Amgen Inc., United States, 4Georgetown University Hospital, United States
Disclosures: E. Michael Lewiecki, New Mexico Clinical Research & Osteoporosis Center, Other 
Financial or Material Support, Mereno, Grant/Research Support, Sandoz, Consultant, PFEnex, Grant/ 
Research Support, Ultragenyx, Consultant, Shire, Consultant, Shire, Speakers' Bureau, Amgen, 
Consultant, Amgen, Grant/Research Support, Radius, Speakers' Bureau, Radius, Consultant, Alexion, 
Consultant, Alexion, Speakers’ Bureau

ASBMR 2018 Annual Meeting 93
OSTEOPOROSIS - NUTRITION, DIETARY SUPPLEMENTS AND PHYSICAL ACTIVITY

FRI-0824  
**ASBMR 2018 Annual Meeting Young Investigator Award**  
The Calgary Vitamin D Study: Safety of Three-Year Supplementation With 400, 4000 or 10000 IU Daily  
Emma O Billington*1, Lauren A Burt1, Erin M Davison1, Marianne S Rose2, Sharon Gaudet1, Michelle Kan1, Steven K Boyd1, David A Hanley1.  1McCaig Institute for Bone and Joint Health, Cumming School of Medicine, University of Calgary, Canada, 2Research Facilitation, Alberta Health Services, Canada  
*Disclosures: Emma O Billington, None**

FRI-0825  
**Natural history of maternal urinary β-C-terminal telopeptide of type I collagen (CTX) in pregnancy, and response to cholecalciferol supplementation: findings from the MAVIDOS trial**  
Elizabeth Curtis*1, Camille Parsons1, Kate Maslin1, Stefania D’Angelo1, Rebecca Moon1, Sarah Crozier1, Fatma Gossiel2, Nicholas Bishop1, Stephen Kennedy4, Aris Papageorgiou4, Robert Fraser1, Saurabh Gandhi1, Ann Prentice6, Hazel Inskip1, Keith Godfrey1, Inez Schoenmakers6, M Kassim Javid2, Richard Eastell2, Cyrus Cooper1, Nicholas Harvey1.  1MRC Lifecourse Epidemiology Unit, University of Southampton, Southampton, United Kingdom, 2Academic Unit of Bone Metabolism, University of Sheffield, Sheffield, United Kingdom, 3Academic Unit of Child Health, Sheffield Children’s Hospital, University of Sheffield, Sheffield, United Kingdom, 4Nuffield Department of Women’s & Reproductive Health, John Radcliffe Hospital, University of Oxford, Oxford, United Kingdom, 5Department of Obstetrics and Gynaecology, Sheffield Hospitals NHS Trust, University of Sheffield, Sheffield, United Kingdom, 6MRC Human Nutrition Research, Elsie Widdowson Laboratory, Cambridge, United Kingdom, 7National Institute for Health Research (NIHR) Oxford Biomedical Research Centre, University of Oxford, United Kingdom  
*Disclosures: Elizabeth Curtis, None**

FRI-0826  
**The association of breastfeeding, maternal smoking, birth weight and maternal diet with bone density and microarchitecture in young adulthood: a 25-year longitudinal study**  
Yi Yang*1, Feitong Wu1, Terry Dwyer2, Tania Winzenberg1, Graeme Jones1.  1Menzies Institute for Medical Research, University of Tasmania, Australia, 2The George Institute for Global Health, University of Oxford, United Kingdom  
*Disclosures: Yi Yang, None**

FRI-0827  
**Effect of High-Dose Vitamin D on Bone Microarchitecture assessed via High Resolution Peripheral Quantitative Computed Tomography (HR-pQCT): a Double-Blind RCT**  
Ursina Meyer*1, Ursula Heilmeier1, Robert Theiler2, Andreas Egli1, Heike A. Bischoff-Ferrari2.  1Centre on Aging and Mobility, Department of Geriatrics and Aging Research, University Hospital Zurich and Zurich of University, Switzerland, 2Department of Geriatrics and Aging Research, University Hospital Zurich and Zurich of University, Switzerland  
*Disclosures: Ursina Meyer, None**

FRI-0828  
**Vitamin D Status, Bone Quality and Long-Term Risk for Fracture-related Hospitalization in Older Women**  
Kun Zhu*1, Joshua Lewis2, Marc Sim2, Richard Prince1.  1Department of Endocrinology and Diabetes, Sir Charles Gairdner Hospital, Australia, 2School of Medical and Health Sciences, Edith Cowan University, Australia, 3Medical School, University of Western Australia, Australia  
*Disclosures: Kun Zhu, None**

FRI-0829  
**High dietary calcium intakes in men, not women, are associated with increased all-cause mortality: the Melbourne Collaborative Cohort Study**  
Alexander Rodriguez*1, David Scott1, Belal Khan2, Allison Hodge1, Dallas English2, Graham Giles1, Bo Abrahamsen1, Peter Ebeling1.  1Monash University, Australia, 2University of Melbourne, Australia, 3Cancer Council Victoria, Australia, 4University of Southern Denmark, Denmark  
*Disclosures: Alexander Rodriguez, None**
OSTEOPOROSIS - PATHOPHYSIOLOGY

FRI-0859  A greater weight loss reduces lumbar spine trabecular bone score in the obese, and this is not influenced by vertebral body structural defects
Julia Amariti1, Stephen Schneider2, Karen Hansen3, Yvette Schlussel1, Sue Shapses1.
1Rutgers University, United States, 2Rutgers Robert Wood Johnson Medical School, United States, 3University of Wisconsin School of Medicine and Public Health, United States
Disclosures: Julia Amariti, None

FRI-0860  Identification of Cellular Senescence and Senescent Secretory Markers as Major Etiologies Underlying Radiotherapy Related Bone Damage
Abhishek Chandra*, Joshua Farr, David Monroe, Rebekah Samsonraj, Haitao Wang, Susan Law, Sundeep Khosla, Robert Pignolo. Mayo Clinic, United States
Disclosures: Abhishek Chandra, None

FRI-0861  Identification and Characterization of lncRNA-DBD in Diabetic Bone Metabolism
Zhekai Hu*, Qisheng Tu, Jake Chen1,2. 1Division of Oral Biology Tufts University School of Dental Medicine, United States, 2Department of Developmental, Molecular and Chemical Biology Sackler School of Graduate Biomedical Sciences Tufts University School of Medicine, United States
Disclosures: Zhekai Hu, None

FRI-0862 Estrogen depletion alters regulation of mineralization at actively forming osteonal surfaces in a monkey animal model
Eleftherios P. Paschalis*, Sonja Gamsjaeger1, Stamatia Rokidi1, Keith Condon2, Klaus Klaushofer1, David Burr2. 1Ludwig Boltzmann Institute of Osteology at the Hanusch Hospital of WGKK and AUVA Trauma Centre Meidling, 1st Medical Department, Hanusch Hospital, Heinrich Collin Str. 30, A-1140, Austria, 2Indiana University, School of Medicine, United States
Disclosures: Eleftherios P. Paschalis, None

OSTEOPOROSIS - SECONDARY OSTEOPOROSIS

FRI-0877  Low bone mineral density remains highly prevalent in adolescents despite height adjustment: results from the Sickle Cell Clinical Research and Intervention Program (SCCRIP) pediatric cohort
Oyebimpe Adesina*, Guolian Kang2, Martha Villavicencio1, Jason Hodges1, Wassim Chemaitilly3, Sue Kaste4, James Gurney5, Babette Zemel6, Jane Hankins2. 1Division of Hematology, University of Washington School of Medicine, United States, 2Department of Biostatistics, St. Jude Children’s Research Hospital, United States, 3Department of Hematology, St. Jude Children’s Research Hospital, United States, 4Department of Pediatric Medicine, Division of Endocrinology, St. Jude Children’s Research Hospital, United States, 5Department of Radiological Sciences, St. Jude Children’s Research Hospital, United States, 6School of Public Health, University of Memphis, United States, 7Division of Gastroenterology, Hepatology and Nutrition, Children’s Hospital of Philadelphia, United States
Disclosures: Oyebimpe Adesina, None

FRI-0878  Hyponatremia Induced Osteoporosis
Julianna Barsony*, Qin Xu, Joseph G. Verbalis. Georgetown University, United States
Disclosures: Julianna Barsony, None

FRI-0879 Bone histomorphometric effects of HIV infection and Antiretroviral therapy
Janaina Ramalho*, Csw Martins, Rmr Pereira, Thomas Nickolas, Mt Yin, J Galvão, Margareth Eira, Lm Reis, Luzia Furukawa, Vanda Jorgetti, Rm Moyses1,3. 1Universidade de São Paulo, Brazil, 2Columbia University, United States, 3UNINOVE, Brazil
Disclosures: Janaina Ramalho, None
FRI-0880  Low daily dose of glucocorticoids induces trabecular and cortical bones impairment at the femur: a 3D analysis using DXA-based modeling.
Arnau Manasanch Berengué*1, Renaud Winzenrieth1, Ludovic Humbert1, Edward Leib2.
1Galgo Medical SL, Spain, 2Dept. of Medicine, University of Vermont College of Medicine, United States
Disclosures: Arnau Manasanch Berengué, Galgo Medical, Other Financial or Material Support

OSTEOPOROSIS – TREATMENT

FRI-0902  Efficacy of Teriparatide Compared With Risedronate on FRAX®-defined Major Osteoporotic Fractures: A Post-hoc Analysis of the VERO Clinical Trial
Jean-Jacques Body*1, Fernando Marin2, Piet Gesuens3, Cristiano Zerbinì4, Astrid Fahrleitner-Pamer5, Ruediger Moericke6, Enrique Casado7, Jan Stepan8, Salvatore Minisola9, Eric Lespessailles10, Pedro López-Romero12, David Kendler11. 1CHU Brugmann, ULB, Belgium, 2Lilly Research Center Europe, Spain, 3Maastricht University Medical Center, Netherlands, 4Centro Paulista de Investigação Clínica, Brazil, 5Division of Endocrinology, Medical University of Graz, Austria, 6Institut Præventive Medizin & Klinische Forschung, Germany, 7University Hospital Parc Taulí Sabadell (UAB), Spain, 8Institute of Rheumatology and Faculty of Medicine 1, Charles University, Czech Republic, 9Sapienza Rome University, Italy, 10Regional Hospital, University of Orleans, France, 11University of British Columbia, Canada
Disclosures: Jean-Jacques Body, Eli Lilly and Company, Grant/Research Support, Amgen, Speakers’ Bureau

FRI-0903  Association of Alendronate and Risk of Cardiovascular Events in Patients with Hip Fracture
Ching-Lung Cheung*1, Chor-Wing Sing1, Angel Wong1, Douglas Kiel2, Elaine Cheung3, Joanne Lam4, Tommy Cheung5, Esther Chan5, Annie Kung6, Ian Wong7. 1The University of Hong Kong, Hong Kong, 2Hebrew SeniorLife, Harvard Medical School, United States, 3United Christian Hospital, Hong Kong, 4Queen Mary Hospital, Hong Kong, 5UCL School of Pharmacy, United Kingdom
Disclosures: Ching-Lung Cheung, None

FRI-0904  Exploring a Teriparatide and Denosumab Sequencing Option: 18 month Interim Results
Felicia Cosman*1, David Dempster2, Donald Mcmahon2, Jeri Nieves4. 1Columbia University, United States, 2Helen Hayes Hospital, United States, 3Columbia University and Helen Hayes Hospital, United States
Disclosures: Felicia Cosman, Amgen, Grant/Research Support, Radius, Speakers’ Bureau, Amgen, Speakers’ Bureau, Eli Lilly, Speakers’ Bureau, Amgen, Consultant, Eli Lilly, Consultant, Eli Lilly, Consultant, Eli Lilly, Grant/Research Support

FRI-0905  Treatments for Osteoporosis Do Not Reduce Overall Mortality
Steven R. Cummings*1, Li-Yung Lui1, Douglas C. Bauer2, Dennis M. Black2. 1San Francisco Coordinating Center, CPMC Research Institute, United States, 2San Francisco Coordinating Center, University of California San Francisco, United States
Disclosures: Steven R. Cummings, Amgen, Consultant, Amgen, Grant/Research Support

FRI-0906  Effect of Denosumab Versus Risedronate on Cortical and Trabecular Bone Microarchitecture by High Resolution Peripheral Quantitative Computed Tomography (HR-pQCT) in Glucocorticoid-treated Individuals
Piet Gesuens*1, Stefan Goemaere2, Nico Pannacciulli3, Nancy Lane4, Eric Lespessailles5, Osvaldo D. Messina6, Roland Chapurlat7, Xiang Yin8, Rachel B. Wagman9, Joop P. Van Den Bergh1. 1Maastricht University Medical Center, Netherlands, 2Ghent University Hospital, Belgium, 3Amgen Inc., United States, 4University of California, Davis, United States, 5University Hospital Orleans, France, 6Cosme Argerich Hospital, Argentina, 7Hôpital Edouard Herriot, France
Disclosures: Piet Gesuens, Pfizer, Abbott, Lilly, Amgen, MSD, Will, Roche, UCB, BMS, Celgene, Novartis, Grant/Research Support, Amgen, Lilly, Consultant, Pfizer, Abbott, Lilly, Amgen, MSD, Will, Roche, UCB, BMS, Celgene, Novartis, Speakers’ Bureau
FRI-0907 Abaloparatide Effect on Bone Mineral Density and Fracture Incidence in Postmenopausal Women with Osteoporosis Aged 80 Years or Older: Results from the ACTIVExtend Phase 3 Trial
Susan Greenspan*, Fitzpatrick Lorraine1, Bruce Mitlak2, Yamei Wang2, Nicholas C. Harvey3, Chad Deal4, Felicia Cosman5, Mike Mcclung6. 1University of Pittsburgh, United States, 2Radius Health, Inc., United States, 3MRC Lifecourse Epidemiology Unit, University of Southampton, United Kingdom, 4Cleveland Clinic Foundation, United States, 5Columbia University College of Physicians and Surgeons, United States, 6Oregon Osteoporosis Center, United States
Disclosures: Susan Greenspan, NIH, Grant/Research Support, Lilly, Grant/Research Support, Amgen, Grant/Research Support

FRI-0908 Treatment gap following clinical vertebral fracture in the International Cost and Utility Related to Osteoporosis Fractures Study (ICUROS)
Mattias Lorentzon*, Helena Johansson2,3, Nicholas C Harvey4, Anders Odén2, Kerrie Sanders1, Fredrik Borgström1, Axel Svedbom6, Eugene Mccloskey2,7, John Kanis1,2,3. 1Geriatric Medicine, Department of Internal Medicine and Clinical Nutrition, Institute of Medicine, Sahlgrenska Academy, University of Gothenburg, Gothenburg and Geriatric Medicine Clinic, Sahlgrenska University Hospital, Malmö, Sweden, 2Centre for Metabolic Bone Diseases, University of Sheffield, Sheffield, UK, Sweden, 3Institute for Health and Aging, Catholic University of Australia, Melbourne, Australia, United Kingdom, 4MRC Lifecourse Epidemiology Unit, University of Southampton, Southampton and NIHR Southampton Biomedical Research Centre, University of Southampton and University Hospital Southampton NHS Foundation Trust, Southampton, United Kingdom, 5LIME/ MMC, Karolinska Institutet, Stockholm, Sweden, 6Mapi, Stockholm, Sweden, 7Mellanby Centre for bone research, Department of Oncology and Metabolism, University of Sheffield, Sheffield, United Kingdom
Disclosures: Mattias Lorentzon, None

FRI-0909 A Pooled Analysis of Fall Incidence from Placebo-controlled Trials of Denosumab
Eugene Mccloskey*, Richard Eastell1, Michael Mcclung2, Nico Pannacciulli3, Christine Wang2, Susan Yue1, Steven R. Cummings5. 1The University of Sheffield, United Kingdom, 2Oregon Osteoporosis Center, United States, 3Amgen Inc., United States, 4San Francisco Coordinating Center, United States
Disclosures: Eugene Mccloskey, Warner Chilcott, Grant/Research Support, Servier, Grant/Research Support, GSK, Consultant, Consultant Healthcare, Consultant, Syneus, Consultant, Amgen, Consultant, Hologic, Grant/Research Support, Tethys, Grant/Research Support, UCB, Consultant, Sanofi-Aventis, Grant/Research Support, Pfizer, Other Financial or Material Support, Roche, Grant/Research Support, Lilly, Grant/Research Support, AstraZeneca, Other Financial or Material Support, Syneus, Grant/ Research Support, Internis, Other Financial or Material Support, Amgen, Other Financial or Material Support, Consilient Healthcare, Other Financial or Material Support, Novartis, Grant/Research Support, Pfizer, Grant/Research Support, IOF, Grant/Research Support, MRC, Grant/Research Support, GSK, Grant/Research Support, ActiveSignal, Grant/Research Support, AR UK, Grant/Research Support, Roche, Other Financial or Material Support, Consilient Healthcare, Grant/Research Support, Medtronic, Grant/Research Support, GSK, Other Financial or Material Support, Internis, Grant/Research Support, Amgen, Grant/Research Support, Servier, Other Financial or Material Support, Lilly, Other Financial or Material Support, Merck, Grant/Research Support, UCB, Grant/Research Support, Hologic, Other Financial or Material Support, AstraZeneca, Grant/Research Support, I3 Innovus, Grant/Research Support, ActiveSignal, Consultant, UCB, Grant/Research Support, Unilever, Grant/Research Support
FRI-0910  Teriparatide accelerates proximal humerus fracture consolidation – the TERAFRAP study
Christian Muschitz*1, Judith Haschka1, Georg Langs2, Markus Holzer3, Andreas Baierl1, Christoph Pümpel1, Zora Messner1, Roland Kocijan1, Xavier Feichtinger4, Rainer Mittermayer4, Jakob E. Schanda4, Thomas Hausner3, Robert Wakolbinger1, Jochen Schmidsfeld6, Christian Fialka2, Wolfgang Schima7, Heinrich Resch1. 1St. Vincent Hospital – Medical Department II – VINFORCE; Academic Teaching Hospital of the Medical University of Vienna, Stumpergasse 13, 1060 Vienna, Austria, 2Medical University of Vienna, Department of Biomedical Imaging and Image-guided Therapy, Computational Imaging Research Lab, Währinger Gürtel 18-20, 1090 Vienna, Austria, 3University of Vienna, Department of Statistics and Operations Research, Oskar-Morgenstern-Platz 1, 1090 Vienna, Austria, 4AUVA Trauma Center Meidling, Kundratstrasse 37, 1120 Vienna, Austria, 5AUVA Trauma Center Lorenz Böhler, Donaueschingenstraße 13, 1200 Vienna, Austria, 6Social Medicine Center East, Department of Traumatology, Langobardenstrasse 122, 1220 Vienna, Austria, 7St. Vincent Hospital – Department of Diagnostic and Interventional Radiology; Academic Teaching Hospital of the Medical University of Vienna, Stumpergasse 13, 1060 Vienna, Austria
Disclosures: Christian Muschitz, None

FRI-0911  Localization of Prefracture Lesions in Atypical Femoral Fracture on Straight and Bowed Femurs
Young Chang Park*1, Kyu Hyun Yang2. 1International St. Mary’s Hospital, Catholic Kwandong University College of Medicine, Republic of Korea, 2Yonsei University College of Medicine, Republic of Korea
Disclosures: Young Chang Park, None

PARACRINE REGULATORS

FRI-0962  Beta 2 Adrenergic Receptor Gene Deletion Enhances Periosteal Response to Mechanical Stimulation in Senescent Male Mice
Sundar Srinivasan*, Dewayne Threet, Philippe Huber, Brandon Ausk, Leah Worton, Ron Kwon, Steve Bain, Ted Gross, Edith Gardiner. University of Washington, United States
Disclosures: Sundar Srinivasan, None

FRI-0963  Plasminogen is Critical for Bone Fracture Repair by Promoting the Functions of Mesenchymal Progenitors
Luqiang Wang*1, Zhenqiang He2, Duan Hao2, Richard Mitteer3, Yanqing Gong2, Ling Qin1. 1Department of Orthopaedic Surgery, Perelman School of Medicine, University of Pennsylvania, United States, 2Division of Translational Medicine and Human Genetics, Perelman School of Medicine, University of Pennsylvania, United States, 3Radiation Oncology and Neurosurgery, Perelman School of Medicine, University of Pennsylvania, United States
Disclosures: Luqiang Wang, None

PRECLINICAL MODELS: NUTRITION AND PHARMACOLOGY

FRI-0973  Strain-Specific Response of Inbred Mice to PTH Suggests Significant Genetic Control of the Bone Anabolic Response to Drug Therapy
Douglas Adams*1, Olivia Hart2, Renata Rydzik1, Dana Godfrey2, Michael Zuscik2, Cheryl Ackert-Bicknell2. 1University of Connecticut, United States, 2University of Rochester, United States
Disclosures: Douglas Adams, None

FRI-0974  AZP-3404, a Short Peptide Derived from Insulin-like Growth Factor Binding Protein 2 (IGFBP-2), Ameliorates Metabolic Status and Trabecular Bone in Aged-Ovariectomized (OVX) Mice
Thomas Delale*1, Stephane Milano1, Victoria Demambro2, David R Clemmmons3, Clifford J Rosen2, Thierry Abribat1. 1Alize pharma 3, France, 2Maine Medical Center, United States, 3NPT Inc, United States
Disclosures: Thomas Delale, None
FRI-0975  **AZP-3404, a Short Peptide Derived from Insulin-like Growth Factor Binding Protein 2 (IGFBP-2), Improves Trabecular Bone in Ovariectomized (OVX) Mice**
Thomas Delale*, Stephane Milano¹, David R Clemmons², Clifford J Rosen¹, Thierry Abribat¹. ¹Alizé Pharma 3, France, ²NPT Inc, United States, ³Maine Medical Center, United States
Disclosures: Thomas Delale, None

FRI-0976  **A Novel Bone Anabolic Conjugated Drug (C3) Can Rebuild Bone in an Ovariectomized (OVX) Rat Model: A Novel Approach for Reversing Osteoporotic Bone Loss**
Marc Grynpas*, Zeeshan Sheikh¹, Robert Young¹, ¹University of Toronto, Canada, ²Sinai Health System, Canada, ³Simon Fraser University, Canada
Disclosures: Marc Grynpas, None

FRI-0977  **Abaloparatide is as Effective as PTH (1-34) in Improving Bone Formation While PTHrP (1-36) Has Less Effect in Mice.**
Carole Le Henaff¹, Florante Ricarte², Zhiming He¹, Joshua Johnson¹, Johanna Warshaw¹, Nicola Partridge¹. ¹New York University, college of dentistry, United States, ²Molecular Pharmacology Training Program, Sackler Institute of Graduate Biomedical Sciences, United States
Disclosures: Carole Le Henaff, None

FRI-0978  **ASBMR 2018 Fund for Research and Education Young Investigator Award Vanadyl Acetylacetonate Increases Bone Formation and Inhibits Osteoclast Differentiation in a Diabetes-Related Osteoporotic Rat Model**
Jayenth Mayur*, Anthony Lin¹, Maximilian Muñoz¹, Kevin Mesina¹, Atharva Dhole¹, Savannah Roy¹, Daniel Cobain¹, Suleiman Sudah¹, Joseph Benevenia¹, Jessica Cottrell¹, David Paglia², Sheldon Lin¹. ¹Rutgers New Jersey Medical School, United States, ²Robert Wood Johnson Medical School, United States, ³Seton Hall University, United States
Disclosures: Jayenth Mayur, None

FRI-0979  **Low-intensity Pulsed Ultrasound (LIPUS) Prevents Development of BRONJ-like Pathophysiology in Rat Alveolar Bone Defect Induced by Tooth Removal after Alendronate and Porphyromonas Gingivalis Challenges**
Kouki Hidaka*, Yuko Mikuni-Takagaki¹, Satoko Wada-Takahashi¹, Makiko Saita², Ryota Kawamata¹, Takenori Sato¹, Akira Kawata¹, Chihiro Miyamoto¹, Yojiro Maehata¹, Hirotaka Watabe², Nobuyuki Tani-Ishii³, Nobushiro Hamada¹, Shun-Suke Takahashi¹, Shinji Deguchi¹, Ryohei Takeuchi¹. ¹Kanagawa Dental University, Graduate School of Dentistry, Department of Oral Science, Japan, ²Kanagawa Dental University, Graduate School of Dentistry, Department of Oral Interdisciplinary Medicine, Japan, ³Kanagawa Dental University, Graduate School of Dentistry, Department of Dentomaxillofacial Diagnosis and Treatment, Japan, ⁴Yokosuka City Hospital, Department of Joint Surgery, Japan
Disclosures: Kouki Hidaka, None

FRI-0980  **A Novel Cathepsin K Inhibitor Specifically Approaching Bone Resorption Surface to Suppress Osteoclastic Bone Resorption**
Xiaohao Wu*, Jun Lu, Jin Liu, Lei Dang, Aiping Lu, Ge Zhang. Hong Kong Baptist University, Hong Kong
Disclosures: Xiaohao Wu, None

**RARE BONE DISEASES: CLINICAL**

FRI-1019  **[18F]NaF PET/CT can identify a silent ‘chronic’ state of Fibrodysplasia Ossificans Progressiva**
Esmée Botman*, Pieter Raijmakers², Maqsood Yaqb², Bernd Teunissen², Coen Netelenbos¹, Lothar Schwarte¹, Wouter Lubbers¹, Adriaan Lammertsma², Marelise Eekhoff². ¹Department of Internal Medicine, section Endocrinology, Netherlands, ²Department of Nuclear Medicine and Radiology, Netherlands
Disclosures: Esmée Botman, None
FRI-1020  Sustained Efficacy and Safety of Burosumab, an Anti-FGF23 Monoclonal Antibody, for 88 Weeks in Children and Early Adolescents with X-Linked Hypophosphatemia (XLH)  
Thomas O. Carpenter*1, Wolfgang Höglér2, Erik Imel3, Anthony A. Portale4, Annemieke Boot5, Agnès Linglart6, Raja Padidela7, William Van’T Hoff8, Gary S. Gottesman9, Meng Mao10, Alison Skринар10, Javier San Martin10, Michael P. Whyte1. 1Yale University School of Medicine, United States, 2Birmingham Children’s Hospital, United Kingdom, 3Indiana University School of Medicine, United States, 4University of California, San Francisco, United States, 5University of Groningen, Netherlands, 6APHP Hôpital Bicêtre Paris Sud, France, 7Royal Manchester Children’s Hospital, United Kingdom, 8Great Ormond Street Hospital, United Kingdom, 9Shriners Hospitals for Children, United States, 10Ultragenyx Pharmaceutical Inc., United States  
Disclosures: Thomas O. Carpenter, Ultragenyx Pharmaceutical Inc., Consultant, Ultragenyx Pharmaceutical Inc., Other Financial or Material Support, Ultragenyx Pharmaceutical Inc., Grant/Research Support

FRI-1021  In a Randomized, Placebo-Controlled Trial Of Teriparatide (TPTD) For Premenopausal Idiopathic Osteoporosis (IOP), Tissue-Level Bone Formation Rate at Baseline and 3 Months Predicts Bone Density Response  
Adi Cohen*1, Stephanie Shiau2, Nandini Nair1, John Williams1, Robert Recker1, Joan Lappe4, David Dempster1, Hua Zhou3, Mafo Kamanda-Kosseh1, Mariana Bucovsky1, Julie Stubby1, Elizabeth Shane1, 1Columbia University Medical Center, United States, 2Mailman School of Public Health, United States, 3Creighton University Medical Center, United States, 4Shriners Hospitals for Children, United States, 5Helen Hayes Hospital, United States  
Disclosures: Adi Cohen, None

FRI-1022  ASBMR 2018 Annual Meeting Young Investigator Award Age-related Changes and the Effect of Bisphosphonates on Bone Turnover and Disease Progression in Fibrous Dysplasia of Bone  
Pablo Florenzano*1,2, Kristen S Pan1,3, Sydney M Brown1, Lori C Guthrie1, Luis Fernandez De Castro1, Michael T Collins 1, Alison M Boyce1. 1Skeletal Diseases and Mineral Homeostasis Section, National Institute of Dental and Craniofacial Research, National Institutes of Health., United States, 2Department of Endocrinology, School of Medicine. Pontificia Universidad Catolica de Chile., United States, 3NIH Medical Research Scholars Program (MRSP), United States  
Disclosures: Pablo Florenzano, None

FRI-1023  Trabecular Bone Score in Osteogenesis Imperfecta. Is it useful?  
Helena Florez*1, Africa Muxi 2, Eva Gonzalez 3, Ana Monegal 1, Núria Guañabens 1, Pilar Peris 1. 1Metabolic Bone Diseases Unit, Department of Rheumatology. Hospital Clinic. University of Barcelona, Spain, 2Department of Nuclear Medicine. Hospital Clinic, University of Barcelona, Spain, 3Department of Immunology. Hospital Clinic, University of Barcelona, Spain  
Disclosures: Helena Florez, None

FRI-1024  Achondroplasia Natural History: a Large, Ongoing Multi-Center Cohort Study  
Julie Hoover-Fong*1, Michael Bober2, Syed Hashmi3, Jacqueline Hecht1, Janet Legare4, Mary Ellen Little2, John Mcgready1, Peggy Modaff9, Richard Pauli4, David Rodriguez-Buritica3, Kerry Schulze1, Elena Serna3, Cory Smid4, Adekemi Alade1. 1Johns Hopkins University, United States, 2AI duPont Hospital for Children, United States, 3University of Texas, United States, 4University of Wisconsin, United States  
Disclosures: Julie Hoover-Fong, BioMarin, Consultant
FRI-1025  The Effect of Burosumab (KRN23), a Fully Human Anti-FGF23 Monoclonal Antibody, on Osteomalacia in Adults with X-Linked Hypophosphatemia (XLH)
Karl L. Insogna*,1, Frank Rauch1, Peter Kamenický2, Nobuaki Ito3, Takuo Kubota1, Akie Nakamura4, Lin Zhang5, Matt Meallifef, Javier San Martin6, Anthony A. Portale6. 1Yale School of Medicine, United States, 2McGill University, Canada, 3Université Paris-Sud, France, 4University of Tokyo Hospital, Japan, 5Osaka University Hospital, Japan, 6Hokkaido University Hospital, Japan, 7Ultragenyx Pharmaceutical Inc., United States, 8University of California, San Francisco, United States

FRI-1026  An overview of the etiology, clinical manifestations, management strategies and complications of hypoparathyroidism from the Canadian National Hypoparathyroidism Registry
Rafik El Werfalli*,1, Yasser Hakami1, Manoela Braga1, Adam Millar2, Zubin Punthakee3, Farhan Tariq4, J.E.M. Young5, Aliya Khan6. 1McMaster University, Canada, 2University of Toronto, Canada
Disclosures: Rafik El Werfalli, None

FRI-1027  Bone Remodeling and Bone Mass in Patients with Hypophosphatasemia
Laura Lopez-Delgado*,1, Leyre Riancho-Zarrabeitia1, Maite Garcia-Unzueta1, Carmen Valero2,3, Jair Tenorio1, Marta Garcia-Hoyos1, Pablo Lapunzina1, Jose A. Riancho1,3. 1Hospital UM Valdecilla, Spain, 2Hospital Sierrallana, Spain, 3Univ Cantabria, IDIVAL, Spain, 4Institute of Medical and Molecular Genetics, Spain
Disclosures: Laura Lopez-Delgado, None

FRI-1028  ASBMR 2018 Annual Meeting Young Investigator Award
Clinical Features of Patients with Tumoral Calcinosis: The Mayo Clinic Experience
Jad Sfeir*, Kurt Kennel, Matthew Drake. Mayo Clinic, United States
Disclosures: Jad Sfeir, None

RARE BONE DISEASES: TRANSLATIONAL

FRI-1077  Mechanisms Underlying Increased Osteoclastogenesis in the Mouse Model of Osteogenesis Imperfecta Due to Mutation in Collagen Type I
Iris Boraschi*,1, Eréne C Niemi2, Frank Rauch1, Mary Nakamura3, Svetlana Komarova1. 1Shriners Hospital-Canada/ McGill University, Canada, 2University of San Francisco California, United States
Disclosures: Iris Boraschi, None

FRI-1078  An antibody against ALK2 extracellular domain reveals a role of dimer formation for signal activation
Takenobu Katagiri*,1, Shinnosuke Tsuji2, Sho Tsukamoto3, Mai Kuratani4, Satoshi Ohte5, Kiyosumi Takaishi7, Yoshihiro Kawaguchi8, Jun Hasegawa8. 1Division of Pathophysiology, Research Center for Genomic Medicine, Saitama Medical University, Japan, 2Rare Disease & LCM Laboratories, R&D Division, Daiichi-Sankyo Co., Ltd., Japan, 3Kensuke Nakamura, Modality Research Laboratories, Biologics Division, Daiichi-Sankyo Co., Ltd., Japan, 4Modality Research Laboratories, Biologics Division, Daiichi-Sankyo Co., Ltd., Japan
Disclosures: Takenobu Katagiri, Daiichi-Sankyo Co., Ltd., Grant/Research Support

FRI-1079  Activation of the pro-fibrotic TGFβ pathway contributes to the multiorgan dysfunctions in the CLCN7-dependent ADO2
Antonio Maurizi*, Mattia Capulli, Anna Curle, Rajvi Patel, Nadia Rucci, Anna Teti. University of L’Aquila, Italy
Disclosures: Antonio Maurizi, None

FRI-1080  Autologous Regulatory T Cell Transplantation Enhances Bone Repair in a Mouse Model of Osteogenesis Imperfecta
Meenal Mehrotra*, Inhong Kang, Shilpak Chatterjee, Uday Baliga, Shikhar Mehrotra. Medical University of South Carolina, United States
Disclosures: Meenal Mehrotra, None
FRI-1081 BMP signaling and BMPR dynamics and interactions are restrained by cell surface heparan sulfate, a mechanism likely altered in Hereditary Multiple Exostoses
Christina Mundy*, Evan Yang, Paul Billings, Hajime Takano, Maurizio Pacifici. The Children’s Hospital of Philadelphia, United States
Disclosures: Christina Mundy, None

FRI-1082 Gene expression profiling of sclerostin antibody-induced therapeutic response in growing Brtl/+ mouse model of osteogenesis imperfecta
Hsiao Hsin Sung*,1, Rachel Surowiec3, Rebecca Falzon2, Lauren Battle2, Chris Stephan2, Michelle S. Caird1, Kenneth M. Kozloff1. 1RIMLS, Department of Rheumatology, Radboudumc, The Netherlands; Department of Oral and Maxillofacial Surgery, University of Michigan, 2Department of Orthopaedic Surgery, University of Michigan, United States, 3Biomedical Engineering, University of Michigan; Department of Orthopaedic Surgery, University of Michigan, United States
Disclosures: Hsiao Hsin Sung, None

FRI-1083 FGF23 Regulates Wnt/β-catenin Signaling-mediated Osteoarthritis in Mice Overexpressing High Molecular Weight FGF2
Patience Meo Burt*, Liping Xiao, Marja Hurley. UConn Health, United States
Disclosures: Patience Meo Burt, None

SARCOPENIA, MUSCLE AND FALLS

FRI-1118 ASBMR 2018 Annual Meeting Young Investigator Award
Three months of vitamin D3, 2,800 IU/d has an unfavorable effect on muscle strength and physical performance in vitamin D insufficient, hyperparathyroid women – a randomized placebo controlled trial
Lise Sofie Bislev*,1, Lene Langagergaard Rødbro1, Lars Rolighed2, Tanja Sikjaer1, Lars Rejnmark1. 1Department of Endocrinology and Internal Medicine, Denmark, 2Department of surgery, Denmark
Disclosures: Lise Sofie Bislev, None

FRI-1119 Analyzing Fall Risk using Smart Phone Application in Subjects with Osteoporosis with and without Falls
Krupa Doshi*,1, Seong Moon2, Michael Whitaker1, Thurmon Lockhart2. 1Mayo Clinic, AZ, United States, 2Arizona State University, United States
Disclosures: Krupa Doshi, None

FRI-1120 Genetic Basis of Falling Risk Susceptibility
Katerina Trajanoska*,1, Felix Day2, Carolina Medina-Gomez 1, Andre G. Uitterlinden1, John Perry2, Fernando Rivadeneira1. 1Department of Internal Medicine, Erasmus Medical Center, Rotterdam, The Netherlands, Netherlands, 2MRC Epidemiology Unit, University of Cambridge School of Clinical Medicine, Cambridge, United Kingdom
Disclosures: Katerina Trajanoska, None

FRI-1121 Effects of Music-based Multitask Exercise (Jaques-Dalcroze Eurhythmics) versus Multicomponent Exercise on Physical Function, Falls and Brain Plasticity in Older Adults: A Randomized Controlled Trial
Mélany Hars*,1, Natalia Fernandez2, François Herrmann3, René Rizzoli1, Gabriel Gold4, Patrik Vuilleumier2, Andrea Trombetti1. 1Division of Bone Diseases, Department of Internal Medicine Specialties, Geneva University Hospitals and Faculty of Medicine, Switzerland, 2Laboratory for Behavioural Neurology and Imaging of Cognition, Campus Biotech, University of Geneva, Switzerland, 3Division of Geriatrics, Department of Internal Medicine, Rehabilitation and Geriatrics, Geneva University Hospitals and Faculty of Medicine, Switzerland
Disclosures: Mélany Hars, None
FRI-1122  Effect of Vitamin D3 supplementation on muscle strength in HIV+ postmenopausal women
Michael Yin*1, Mariana Bucovsky1, John Williams1, Danielle Brunjes1, Arindam Roychoudhury2, Ivelisse Colon1, David Ferris2, Susan Olender2, P.Christian Schulz2, Anjali Sharma4, Cosmina Zeana2, Barry Zingman4, Elizabeth Shane1. 1Columbia University Medical Center, United States, 2BronxCare Health System, United States, 3Weill Cornell Medical College, United States, 4Albert Einstein College of Medicine and Montefiore Medical Center, United States
Disclosures: Michael Yin, None
ADULT METABOLIC BONE DISORDERS

SAT-0001  Acute Kidney Injury in Primary Hyperparathyroidism
Cristiana Cipriani1, Jessica Pepe1, Federica Biamonte1, Valeria Fassino1, Luciano Colangelo1, Valentina Piazzolla1, Carolina Clementelli1, Luciano Nieddu2, Salvatore Minisola1. 1Sapienza University of Rome, Italy, 2UNINT University, Italy
Disclosures: Cristiana Cipriani, None

SAT-0002  Changes in Skeletal Microstructure Through Four Years of rhPTH(1-84) Therapy in Hypoparathyroidism
Natalie Cusano*, Mishaela Rubin2, John Williams2, Sanchita Agarwal2, Gaia Tabacco2, Yu-Kwang Donovan Tay2, Rukshana Majeed2, Beatriz Omeragic2, John Bilezikian2. 1Lenox Hill Hospital, United States, 2Columbia University Medical Center, United States
Disclosures: Natalie Cusano, Shire, Speakers’ Bureau, Shire, Grant/Research Support

SAT-0003  Greater Visceral Adipose Tissue is Associated with Impairment of Bone Strength Assessed with HR-pQCT : the OFELY Study
Francois Duboeuf*, Elisabeth Sornay-Rendu, Roland Chapurlat. INSERM UMR 1033, Université de Lyon, France
Disclosures: Francois Duboeuf, None

SAT-0004  Effects of parathyroidectomy on the biology of bone tissue in patients with chronic kidney disease and secondary hyperparathyroidism
Geovanna O. Pires*, Itamar O. Vieira1, Fabiana R. Hernandez1, Andre L. Teixeira1, Ivone B. Oliveira1, Wagner V. Dominguez1, Luciene M. Dos Reis1, Fabio M. Montenegro1, Rosa M. M. Menezes1, Aluizio B. Carvalho3, Vanda Jorgetti1, 1Laboratório de Investigação Médica 16, Hospital das Clínicas da Faculdade de Medicina da Universidade de São Paulo, Brazil, 2Hospital Samaritano – Áméricas Serviços Médicos, Brazil, 3Nephrology Division, Federal University of São Paulo, Brazil, 4Disciplina de Cabeça e Pescoço, Hospital das Clínicas da Faculdade de Medicina da Universidade de São Paulo, Brazil, 5Post-Graduate Medicine Program, UNINOVE, Brazil
Disclosures: Geovanna O. Pires, None

SAT-0005  Overweight and Underweight Are Risk Factors for Vertebral Fractures in Patients with Type 2 Diabetes Mellitus
Ippei Kanazawa*, Masakazu Notsu, Ken-Ichiro Tanaka, Toshitugu Sugimoto. Shimane University Faculty of Medicine, Japan
Disclosures: Ippei Kanazawa, None

SAT-0006  Cinacalcet restores bone quality in CKD-MBD mice by modulating Wnt10b and klotho signaling in bone cells
Jia-Fwu Shyu*, Tzu-Hui Chu1, Yi-Jun Lin1, Lo-Wei Chen2, Cheng-Yuan Hsiao1, Wen-Chih Liu1. 1Department of Biology and Anatomy, National Defense Medical Center, Taiwan, 2Department of Biology and Anatomy, National Defense Medical Center, United Republic of Tanzania, 3Graduate Institute of Clinical Medicine, College of Medicine, Taipei Medical University, Taiwan
Disclosures: Jia-Fwu Shyu, None

SAT-0007  Bone Material Strength Index as Measured by Impact Microindentation in Patients with Primary Hyperparathyroidism and Hypoparathyroidism
Jessica Starr*, Gaia Tabacco2, Rukshana Majeed1, Beatriz Omeragic1, Maximo Gomez1, Leonardo Bandeira3, Mashaela Rubin1. 1Columbia University, United States, 2University Campus Bio-Medico, Italy, 3Instituto FBandeira de Endocrinologia, United States
Disclosures: Jessica Starr, None
SAT-0008  ASBMR 2018 Annual Meeting Young Investigator Award
Parathyroid Gland Localization in Primary Hyperparathyroidism: Evaluation of a Novel Imaging Protocol and Direct Head-to-Head Comparison of Parathyroid 4D-CT and Sestamibi SPECT/CT
Randy Yeh*, Yu-Kwang Donovan Tay, Gaia Tabacco, Laurent Dercle, Jennifer Kuo, Leonardo Bandeira, Catherine Mcmanus, James Lee, John Bilezikian. Columbia University Medical Center, United States
Disclosures: Randy Yeh, None

SAT-0009  Importance of Recognizing Low Alkaline Phosphatase Levels in a Patient with Decreasing Bone Mineral Density
Nada Alhashemi*, Christine Derzko. 1University of Toronto, Canada, 2University of Toronto, St Michael’s Hospital, Canada
Disclosures: Nada Alhashemi, None

SAT-0010  Fracture risk in Chronic B-cell Lymphocytic Leukemia: a historic cohort study
Anupam Kotwal*, Jad Sfeir, Matthew Drake. Division of Endocrinology, Diabetes, Metabolism, and Nutrition, United States
Disclosures: Anupam Kotwal, None

SAT-0011  Evaluation of an optimal cutpoint of parathyroid venous sampling gradient for localizing elusive cases of primary hyperparathyroidism
Jooyeon Lee*, Namki Hong, Sujin Lee, Jong Ju Jeong, Byung Moon Kim, Dong Joon Kim, Yumie Rhee. 1Department of Internal Medicine, Severance Hospital, Endocrine Research Institute, Yonsei University College of Medicine, Seoul 120-752, Korea, Republic of Korea, 2Thyroid Cancer Clinic, Yonsei University College of Medicine, Severance Hospital, Seoul, Korea, Republic of Korea, 3Department of Radiology, Yonsei University College of Medicine, Severance Hospital, Seoul, Korea, Republic of Korea
Disclosures: Jooyeon Lee, None

SAT-0012  Bone Turnover in Patients With Hypoparathyroidism Treated for 5 Years With Recombinant Human Parathyroid Hormone, rhPTH(1-84), in the Open-Label RACE Study
Michael Mannstadt*, John P. Bilezikian, Henry Bone, Bart L. Clarke, Douglas Denham, Michael A. Levine, Munro Peacock, Jeffrey Rothman, Dolores M. Shoback, Tamara J. Vokes, Mark L. Warren, Nelson B. Watts, Hak-Myung Lee, Nicole Sherry. 1Massachusetts General Hospital and Harvard Medical School, United States, 2Michigan Bone & Mineral Clinic, PC, United States, 3Division of Endocrinology, Diabetes, Metabolism, and Nutrition, United States, 4Mayo Clinic Division of Endocrinology, Diabetes, Metabolism, and Nutrition, United States, 5Clinical Trials of Texas, Inc., United States, 6Division of Endocrinology and Diabetes and Center for Bone Health, Children’s Hospital of Philadelphia, United States, 7Department of Medicine, Division of Endocrinology, Indiana University School of Medicine, United States, 8University Physicians Group – Research Division, United States, 9Endocrine Research Unit, SF Department of Veterans Affairs Medical Center, University of California, United States, 10Section of Endocrinology, University of Chicago Medicine, United States, 11Endocrinology and Metabolism, Physicians East, PA, United States, 12Osteoporosis and Bone Health Services, Mercy Health, United States, 13Shire Human Genetic Therapies, Inc, United States
Disclosures: Michael Mannstadt, Shire, Grant/Research Support, Shire, Consultant

SAT-0013  Normocalcaemic Hyperparathyroidism: Study Of The Prevalence And Natural History In A United Kingdom Referral Population
Marian Schini*, Richard Jacques, Nicola Peel, Jennifer Walsh, Richard Eastell. 1University of Sheffield, United Kingdom, 2Sheffield Teaching Hospitals, NHS, United Kingdom
Disclosures: Marian Schini, None
SAT-0014 Low Volumetric Bone Density is a Risk Factor for Complications after Spine Fusion Surgery
Yi Liu*¹, Alexander Dash¹, Andre Samuel¹, Eric Marty², Harold Moore², Brandon Carlson¹, John Carrino¹, Donald Mcmahon³, Alexander Hughes¹, Han Jo Kim¹, Matthew Cunningham¹, Frank Schwab¹, Richard Bockman³, Emily Stein³. ¹Hospital for Special Surgery, United States, ²Weill Cornell Medical College, United States, ³Columbia University, United States
Disclosures: Yi Liu, None

SAT-0015 Quality of life in hypoparathyroidism improves with rhPTH(1-84) throughout 8 years of continuous therapy
Gaia Tabacco*¹, Donovan Tay Yu-Kwang¹, Mishaela Rubin¹, John Williams¹, Beatriz Omeragic¹, Rukshana Majeed¹, Maximo Gomez Almonte¹, Natalie Cusano², John Bilezikian³. ¹Department of Medicine, Division of Endocrinology, College of Physicians & Surgeons, Columbia University, United States, ²Department of Medicine, Division of Endocrinology, Lenox Hill Hospital, United States
Disclosures: Gaia Tabacco, None

SAT-0016 rhPTH(1-84) in Hypoparathyroidism Is Associated With Stable Renal Function Through 8 Years of Continuous, Uninterrupted Therapy
Donovan Tay*¹, Gaia Tabacco¹, Natalie Cusano², John Williams¹, Beatriz Omeragic¹, Rukshana Majeed¹, Maximo Gomez Almonte¹, John Bilezikian³, Mishaela Rubin¹. ¹Columbia University Medical Center, United States, ²Lenox Hill Hospital Department of Medicine, United States
Disclosures: Donovan Tay, None

SAT-0017 Recognition of persistent low serum alkaline phosphatase in hospitalized adults
Justine Vix*¹, Thierry Hauet², Pascal Roblot³, Françoise Debias¹. ¹Rheumatology department CHU, France, ²Biochemistry department CHU, France, ³Internal medicine department CHU, France
Disclosures: Justine Vix, None

SAT-0018 Coronary Artery Calcification Absence, Assessed by Computed-Tomography, Spanning One Year Of Asfotase Alfa Therapy For A 69-Year-Old Woman With Hypophosphatasia
Michael P. Whyte*¹, Andy Bierhals². ¹Division of Bone and Mineral Diseases, Department of Internal Medicine, Washington University School of Medicine at Barnes-Jewish Hospital; Center for Metabolic Bone Disease and Molecular Research, Shriners Hospital for Children, United States, ²Mallinckrodt Institute of Radiology, Washington University School of Medicine at Barnes-Jewish Hospital, United States
Disclosures: Michael P. Whyte, None

SAT-0040 PTH 1-34 Replacement Therapy has Minimal Effect on Quality of Life in Patients with Hypoparathyroidism
Rachel I. Gafni*¹, Tiffany Hu¹, Lori C. Guthrie¹, Beth A. Brillante¹, Michaele Smith¹, Robert James¹, Michael T. Collins¹. ¹National Institute of Dental and Craniofacial Research, National Institutes of Health, United States, ²Rehabilitation Medicine Department, Clinical Center, National Institutes of Health, United States, ³Rho, Inc, United States
Disclosures: Rachel I. Gafni, None

BIOMECHANICS AND BONE QUALITY

SAT-0053 Slc20a2, encoding the phosphate transporter PiT2, is a novel genetic determinant of bone quality and strength
Sarah Beck-Cormier*¹, Christopher J. Lelliott², John G. Logan³, David T. Lafont³, Victoria D. Leitch¹, Natalie C. Butterfield¹, Hayley J. Protheroe¹, Peter I. Croucher¹, Paul A. Baldock¹, Alina Gaultier-Lintia², Gael Nicolas², Nina Bon¹, Sophie Sourice¹, Jérôme Guicheux¹, Laurent Beck¹, Graham R. Williams¹, J. H. Duncan Bassett¹. ¹Inserm, UMR 1229, RMSeS, Regenerative Medicine and Skeleton, Université de Nantes, UFR Odontologie, ONIRIS, Nantes, F-44042, France, ²Mouse Pipelines, Wellcome Trust Sanger Institute, Hinxton, CB10 1SA, United Kingdom, ³Molecular Endocrinology Laboratory, Department of Medicine, Imperial College London, London W12 0NN, United Kingdom, ⁴The Garvan Institute of Medical Research, Sydney, NSW 2010, Australia, ⁵CHU Nantes, Laennec Hospital, Nantes, F-44093, France, ⁶Normandie Univ, UNIROUEN, Inserm U1245 and Rouen University Hospital, Department of Genetics and CNR-MAJ, F 76000, Normandy Center for Genomic and Personalized Medicine, Rouen, France
Disclosures: Sarah Beck-Cormier, None
SAT-0054 Bone strength and mineralization are regulated independently of bone mass by ephrinB2-dependent autophagic processes in osteocytes
Vrahnas Christina*, Toby Dite, Yifang Hu, Huynh Nguyen, Mark R Forwood, Keith R Bambery, Mark J Tobin, Gordon K Smyth, T John Martin, Natalie A Sims. 1St. Vincent’s Institute of Medical Research, Australia, 2Walter and Eliza Hall Institute of Medical Research, Australia, 3Griffith University, Australia, 4Australian Synchrotron, Australia
Disclosures: Natalie Sims, None

SAT-0055 ASBMR 2018 Annual Meeting Young Investigator Award
Non-invasive Localized Cold Therapy as a New Mode of Bone Repair Enhancement
Marianne Comeau-Gauthier*, Daniel Castano, Jose Luis Ramirez-Garcia Luna, Justin Drager, Jake Barralet, Geraldine Merle, Edward Harvey. McGill University, Canada
Disclosures: Marianne Comeau-Gauthier, None

SAT-0056 A Novel FEM Approach for Evaluating the Fracture Resistance of Human Cortical Bone Demonstrates that Material Heterogeneity Distributes and Attenuates Damage in Cortical Bone from Human Iliac Crest Biopsies
Ahmet Demirtas*, Erik Taylor, Eve Donnelly, Ani Ural. 1Villanova University, United States, 2Cornell University, United States
Disclosures: Ahmet Demirtas, None

SAT-0057 Aging and Chronic Kidney Disease differently diminish bone mechanics from the nano- to whole-bone scales
Chelsea M Heveran*, Charles Schurmam, Claire Acevedo, Eric Schaible, Eric W Livingston, Moshe Levi, Ted Bateman, Tamara Alliston, Karen B King, Virginia L Ferguson. 1Department of Mechanical Engineering, University of Colorado at Boulder, United States, 2Department of Orthopaedic Surgery, University of California San Francisco, United States, 3Department of Mechanical Engineering, University of Utah, United States, 4Lawrence Berkeley National Laboratory, United States, 5Department of Biomedical Engineering, University of North Carolina, United States, 6Department of Biochemistry and Molecular &Cellular Biology, Georgetown University, United States, 7UC Berkeley/UCSF Graduate Program in Bioengineering, United States, 8Department of Orthopaedics, University of Colorado School of Medicine, United States
Disclosures: Chelsea M Heveran, None

SAT-0058 ASBMR 2018 Fund for Research and Education Young Investigator Award in Honor of Adele L. Boskey
The Effect of Vitamin D3 Supplementation on Distal Radius Fracture Healing: A Randomized Controlled HR-pQCT Trial
Disclosures: F.L. Heyer, None

SAT-0059 Differences in Microarchitectural and Nano-mechanical Properties of Bone Between Patients with and without Atypical Femoral Fracture after Prolonged Bisphosphonate Treatment
Shijing Qiu*, Lanny Griffin, George Divine, Mahalakshmi Honasoge, Arti Bhan, Shiri Levy, Elizabeth Warner, Sudhaker Rao. 1Henry Ford Hospial, United States, 2California Polytechnic State University, United States
Disclosures: Shijing Qiu, None

SAT-0060 Effect of Exercise and Weight on Bone Health in 8-9 Year Old Children
Sandra Shefelbine*, Vineel Kondiboyina, Lauren Raine, Arthur Kramer, Naiman Khan, Charles Hillman. 1Northeastern University, United States, 2University of Illinois at Urbana-Champaign, United States
Disclosures: Sandra Shefelbine, None
Uncontrolled hyperglycemia delays bone healing and disrupts the microstructure and gene expression of cartilaginous and bony cells at the growth plate, metaphyseal and subchondral bone in diabetic rats

Ariane Zamarioli*, Beatriz P Trani, Maysa S Campos, Joao Paulo B Ximeneze, Raquel A Silva, Jose B Volpon. 1School of Medicine of Ribeirao Preto, Brazil, 2School of Pharmaceutical Sciences of Ribeirao Preto, Brazil, 3School of Dentistry of Ribeirao Preto, Brazil

Disclosures: Ariane Zamarioli, None

Second-generation HR-pQCT reveals minor size differences between right and left sides, but no major differences in density or microarchitecture

Sanchita Agarwal*, Bin Zhou, Y Eric Yu, Kyle K Nishiyamai, Fernando R Rosetet, Mariana Bucovsky, Elizabeth Shanee, X Edward Guot. 1Division of Endocrinology, Department of Medicine, Columbia University, United States, 2Bone Bioengineering Laboratory, Department of Biomedical Engineering, Columbia University, United States

Disclosures: Sanchita Agarwal, None

Persistent activation of calcium-sensing receptor increases microcrack and decreases bone strength.

Itsuto Endo, Bingzi Dong, Yukio Ohnishi, Yukari Ooguro, Kiyo Kurahashi, Masahiro Hiasa, Jumpei Teramachi, Hirofumi Tenshin, Seiji Fukumoto, Masahiro Abe, Toshio Matsumoto. 1Department of Hematology, Endocrinology and Metabolism, Tokushima University Graduate School of Medical Sciences, Japan, 2Department of Chronomedicine, Tokushima University Graduate School of Medical Sciences, Japan, 3Department of Endocrinology and Metabolism, the Affiliated Hospital of Qindao University, China, 4Department of Orthodontics and Dento-facial Orthopedic, Tokushima University, Japan, 5Department of Tissue Regulation, Tokushima University, Japan, 6Fujii Memorial Institute of Medical Sciences, Tokushima University, Japan

Disclosures: Itsuto Endo, None

Is cortical porosity associated with degraded material quality?

Aurelien Gourrier*, Delphine Farlay, Helene Foller, Georges Boivin. 1LIPHY CNRS Universite Grenoble Alpes, France, 2INSERM UMR 1033 Universite de Lyon, France

Disclosures: Aurelien Gourrier, None

Chondroitin Sulfate and Biglycan Play Pivotal Roles in Bone Toughness via Retaining Bound Water in Bone Matrix

Rui Hua, Jie Bai, Xiaodu Wang, Jean X. Jiang. 1Department of Biochemistry, UT Health San Antonio, United States, 2Department of Mechanical Engineering, University of Texas at San Antonio, United States

Disclosures: Rui Hua, None

Quantitative Computed Tomography (QCT) Analysis of Bone Quality: Consideration of Hierarchical Levels of Variation for Predicting Fracture Risk.

Randee Hunter*, Karen Briley, James Ellis, Amanda Agnew. 1Skeletal Biology Research Laboratory, United States, 2Wright Center of Innovation in Biomedical Imaging, United States

Disclosures: Randee Hunter, None

Compressive Bone Strength Index (BSIc) Explains 85% Variance in Experimentally-Derived Distal Radius Failure Load

James Johnston, Matthew Mc Donald, Si aja Kontulainen. 1Department of Mechanical Engineering, University of Saskatchewan, Canada, 2College of Kinesiology, University of Saskatchewan, Canada

Disclosures: James Johnston, None

Differences in bone quality between fresh bone and PMMA-embedded bone

Hiromi Kimura-Suda, Teppei Ito, Masahiko Takahata, Tomohiro Shimizu, Fumiya Nakamura, Masahiro Ota. 1Chitose Institute of Science and Technology, Japan, 2Hokkaido University, Japan

Disclosures: Hiromi Kimura-Suda, None
SAT-0069 Osseointegrated implants for lower limb amputees: evaluation of bone mineral density
Seamus Thomson*, William Lu1, Munjed Al Muderis2. 1The University of Sydney, Australia, 2The Osseointegration Group of Australia, Australia
Disclosures: Seamus Thomson, Osseointegration International, Grant/Research Support

SAT-0070 Distal Radius Bone Microarchitecture: what happens between age 25 and old age?
Canchen Ma*, Feng Pan1, Laura Laslett1, Kathryn Squibb1, Roger Zebaze2, Tania Winzenberg1, Graeme Jones1. 1Menzies Institute for Medical Research, University of Tasmania, Australia, 2Austin and Repatriation Medical Centre, University of Melbourne, Australia
Disclosures: Canchen Ma, None

SAT-0071 Osteoarthritis Correlates with High-Speed Exercise and Sesamoid Bone Fracture in Racehorses
Heidi Reesink*, Erin Cresswell2, Sean Mcdonough1, Scott Palmer1, Christopher Hernandez1, Caroline Wollman1, Bridgette Peal1. 1Cornell University, United States, 2LifeNet Health, United States, 3North Carolina State University, United States
Disclosures: Heidi Reesink, None

BONE ACQUISITION AND PEDIATRIC BONE DISORDERS

SAT-0110 Identification of a Non-Linear Maturational Trajectory During Adolescence
Melanie Boeyer*, Emily Leary, Dana Duren. University of Missouri, United States
Disclosures: Melanie Boeyer, None

SAT-0111 Sexual Dimorphism in Cortical and Trabecular Bone Microstructure Appears During Puberty in Chinese Children
Ka Yee Cheuk*, Xiao-Fang Wang1, Ji Wang1, Zhendong Zhang1, Fiona Wp Yu1, Vivian Wy Hung1, Wayne Yw Lee1, Ali Ghaseem-Zadeh2, Roger Zebaze2, Tracy Y Zhu1, X Edward Guo3, Jack Cy Cheng1, Tsz Ping Lam1, Ego Seeman1. 1Department of Orthopaedics and Traumatology, The Chinese University of Hong Kong, Hong Kong, 2Departments of Endocrinology and Medicine, Austin Health, University of Melbourne, Australia, 3Bone Bioengineering Laboratory, Department of Biomedical Engineering, Columbia University, United States
Disclosures: Ka Yee Cheuk, None

SAT-0112 Elucidating the Mechanism of JAGGED1-mediated Osteoblast Commitment during Maxillary Development
Archana Kamalakar*, Melissa Oh, Samir Ballestas, Yvonne Coretha Stephenson, Steven Goudy. Emory University, United States
Disclosures: Archana Kamalakar, None

SAT-0113 Menstrual abnormalities and cortical bone deterioration in young female athletes: an analysis by HR-pQCT
Yuriko Kitajima*, Ko Chiba1, Yusaku Isobe2, Narihiro Okazaki2, Naoko Murakami1, Michio Kitajima1, Kiyonori Miura1, Makoto Osaki2, Hideaki Masuzuki1. 1Department of Obstetrics and Gynecology, Nagasaki University Graduate School of Biomedical Sciences, Japan, 2Departments of Endocrinology, Royal Children’s Hospital Mlebourne, Australia, 3Alliance for Research in Exercise, Nutrition and Activity, University of South Australia, Australia, 4Murdoch Children’s Research Institute, Australia
Disclosures: Yuriko Kitajima, MARUSAN-AI Co., Ltd., Grant/Research Support

SAT-0114 Body mass is important, but so is its distribution: associations between body composition and bone health measures in 11-12 year old children
Peter Simm*, Dorothea Dumuid2, Susan Clifford3, Grace Gell3, Timothy Olds3, Melissa Wake3. 1Dept of Endocrinology, Royal Children’s Hospital Mlebourne, Australia, 3Alliance for Research in Exercise, Nutrition and Activity, University of South Australia, Australia, 3Murdoch Children’s Research Insitute, Australia
Disclosures: Peter Simm, None

SAT-0115 Elevated RANKL Levels in Pediatric Patients with Metabolic Bone and Neuromuscular Disorders
Sara Akhtar Ali*, Leigh Ramos-Platt, Senta Georgia, Pisit Pitukcheewanont. Children’s Hospital Los Angeles, United States
Disclosures: Sara Akhtar Ali, None
SAT-0116 SITAR Models of Bone and Body Composition Growth: Prospective Longitudinal Data for U.S. White Girls from Childhood to Adulthood
Jodi N Dowthwaite*, Stephanie A Klithenermes, Tamara A Scerpella. SUNY Upstate Medical University, Binghamton University, United States, University of Wisconsin - Madison, United States
Disclosures: Jodi N Dowthwaite, None

SAT-0117 Low Trabecular Bone Score in Adolescent Female Inpatients with Anorexia Nervosa
Yael Levy-Shraga*, Liana Tripto-Shkolnik, Dana David, Iris Vered, Daniel Stein, Dalit Modan-Moses. Pediatric Endocrinology Unit, The Edmond and Lily Safra Children’s Hospital, Chaim Sheba Medical Center, Tel-Hashomer, Israel, Institute of Endocrinology, Chaim Sheba Medical Center, Tel-Hashomer, Israel, Pediatric Psychosomatic Department, The Edmond and Lily Safra Children’s Hospital, Chaim Sheba Medical Center, Tel-Hashomer, Israel
Disclosures: Yael Levy-Shraga, None

SAT-0118 Polyhydramnios: sole risk factor for non-traumatic fractures in 3 infants
Geneviève Nadeau*, Marie-Béatrice Saade, Patricia Olivier, Melissa Fiscaletti, Marie Laberge-Malot, Philippe Campeau, Nathalie Alos. CHU Sainte-Justine - University of Montreal, Canada
Disclosures: Geneviève Nadeau, None

BONE INTERACTIONS WITH MUSCLE AND OTHER TISSUES

SAT-0135 ASBMR 2018 Annual Meeting Young Investigator Award
Osteocalcin is necessary and sufficient to mount an acute stress response
Julian Berger*, Lori Khrimian, Karsenty Gerard. Columbia University, United States
Disclosures: Julian Berger, None

SAT-0136 Mice with reduced visceral and bone marrow adipose tissue have increased bone mass
Louise Grahnemo*, Karin L. Gustafsson, Klara Sjögren, Petra Henning, Vikte Lionikaite, Antti Koskela, Juha Tuukkanen, Claes Ohlsson, Ingrid Wernstedt Asterholm, Marie K. Lagerquist. Centre for Bone and Arthritis Research, Department of Internal Medicine and Clinical Nutrition, Institute of Medicine, The Sahlgrenska Academy, University of Gothenburg, Sweden, Medical Research Center, University of Oulu, Finland, Sweden, Unit of Metabolic Physiology, Department of Physiology, Institute of Neuroscience and Physiology, The Sahlgrenska Academy, University of Gothenburg, Sweden
Disclosures: Louise Grahnemo, None

SAT-0137 An Osteocyte Protective Metabolite, β-aminoisobutyric Acid, BAIBA Mediates Survival Signals through MRGPRD/Ca2+/CaMKKβ/AMPK pathway.
Yukiko Kitase*, Lynda Bonewald. Indiana University, United States
Disclosures: Yukiko Kitase, None

SAT-0138 Fam210a is a Novel Determinant of Bone and Muscle
Ken-Ichiro Tanaka*, Yingben Xue, Loan Nguyen-Yamamoto, John A Morris, Ippei Kanazawa, Toshitsugu Sugimoto, Simon S Wing, J Brent Richards, David Goltzman. Calcium Research Laboratory, Metabolic Disorders and Complications Program, Research Institute of the McGill University Health Centre, Canada, Departments of Medicine, Human Genetics, Epidemiology and Biostatistics, McGill University, Jewish General Hospital, Canada, Internal Medicine 1, Shimane University Faculty of Medicine, Japan, Division of Endocrinology, Department of Medicine, McGill University, Canada
Disclosures: Ken-Ichiro Tanaka, None

SAT-0139 The direct transdifferentiation of tendon cells into bone cells during bone modeling and remodeling
Ke Wang*, Chi Ma, Minghao Zheng, Xiaohua Liu, Jian Feng, Yan Jing. Texas A&M University College of Dentistry, United States, The University of Western Australia, Australia
Disclosures: Ke Wang, None
SAT-0140  Nmp4 regulates bone physiology, obesity, and glucose metabolism  
Joseph Bidwell*, Ronald Wek, Alexander Robling, Sarah Tersey, Michele Adaway, Carmella Evans-Molina. Indiana University School of Medicine, United States  
Disclosures: Joseph Bidwell, None

SAT-0141  Osteocalcin/Oxytocin and NGF/BDNF mRNA levels in bone mediate muscle phenotype dependent response to cold stress challenge in mice  
Claudia Camerino*, Elena Conte, Maria Rosaria Carratù, Adriano Fonzino, Domenico Tricarico. University of Bari, Italy  
Disclosures: Claudia Camerino, None

SAT-0142  Bone Defect and Fracture Healing in Dystrophy/utrophin Double Knockout Mice  
Xueqin Gao*, Xuying Sun, Sarah Amra, Yan Cui, Zhenhan Deng, Haizi Cheng, Charles Huard, Bing Wang, Walter Lowe, Johnny Huard. University of Texas Health Science Center at Houston, United States, 2University of Pittsburgh, United States

SAT-0143  Annexin A5 prevents force-mediated bone ridge overgrowth at the enthesis  
Hisashi Ideno*, Yoshinori Arai, Koichiro Komatsu, Kazuhiisa Nakashima, Satoshi Wada, Teruhito Yamashita, Ernst Pöschl, Bent Brachvogel, Yoichi Ezura, Akira Nifuji. 1Department of Pharmacology, Tsurumi University School of Dental Medicine, Yokohama, Japan, 2Nihon University, School of Dentistry, Japan, 3Department of Orthodontics, Tsurumi University School of Dental Medicine, Yokohama, Japan, 4Division of Hard Tissue Research, Institute for Oral Science, Matsumoto Dental University, Japan, 5School of Biological Sciences, University of East Anglia, Norwich Research Park, Norwich, United Kingdom, 6Experimental Neonatology, Department of Pediatrics and Adolescent Medicine, Center for Biochemistry, Medical Faculty, University of Cologne, Germany, 7Department of Molecular Pharmacology, Medical Research Institute, Tokyo Medical and Dental University, Japan
Disclosures: Hisashi Ideno, None

SAT-0144  Dysregulation of NF-kB in Intestinal Epithelial Cells Induces Osteopenia in Mice  
Ke Ke*, Manoj Arra, Gabriel Mbavileve, Gaurav Swarnkar, Yousef Abu-Amer. Washington University School of Medicine, United States
Disclosures: Ke Ke, None

SAT-0145  Factors Secreted From MLO-Y4 Osteocyte-Like Cells under Inflammatory Conditions Inhibit C2C12 Myoblast Differentiation  
Dorit Naot*, Maureen Watson, Ally Choi, David Musson, Jillian Cornish. Department of Medicine, University of Auckland, New Zealand
Disclosures: Dorit Naot, None

SAT-0146  Region-specific differences in geometric parameters of cortical fibula structure and peroneal muscle forces in football players.  
Sergio Luscher*, Laura Marcela Nocciolino, Nicolas Pilot, Leonardo Pissani, Gustavo Roberto Cointry, Maria Rosa Ulla, Joern Rittweger, Jose Luis Ferretti, Ricardo Francisco Capozza. 1Center for P-Ca Metabolism Studies (CEMfoC), Natl Univ of Rosario, Argentina, 2Musculoskeletal Biomechanical Studies Unit (UDEBOM), University Institute Gran Rosario (IUGR), Argentina, 3Musculoskeletal Biomechanical Studies Unit (UDEBOM), University Institute Gran Rosario (IUGR), Argentina, 4CEOM- Centro de endocrinología Osteología y Metabolismo de Córdoba, Argentina, 5Institute of Aerospace Medicine, German Aerospace Center (DLR); Department of Pediatrics and Adolescent Medicine, University of Cologne, Germany, 6School of Healthcare Science, Manchester Metropolitan University, United Kingdom
Disclosures: Sergio Luscher, None

BONE MARROW MICROENVIRONMENT AND NICHES

SAT-0169  Low bone mass and high marrow adiposity in congenic 6T mice are related to shifts in metabolic flexibility within the bone marrow niche.  
Sheila Bornstein*, Clifford Rosen, Victoria Demambro, Anyanya Guntur, Makoto Fujiwara. Maine Medical Center Research Institute, United States
Disclosures: Sheila Bornstein, None
Activation of β-catenin signaling in mature osteoblasts versus osteoblast progenitors defines a transcriptional and mutational profile for the transformation of MDS to AML
Álvaro Cuesta-Domínguez*1, Ioanna Mosialou1, Junfei Zhao2, Akihide Yoshimi3, Konstantinos Panitas4, Richard A. Friedman5, Omar Abdel-Wahab6, Raúl Rabadán7, Stavroula Kousteni1. 1Department of Physiology and Cellular Biophysics, College of Physicians and Surgeons, Columbia University Medical Center, United States, 2Department of Systems Biology, Columbia University Medical Center, United States, 3Human Oncology and Pathogenesis Program, Memorial Sloan Kettering Cancer Center, United States, 4Department of Physiology and Cellular Biophysics, College of Physicians and Surgeons, Columbia University, United States, 5Biomedical Informatics Shared Resource, Department of Biomedical Informatics, Herbert Irving Comprehensive Cancer Center, College of Physicians and Surgeons, Columbia University Medical Center, United States, 6Weill Cornell Medical College and Leukemia Service, Dept. of Medicine, Memorial Sloan Kettering Cancer Center, United States, 7Department of Systems Biology and Department of Biomedical Informatics, Columbia University Medical Center, United States
Disclosures: Álvaro Cuesta-Domínguez, None

Pharmacological Targeting of Osteoblast-Induced MDS and AML
Ioanna Mosialou*, Marta Galan-Diez, Andrew Vandenberg, Abdullah Ali, Azra Raza, Stavroula Kousteni. Columbia University, United States
Disclosures: Ioanna Mosialou, None

Single-cell proteomics reveal bone marrow stromal cell drivers of blood regeneration
Nicolas Severe*, Murat Karabacak, Karin Gustafsson, Ninib Baryawno, Gabriel Courties, Yonna Kfoury, Elizabeth Scadden, Matthias Nahrendorf, Mehmet Toner, David Scadden. 1Massachusetts General Hospital, United States, 2Shriners Hospital for Children, United States
Disclosures: Nicolas Severe, None

Osteocalcin and osteopontin mediate osteogenic differentiation of mesenchymal stem/stromal cells by controlling the maturation level of mineral species
Marta Carvalho*, Joaquim Cabral, Cláudia Lobato Da Silva, Deepak Vashishth. 1Center for Biotechnology and Interdisciplinary Studies, Department of Biomedical Engineering, Rensselaer Polytechnic Institute, United States, 2Department of Bioengineering and iBB - Institute of Bioengineering and Biosciences, Instituto Superior Técnico, Universidade de Lisboa, Portugal
Disclosures: Marta Carvalho, None

Osterix-cre expression by itself enhances adipogenic differentiation of stromal cells and affects hematopoiesis
Katrin Huck*, Carla Sens-Albert, Inaam Nakchbandi. 1Max-Planck Institute for Medical Research, Germany, 2University of Heidelberg, Germany
Disclosures: Katrin Huck, None

ERRα in primary breast tumours promotes tumour cell dissemination to bone by regulating RANK
Geoffrey Vargas*, Mathilde Bouchet, Casina Kan, Claire Benetollo, Martine Croset, Martine Mazel, Laure Cayrefourcq, Sophie Vacher, Francesco Pantano, Keltouma Driouch, Ivan Bieche, William Jacot, Jane Aubin, Catherine Alix-Panabieres, Philippe Clezardin, Edith Bonneyle. 1INSERM-U1033, France, 2ENS-Lyon, France, 3INSERM U1033, Australia, 4INSERM U 1028-CNRS UMR 5292-UCBL Lyon 1, France, 5Institut Universitaire de Recherche Clinique (IURC)- Montpellier, France, 6Institut Curie, France, 7University Campus Bio-Medico-Roma, Italy, 8University of Toronto, Canada
Disclosures: Geoffrey Vargas, None
SAT-0188

ASBMR 2018 Annual Meeting Young Investigator Award

S100A4 Released from Highly Bone-metastatic Breast Cancer Cells Plays a Critical Role in Osteolysis

Haemin Kim*, Sang Il Kim, Hyung Joon Kim, Brian Y. Ryu, Junho Chung, Zang Hee Lee, Hong-Hee Kim. 1Hospital for Special Surgery, United States, 2Seoul National University, Republic of Korea, 3Pusan National University, Republic of Korea

Disclosures: Haemin Kim, None

SAT-0189

Granulocyte Colony Stimulating Factor impacts on osteomas and bone marrow macrophages – implications for prostate cancer osteoblastic lesion formation

Susan Millard*, Andy Wu, Simran Kaur, Yaowu He, Lena Batoon, John Hooper, Allison Pettit. Mater Research - UQ, Australia

Disclosures: Susan Millard, None

SAT-0190

Serum levels of RANKL are increased in primary breast cancer patients in the presence of disseminated tumor cells in the bone marrow.

Tilman Rachner*, Martina Rauner, Andy Göbel, Oliver Hoffmann, Lorenz Hofbauer, Rainer Kimmig, Sabine Kasimir-Bauer, Ann-Kathrin Bittner. 1Universitätsklinik Dresden, Germany, 2University Hospital Dresden, Germany, 3University Hospital Essen, Germany

Disclosures: Lorenz Hofbauer, None

SAT-0191

Suppression of Breast Cancer Bone metastasis by Osteocytic Connexin Hemichannels, a Potential Therapeutic Target

Manuel Riquelme*, Sumin Gu, Zhiqiang An, Jean Jiang. 1Department of Biochemistry and Structural Biology, University of Texas Health Science Center at San Antonio, United States, 2Brown Foundation, Institute of Molecular Medicine, UT Health Houston, United States

Disclosures: Manuel Riquelme, None

SAT-0192

HDAC inhibitors directly stimulate LIFR and induce pro-dormancy effects in breast cancer cells

Miranda Sowder*, Lauren Holtslander, Vera Mayhew, Samuel Dooyema, Rachelle W. Johnson. 1Vanderbilt University, United States, 2Vanderbilt University Medical Center, United States

Disclosures: Miranda Sowder, None

SAT-0193

Pharmacological Inhibition of Sclerostin Protects From Breast Cancer-induced Osteolytic Disease and Muscle Weakness

Eric Hesse*, Saskia Schröder, Diana Zarecneva, Jenny Pamperin, Hiroaki Saito, Hanna Taipaleenmäki. Molecular Skeletal Biology Laboratory, Department of Trauma, Hand and Reconstructive Surgery, University Medical Center Hamburg-Eppendorf, Germany

Disclosures: Eric Hesse, None

SAT-0194

Epigenetic targeting of the myeloma-bone microenvironment in 3D

Juraj Adamik*, Yerneni S Saigopalakrishna, Sree H Pulugulla, Quanhong Sun, Philip E Auron, Phil G Campbell, Deborah L Galson. 1Department of Medicine, Hematology/Oncology, UPMC Hillman Cancer Center, University of Pittsburgh, United States, 2Department of Biomedical Engineering, Carnegie Mellon University, United States, 3Department of Biological Sciences, Duquesne University, United States, 4Department of Biomedical Engineering, Engineering Research Accelerator, Carnegie Mellon University, United States, 5Department of Medicine, Hematology/Oncology, UPMC Hillman Cancer Center, McGowan Institute for Regenerative Medicine, University of Pittsburgh, United States

Disclosures: Juraj Adamik, None

SAT-0195

Metastatic Lesion Types Predict Vertebral Bone Matrix Quality and Strength

Stacyann Bailey*, David Hackney, Marc Stadelmann, Philippe Zysset, Ron Alkalay, Deepak Vashishth. 1Rensselaer Polytechnic Institute, United States, 2Beth Israel Deaconess Medical Center, United States, 3University of Bern, Switzerland

Disclosures: Stacyann Bailey, None
SAT-0196  Diacritic impacts of matrix stiffness and adhesion on osteosarcoma cells and osteoblasts
Tongmeng Jiang*, Li Zheng, Jinmin Zhao. Guangxi Engineering Center in Biomedical Materials for Tissue and Organ Regeneration & Guangxi Collaborative Innovation Center for Biomedicine, The First Affiliated Hospital of Guangxi Medical University, China
Disclosures: Tongmeng Jiang, None

SAT-0197  Identification of potential mediators of bone loss in cancer
Jessica Dorschner*, Jennifer Westendorf, Theodore Craig, Xuewei Wang, Rajiv Kumar. Mayo Clinic, United States
Disclosures: Jessica Dorschner, None

SAT-0198  An Incomplete Atypical Femoral Fracture Associated with Bisphosphonate Therapy and Femoral Skeletal Metastasis
Pamela Taxel, Md*, Adam Lindsay, Md. UConn Health, United States
Disclosures: Pamela Taxel, Md, None

SAT-0199  Roles of membrane bound HB-EGF and EGF-Receptor interaction on osteoblast in melanoma induced bone resorption
Kenta Watanabe*, Shosei Yoshinouchi, Keita Taniguchi, Michiko Hirata, Tsukasa Tominari, Chisato Miyaura, Masaki Inada. Tokyo University of Agriculture and Technology, Japan
Disclosures: Kenta Watanabe, None

CHONDROCYTES

SAT-0226  DDRGK1, an essential component of the ufmylation process, regulates osteochondroprogenitor fate determination
Yangjin Bae*, Adetutu Egunsola, Monika Weisz-Hubshman, Ming-Ming Jiang, Brendan Lee. Baylor College of Medicine, United States
Disclosures: Yangjin Bae, None

SAT-0227  The role of mitochondrial dysfunction in the development of post-traumatic osteoarthritis
Katherine Escalera-Rivera*, Sarah Catheline, Roman Eliseev, Jennifer Jonason. University of Rochester, United States
Disclosures: Katherine Escalera-Rivera, None

SAT-0228  Postnatal inactivation of Dot1L histone methyltransferase in growth plate cartilage impairs longitudinal bone growth
Sangita Karki*, Rosa M. Guzzo. UConn Health, United States
Disclosures: Sangita Karki, None

SAT-0229  Ciliary IFT80 Plays a Critical and Necessary Role in Fracture Healing through Regulating IGFβ Signaling Pathway
Min Liu*, Mohammed Alharbi, Jormay Lim, Dana Graves, Shuying Yang. 1Dept. of Anatomy and Cell Biology, School of Dental Medicine, University of Pennsylvania, United States, 2Dept. of Periodontics, School of Dental Medicine, University of Pennsylvania, United States
Disclosures: Min Liu, None

SAT-0230  PTHrP Targets Salt-induced Kinases to Regulate Chondrocyte Differentiation
Shigeki Nishimori*, Marc Wein, Kei Sakamoto, Marc Foretz, Rebecca Berdeaux, Henry Kronenberg. 1Massachusetts General Hospital, United States, 2Nestlé Institute of Health Sciences, Switzerland, 3INSERM, France, 4University of Texas, United States
Disclosures: Shigeki Nishimori, None

SAT-0231  Direct transdifferentiation of ligament cells into articular chondrocytes that is regulated by Indian hedgehog (IHH) signaling and phosphate levels
Jun Wang*, Chi Ma, Hui Li, Zhanjun Li, Liangxue Lai, Yan Jing, Jian Q. Feng. 1Texas A&M College of Dentistry, United States, 2Jilin Provincial Key Laboratory of Animal Embryo Engineering, Jilin University, China
Disclosures: Jun Wang, None
SAT-0232 Runx2 Deletion in Chondrocytes Fails to Disrupt Development of TMJ
David Summerford*, Haiyan Chen, Harunur Rashid, Yang Yang, Amjad Javed. University of Alabama at Birmingham, United States
Disclosures: David Summerford, None

SAT-0233 IL36α promotes chondrocyte maturation: is this a functional role in fracture repair?
Xin Jin*, Tieshi Li, Alessandra Esposito, Jie Jiang, Lai Wang, Joseph Temple, Anna Spagnoli. Rush University Medical Center, United States
Disclosures: Xin Jin, None

SAT-0234 Role of the A2B Adenosine Receptor in Inflammatory Degradation of Cartilage
Meghan Kupratis*, Lauren Mangano Drenkard, Louis Gerstenfeld, Elise Morgan. Boston University, United States
Disclosures: Meghan Kupratis, None

SAT-0235 WITHDRAWN

ENERGY METABOLISM, BONE, MUSCLE AND FAT

SAT-0255 Undercarboxylated Osteocalcin Downregulates Pancreatic Lipase Expression in CREB2-Dependent Manner in Pancreatic Acinar Cells
Danbi Park*, Ye-Won Kwon1, Jeong-Hwa Baek2, Kyunghwa Baek1. 1Department of Pharmacology, College of Dentistry and Research Institute of Oral Science, Gwangju University, Republic of Korea, 2Department of Molecular Genetics, School of Dentistry and Dental Research Institute, Seoul National University, Republic of Korea
Disclosures: Danbi Park, None

SAT-0256 Pparγ inhibition in osteoblast / osteocyte (OB/OCY) restores PTH bone anabolism in high fat diet model, importance of glycolysis versus mitochondrial oxidation ratio
Lucie Bourgoin*, Beatrice Desvergne2, Nicolas Bonnet1. 1Service of Bone Diseases, Faculty of Medicine (UNIGE), Switzerland, 2Genopode Science & Medical University, Switzerland
Disclosures: Lucie Bourgoin, None

SAT-0257 Allocation of Bone Marrow Stromal Cells into the Adipogenic Lineage is Marked by Enhanced Expression of the Mitophagy Receptor Beil1i3
Makoto Fujiwara*, Anyonya Guntur1, Phuong Le1, Victoria Demambro1, Mark Horowitz2, Clifford Rosen1. 1Maine Medical Center Research Institute, United States, 2Yale University School of Medicine, United States
Disclosures: Makoto Fujiwara, None

SAT-0258 Metformin Facilitates Fracture Healing in Type-2 Diabetes Mice
Yuqi Guo*, Xin Li. NYU College of Dentistry, United States
Disclosures: Yuqi Guo, None

SAT-0259 KLF10 regulates skeletal muscle metabolism in mice
Malek Kammoun*, Vladimir Veksler2, Jérôme Piqueura2, Lydie Nadal-Descartes1, Philippe Poulpet1, Molly Nelson Holte1, Malayann Subramaniyan3, Sabine Bensamoun1, John Hawse4. 1Université de Technologie de Compiègne, France, 2Univ. Paris-Sud, France, 3Université de Tours, France, 4Mayo Clinic, United States
Disclosures: Malek Kammoun, None

SAT-0260 Fatty acid oxidation is essential for osteoclast development and skeletal homeostasis
Priyanka Kushwaha*, Conor BeilF, Michael J. Wolfgang1, Ryan C. Riddle1. 1Johns Hopkins University School of Medicine, United States, 2Johns Hopkins University, United States
Disclosures: Priyanka Kushwaha, None

SAT-0261 Metabolic characterization of the OCN-Cre;iDTR mouse model supports a relationship between bone health, bone marrow adipose tissue, and overall fitness
Heather Fairfield*, Samantha Costa1, Calvin Vary1, Victoria Demambro1, Marie Demay2, Clifford Rosen1, Michaela Reagan1. 1Maine Medical Center Research Institute, United States, 2Center for Skeletal Research, Massachusetts General Hospital, United States
Disclosures: Heather Fairfield, None
SAT-0262  Complexity in Neuropeptide Y’s effects on the skeleton  
Natalie Ky Wee*, Benjamin P Sinder¹, Sanja Novak¹, Xi Wang¹, Brya G Matthews²,  
Boris Zemelman³, Ivo Kalajzic¹. ¹Department of Reconstructive Sciences, University of  
Connecticut Health Center, United States, ²Department of Molecular Medicine, University  
of Auckland, New Zealand, ³Center for Learning and Memory, The University of Texas at  
Austin, United States  
Disclosures: Natalie Ky Wee, None

SAT-0263  Osteocalcin Null Mice Differ From Wildtype by Sex and Genotype in Response to  
Prolonged High Fat Diet  
Patricia Buckendahl*, Saad Ahmad, Nicholas Bello, Sue Shapses. Rutgers University,  
United States  
Disclosures: Patricia Buckendahl, None

SAT-0264  Change In Body Composition And Mass In Relation To The Final Menstrual Period  
(FMP): Study Of Women’s Health Across The Nation (SWAN)  
Gail Greendale*, Weijuan Han¹, Meihua Huang¹, Barbara Sternfeld³, Kristine Ruppert¹,  
Carrie Karvonen-Gutierrez², Arun Karlamangla¹. ¹Division of Geriatrics, David Geffen  
School of Medicine at UCLA, United States, ²Division of Geriatrics, Emeritus, United  
States, ³Epidemiology Data Center, University of Pittsburgh, United States, ³School of  
Public Health, University of Michigan, United States  
Disclosures: Gail Greendale, None

SAT-0265  Hyperandrogenism is not associated with low bone mineral density in exercising  
women with menstrual disturbances  
Kristen Koltun*, Emily Southermayd, Nancy Williams, Mary Jane De Souza. Pennsylvania  
State University, United States  
Disclosures: Kristen Koltun, None

SAT-0266  Thermoneutral housing exacerbates bone loss from atypical antipsychotic drugs  
Roni Kunst*, Megan Rue², Katherine Motyl¹. ¹MMCRI, Netherlands, ²MMCRI, United  
States  
Disclosures: Roni Kunst, None

SAT-0267  Metabolic, Anthropometric and Nutritional Profile of Girls with Adolescent Idiopathic  
Scoliosis: A Pilot Study  
Émilie Normand*, Anita Franco, Stefan Parent , Alain Moreau, Valérie Marcial. Centre de  
recherche CHU Sainte-Justine, Canada  
Disclosures: Émilie Normand, None

SAT-0268  A rat model of steroid-associated osteonecrosis  
Li-Zhen Zheng*, Jia-Li Wang¹, Ling Kong¹, Le Huang¹, Li Tian¹, Qian-Qian Pang¹, Xin-  
Luan Wang², Ling Qin¹. ¹Musculoskeletal Research Laboratory, Department of Orthopaedics  
& Traumatology, The Chinese University of Hong Kong, Hong Kong SAR, PR China,  
Hong Kong, ²Translational Medicine R&D Center, Institute of Biomedical and Health  
Engineering, Shenzhen Institutes of Advanced Technology, Chinese Academy of Sciences,  
Shenzhen, PR China, China  
Disclosures: Li-Zhen Zheng, None

GENETIC MODELS OF MUSCULOSKELETAL DISEASES

SAT-0295  Biochemical and phenotypic characterization of mice constitutively expressing epitope-  
tagged PIT1 transporter in all tissues  
Clemens Bergwitz*, Sampada Chande, Bryan Ho, Shumayi Syed, Jonathan Fentene. Yale  
University School of Medicine, United States  
Disclosures: Clemens Bergwitz, None

SAT-0296  The role of inorganic pyrophosphate in the pathogenesis of PXE caused by ABCC6  
mutations  
Qiaoli Li*, Jouni Uitto. Thomas Jefferson University, United States  
Disclosures: Qiaoli Li, None
SAT-0297  
**BMP2 is Required for Entheseal Bone Formation in Antigen-Induced Arthritis**

Yukiko Maeda*, Catherine Manning, Ellen Gravallese. University of Massachusetts Medical School, United States  
*Disclosures: Yukiko Maeda, Abbvie, Grant/Research Support*

SAT-0298  
**COPB2 Loss of Function Leads to Disrupted Collagen Trafficking and Juvenile Osteoporosis**

Ronit Marom*, Lindsay C Burrage1, Mahim Jain2, Ingo Grafe1, Daryl A Scott1, Jill A Rosenfeld1, Jason D Heaney1, Denise Lanza1, Xiaohui Li1, Kyu-Sang Joeng1, Yi-Chien Lee1, I-Wen Song1, Joseph M Sliepka1, Dominyka Batkovskyle1, Zixue Jin1, Brian C Dawson1, Shao Chen1, Yuqing Chen1, Ming-Ming Jiang1, Elda M Munivez1, Vernon R Sutton1, Cole Kuzawa1, Rossella Venditti4, Maryann Weis4, Aurélie Clément5, Brenna Tremp6, Bernardo Blanco-Sánchez6, Monte Westerfield6, David Eyre5, Catherine G Ambrose6, Antonella De Matteis4, Brendan Lee1. 1Baylor College of Medicine, United States, 2Kennedy Krieger Institute, United States, 3University of Texas Health Science Center at Houston, United States, 4TIGEM (Telethon Institute of Genetics and Medicine), Italy, 5University of Washington, United States, 6University of Oregon, United States  
*Disclosures: Ronit Marom, None*

SAT-0299  
**PIN1 is a new therapeutic target of craniosynostosis**

Hye-Rim Shin*, Han-Sol Bae1, Bong-Su Kim1, Heein Yoon1, Young-Dan Cho1, Woo-Jin Kim1, Kang Young Choi1, Yun-Sil Lee1, Kyung-Mi Woo1, Jeong-Hwa Baek1, Hyun-Mo Ryoo1. 1Seoul National University, Republic of Korea, 2Kyungpook National University, Republic of Korea  
*Disclosures: Hye-Rim Shin, None*

SAT-0300  
**Identifying Genetic Modifiers in Patients with Mild Fibrodysplasia Ossificans Progressiva using Whole Exome Sequencing**

Kelly Wentworth*, Tania Moody1, Kim Taylor1, Niambi Brewer2, Fred Kaplan2, Robert Pignolo4, Eileen Shore2, Edward Hsiao1. 1UCSF, United States, 2UPenn, United States, 3Mayo Clinic, United States  
*Disclosures: Kelly Wentworth, Clementia Pharmaceuticals, Other Financial or Material Support*

SAT-0301  
**No Indication for Increased Severity of the Sclerotic Bone Phenotype of Sost Knockout Mice in the Presence of an Lrp4 Mutation.**

Eveline Boudin*, Timur Yorgan2, Gretl Hendrickx2, Ellen Steenackers1, Michaela Kneissel1, Ina Kramer1, Geert Mortier1, Thorsten Schinke1, Wim Van Hul1. 1Centre of Medical Genetics, University and University Hospital of Antwerp, Belgium, 2Department of Osteology and Biomechanics, University Medical Center Hamburg, Germany, 3Musculoskeletal Disease Area, Novartis Institutes for BioMedical Research, Basel, Switzerland., Switzerland, 4Musculoskeletal Disease Area, Novartis Institutes for BioMedical Research, Basel, Switzerland., Belgium  
*Disclosures: Eveline Boudin, None*

SAT-0302  
**Adgrg6 Is a Novel and Critical Regulator for Cartilage Homeostasis and Joint Stability**

Zhaoyang Liu*, Ryan Gray. University of Texas at Austin, Dell Medical School, United States  
*Disclosures: Zhaoyang Liu, None*

SAT-0303  
**Common and rare variants of WNT16, DKK1 and SOST and their relationship with bone mineral density**

Núria Martínez-Gil*, Neus Roca-Ayats1, Anna Monistrol-Mula1, Natália Garcia-Giral2, Adolfo Diez-Pérez3, Xavier Nogués3, Leonardo Mellibovsky1, Daniel Grinberg1, Susana Balcells1. 1Department of Genetics, Microbiology and Statistics, Faculty of Biology, University of Barcelona, IBUB, IRSJD, CIBERER, Spain, 2Musculoskeletal Research Group, IMIM (Hospital del Mar Medical Research Institute), Centro de Investigación Biomédica en Red de Fragilidad y Envejecimiento Saludable (CIBERFES), ISCIII, Spain  
*Disclosures: Núria Martínez-Gil, None*
SAT-0304 Genetic variability and functionality of the FLJ42280 locus, a GWAS hit for osteoporosis
Neus Roca-Ayats*1, Dario G. Lupiáñez2, Núria Martínez-Gil1, Marina Gerousi1, Mónica Cozar1, Natália Garcia-Giralt1, Xavier Nogués1, Leonardo Mellibovsky4, Adolfo Diez-Pérez2, Susanna Balcells1, Daniel Grinberg1. 1Department of Genetics, Microbiology and Statistics, Facultat de Biologia, Universitat de Barcelona, Centro de Investigación Biomédica en Red de Enfermedades Raras (CIBERER), ISCIII, IBUB, IRSJD, Spain, 2Epigenetics and Sex Development Group, Berlin Institute for Medical Systems Biology, Max-Delbrück Center for Molecular Medicine, Germany, 3Department of Genetics, Microbiology and Statistics, Facultat de Biologia, Universitat de Barcelona, IBUB, Spain, 4Musculoskeletal Research Group, IMIM (Hospital del Mar Medical Research Institute), Centro de Investigación Biomédica en Red en Fragilidad y Envejecimiento Saludable (CIBERFES), ISCIII, Spain
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GENOMICS, TRANSCRIPTOMICS, PROTEOMICS AND METABOLOMICS OF MUSCULOSKELETAL DISEASE

SAT-0325 A high resolution Capture-C promoter ‘interactome’ implicates causal genes at BMD GWAS loci
Alessandra Chesi*2, Yadav Wagley1, Matthew E. Johnson2, Sumei Lu2, Michelle E. Leonard2, Kenyaita M. Hodge2, James A. Pippin2, Elisabetta Manduchi2, Andrew D. Wells2, Struan F.A. Grant2, Kurt D. Hankenson1. 1University of Michigan, United States, 2The Children’s Hospital of Philadelphia, United States
Disclosures: Alessandra Chesi, None

SAT-0326 Assessing Clinical Utility of Genetic Profiling in Fracture Risk Assessment: A Decision Curve Analysis
Thao P. Ho-Le*1,2, Jacqueline R. Center1,3, John A. Eisman1,3,4, Hung T. Nguyen2, Tuan V. Nguyen2,3,4, 1Bone Biology Division, Garvan Institute of Medical Research, Australia, 2School of Biomedical Engineering, University of Technology, Sydney, Australia, 3St Vincent Clinical School, UNSW Australia, Australia, 4School of Medicine, Notre Dame University, Australia., Australia
Disclosures: Thao P. Ho-Le, None

SAT-0327 Bioinformatics Informs GWAS: An Osteoporosis and Epigenetics Study
Hui Shen*, Xiao Zhang, Fangtang Yu, Hong-Wen Deng, Melanie Ehrlich. Tulane University, United States
Disclosures: Hui Shen, None

SAT-0328 Comprehensive targeted LC-QTOF-MS metabolomics identifies novel metabolite changes associated with treatment of the rare bone disease Alkaptonuria
Brendan Norman*, Andrew Davison2, Gordon Ross1, Anna Milan2, Andrew Hughes2, Norman Roberts1, Lakshminarayan Ranganath2, James Gallagher1. 1Institute of Ageing & Chronic Disease, University of Liverpool, United Kingdom, 2Liverpool Clinical Laboratories, Royal Liverpool University Hospitals Trust, United Kingdom, 3Agilent Technologies UK Ltd, United Kingdom
Disclosures: Brendan Norman, None

SAT-0329 Identification of secreted factors coupling bone resorption to bone formation in humans using denosumab as a biological probe
Megan Weivoda*, David Monroe, Josh Farr, Elizabeth Atkinson, Brittany Negley, Brianne Thicke, Ming Ruan, Louise Mcready, Matthew Drake, Merry Jo Oursler, Sundeep Khosla. Mayo Clinic, United States
Disclosures: Megan Weivoda, None
Integrative analysis of genetic and clinical risk factors affecting bone loss in Korean population

Ji Hyun Lee*1, Jooyong Park2, Jung Hee Kim3, Hyung Jin Choi4, Eu Jeong Ku5, A Ram Hong6, Ji-Yeob Choi2, Nam H. Cho7, Chan Soo Shin8. 1Department of Internal Medicine, Seoul National University College of Medicine, Department of Internal Medicine, VHS Medical Center, Republic of Korea, 2Department of Biomedical Sciences, Seoul National University College of Medicine, Republic of Korea, 3Department of Internal Medicine, Seoul National University College of Medicine, Republic of Korea, 4Department of Anatomy, Seoul National University College of Medicine, Seoul, Republic of Korea, 5Department of Internal Medicine, Chungbuk National University College of Medicine, Cheongju Si, Republic of Korea, 6Department of Internal Medicine, Seoul National University College of Medicine, Boramae Medical Center, Republic of Korea, 7Department of Preventive Medicine, Ajou University School of Medicine, Republic of Korea

Disclosures: Ji Hyun Lee, None

HORMONAL REGULATORS- POSTER SESSION I AND POSTER TOURS

SAT-0343 Regulation of FGF23 and Bone Mass by the Proprotein Convertase Furin
Omar Al Rifai*1, Rachid Essalmani1, John Creemers2, Nabil G. Seidah1, Mathieu Ferron1. 1Institut de recherches cliniques de Montreal, Canada, 2KU Leuven, Belgium

Disclosures: Omar Al Rifai, None

SAT-0344 WITHDRAWN

SAT-0345 Bone-Targeted Pharmacological Inhibition of Notch Signaling Potentiates PTH-induced Bone Gain.
Jesus Delgado-Calle*1, Gerald Wu2, Mathew E. Olson1, Kevin Mcandrews2, Jessica H. Nelson1, Ashley L. Daniel1, Noriyoshi Kurihara1, Emily G. Atkinson2, Venkat Srinivasan3, Lifeng Xiao1, Frank H. Ebertino4, G. David Roodman1, Robert K. Boeckman Jr1, Teresita Bellido1. 1Indiana University School of Medicine, Dept. of Medicine, Hematology/Oncology, United States, 2Indiana University School of Medicine, Dept. of Anatomy and Cell Biology, United States, 3University of Rochester, Dept. of Chemistry, United States

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SAT-0346 Overexpression of Sirt1 in Mesenchymal Stem Cells Protects against Glucocorticoid-Induced Osteoporosis by Inhibiting Oxidative Stress and Osteocyte Senescence
Qinghe Geng*, Xiaoqing Hu, Jun Wu, Dengshun Miao. Nanjing Medical University, China

Disclosures: Qinghe Geng, None

SAT-0347 Sustained Klotho delivery reduces serum phosphate in a model of diabetic nephropathy
Julia Hum*1, Linda O’Bryan2, Arun Tatiparthi2, Erica Clinkenbeard2, Pu Ni3, Martin Cramer1, Manoj Bhaskaran1, Robert Johnson2, Rosamund Smith2, Kenneth White4. 1Marian University, United States, 2Eli Lilly and Company, United States, 3Covance Inc, United States, 4Indiana University School of Medicine, United States

Disclosures: Julia Hum, None

SAT-0348 WITHDRAWN

SAT-0349 1,25-Dihydroxyvitamin D Retards Osteoporosis by Activating Nrf2-Antioxidant Signaling and Inactivating P16 Senescence Signaling
Wanxin Qiao*1, Lulu Chen1, Weiwei Sun1, David Goltzman2, Dengshun Miao1. 1Nanjing Medical University, China, 2McGill University, Canada

Disclosures: Wanxin Qiao, None

SAT-0350 Estrogen-stimulated pleiotrophin functions to stimulate osteoblast differentiation and maintain bone mass in IGF binding protein-2 knockout mice
Susan D’Costa*1, Gang Xi1, Victoria Demambro2, Clifford Rosen2, David Clemmons1. 1University of North Carolina at Chapel Hill, United States, 2Maine Medical Center Research Institute, United States

Disclosures: Susan D’Costa, None
SAT-0351  **Overexpression of Sirt1 in Mesenchymal Stem Cells Protects against Estrogen Deficiency-Induced Osteoporosis**  
Qian Zhang*, Rong Wang, Jianliang Jin, Dengshun Miao. Nanjing Medical University, China  
*Disclosures: Qian Zhang, None*

SAT-0352  **Oxytocin treatment improves the femoral neck bone quality of the aging rats in periestropause**  
Fernanda Fernandes*, Camila Tami Stringhetta Garcia, Melise Jacon Peres Ueno, Angela Cristina Nicola, Fabiana Fernandes, Mário Jefferson Quirino Louzada, Antônio Hernandez Chaves-Neto, Rita Cássia Menegati Dornelles. UNESP, Brazil  
*Disclosures: Fernanda Fernandes, None*

SAT-0353  **The Phosphate Hypothesis: Divergent Roles for PTH and PTHrP**  
Robert Fredericks*. Endocrine-Associates, United States  
*Disclosures: Robert Fredericks, None*

SAT-0354  **Estrogen Attenuates Complex I Activity and Stimulates the Mitochondrial Apoptotic Death Pathway in Osteoclast Progenitors**  
Ha-Neui Kim*, Intawat Nookaew¹, Nukhet Aykin-Burns¹, Kim Krager¹, Li Han¹², Robert Jilka¹², Stavros Manolagas¹², Maria Almeida¹². ¹University of Arkansas for Medical Sciences, United States, ²Central Arkansas Veterans Healthcare System, United States  
*Disclosures: Ha-Neui Kim, None*

SAT-0355  **The impact of dietary phosphate on acute renal phosphate and calcium excretion in healthy subjects.**  
Tom Mazzetti*, Mandy E. Turner, Laura Couture, Jenny Munroe, Rachel M. Holden. ¹Queen’s University School of Medicine, Canada, ²Queen’s University Department of Biomedical and Molecular Sciences, Canada, ³McGill University Faculty of Health Sciences, Canada, ⁴Kingston General Hospital, Canada, ⁵Queen’s University Department of Medicine, Canada  
*Disclosures: Tom Mazzetti, None*

SAT-0356  **Relative influence of serum ionized calcium and 25-hydroxyvitamin D in regulating PTH secretion in healthy subjects: an analysis of a large cohort**  
Federica Ferrone*, Jessica Pepe, Cristina Cipriani, Vittoria Danese, Veronica Cecchetti, Valeria Fassino, Federica Biamonte, Luciano Colangelo, Frank Blocki, Salvatore Minisola. ¹Department of Internal Medicine and Medical Disciplines, “Sapienza” University of Rome, Italy, ²diasorin inc, United States, ³Department of Internal Medicine and Medical Disciplines, “Sapienza” University of Rome, Jamaica  
*Disclosures: Federica Ferrone, None*

SAT-0357  **Decrement of Dentin Matrix Protein 1 caused by Excessive Parathyroid hormone is one of the pathogenesis in elevating Fibroblast Growth Factor 23 expression in Bone Tissue on Primary Hyperparathyroidism Model**  
Yuki Nagata*, Yasuo Imanishi, Tomomi Maeda, Daichi Miyaoka, Noriyuki Hayashi, Masanori Emoto, Masaaki Inaba. Osaka City University Graduate School of Medicine, Department of Metabolism, Endocrinology, and Molecular Medicine, Japan  
*Disclosures: Yuki Nagata, None*

SAT-0358  **Vitamin D Metabolites and the Gut Microbiome in Older Men: The MrOS Study.**  
Robert Thomas*, Lingjing Jiang, Zech Xu, Jian Shen, Stefan Janssen, Gail Ackermann, John Adams, Steven Pauwels, Dirk Venderschueren, Rob Knight, Eric Orwoll, Deborah Kado. ¹University of California San Diego, United States, ²University of California Los Angeles, United States, ³UZ Leuven, Belgium, ⁴Oregon Health Sciences University, United States  
*Disclosures: Robert Thomas, None*
SAT-0359  Determination of reference ranges for parathyroid hormone in healthy individuals
classified by vitamin D status using the Elecsys® PTH and Vitamin D total II
immunoassays
Richard Ostlund*, Naga Yalla1, Gabriella Bobba2, Ge Guo1, Ann Stankiewicz1. 1Washington
University, St. Louis, MO, United States, 2Roche Diagnostics International Ltd, Rotkreuz,
Switzerland, 3Roche Diagnostics Inc., Indianapolis, Indiana, United States
Disclosures: Richard Ostlund, Roche Diagnostics and Regeneron, Grant/Research Support

MECHANOBIOLOGY

SAT-0392  Gambogic amide, a TrkA agonist, augments skeletal adaptation to mechanical loading
through sensory nerve signaling
Phuong Hua*, Ryan Tomlinson. Thomas Jefferson University, United States
Disclosures: Phuong Hua, None

SAT-0393  Knockout p16 Protects against Unloading-Induced Intervertebral Disc Degeneration
by Inhibiting Oxidative Stress And Cell Senescence
Yongxin Ren*, Hui Che. The First Affiliated Hospital of Nanjing Medical University, China
Disclosures: Yongxin Ren, None

SAT-0394  FAK expression in osteocytes is dispensable for bone accrual and for the anabolic
response of cortical and cancellous bone to mechanical loading in female mice.
Amy Y Sato*, Troy Li1, Kevin Mcandrews1, Alexander G Robling1,2, Teresita Bellido2,3.
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States, 2Roudebush Veterans Administration Medical Center, United States, 3Department
of Anatomy & Cell Biology, Department of Medicine, Division of Endocrinology, Indiana
University School of Medicine, United States
Disclosures: Amy Y Sato, None

SAT-0395  ASBMR 2018 Annual Meeting Young Investigator Award
IGF1R Deficiency in Periosteal Osteoprogenitors Inhibits Bone Response to
Mechanical Loading
Tianlu Wang*, Faming Tian, Yongmei Wang, Daniel Bikle. Endocrine Unit, University of
California, San Francisco and San Francisco VA Health Care System, United States
Disclosures: Tianlu Wang, None

SAT-0396  Mechanical Loading Induces Bone Formation from Pre-Existing Osterix Expressing
Cells
Heather Zannit*, Matthew Silva. Washington University in St. Louis, United States
Disclosures: Heather Zannit, None

SAT-0397  Growth Hormone Effects on Bone Loss-Induced by Mild Traumatic Brain Injury and/or
Hind Limb Unloading
Nikita Bajwa*, Chandra Sekhar Kesavan1,2, Heather Watt1, Subburaman Mohan1,2.
1Musculoskeletal Disease Center, VA Loma Linda Healthcare System, United States,
2Department of Medicine, Loma Linda University, United States
Disclosures: Nikita Bajwa, None

SAT-0398  Mechanical Stress-induced Intracellular Ca2+ Oscillations in Human Periodontal
Ligament Fibroblasts
Ei Ei Hsu Hlaing*, Yoshihito Ishihara2, Ziyi Wang1, Naoya Odagaki1, Hiroshi Kamioka1.
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and Pharmaceutical Sciences, Japan, 2Department of Orthodontics, Okayama University
Hospital, Japan
Disclosures: Ei Ei Hsu Hlaing, None

SAT-0399  Role of Parathyroid Hormone Receptor Type I and Primary Cilia in Bone
Mechanotransduction on Osteocytes and Osteoblast
Arancha Gortazar*, Irene Buendia, Eduardo Martin-Guerrero, Irene Tirado, Juan Antonio
Ardura. Bone Physiopathology Laboratory, Departamento de Ciencias Médicas Básicas,
Facultad de Medicina, Universidad San Pablo CEU, CEU Universities, Spain
Disclosures: Arancha Gortazar, None
SAT-0400  Adaptive Changes in Micromechanical Environment of Cancellous and Cortical Bone Following Mechanical Loading and Disuse  
Haisheng Yang*, Ran Liu¹, Whitney Bullock², Russell Main². ¹Beijing University of Technology, China, ²Purdue University, United States  
Disclosures: Haisheng Yang, None

MUSCULOSKELETAL AGING

SAT-0419  Short-term pharmacologic inhibition of RAGE suppresses bone turnover and muscle atrophy in aging  
Hannah M. Davis*, Mohammad W. Aref¹,², Alyson L. Essex¹, Sinai Valdez¹, Alexandra Aguilar-Perez¹,², Padmini Deosthale¹,², Fletcher White³,⁴, Jolene Windle⁶, Matthew R. Allen¹,²,³, Lilian I. Plotkin¹,²,³, ¹Department of Anatomy & Cell Biology, Indiana University School of Medicine, United States, ²Indiana Center for Musculoskeletal Health, United States, ³Department of Anesthesia, Indiana University School of Medicine, United States, ⁴Star Neuroscience Research Institute, United States, ⁵Roudebush Veterans Administration Medical Center, United States, ⁶Department of Human and Molecular Genetics, Virginia Commonwealth University, Richmond, VA, United States  
Disclosures: Hannah M. Davis, None

SAT-0420  Anti-Sost/Dkk1 Antibody Therapy Increases Bone Formation in Old Mice, but Does Not Enhance Their Modest Response to Tibial Loading  
Lisa Lawson*, Michael Brodt, Matthew Silva. Washington University in St. Louis, United States  
Disclosures: Lisa Lawson, None

SAT-0421  Association of trajectories of change in bone, lean mass and physical performance with mortality in older men  
Jian Shen*, Neeta Parimi ², Peggy Cawthon ², Lisa Langsetmo ³, Kris Ensrud ³, Jane Cauley ⁴, Deborah Kado³. ¹University of California, San Diego, United States, ²California Pacific Medical Center Research Institute, United States, ³University of Minnesota, United States, ⁴University of Pittsburgh Graduate School of Public Health, United States, ⁵University of California, United States  
Disclosures: Jian Shen, None

SAT-0422  Fibroblast growth factor receptor 3 inhibits progression of degeneration in the intervertebral disc in mice  
Yangli Xie*, Xiaolan Du, Lin Chen, Zuqiang Wang. Department of Rehabilitation Medicine, Center of Bone Metabolism and Repair, State Key Laboratory of Trauma, Burns and Combined Injury, Trauma Laboratory, Daping Hospital, Army Medical University, China  
Disclosures: Yangli Xie, None

SAT-0423  The Vitamin D Receptor Expression in Skeletal Muscle of Women with Distal Radius Fracture  
Kahyun Kim*, Hyun Sik Gong. ¹Department of Orthopaedic Surgery, Hallym University College of Medicine, Republic of Korea, ²Department of Orthopaedic Surgery, Seoul National University College of Medicine, Republic of Korea  
Disclosures: Kahyun Kim, None

SAT-0424  Age-related Decline of Osteogenesis Depends on Regulation of Protein Kinase A (PKA) by the Protein Kinase Inhibitor Gamma (PKIγ)  
Bryan S. Hausman*, Xin Chen², Hyomin Choe³, Ozan Akkus¹, Edward M. Greenfield¹. ¹Case Western Reserve University, United States, ²University of North Carolina at Chapel Hill, United States, ³Department of Orthopaedic, Yokohama City University, Japan  
Disclosures: Bryan S. Hausman, None

SAT-0425  Lineage Tracing Studies Identify The Source Of Chondrocyte-Like Cells In Mouse Intervertebral Disc With Normal Aging  
Sarthak Mohanty*, Robert Pinelli¹, Chitra Dahia². ¹Hospital for Special Surgery, United States, ²Weill Cornell Medical College, United States  
Disclosures: Sarthak Mohanty, None
MUSCULOSKELETAL DEVELOPMENT

SAT-0438 Novel Genetic Loci Control L5 Vertebral Trabecular Bone and the Response to Low Calcium Intake in Growing BXD Recombinant Inbred Mice
Krittikan Chanpaisaeng*, Sarah Mace, Perla Reyes-Fernandez, James Fleet. 1Department of Nutrition Science, Purdue University, United States, 2Department of Biological Sciences, Purdue University, United States
Disclosures: Krittikan Chanpaisaeng, None

SAT-0439 The large variant of the stimulatory G protein alpha-subunit XLαs regulates bone formation by promoting Wnt signaling
Qing He*, Julia Matthias, Lauren Shumate, Murat Bastepe. Massachusetts General Hospital and Harvard Medical School, United States
Disclosures: Qing He, None

SAT-0440 BMP9 stimulates synovial joint regeneration in mice
Ken Muneoka*, Ling Yu, Mingquan Yan, Lindsay Dawson. Texas A&M University, United States
Disclosures: Ken Muneoka, None

SAT-0441 Microtubule-Actin Crosslinking Factor 1 Is Essential for Bone Formation in Mice
Fan Zhao*, Xiaoli Ma, Wuxia Qiu, Lifang Hu, Airong Qian. 1Northwestern Polytechnical University, China, 2Northwestern Polytechnical, China
Disclosures: Fan Zhao, None

SAT-0442 Epigenetic regulator, Uhrf1, positively controls skeletal muscle differentiation
Yuichiro Sawada*, Tadahiko Kikugawa, Iori Sakakibara, Yusuke Ono, Yuta Yanagihara, Noritaka Saeki, Hiroyuki Iio, Takashi Saika, Yuuki Imai. 1Department of Urology, Ehime University Graduate School of Medicine, Japan, 2Research Center for Advanced Science and Technology, The University of Tokyo, Japan, 3Musculoskeletal Molecular Biology Research Group, Nagasaki University Graduate School of Biomedical Sciences, Japan, 4Division of Integrative Pathophysiology, Proteo-Science Center, Ehime University, Japan
Disclosures: Yuichiro Sawada, None

SAT-0443 Circulating MicroRNAs Are Negatively Associated with Bone Mineral Density in Postmenopausal Women
Zhaojing Chen*, Debra Bemben, Michael Bemben. 1California State University, San Bernardino, United States, 2University of Oklahoma, United States
Disclosures: Zhaojing Chen, None

SAT-0444 Comparing the epithelial-mesenchymal interaction effects in alveolar bone and long bone
Chul Son*, Joo-Cheol Park, Dong-Seol Lee, Yeoung Hyun Park. Laboratory for the Study of Regenerative Dental Medicine, Department of Oral Histology and Developmental Biology, School of Dentistry and Dental Research Institute, Seoul National University, Republic of Korea
Disclosures: Chul Son, None

SAT-0445 Gait and Scaling Effect on Bone Growth in Rat Tibia
Hyunggwi Song*, Mariana Kersh. Department of Mechanical Science and Engineering, UIUC, United States
Disclosures: Hyunggwi Song, None

SAT-0446 Associations of Insulin-like Growth Factor-1, Insulin-like Growth Factor Binding Protein-3, Bone and Body Composition Variables in Children 2 to 8 y
Olusola Sotunde*, Neil Brett, Sherry Agellon, Catherine Vanstone, Hope Weiler. 1School of Human Nutrition, McGill University, Canada, 2School of Nutrition Ryerson University, Canada
Disclosures: Olusola Sotunde, None
SAT-0447 Interactions between protein phosphatases and potassium channels control chondrocytes proliferation and regeneration
Earnest Taylor*, Elizabeth Bradley, Xiaodong Li, Jennifer Westendorf. Mayo Clinic, United States

Disclosures: Earnest Taylor, None

MUSCULOSKELETAL PROGENITOR CELLS AND LINEAGE DETERMINATION

SAT-0464 Targeted epigenetic modulation of bone-specific enhancers regulates mesenchymal cell fate and controls osteoblastic differentiation
Jonathan Gordon*, Coraliee Tye¹, Joseph Boyd¹, Andre Van Wijnen², Janet Stein¹, Gary Stein¹, Jane Lian¹. ¹Department of Biochemistry, Larner College of Medicine, University of Vermont, United States, ²Department of Orthopedic Surgery, Mayo Clinic, United States

Disclosures: Jonathan Gordon, None

SAT-0465 Glutamine metabolism is required in skeletal stem cells for appropriate bone regeneration.
Yilin Yu*, Anthony Mirando, Leyao Shen, Matthew Hilton, Courtney Karner. Duke University, United States

Disclosures: Yilin Yu, None

SAT-0466 Zinc Finger Protein 467 Is a Major Determinant of Lineage Allocation and Bone Turnover in Female Mice
Phuong Le¹, Weiqing Liu¹, Tj Martin¹, Beate Lanske¹, Roland Baron¹, Clifford Rosen¹. ¹Maine Medical Center Research Institute, United States

Disclosures: Phuong Le, None

SAT-0467 Effects of Notch1 signaling on bone fracture healing
Sanja Novak*, Emilie Roeder¹, Brya G Matthews¹, Douglas J Adams², Ivo Kalajzic¹. ¹Department of Reconstructive Sciences, University of Connecticut Health Center, United States, ²Department of Orthopaedic Surgery, University of Connecticut Health Center, United States

Disclosures: Sanja Novak, None

SAT-0468 Aberrant muscle tissue repair by mutant ACVR1 FOP muscle stem cells – implications for heterotopic ossification
Alexandra Stanley*, Elisia Tichy², Foteini Mourkioti², Eileen M. Shore³. ²Perelman School of Medicine, University of Pennsylvania, Department of Orthopaedic Surgery, Cell and Developmental Biology Graduate Program, United States, ³Perelman School of Medicine, University of Pennsylvania, Department of Orthopaedic Surgery, United States

Disclosures: Alexandra Stanley, None

SAT-0469 New Insight into SHP2 regulation of Osteogenic Commitment of Mesenchymal Progenitors
Lijun Wang*, Jiahui Huang², Chunlin Zuo², Douglas Moore², Matthew Warman², Michael Ehrlich¹, Wentian Yang¹. ¹Department of Orthopaedics, Brown University Alpert Medical School and Rhode Island Hospital, United States, ²Brown University Alpert Medical School and Rhode Island Hospital, United States

Disclosures: Lijun Wang, None

SAT-0470 PDGFRβ signaling regulates osteogenesis of αSMA labeled periosteal cells.
Xi Wang*, Sanja Novak¹, Danko Grcevic², Brya G Matthews¹, Ivo Kalajzic¹. ¹UConn Health, United States, ²University of Zagreb, Croatia

Disclosures: Xi Wang, None
SAT-0471 Human mesenchymal stromal cells in adhesion to cell-derived extracellular matrix and titanium: comparative kinome profile analysis
Marta Baroncelli1, Gwenny Fuhler1, Jeroen Van De Peppel1, William Zambuzzi1, Johannes Van Leeuwen1, Maikel Peppelenbosch2, Bram Van Der Eerden1. 1Internal Medicine, Erasmus MC, Netherlands, 2Gastroenterology, Erasmus MC, Netherlands, 3Chemistry and Biochemistry, Institute of Bioscience, UNESP, Brazil
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SAT-0472 Requirement of the PDGFR-PI3K-AKT signaling axis in periosteal cells
Laura Doherty*, Xi Wang, Jungeun Yu, Ivo Kalajzic, Archana Sanjay. UConn Health, United States
Disclosures: Laura Doherty, None

SAT-0473 DPP-4-Cleaved SDF-1β Diminishes Migration and Osteogenic Differentiation Capacities of Bone Marrow Mesenchymal Stem Cells
Ahmed Elmansi*, Khaled Hussein1, Brian Volkman2, Galina Kondrikova1, Wendy Bollag3, Sadanand Fulzele4, Xingming Shi5, Meghan Mcgee-Lawrence1, Mark Hamrick1, Carlos Isales1, William Hill1, Sudharsan Periyasamy-Thanadan6. 1Department of Cellular Biology and Anatomy, Augusta University, United States, 2Department of Biochemistry, Medical College of Wisconsin, United States, 3Department of Physiology, Augusta University, United States, 4Department of Orthopedic Surgery, Medical College of Georgia, United States, 5DEPARTMENT OF NEUROSCIENCE AND REGENERATIVE MEDICINE, Augusta University, United States, 6Cancer Center Pharmacy, Medical College of Georgia, Augusta University, United States
Disclosures: Ahmed Elmansi, None

SAT-0474 Assessment of a new anabolic drug, picolinic acid, in MSC cultures using in vitro live-cell confocal imaging
Damian Myers*, Ahmed Al Saedi, Gustavo Duque. University of Melbourne, Australia
Disclosures: Damian Myers, None

SAT-0475 Validation of osteogenic properties of Cytochalasin D by high-resolution RNA-sequencing in mesenchymal stem cells derived from bone marrow and adipose tissues
Rebekah Samsonraj*, Christopher Paradise1, Amel Dukadakov1, Buer Sen2, Asha Nair1, Allan Dietz1, David Deyle1, Simon Cool1, Janet Rubin2, Andre Van Wijnen1, 1Mayo Clinic, United States, 2University of North Carolina, United States, 3Institute of Medical Biology, Singapore
Disclosures: Rebekah Samsonraj, None

SAT-0476 Activation of Mitochondrial OxPhos Drives Osteogenesis via β-catenin
Brianna Shares*, Melanie Busch, Noelle White, Laura Shum, Roman Eliseev. University of Rochester, United States
Disclosures: Brianna Shares, None

OSTEOARTHRITIS AND OTHER JOINT DISORDERS

SAT-0501 Drug-induced modulation of gp130 signaling prevents articular cartilage degeneration and promotes repair
Ruzanna Shkhyan*, Ben Van Handel, Jacob Bogdanov, Denis Evseenko. University of Southern California, United States
Disclosures: Ruzanna Shkhyan, None

SAT-0502 Tissue Mechanical Deficiencies Detected in Both Articular Cartilage and Subchondral Trabecular Bone in Osteoarthritic Human Knees
Yizhong Hu*, Eric Y. Yu1, Ariana Moini1, Zexi Wang1, Matthew Scott Heller1, Akshay Lakra1, Herbert John Cooper2, Roshan Pradip Shah1, Jeffrey Albert Geller1, X. Lucas Lu2, X. Edward Guo1. 1Bone Bioengineering Laboratory, Columbia University, United States, 2Department of Orthopaedic Surgery, Columbia University Medical Center, United States, 3Department of Mechanical Engineering, University of Delaware, United States
Disclosures: Yizhong Hu, None
SAT-0503 ASBMR 2018 Annual Meeting Young Investigator Award

Reliable change index in the evaluation of joint space loss: a novel method for assessing osteoarthritis progression data from the Osteoarthritis Initiative
Camille Parsons*, Andy Judge, Kirsten Leyland, Hazel Inskip, Cyrus Cooper. 1MRC Lifecourse Epidemiology Unit, University of Southampton, United Kingdom, 2University of Bristol, United Kingdom

Disclosures: Camille Parsons, None

SAT-0504 Predicting total hip replacement for symptomatic osteoarthritis using radiographs or clinical computed tomography; a prospective case-control study
Kenneth Poole*, Ilya Burkov, Graham Treece, Andrew Gee, Thomas Turmezei, Fjola Johannesdottir, Sigurdur Sigurdsson, Tamara Harris, Helgi Jonsson, Vilmundur Gudnadson. 1University of Cambridge, United Kingdom, 2University of East Anglia, United Kingdom, 3The Icelandic Heart Association, Iceland, 4Public Health Sciences, University of Iceland, 5Laboratory of Epidemiology and Population Sciences, United States, 6Faculty of Medicine, University of Iceland, Iceland

Disclosures: Kenneth Poole, None

SAT-0505 Beneficial effects of Denosumab on bone loss and bone erosion from results of long-term treatment in the phase 3, DESIRABLE study in patients with rheumatoid arthritis (RA) on background csDMARDs
Yoshiya Tanaka*, Satoshi Soen, Hisashi Yamanaka, Toshiyuki Yoneda, Sakae Tanaka, Takaya Nitta, Naoki Okubo, Harry Genant, Désirée Van Der Heijde, Tsutomu Takeuchi. 1University of Occupational and Environmental Health, Japan, 2Kindai University Nara Hospital, Japan, 3Institute of Rheumatology Tokyo Women’s Medical University, Japan, 4Osaka University Graduate School of Dentistry, Japan, 5The University of Tokyo, Japan, 6Daiichi Sankyo Co. Ltd, Japan, 7University of California, United States, 8Leiden University Medical Center, Netherlands, 9Keio University School of Medicine, Japan

Disclosures: Yoshiya Tanaka, Mitsubishi Tanabe, Takeda, Bristol-Myers, Chugai, Astellas, Abbvie, MSD, Daiichi Sankyo, Pfizer, Kyowa Hakko Kirin, Eisai, Ono, Grant/Research Support, Daiichi-Sankyo, Astellas, Pfizer, Mitsubishi Tanabe, Bristol-Myers, Chugai, YL Biologics, Eli Lilly, Sanofi, Janssen, UCB, Speakers’ Bureau

SAT-0506 PTH cease the process of TMJ OA by HDAC4
Jun Zhang*, Caixia Pi, Fan Yi, Quan Yuan, Xin Xu, Xuedong Zhou, Liwei Zheng. State Key Laboratory of Oral Diseases, National Clinical Research Center for Oral Diseases, West China Hospital of Stomatology, China

Disclosures: Jun Zhang, None

SAT-0507 Subchondral cyst number is positively associated with proximal tibia bone mineral density, alignment and joint space narrowing in individuals with OA
Wadena Burnett*, Saija Kontulaainen, Christine McLennan, Diane Hazel, Carl Talmo, David Wilson, David Hunter, James Johnston. 1University of Saskatchewan, Canada, 2New England Baptist Hospital, United States, 3University of British Columbia, Canada, 4Kolling Institute of Bone & Joint Research, University of Sydney, Australia

Disclosures: Wadena Burnett, None

SAT-0508 Establishing a Model to Investigate the Role of Non-Traumatic Bone Marrow Lesions in the Pathogenesis of Knee Osteoarthritis: 9.4T MRI and microCT in Dunkin-Hartley Guinea Pigs
Alicia K Gabilondo*, John R Matyas, Jeffrey F Dunn, Sarah L Manske. 1McCaig Institute for Bone and Joint Health, Department of Radiology, Cumming School of Medicine, University of Calgary, Canada, 2McCaig Institute for Bone and Joint Health, Faculty of Veterinary Medicine, University of Calgary, Canada

Disclosures: Alicia K Gabilondo, None
SAT-0509  Accelerated Osteoarthritic-like Symptoms in a Novel Dual Injury Model Combining Destabilisation of the Medial Meniscus and Cartilage Damage  
Kendal Mcculloch*1, Carmen Huesa2, Lynette Dunning1, Rob Van ‘T Hof6, John Lockhart1, Carl Goodyear4. 1University of the West of Scotland, United Kingdom, 2University of Edinburgh, United Kingdom, 3University of Liverpool, United Kingdom, 4University of Glasgow, United Kingdom  
Disclosures: Kendal Mcculloch, None

SAT-0510  LPS Induced Inflammation Pre-Injury Increases the Severity of Post-Traumatic Osteoarthritis in MRL/MpJ Superhealer Mice  
Melanie Mendez*1, Deepa Murugeshi2, Allison Hsia1, Blaine Christiansen3, Gabriela Loots3. 1University of California-Merced, Lawrence Livermore National Laboratory, United States, 2Lawrence Livermore National Laboratory, United States, 3University of California-Davis, United States  
Disclosures: Melanie Mendez, None

SAT-0511  Bone and Muscle Quality in Postmenopausal Women with Both Osteoarthritis and Osteoporosis – the AMBERS study  
Andy Kin On Wong*1, Shannon Reitsma2, Hana Gillick3, Abinna Chandrakumar1, Eva Szabo1, Justin Chee3, Angela M Cheung3, Jonathan D Adachi6. 1Joint Department of Medical Imaging, University Health Network, Canada, 2Department of Medicine, McMaster University, Canada, 3CESHA, University Health Network, Canada  
Disclosures: Andy Kin On Wong, None

SAT-0512  Intermittent PTH exerts an anabolic effect on the osteochondral tissue of the TMJ  
Sumit Yadav*1, Po-Jung Chen2, Mara H O’Brien2, Eliane Dutra2. 1Associate Professor, United States, 2University of Connecticut Health Center, United States  
Disclosures: Sumit Yadav, None

OSTEOBLASTS

SAT-0537  Conditional deletion of Dock7 in the early limb bud results in reduced trabecular bone in both sexes with increased fat mass only in male mice  
Kathleen A Becker*1, Daniel J Brooks2, Anne Harrington3, Mary L Bouxsein2, Lucy Liaw3, Clifford J Rosen1. 1Maine Medical Center Research Institute, United States, 2Beth Israel Deaconess Medical Center, Harvard Medical School, United States, 3Maine Medical Center Research Institute, Maine Medical Center, United States  
Disclosures: Kathleen A Becker, None

SAT-0538  The Role of VEGFA from Osteoblast Lineage Cells during Fracture and Cortical Defect Repair  
Evan Buettmann*, Nicole Migotsky, Susumu Yoneda, Pei Hu, Jennifer Mckenzie, Matthew Silva. Washington University in St. Louis, United States  
Disclosures: Evan Buettmann, None

SAT-0539  Gene regulatory landscape in primary human mesenchymal stem cell (MSC) during BMP2-induced osteoblast differentiation  
Alessandra Chesi*1, Yadav Wagley2, Matthew E. Johnson1, Sumei Lu1, Michelle E. Leonard1, Kenyaita M. Hodge1, James A. Pippin1, Elisabetta Manduchi1, Andrew D. Wells1, Kurt D. Hankenson5, Struan F.A. Grant1. 1The Children’s Hospital of Philadelphia, United States, 2University of Michigan, United States  
Disclosures: Alessandra Chesi, None

SAT-0540  Ablation of Gjc1 in the Chondro-Osteogenic Lineage Inhibits Osteoclastogenesis Leading to High Trabecular Bone Mass  
Francesca Fontana*, Marcus Watkins , Song Dah Woon , Giulia Leanza, Roberto Civitelli. Washington University School of Medicine, United States  
Disclosures: Francesca Fontana, None

SAT-0541  A novel role for tissue nonspecific alkaline phosphatase in cranial bone progenitor cells.  
Hwa Kyung Nam*, Iva Vesela, Nan Hatch. University of Michigan, School of Dentistry, United States  
Disclosures: Hwa Kyung Nam, None
SAT-0542  Global Expression of miR-29 Decoy Decreases Bone Formation and Alters Cortical Bone Morphology in Young Mice
Henry Hrdlicka*, Bongjin Shin, Anne Delany, Sun-Kyeong Lee. UConn Health, United States
Disclosures: Henry Hrdlicka, None

SAT-0543  TNAP Deficiency Is the Major Contributor to the Loss of the Mineralization Potential of Trps1 Deficient Osteogenic Cells
Sana Khalid*, Byongsoo Chae, Daisy Monier, MairobyS Socorro, Victoria Smethurst, Dobrawa Napierala. Center for Craniofacial Regeneration, Dept. of Oral Biology, McGowan Institute for Regenerative Medicine, University of Pittsburgh School of Dental Medicine, United States
Disclosures: Sana Khalid, None

SAT-0544  Macrophage-secreted Emilin2 Stimulates Chemotaxis and Differentiation in Stromal/Osteoblastic Cells
Yukihiro Kohara*, Atsushi Watanabe, Noboru Ogiso, Sunao Takeshita. National Center for Geriatrics and Gerontology, Japan
Disclosures: Yukihiro Kohara, None

SAT-0545  Trapidil induces osteogenesis by upregulating the signaling of bone morphogenetic proteins
Bongjun Kim*, Hong-Hee Kim, Zang Hee Lee. Department of Cell and Developmental Biology, School of Dentistry, Seoul National University, Republic of Korea
Disclosures: Bongjun Kim, None

SAT-0546  Regulator of G protein signaling protein 12 is required for osteoblast differentiation through controlling calcium channel/Gαi-calcium oscillation-ERK signaling
Ziqing Li*, Tongjun Liu, Alyssa Gilmore, Néstor Más Gómez, Claire H Mitchell, Yi-Ping Li, Merry J Oursler, Shuying Yang. Department of Anatomy and Cell Biology, University of Pennsylvania, School of Dental Medicine, United States; Department of Oral Biology, School of Dental Medicine, University of Buffalo, State University of New York, United States; Department of Physiology, University of Pennsylvania, School of Medicine, United States; Department of Pathology, University of Alabama in Birmingham, United States; Department of Medicine, Endocrine Research Unit, Mayo Clinic, United States
Disclosures: Ziqing Li, None

SAT-0547  Lnc-DIF inhibits bone formation via targeting mir-489-3p
Zhiping Miao*, Yong Yin, Yan Zhang, Ye Tian, Lifang Hu, Airong Qian. Northwestern Polytechnical University, China
Disclosures: Zhiping Miao, None

SAT-0548  Conditional Deletion of the Glucocorticoid Receptor in Osteoprogenitors Reveals Complex Roles for Glucocorticoid Signaling in Caloric Restriction-Induced Bone Marrow Fat Accumulation
Jessica Pierce*, Ke-Hong Ding, Jianrui Xu, Kanglun Yu, Anuj Sharma, Mark Hamrick, William Hill, Xing-Ming Shi, Carlos Isales, Meghan Mcgee-Lawrence. Augusta University, United States
Disclosures: Jessica Pierce, None

SAT-0549  BAF Chromatin Remodelling Epigenetically Controls Osteogenesis in vivo
Tanner Godfrey, Mohammad Rehan*, Benjamin Wildman, Yuechuan Chen, Quamarul Hassan. University of Alabama at Birmingham, United States
Disclosures: Tanner Godfrey, None

SAT-0550  The N6-methyladenosine demethylase FTO functions in bone to protect osteoblasts from age-related DNA damage
Qian Zhang*, Ryan Riddle, Marie-Claude Faugere, Clifford Rosen, Charles Farber, Thomas Clemens. Department of Orthopaedic Surgery, Johns Hopkins University, United States; Department of Medicine, University of Kentucky, United States; Maine Medical Center, United States; University of Virginia, United States
Disclosures: Qian Zhang, None
SAT-0551 Direct reprogramming of mouse fibroblasts into functional osteoblasts by defined factors
Hui Zhu*1, Bogdan Conrad2, Fan Yang1, Joy Wu1. 1Division of Endocrinology, Stanford University School of Medicine, United States, 2Program of Stem Cell Biology and Regenerative Medicine, Stanford University, United States, 3Department of Orthopaedic Surgery, Stanford University School of Medicine, United States
Disclosures: Hui Zhu, None

SAT-0552 Possible involvement of regulation of intracellular RANKL by a RANKL binding peptide WP9QY in osteogenesis.
Yuriko Furuya*. Nagahama Institute for Biochemical Science, Oriental Yeast Co., Ltd., Japan
Disclosures: Yuriko Furuya, None

SAT-0553 Remarkable early bone-forming efficacy of bisphosphonate (alendronate, zoledronate or risedronate)-conjugated collagen sponges as a rhBMP-2 delivery carrier
Soon Jung Hwang*1, In Sook Kim2. 1Department of Oral and Maxillofacial Surgery, School of Dentistry, Seoul National University, Republic of Korea, 2Dental Research Institute, Seoul National University, Republic of Korea
Disclosures: Soon Jung Hwang, None

SAT-0554 Gene activated-matrix (GAM) comprised of atelocollagen and plasmid DNA encoding microRNA promotes rat cranial bone augmentation
Rena Shido1*, Yoshinori Sumita2, Masashi Hara1, Shun Narahara1, Izumi Asahina1. 1Department of Regenerative Oral Surgery, Unit of Translational Medicine, Graduate School of Biomedical Science, Nagasaki University, Japan, 2Basic and Translational Research Center for Hard Tissue Disease, Nagasaki University Graduate School of Biomedical Sciences, Japan
Disclosures: Rena Shido, None

SAT-0555 Synergistic Effects of Adiponectin and Irisin on Bone Cells
Tong Chen*1, Weina Zhou2,3, Qisheng Tu2, Jinkun Chen 2,4. 12nd Dental Center, Peking University School and Hospital of Stomatology, Beijing, China. Central Laboratory, Peking University School and Hospital of Stomatology, Beijing, China., China, 2Division of Oral Biology, Tufts University School of Dental Medicine, Boston, Massachusetts, United States, 3Jiangsu Key Laboratory of Oral Disease, Nanjing Medical University.Nanjing, China, 4Department of Developmental, Molecular and Chemical Biology Sackler School of Graduate Biomedical Sciences Tufts University School of Medicine, United States
Disclosures: Tong Chen, None

SAT-0556 The stimulation of osteogenesis by delivery of recombinant protein of osteogenic molecular switches
Woojin Kim*, Youngdan Cho, Hyunmo Ryoo. Seoul National University, Republic of Korea
Disclosures: Woojin Kim, None

OSTEOCLASTS

SAT-0596 ASBMR 2018 Annual Meeting Young Investigator Award
Cell Autonomous Sfrp4-Dependent Inhibition of Non-Canonical Wnt Signaling in Osteoclasts Prevents Osteoclastogenesis, Ensuring Normal Cortical Bone Development
Kun Chen*1, Pei Ying Ng1, Dorothy Hu1, Roland Baron1,2, Francesca Gori1. 1Division of Bone and Mineral Research, Harvard Medical School and Harvard School of Dental Medicine, United States, 2Endocrine Unit, Massachusetts General Hospital, United States
Disclosures: Kun Chen, None

SAT-0597 Autocrine actions of high mobility group box1 protein (HMGB1) on osteocytes and osteoclasts regulate osteoclastogenesis
Hannah M. Davis1,2, Sinai Valdez1, Leland J. Gomez1, Angela Bruzzaniti2,3, Lilian I. Plotkin1,2,4. 1Department of Anatomy & Cell Biology, Indiana University School of Medicine, United States, 2Indiana Center for Musculoskeletal Health, United States, 3Biomedical and Applied Sciences, Indiana University School of Dentistry, United States, 4Roudebush Veterans Administration Medical Center, United States
Disclosures: Hannah M. Davis, None
SAT-0598  EOMES is a novel and essential co-partner of PU.1 and MITF in regulating osteoclast differentiation
Blake E. Hildreth III*, Heather A. Carey2, Devadoss J. Samuvel1, Katie A. Thies1, Jennifer A. Geisler1, Thomas J. Rosol1, Ramiro E. Toribio1, Julia F. Charles4, Michael C. Ostrowski1, Sudarshana M. Sharma1. 1Medical University of South Carolina Department of Biochemistry and Molecular Biology and Hollings Cancer Center, United States, 2Ohio State University Department of Cancer Biology and Genetics and Comprehensive Cancer Center, United States, 3Ohio State University College of Veterinary Medicine, United States, Brigham and Women’s Hospital and Harvard Medical School Department of Medicine, Division of Rheumatology, Immunology and Allergy, United States
Disclosures: Blake E. Hildreth III, None

SAT-0599  ASBMR 2018 Annual Meeting Young Investigator Award
RANKL-Sensitive Super-Enhancer Activities Determine Cell Identity During Osteoclastogenesis
Min Joon Lee*, Sungho Park2, Keunsoo Kang1, Jiyoung Ahn1, Ye-Ji Lee1, Sehwan Mun1, Seyeon Bae1, Kaichi Kaneko3, Kyung-Hyun Park-Min1. 1University of Toronto Faculty of Medicine, Canada, 2Arthritis and Tissue Degeneration Program, David Z. Rosensweig Genomics Research Center, Hospital for Special Surgery, United States, Department of Microbiology, Dankook University, Republic of Korea, 3Arthritis and Tissue Degeneration Program, Hospital for Special Surgery, United States
Disclosures: Min Joon Lee, None

SAT-0600  IDH2 is a novel regulator of osteoclast differentiation and function through osteoblastic modulation of ATF-NFATc1-RANKL signaling axis
Suk-Hee Lee*, Seung-Hoon Lee, Soon-Young Kim, Eun-Hye Lee, Yeon-Ju Lee, Jung-Eun Kim. Department of Molecular Medicine, CMRI, BK21 Plus KNU Biomedical Convergence Program, School of Medicine, Kyungpook National University, Republic of Korea
Disclosures: Suk-Hee Lee, None

SAT-0601  Cortistatin Directly Binds to RANK and Protects Against Osteoporosis in Mice
Weiwei Li*, Ruize Qu2, Xiaomin Chen2, Wenhan Wang2, John Hayball3, Krasimir Vasilev3, Yunpeng Zhao1. 1Shandong University Qilu Hospital, China, 2Shandong University, China, 3University of South Australia, Australia
Disclosures: Weiwei Li, None

SAT-0602  Hdac3 promotes bone robustness by suppressing osteoclast responsiveness to RANKL and enhancing bone formation
Anna Mattson*, David Molstad1, Dana Begun1, Jennifer Westendorf1, Merry Jo Oursler1, Meghan Mcgee-Lawrence2, Bradley Elizabeth1. 1Mayo Clinic, United States, 2Augusta University, United States
Disclosures: Anna Mattson, None

SAT-0603  Collagen Type VI α2 Chain Deficiency Causes Trabecular Bone Loss by Promoting Osteoclast Differentiation through Enhanced TNFα Signaling
Hai Pham*, Annie Dar1, Vardit Kram1, Li Li1, Tina Kitls1, Marian Young1. 1Craniofacial and Skeletal Diseases Branch, National Institute of Dental and Craniofacial Research, National Institutes of Health, United States, 2Collagen Type VI α2 Chain Deficiency Causes Trabecular Bone Loss by Promoting Osteoclast Differentiation through Enhanced TNFα Signaling, United States
Disclosures: Hai Pham, None

SAT-0604  ASBMR 2018 Annual Meeting Young Investigator Award
Dual specificity of the Inpp4b phosphatase in bone remodeling
Lina Saad*, Monica Pata, Jean Vacher. IRCM, Canada
Disclosures: Lina Saad, None

SAT-0605  An Unanticipated Role for Sphingosine Kinase-2 in Bone Anabolism
Joanne Walker*, Gang-Qing Yao, Meiling Zhu, Ben-Hua Sun, Christine Simpson, Karl Insogna. Yale University School of Medicine, United States
Disclosures: Joanne Walker, None
SAT-0606  Osteoclastogenic cues induce both priming and assembly signals for the NLRP3 inflammasome
Yael Alippe*, Chun Wang, Biancamaria Ricci, Jianqiu Xiao, Dustin Kress, Guillermo Blanco, Yousef Abu-Amer, Roberto Civitelli, Gabriel Mbalaviele. 1Division of Bone and Mineral Diseases, Washington University School of Medicine, United States, 2Department of Orthopaedic Surgery, Washington University School of Medicine, United States, 3IDEHU, University of Buenos Aires, Argentina
Disclosures: Yael Alippe, None

SAT-0607  Regulation of Membrane Localization of CD44 and Migration of Osteoclasts by ERM proteins
Meenakshi Chellaiah*. School of Dentistry, University of Maryland, United States
Disclosures: Meenakshi Chellaiah, None

SAT-0608  Protective effect of a novel benzamide derivative on alveolar bone erosion through suppression of NFATc1-mediated osteoclastogenesis
Hye Jung Ihn, Soomin Lim, Hong-In Shin, Eui Kyun Park. 1Institute for Hard Tissue and Biotooth Regeneration, Kyungpook National University, Republic of Korea, 2Department of Oral Pathology and Regenerative Medicine, Kyungpook National University, Republic of Korea
Disclosures: Hye Jung Ihn, None

SAT-0609  Fas/S1P1 crosstalk via NF-κB activation in osteoclasts controls subchondral bone remodeling in murine TMJ arthritis
Islamy Rahma Hutami*, Eiji Tanaka, Takashi Izawa. Tokushima University Graduate School, Japan
Disclosures: Islamy Rahma Hutami, None

SAT-0610  Downregulation of receptor activator NF-κB (RANK) expression by methylation of its gene promoter
Riko Kitazawa, Yuki Murata, Ryuma Haraguchi, Sohei Kitazawa. 1Division of Diagnostic Pathology, Ehime University Hospital, Japan, 2Department of Molecular Pathology, Ehime University Graduate School of Medicine, Japan
Disclosures: Riko Kitazawa, None

SAT-0611  CCR5 is required for osteoclast function through regulating lysosomal vesicle trafficking
Jiwon Lee*, Yuuki Imai, Tadahiro Iimura. Ehime University, Japan
Disclosures: Jiwon Lee, None

SAT-0612  Inhibition of osteoclast differentiation and P. gingivalis lipopolysaccharide-induced alveolar bone resorption by novel Bruton’s tyrosine kinase inhibitor acalabrutinib
Youngkyun Lee*, Yong-Gun Kim, Jung-Hong Ha. Kyungpook National University Scholl of Dentistry, Republic of Korea
Disclosures: Youngkyun Lee, None

SAT-0613  Regulation of osteoclastogenesis by protein kinase D2 and protein kinase D3
Carina M G Meyers*, Kim Mansky, Eric Jensen. University of Minnesota, United States
Disclosures: Carina M G Meyers, None

SAT-0614  WITHDRAWN

SAT-0615  Lipoteichoic acid, a membrane component of gram-positive bacteria, induces PGE2-mediated inflammatory bone resorption in periodontitis.
Tsukasa Tominari*, Ryota Ichimaru, Keita Taniguchi, Kenta Watanabe, Chiho Matsumoto, Michiko Hirata, Masaki Inada, Chisato Miyaura. Tokyo University of Agriculture and Technology, Japan
Disclosures: Tsukasa Tominari, None

132 American Society for Bone and Mineral Research
SAT-0655  Osteocyte Sirt6 has crucial roles in bone and phosphate metabolism  
Department of Orthopedics Surgery, Tokyo Medical and Dental University, 1-5-45 Yushima Bunkyo-Ku Tokyo Japan, 113-8519, Japan,  
Department of Physiology and Cell Biology, Tokyo Medical and Dental University, 1-5-45 Yushima Bunkyo-Ku Tokyo Japan, 113-8519, Japan,  
Department of Cartilage Regeneration, Tokyo Medical and Dental University, 1-5-45 Yushima Bunkyo-Ku Tokyo Japan, 113-8519, Japan  
Disclosures: Aikebaier Aobulikasimu, None

SAT-0656  PPARα is a negative regulator of sclerostin production in osteocytes  
Amit Chougule*, Lance Stechschulte, Beata Lecka-Czernik. University of Toledo, United States  
Disclosures: Amit Chougule, None

SAT-0657  Microgravity exposure in growing mice is detrimental to osteocyte lacunar volume and shape  
Department of Mechanical Engineering, University of Colorado, Boulder CO, United States,  
Department of Applied Mathematics, University of Colorado, Boulder CO, United States,  
BioServe Space Technologies, University of Colorado, Boulder, CO, United States  
Disclosures: Jennifer C. Coulombe, None

SAT-0658  Sex divergent role of osteocytic miR21 in the maintenance of osteocyte viability and regulation of bone turnover  
Department of Anatomy & Cell Biology, Indiana University School of Medicine, United States,  
Indiana Center for Musculoskeletal Health, United States,  
Department of Hematology/Oncology, Indiana University School of Medicine, United States,  
Roudebush Veterans Administration Medical Center, United States  
Disclosures: Hannah M. Davis, None

SAT-0659  Osteocyte Density and Viability in Postmenopausal Women after Long-term Bisphosphonate Therapy  
Henry Ford Hospital, United States  
Disclosures: Shijing Qiu, None

SAT-0660  Defective Perilacunar/Canalicular Remodeling in Subchondral Bone Exacerbates Osteoarthritis  
Karsyn Bailey*, Jonathon Woo, Cristal Yee, Claire Acevedo, Aaron Fields, Jeffrey Lotz, Alexis Dang, Alfred Kuo, Thomas Vail, Tamara Alliston.  
University of California San Francisco, United States  
Disclosures: Karsyn Bailey, None

SAT-0661  Effects of in vivo Induction of Diffuse Damage in Osteocyte Network  
Rinaldo Florencio-Silva*, Leila Mehraban Alvandi, Dorra Frihka, Erica Teixeira, Robert Majeska, Mitchell Schaffler.  
The City College Of New York, United States  
Disclosures: Rinaldo Florencio-Silva, None

SAT-0662  A potential role for the NLRP3 inflammasome in osteocyte-mediated triggering of osteoclast differentiation  
Dorra Frihka-Benayed*, Maria Lapshina, Robert Majeska, Mitchell Schaffler.  
The City College Of New York, United States  
Disclosures: Dorra Frihka-Benayed, None
SAT-0663  
Scriptaid Induces Osteocyte Respiration through an HDAC5 Independent Mechanism
Ningyuan Sun*, Ehab Azab¹, Yuhei Uda¹, Chao Shi², Paola Divieti Pajevic¹. ¹Boston University Henry M. Goldman School of Dental Medicine, United States, ²The Second Affiliated Hospital of Xi’an Jiaotong University, China
Disclosures: Ningyuan Sun, None

OSTEOPOROSIS – ASSESSMENT

SAT-0680  
Normative Data for Trabecular Bone Score in Men and Women
Kara Anderson*, Kara Holloway-Kew, Mark Kotowicz, Natalie Hyde, Julie Pasco. Deakin University, Australia
Disclosures: Kara Anderson, None

SAT-0681  
Time since fracture and number of previous fractures are independently associated with risk of new clinical fracture
Kristian Axelsson*, Dan Lundh², Mattias Lorentzon¹. ¹Department of Geriatrics, Sahlgrenska Academy, Gothenburg University, Sweden, ²School of Bioscience, University of Skovde, Sweden
Disclosures: Kristian Axelsson, None

SAT-0682  
Development of Thresholds for Assessing Radius and Tibia Fragility Fracture Risk Using HR-pQCT – The CaMos Cohort
Syed Jafri*, Lauren Burt², Leigh Gabel², David Hanley², Steven Boyd². ¹University of Calgary, Canada, ²McCaig Institute for Bone and Joint Health, Department of Radiology, Cumming School of Medicine, University of Calgary, Calgary, Canada, ³McCaig Institute for Bone and Joint Health, Departments of Community Health Sciences and Oncology, Cumming School of Medicine, University of Calgary, Calgary, Canada
Disclosures: Syed Jafri, None

SAT-0683  
Automated Identification of Vertebral Compression Fractures Using Artificial Intelligence Convolutional Neural Networks Predicts Incident Non-vertebral and Hip Fracture: The Manitoba BMD Registry
Sheldon Derkatch*, Christopher Kirby², Doug Gabel², David Hanley², Steven Boyd². ¹University of Manitoba, Canada, ²St-Boniface Hospital Albrechtsen Research Centre, Canada
Disclosures: Sheldon Derkatch, None

SAT-0684  
Clinical Performance of a Beta Version of Trabecular Bone Score (TBS) Including Thickness-based Correction for Soft Tissue Effects: The Manitoba BMD Cohort
William D. Leslie*, Enisa Shevroja², Lisa M. Lix¹, Didier Hans². ¹Department of Medicine (W.D.L.), University of Manitoba, Canada, ²Center of Bone Diseases, DAL-RHU - Lausanne University Hospital, Switzerland
Disclosures: William D. Leslie, None

SAT-0685  
Usefulness of the Trabecular Bone Score in dialysis patients
Oliver Malle*, Astrid Fahrleitner-Pammer. Medical University of Graz, Dpt. of Internal Medicine, Div. of Endocrinology and Diabetology, Austria
Disclosures: Oliver Malle, None

SAT-0686  
Assessment of Age Related Changes in Bone Metabolism Using 18F–Sodium Fluoride PET/CT
Sylvia Rhodes*, Alexandra Batzdorf, Austin Alexxih, Jonathan Guntin, Matthew Peng, Amanda Jankelovits, Justin Kim, Julia Hornyak, Poul Flemming, Abass Alavi, Chamith Rajapakse. University of Pennsylvania, United States
Disclosures: Sylvia Rhodes, None
SAT-0687 Serum levels of DKK2 and sFRP1 are associated to incident fragility fractures in older women
Ana Maria Rodrigues*, Mónica Eusébio, Ana Carolina Rodrigues, Joana Caetano-Lopes, Inês Lopes, Jorge M Mendes, Pedro Simões Coelho, João Eurico Fonseca, Jaime Cunha Branco, Helena Canhão. 1EpiDoc Unit – Unidade de Epidemiologia em Doenças Crónicas, CEDOC, Nova Medical School, Lisboa, Portugal, 2Sociedade Portuguesa de Reumatologia, Lisboa, Portugal, 3Faculdade de Medicina da Universidade de Lisboa, Lisboa, Portugal, 4Department of Orthopaedic Research, Boston Children’s Hospital, Boston, MA, USA; Department of Genetics, Harvard Medical School, Boston, MA, United States, 5Unidade de Investigação em Reumatologia, Instituto de Medicina Molecular, Faculdade de Medicina, Universidade de Lisboa, Centro Académico de Medicina de Lisboa, Portugal, 6NOVA IMS, Universidade Nova de Lisboa, Lisboa, Portugal, 7Centro de Estudos de Doenças Crónicas (CEDOC) da NOVA Medical School, Universidade Nova de Lisboa (NMS/UNL), Lisboa, Portugal
Disclosures: Ana Maria Rodrigues, None

SAT-0688 Bone Endosteal But Not Periosteal Changes During Aging At The Distal Radius And Tibia Significantly Differ Between Men And Women As Determined From HRpQCT Images Using A Novel 3D Rigid-Registration Approach
Bert Van Rietbergen*, Emmanuel Biver, Thierry Chevalley, Keita Ito, Roland Chapurlat, Serge Ferrari. 1Dept. Biomed. Eng. Eindhoven University of Technology / Dept. Orthopaedics Maastricht University Medical Centre, Netherlands, 2Division of Bone Diseases, University Hospitals and Faculty of Medicine, Switzerland, 3Orthopaedic Biomechanics, Dept. Biomed. Eng. / Dept. Orthopaedics, University Medical Center Utrecht, Netherlands, 4INSERM UMR 1033, Université de Lyon, France
Disclosures: Bert Van Rietbergen, Scanco Medical AG, Consultant

SAT-0689 Off-Treatment Bone Mineral Density Changes in Postmenopausal Women after 5 Years of Anastrozole
Ivana Sestak*, Jack Cuzick. Centre for Cancer Prevention, Queen Mary University London, United Kingdom
Disclosures: Ivana Sestak, None

SAT-0690 Clinical Applicability of TBS in Women with Short Stature
Pedro Alvarenga*, Milena Diniz, Milena Leite, Caroline Silva, Jessica Eleuterio, Maria Marta Soares, Bruno Muzzi, Barbara Silva. 1Alberto Cavalcanti Hospital, Brazil, 2Santa Casa de Belo Horizonte, Brazil, 3Mario Pena Hospital, Brazil, 4CEMA, Brazil, 5Felicio Rocho Hospital, Brazil, 6Mater Dei Hospital, Densimeter, Brazil, 7Felicio Rocho Hospital, Santa Casa de Belo Horizonte, Brazil
Disclosures: Pedro Alvarenga, None

SAT-0691 BRIDGING THE GAP WITH FRAX: FRAX UTILITY IN PREVENTING HIP FRACTURES IN MEN
Eduardo Dusty Luna*, Donna Davenport, John W Hinchey, John M Bruder. 1UTHSCSA, United States, 2ALMV AH, United States
Disclosures: Eduardo Dusty Luna, None

SAT-0692 Trabecular Bone Score (TBS) Integrating a New Correction for Soft Tissue Effects Based on Estimated Tissue Thickness
François De Guio*, Enisa Shevroja, Franck Michelet, Didier Hans. 1Medimaps, France, 2Center of Bone diseases, Bone and Joint Department, Lausanne University Hospital, Switzerland
Disclosures: François De Guio, Medimaps, Other Financial or Material Support

SAT-0693 Accounting for Confounding Factors Affecting Dual-Energy X-ray Absorptiometry in a Large Clinical Trial
Catherine Donlon*, Cindy Yu, Sharon Chou, Meryl Leboff. 1Division of Endocrinology, Diabetes and Hypertension, Brigham and Women’s Hospital, United States, 2Harvard Medical School, United States
Disclosures: Catherine Donlon, None
SAT-0694  Can DXA-derived 3D measurements at the lumbar spine predict thoracic spine fractures?
Mirella López Picazo*,1, Ludovic Humbert1, Silvana Di Gregorio2, Miguel Angel Gonzalez Ballester2, Luis Del Rio1, 1Galgo Medical, Spain, 2BCN MedTech, Universitat Pompeu Fabra, Spain, 3CETIR Grup Médic, Spain
Disclosures: Mirella López Picazo, None

SAT-0695  Are They Really a Different Population? Comparing Fracture Risk Factors Between Home Care Recipients and Long-Term Care Residents
Caitlin Mcarthur*,1, George Ioannidis1, Micaela Jantzi2, Jonathan Adachi3, Lora Giangregorio2, John Hirdes2, Alexandra Papaioannou1. 1McMaster University, GERAS Centre for Aging Research, Canada, 2University of Waterloo, Canada, 3McMaster University, Canada
Disclosures: Caitlin Mcarthur, None

SAT-0696  Common mistakes in the clinical use of bone mineral density testing
Radamés Leal Freitas*,1, José Seabra Alves-Neto2, Amanda Raquel Costa Cruz2, Francisco De Assis Pereira1, Fábio de Souza Santos1, Lúcio Moraes Lanzieri-Filho1, Patricia Monique Vila Nova Pereira1. 1Universidade Federal de Sergipe, Brazil, 2Universidade Tiradentes, Brazil
Disclosures: Radamés Leal Freitas, None

SAT-0697  QCT of the femur: Comparison between QCTPro and MIAF Femur
Ling Wang*,1, Oleg Museyko2, Klaus Engelke2, Keenan Brown3, Xiaoguang Cheng1. 1Department of Radiology, Beijing Jishuitan Hospital, China, 2Institute of Medical Physics, University of Erlangen, Germany, 3Mindways Software Inc., United States
Disclosures: Ling Wang, None

SAT-0698  Comparison between laser scanning confocal microscopy and traditional light microscopy in forensic histo-osteology
Lelia Watamaniuk*,1, Ashley Smith2, Natalie Dion1, Louis Georges Ste Marie1. 1Department of Anthropology, McMaster University, Canada, 2Department of Anthropology, University of Toronto, Canada, 3CHUM- Centre Hospitalier de l’Universite de Montreal, Canada
Disclosures: Lelia Watamaniuk, None

SAT-0699  Machine Learned Features and Classifier for Automatic HR-pQCT Cortical and Trabecular Compartment Segmentation
Bryce A Besler*,1, Nils D Forkert2, Lauren A Burt3, Steven K Boyd4. 1Biomedical Engineering Graduate Program, Canada, 2Hotchkiss Brain Institute, Canada, 3McCaig Institute for Bone and Joint Health, Canada
Disclosures: Bryce A Besler, None

OSTEOPOROSIS – EPIDEMIOLOGY

SAT-0738  Microvascular Complications and Risk of Incident Hip Fracture in Type 2 Diabetes: A National Cohort
Po-Yin Chang*,1, Yi-Ting Wang3, Rodrigo J. Valderrábano1, Yi-Wen Tsai2, Jennifer S. Lee3. 1Stanford University School of Medicine, United States, 2National Yang-Ming University Institute of Health and Welfare Policy, Taiwan, 3University of Miami Miller School of Medicine, United States
Disclosures: Po-Yin Chang, None

SAT-0739  Cancer Patients who Suffer Fractures are Rarely Assessed or Treated for Osteoporosis: Population-based Data from Manitoba
Beatrice Edwards*,1, William Leslie2, Saeed Al-Azazi1, Lin Yan2, Lisa Lix2, Piotr Czyzykowski1, Harminder Singh1. 1Central Texas Veterans Healthcare System, United States, 2University of Manitoba, Canada, 3University of Manitoba, CancerCare Manitoba, Canada
Disclosures: Beatrice Edwards, None
SAT-0740

**ASBMR 2018 Annual Meeting Young Investigator Award**

Risk Factors for Atypical Femur Fractures in a Large, Prospective Cohort Study: A Multivariable Analysis from the Southern California Osteoporosis Cohort Study (SOCs)

Erik J. Geiger*,1, Dennis M. Black1, Bonnie H. Li2, Denison S. Ryan2, Richard M. Dell2, Annette L. Adams2. 1University of California, San Francisco, United States, 2Kaiser Permanente Southern California, United States

Disclosures: Erik J. Geiger, None

SAT-0741

**ASBMR 2018 Annual Meeting Young Investigator Award**

Treatment with Statins Is Associated with Higher Volumetric Bone Mineral Density and Lower Cortical Porosity in Older Women

Berit Larsson*,1, Anna Nilsson1, Dan Mellstrom1, Daniel Sundh1, Mattias Lorentzon2. 1Department of Geriatric Medicine, Institute of Medicine, Sahlgrenska Academy, University of Gothenburg, Sweden, 2Head of Geriatric Medicine, Institute of Medicine, Sahlgrenska Academy, University of Gothenburg, Sweden

Disclosures: Berit Larsson, None

SAT-0742


E. Michael Lewiecki*,1, Benjamin Chastek2, Kevin Sundquist3, Setareh A. Williams3, Deane Leader, Jr.4, Richard J. Weiss1, Yamei Wang1, Lorraine A. Fitzpatrick5, Jeffrey R. Curtis6.

1New Mexico Clinical Research & Osteoporosis Center, United States, 2Optum, United States, 3Radius Health, Inc., United States, 4UAB Arthritis Clinical Intervention Program, University of Alabama at Birmingham, United States


SAT-0743

**An Atlas of Human and Murine Genetic Influences on Osteoporosis**


1Department of Human Genetics, McGill University, Canada, 2University of Queensland Diamantina Institute, Translational Research Institute, Australia, 3Garvan Institute of Medical Research, Australia, 4Molecular Endocrinology Laboratory, Department of Medicine, Imperial College London, United Kingdom, 5Institute for Systems Genetics, New York University Langone Medical Center, United States, 6Centre for Clinical Epidemiology, Lady Davis Institute, Jewish General Hospital, Canada, 7Department of Research, 23andMe, United States, 8Department of Internal Medicine, Erasmus Medical Center, Netherlands, 9Department of Public Health and Primary Care, University of Cambridge, United Kingdom, 10MRC LifeCourse Epidemiology Unit, University of Southampton, United Kingdom, 11NIHR Musculoskeletal Biomedical Research Unit, Botnar Research Centre, Nuffield Department of Orthopaedics, Rheumatology and Musculoskeletal Sciences, United Kingdom, 12Department of Hygiene and Epidemiology, University of Ioannina Medical School, Greece, 13Department of Internal Medicine and Clinical Nutrition, University of Gothenburg, Sweden, 14Institute for Aging Research, Hebrew SeniorLife, United States, 15Center for Musculoskeletal Research, Department of Orthopaedics, University of Rochester, United States, 16Wellcome Trust Sanger Institute, Wellcome Genome Campus, United Kingdom

Disclosures: John Morris, None
SAT-0744  
**ASBMR 2018 Annual Meeting Young Investigator Award**  
**Risk of fracture after bariatric surgery in France: population based, retrospective cohort study**  
Julien Paccou*, Niels Martignène¹, Eric Lespessailles², Bernard Cortet¹, Grégoire Ficheur¹.  
¹Lille University Hospital, France, ²Université d’Orléans, France  
**Disclosures:** Julien Paccou, None

SAT-0745  
**Secular trends in the initiation of therapy in secondary fracture prevention: widening treatment gaps in Denmark and Spain**  
Daniel Prieto-Alhambra*, Martin Ernst², Katrine Hass Rubin², Daniel Martinez-Laguna², M Kassim Javaid³, Cyrus Cooper⁴, Cesar Libanati⁵, Emese Toth⁵, Bo Abrahamsen⁶.  
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**Disclosures:** Daniel Prieto-Alhambra, UCB, Grant/Research Support, Servier, Grant/Research Support, Pharmo Institute, Grant/Research Support, Amgen, Grant/Research Support

SAT-0746  
**Temporal Trends and Factors Associated with Bisphosphonate Drug Holidays**  
Jeffrey Curtis*, Rui Chen, Tarun Arora, Shanette Daigle, Robert Matthews, Huifeng Yun, Nicole Wright, Ayesha Jaleel, Elizabeth Delzell, Kenneth Saag. University of Alabama at Birmingham, United States  
**Disclosures:** Jeffrey Curtis, Radius, Grant/Research Support, Radius, Consultant, Amgen, Grant/Research Support, Amgen, Consultant

SAT-0747  
**Type 2 Diabetes and HR-pQCT Parameters in Older Men**  
Ann Schwartz*, Neeta Parimi¹, Andrew Burghardt¹, Mary Bouxsein¹, Elsa Strotmeyer¹, Eric Vittinghoff¹, Eric Orrwoll¹, Gina Woods¹, Dennis Black¹, Nancy Lane³, Kristine Ensrud³, Nicola Napoli⁷.  
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**Disclosures:** Ann Schwartz, None

SAT-0748  
**Cluster Analysis of High Resolution Peripheral Quantitative Computed Tomography Parameters Identifies Bone Phenotypes Associated With High Rates of Prevalent Fracture**  
Kate Ward*, Mark Edwards, Leo Westbury, Cyrus Cooper, Elaine Dennison. MRC Lifecourse Epidemiology, University of Southampton, United Kingdom  
**Disclosures:** Kate Ward, None

SAT-0749  
**Serum Estradiol, Follicle Stimulating Hormone and Sex Hormone Binding Globulin and the Risk of Fracture across the Menopausal Transition: Study of Women’s Health Across the Nation (SWAN)**  
Kristine Ruppert*, Jane Cauley¹, Yinjuan Lian¹, Joel Finkelstein², Carrie Karvonen-Gutierrez³, Sioban Harlow³, Joan Lo³, Sherri Burnett-Bowie², Arun Karlamangla³, Gail Greendale¹.  
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**Disclosures:** Kristine Ruppert, None
SAT-0750  Vertebral fractures cascade: potential etiologies and risk factors
Helene Che*, 1, Veronique Breuil1, Bernard Cortet1, Julien Paccou1, Thierry Thomas1, Laure Chapuis1, Francoise Debiais1, Nadia Mehsen Coutre2, Rose Marie Javier3, Sylvie Loiseau Peres3, Christian Roux10, Karine Briot10. 1CHU Lapeyronie Montpellier, Rheumatology department, France, 2CHU L’Archet Nice, Rheumatology department, France, 3CHU Roger Salengro Lille, Rheumatology department, France, 4CHU Nord Saint Etienne, Rheumatology department, France, 5CHU Simone Veil du Vitre, Rheumatology department, France, 6CHU La Milette Poitiers, Rheumatology department, France, 7CHU Pellegrin Bordeaux, Rheumatology department, France, 8CHU Hautepiere Strasbourg, Rheumatology department, France, 9CHR Orleans, Rheumatology department, France, 10CHU Paris Cochin, Rheumatology department, France
Disclosures: Helene Che, None

SAT-0751  Trabecular Bone Score in Healthy Adult Population of India: Chandigarh Urban Bone Epidemiological Study (CUBES)
Abhilasha Garg*, 1, Ruban Dhalwal1, Anshita Aggarwal1, Rimesh Pal1, Priyanka Singh1, Niranjan Khandelwal1, Naresh Sachdeva1, Anil Bhansali1, Sanjay Kumar Bhadada1. 1Department of Endocrinology, Post Graduate Institute of Medical Education and Research, India, 2Endocrinology, Diabetes and Metabolism, Department of Medicine, University of New York Upstate Medical University, United States, 3Department of Radiodiagnosis, Post Graduate Institute of Medical Education and Research, India
Disclosures: Abhilasha Garg, None

SAT-0752  Association between locomotive syndrome and bone mass, vertebral fractures and sarcopenia in the elderly aged 80 years and over.
Jane Erika Frazao Okazaki*, Fernanda Martins Gazoni, Daniela Regina Brandao Tavares, Maria Carolina Fonseca Batista Arbex, Lais Abreu Bastos, Flavia Kurebayashi Fonte, Maysa Seabra Cendoroglo, Fania Cristina Santos. UNIFESP, Brazil
Disclosures: Jane Erika Frazao Okazaki, None

SAT-0753  Involvement of lifestyle-related diseases in the development of fragility fracture of the proximal femur
Takashi Iwakura*, Atsushi Sakurai, Satoru Sawamura. Awaji Medical Center, Japan
Disclosures: Takashi Iwakura, None

SAT-0754  WITHDRAWN

SAT-0755  Longitudinal change of bone quality according to serum adipokine levels in Korean adults: The KoGES-ARIRANG study
Jung Soo Lim*, 1, Taehwa Go1, Daeyeong Kang1, Sang Baek Koh1. 1Department of Internal Medicine, Yonsei University Wonju College of Medicine, Republic of Korea, 2Center of Biomedical Data Science, Yonsei University Wonju College of Medicine, Republic of Korea, 3Institute of Genomic Cohort, Yonsei University Wonju College of Medicine, Republic of Korea, 4Department of Preventive Medicine, Yonsei University Wonju College of Medicine, Republic of Korea
Disclosures: Jung Soo Lim, None

SAT-0756  Pain at Multiple Sites Is Associated with Prevalent and Incident Fractures in Older Adults: a 5.1-year Follow-up Study
Feng Pan*, 1, Jing Tian1, Dawn Aitken1, Flavia Cicuttini2, Graeme Jones1. 1Menzies Institute for Medical Research, University of Tasmania, Australia, 2Department of Epidemiology and Preventive Medicine, Monash University Medical School, Australia
Disclosures: Feng Pan, None
Vitamin D Insufficiency and Elevated Vitamin D Metabolite Ratios (VMR) are Associated with Increased Risk of Injuries: Results from the British Army Lower Limb Injury Prevention (ALLIP) Study

Jonathan Tang*, Sarah Jackson*, Rachel Izard*, Samuel Oliver, Isabelle Piec, Christopher Washbourne, Neil Walsh, Julie Greeves, William Fraser. 1University of East Anglia, United Kingdom, 2Army Personnel and Research Capability, United Kingdom, 3Army Recruiting and Training Division, United Kingdom, 4University of Bangor, United Kingdom, 5Bangor University, United Kingdom

Disclosures: Jonathan Tang, None

Greater Bone Marrow Adiposity Predicts Loss of Spine Compressive Strength and Trabecular Bone in Postmenopausal Women from the AGES-Reykjavik Study

Gina Woods*, Susan Ewing, Deborah Kado, Trisha Hue, Sigurdur Sigurdsson, Gudny Eiriksdottir, Vilhundur Gudnason, Eric Vittinghoff, Thomas Lang, Tamara Harris, Clifford Rosen, Kaipin Xu, Xiaojuan Li, Ann Schwartz. 1Department of Medicine, UCSD, United States, 2Department of Epidemiology, UCSF, United States, 3Department of Epidemiology and Biostatistics, UCSF, United States, 4Icelandic Heart Association, Iceland, 5National Institute on Aging, United States, 6Maine Medical Center Research Institute, United States, 7Program of Advanced Musculoskeletal Imaging, Cleveland Clinic, United States

Disclosures: Gina Woods, None

Meta-analysis of Lithium use on the Risk of Fracture in Epidemiological Studies

Qing Wu*, Bowen Liu, Shu Zhang. 1University of Nevada, Las Vegas, United States

Disclosures: Qing Wu, None

OSTEOPOROSIS - HEALTH SERVICES RESEARCH

ASBMR 2018 Annual Meeting Young Investigator Award

The Long-term Impact of Incident Low-trauma Fractures on Health-related Quality of Life of Older People: The Canadian Multicentre Osteoporosis Study

Asm Borhan*, Alexandre Papaioannou, Olga Gajic-Veljanoski, Courtney Kennedy, George Ioannidis, Claudie Berger, Wilma Hopman, David Goltzman, Robert Josse, Christopher S Kovacs, David A Hanley, Jerilynn C Prior, Suzanne N Morin, Stephanie M Kaiser, Angela M Cheung, Lehana Thabane, Jonathan D Adachi, The Camos Research Group. 1McMaster University & GERAS Centre, Canada, 2GERAS Centre, Canada, 3Camos – McGill University, Canada, 4Kingston General Hospital, Canada, 5McGill University, Canada, 6St. Michael Hospital, Canada, 7Memorial University of Newfoundland, Canada, 8University of Calgary, Canada, 9University of British Columbia, Canada, 10Dalhousie University, Canada, 11University of Toronto & University Health Network, Canada, 12McMaster University & St. Joseph’s Healthcare Hamilton, Canada

Disclosures: Asm Borhan, None

Inappropriate Use of Cost-effectiveness Thresholds as Intervention Thresholds – Potential for Overtreatment of Low Risk Individuals

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Disclosures: Eugene Mccloskey, None

Bending the Curve with Patient Identification and Treatment in Osteoporosis

E. Michael Lewiecki*, Jesse D. Ortendahl, Jacqueline Vanderpuye-Orgle, Andreas Grauer, Amanda L. Harmon, Andrea J. Singer. 1New Mexico Clinical Research & Osteoporosis Center, United States, 2Partnership for Health Analytic Research, LLC, United States, 3Amgen Inc., United States, 4Georgetown University Hospital, United States

Disclosures: E. Michael Lewiecki, New Mexico Clinical Research & Osteoporosis Center, Other Financial or Material Support, Mereo, Grant/Research Support, Sandoz, Consultant, PFEnex, Grant/Research Support, Ultragenyx, Consultant, Shire, Consultant, Shire, Speakers’ Bureau, Amgen, Consultant, Amgen, Grant/Research Support, Radius, Speakers’ Bureau, Radius, Consultant, Alexion, Consultant, Alexion, Speakers’ Bureau
SAT-0807 HIP Mobile: A community-based Monitoring, Rehabilitation and Learning e-system for patients following a Hip Fracture
Ahmed Abou-Sharkh*, Nancy E. Mayo1, Michelle Wall1, Anthony Albers2, Stephane Bergeron1, Sonia Jean3, Pierre Berube3, Edward J. Harvey1, Suzanne N. Morin1. 1Research Institute of McGill University Health Center, Canada, 2St-Mary’s Hospital, Canada, 3Jewish General hospital, Canada, 4Institut national de sante publique du Quebec, Canada, 5Greybox Solutions, Canada
Disclosures: Ahmed Abou-Sharkh, None

SAT-0808 Time trends among new users of osteoporosis drugs over 20 years: considerations for pharmacoepidemiologic study design
Kleen Hayes*, Joann Ban1, Grace Athanasiadis1, Andrea Burden3, Suzanne Cadarette1. 1University of Toronto, Canada, 2ETH Zurich, Switzerland
Disclosures: Kleen Hayes, None

SAT-0809 Reasons for not-attending the FLS: a survey among non-attenders based on home visits and questionnaires
Peter Van Den Berg*, Dave Schweitzer1, Paul Van Haard1, Joop Van Den Bergh2, Piet Geusens3. 1Reinier de Graaf Gasthuis, Netherlands, 2Maastricht University Medical Center, VieCuri Medical Centre Noord-Limburg, Netherlands, 3Maastricht University Medical Center, Hasselt University, Netherlands
Disclosures: Peter Van Den Berg, None

SAT-0810 Improvement in the primary and secondary prevention of osteoporosis by a Fracture Liaison Service: feedback from a single French center care pathway
Arthur Vrignaud*, Simon Pelletier, Emmanuelle Dernis, Yvon Moui, Bénédicte Haettich. Le Mans General Hospital, France
Disclosures: Arthur Vrignaud, None

OSTEOPOROSIS - NUTRITION, DIETARY SUPPLEMENTS AND PHYSICAL ACTIVITY

SAT-0824 ASBMR 2018 Annual Meeting Young Investigator Award
The Calgary Vitamin D Study: Safety of Three-Year Supplementation With 400, 4000 or 10000 IU Daily
Emma O Billington*, Lauren A Burt1, Erin M Davison1, Marianne S Rose2, Sharon Gaudet1, Michelle Kan1, Steven K Boyd1, David A Hanley1. 1McCaig Institute for Bone and Joint Health, Cumming School of Medicine, University of Calgary, Canada, 2Research Facilitation, Alberta Health Services, Canada
Disclosures: Emma O Billington, None

SAT-0825 Natural history of maternal urinary β-C-terminal telopeptide of type I collagen (CTX) in pregnancy, and response to cholecalciferol supplementation: findings from the MAVIDOS trial
Elizabeth Curtis*, Camille Parsons1, Kate Maslin1, Stefania D’Angelo1, Rebecca Moon1, Sarah Crozier1, Fatma Gossiel1, Nicholas Bishop3, Stephen Kennedy4, Aris Papageorgiou4, Robert Fraser5, Saurabh Gandhi5, Ann Prentice6, Hazel Inskip6, Keith Godfrey6, Inez Schoenmakers6, M Kassim Javad6, Richard Eastell6, Cyrus Cooper1, Nicholas Harvey1. 1MRC LifeCourse Epidemiology Unit, University of Southampton, Southampton, United Kingdom, 2Academic Unit of Bone Metabolism, University of Sheffield, Sheffield, United Kingdom, 3Academic Unit of Child Health, Sheffield Children’s Hospital, University of Sheffield, Sheffield, United Kingdom, 4Nuffield Department of Women’s & Reproductive Health, John Radcliffe Hospital, University of Oxford, Oxford, United Kingdom, 5Department of Obstetrics and Gynaecology, Sheffield Hospitals NHS Trust, University of Sheffield, Sheffield, United Kingdom, 6MRC Human Nutrition Research, Elsie Widdowson Laboratory, Cambridge, United Kingdom, 7National Institute for Health Research (NIHR) Oxford Biomedical Research Centre, University of Oxford, United Kingdom
Disclosures: Elizabeth Curtis, None
SAT-0826 The association of breastfeeding, maternal smoking, birth weight and maternal diet with bone density and microarchitecture in young adulthood: a 25-year longitudinal study
Yi Yang*, Feitong Wu, Terry Dwyer, Tania Winzenberg, Graeme Jones. 1Menzies Institute for Medical Research, University of Tasmania, Australia, 2The George Institute for Global Health, University of Oxford, United Kingdom
Disclosures: Yi Yang, None

SAT-0827 Effect of High-Dose Vitamin D on Bone Microarchitecture assessed via High Resolution Peripheral Quantitative Computed Tomography (HR-pQCT): a Double-Blind RCT
Ursina Meyer*, Ursula Heilmeier, Robert Theiler, Andreas Egli, Heike A. Bischoff-Ferrari. 1Centre on Aging and Mobility, Department of Geriatrics and Aging Research, University Hospital Zurich and Zurich of University, Switzerland, 2Department of Geriatrics and Aging Research, University Hospital Zurich and Zurich of University, Switzerland
Disclosures: Ursina Meyer, None

SAT-0828 Vitamin D Status, Bone Quality and Long-Term Risk for Fracture-related Hospitalization in Older Women
Kun Zhu*, Joshua Lewis, Marc Sim, Richard Prince. 1Department of Endocrinology and Diabetes, Sir Charles Gairdner Hospital, Australia, 2School of Medical and Health Sciences, Edith Cowan University, Australia, 3Medical School, University of Western Australia, Australia
Disclosures: Kun Zhu, None

SAT-0829 High dietary calcium intakes in men, not women, are associated with increased all-cause mortality: the Melbourne Collaborative Cohort Study
Alexander Rodriguez*, David Scott, Belal Khan, Allison Hodge, Dallas English, Graham Giles, Bo Abrahamson, Peter Ebeling. 1Monash University, Australia, 2University of Melbourne, Australia, 3Cancer Council Victoria, Australia, 4University of Southern Denmark, Denmark
Disclosures: Alexander Rodriguez, None

SAT-0830 Response of Common Genetic variants of Vitamin D Binding Protein (DBP) to vitamin D supplementation in Saudi adults
Nasser Al-Daghri*. King Saud University, Saudi Arabia
Disclosures: Nasser Al-Daghri, None

SAT-0831 Female recruits with the lowest baseline bone strength have the greatest increases in bone strength following 8 weeks of U.S. Army Basic Combat Training
Katelyn Guerriere*, Julie Hughes, Erin Gaffney-Stomberg, Kathryn Taylor, Kristin Popp, Chun Xu, Gini Unnikrishnan, Mary Bouxsein, Jaques Reifman. 1USARIEM, United States, 2MGH, United States, 3BHSAI, United States
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SAT-0832 Effect of high impact exercise on femoral neck bone mineral density and T2 relaxation times of articular cartilage in postmenopausal women
Chris Hartley*, Robert Kerslake, Jonathan Folland, Katherine Brooke-Wavell. 1NCSEM, School of Sports and Exercise Science, Loughborough University, United Kingdom, 2Nottingham University Hospital NHS Trust, United Kingdom
Disclosures: Chris Hartley, None

SAT-0833 Association of trabecular bone score and bone density with actigraphy-measured physical activity in NHANES 2005-2006
Rajesh Jain*, Meltem Zeytinoglu, Tamara Vokes. 1Lewis Katz School of Medicine at Temple University, United States, 2University of Chicago Medicine, United States
Disclosures: Rajesh Jain, None
SAT-0834 Dairy Intake and Its Associations with Bone Mineral Density and Trabecular Bone Score in the VITamin D and OmegA-3 Trial (VITAL)  
Meryl Leboff*,1,2, Catherine Donlon1, Nancy Cook2,3,4, Sharon Chou1,2, Julie Buring2,3,4, Joann Manson2,3,4. 1Division of Endocrinology, Diabetes and Hypertension, Brigham and Women’s Hospital, United States, 2Harvard Medical School, United States, 3Department of Epidemiology, Harvard T.H. Chan School of Public Health, United States, 4Division of Preventive Medicine, Brigham and Women’s Hospital  
Disclosures: Meryl Leboff, None  

SAT-0835 Vitamin D status and its associated factors in Taiwanese healthy adults  
Yi-Chin Lin*, Yi-Wen Cheng. Deparment of Nutrition, Chung Shan Medical University, Taiwan  
Disclosures: Yi-Chin Lin, None  

OSTEOPOROSIS – PATHOPHYSIOLOGY  

SAT-0859 A greater weight loss reduces lumbar spine trabecular bone score in the obese, and this is not influenced by vertebral body structural defects  
Julia Amariti*,1, Stephen Schneider2, Karen Hansen3, Yvette Schlussel1, Sue Shapses1. 1Rutgers University, United States, 2Rutgers Robert Wood Johnson Medical School, United States, 3University of Wisconsin School of Medicine and Public Health, United States  
Disclosures: Julia Amariti, None  

SAT-0860 Identification of Cellular Senescence and Senescent Secretory Markers as Major Etiologies Underlying Radiotherapy Related Bone Damage  
Abhishek Chandra*, Joshua Farr, David Monroe, Rebekah Samsonraj, Haitao Wang, Susan Law, SundeeKhosla, Robert Pignolo. Mayo Clinic, United States  
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SAT-0861 Identification and Characterization of lncRNA-DBD in Diabetic Bone Metabolism  
Zhekai Hu*, Qisheng Tu, Jake Chen1,2. 1Division of Oral Biology Tufts University School of Dental Medicine, United States, 2Department of Developmental, Molecular and Chemical Biology Sackler School of Graduate Biomedical Sciences Tufts University School of Medicine, United States  
Disclosures: Zhekai Hu, None  

SAT-0862 Estrogen depletion alters regulation of mineralization at actively forming osteonal surfaces in a monkey animal model  
Eleftherios P. Paschalis*,1, Sonja Gamsjaeger1, Stamata Rokidi1, Keith Condon2, Klaus Klaushofer1, David Burr2. 1Ludwig Boltzmann Institute of Osteology at the Hanusch Hospital of WGGK and AUV Trauma Centre Meidling, 1st Medical Department, Hanusch Hospital, Heinrich Collin Str. 30, A-1140, Austria, 2Indiana University, School of Medicine, United States  
Disclosures: Eleftherios P. Paschalis, None  

SAT-0863 Bilirubin promotes down-regulation of RUNX2 and up-regulation of RANKL gene expression in bone explants and in osteoblastic and osteocytic cell lines  
Silvia Ruiz-Gaspà*, Albert Parés, Andrés Combalia, Pilar Peris, Ana Monegal, Núria Guañabens. Metabolic Bone Diseases and Liver Units, Hospital Clinic, IDIBAPS, CIBERehd, University of Barcelona, Barcelona, Spain  
Disclosures: Silvia Ruiz-Gaspà, None  

SAT-0864 Effects of hydroxyapatite/collagen complex on bone formation at osteotomy site of proximal tibia after povidone-iodine or ethanol exposure in ovariectomized rats  
Itsuki Nagahata*, Naohisa Miyakoshi, Yuji Kasukawa, Yûichi Ono, Manabu Akagawa, Yusuke Yuasa, Chiaki Sato, Yoichi Shimada. Akita University graduate school of medicine, Japan  
Disclosures: Itsuki Nagahata, None
OSTEOPOROSIS - SECONDARY OSTEOPOOROSIS

SAT-0877  Low bone mineral density remains highly prevalent in adolescents despite height adjustment: results from the Sickle Cell Clinical Research and Intervention Program (SCCRIP) pediatric cohort
Oyebimpe Adesina*1, Guolian Kang2, Martha Villavicencio1, Jason Hodges1, Wassim Chemaitilly4, Sue Kaste1, James Gurney6, Babette Zemel1, Jane Hankins1. 1Division of Hematology, University of Washington School of Medicine, United States, 2Department of Biostatistics, St. Jude Children’s Research Hospital, United States, 3Department of Hematology, St. Jude Children’s Research Hospital, United States, 4Department of Pediatric Medicine, Division of Endocrinology, St. Jude Children’s Research Hospita, United States, 5Department of Radiological Sciences, St. Jude Children’s Research Hospital, United States, 6School of Public Health, University of Memphis, United States, 7Division of Gastroenterology, Hepatology and Nutrition, Children’s Hospital of Philadelphia, United States
Disclosures: Oyebimpe Adesina, None

SAT-0878  Hyponatremia Induced Osteoporosis
Julianna Barsony*, Qin Xu, Joseph G. Verbalis. Georgetown University, United States
Disclosures: Julianna Barsony, None

SAT-0879  Bone histomorphometric effects of HIV infection and Antiretroviral therapy
Janaina Ramalho*1, Csw Martins1, Rmr Pereira1, Thomas Nickolas2, Mt Yin2, J Galvão2, Margaret Eira1, Lm Reis1, Luzia Furukawa1, Vanda Jorgetti1, Rm Moyeses1. 1Universidade de São Paulo, Brazil, 2Columbia University, United States, 3UNINOVE, Brazil, 4Instituto de Infectologia Emilio ribas, Brazil
Disclosures: Janaina Ramalho, None

SAT-0880  Low daily dose of glucocorticoids induces trabecular and cortical bones impairment at the femur: a 3D analysis using DXA-based modeling.
Arnau Manasanch Berengué *1, Renaud Winzenrieth1, Ludovic Humbert1, Edward Leib2. 1Galgo Medical SL, Spain, 2Dept. of Medicine, University of Vermont College of Medicine, United States
Disclosures: Arnau Manasanch Berengué , Galgo Medical, Other Financial or Material Support

SAT-0881  Absence of Alpha-Synuclein (Snca) Protects Against Ovariectomy-Induced Weight Gain and Bone Loss by Independent Mechanisms.
Carolina Figueroa*1, Clifford Rosen1, Charles Farber2, Gina Calabrese2, Victoria Demambro1. 1Maine Medical Center Research Institute, United States, 2University of Virginia, United States
Disclosures: Carolina Figueroa, None

SAT-0882  Low Bone Density and Fragility Fractures as the Initial Presentation of Hemochromatosis: Two Case Reports
Yi Liu*1, Joseph Lane1, Raymond Pastore2, Dorothy Fink1. 1Hospital for Special Surgery, United States, 2New York Presbyterian Hospital, Weill Cornell Medical College, United States
Disclosures: Yi Liu, None

SAT-0883  Effect of Parathyroidectomy versus Antiresorptive Treatment on Bone Mineral Density in Osteoporotic Postmenopausal Women with Primary Hyperparathyroidism
Tomaz Kocjan*1, Gaj Vidmar 2, Andrej Janez1, Sonka Jazbinsk3, Katarina Remec3, Mojca Jensterle Sever1. 1University Medical Centre Ljubljana, Slovenia, 2University Rehabilitation Institute Republic of Slovenia, Slovenia, 3Medical Faculty Ljubljana, Slovenia
Disclosures: Tomaz Kocjan, None
SAT-0884  Glucocorticoid-induced osteoporosis induced poor bone quality, low bone mineral density, low muscle mass and high low back pain
Tomohisa Koyama*,1, Masayuki Miyagi1, Sho Inoue1, Shuichiro Tajima1, Kosuke Murata1, Ayumu Kawakubo1, Yui Uekusa1, Yuki Yokozeki1, Hisako Fujimaki1, Daisuke Ishi1, Koji Ishikawa2, Seiji Ohtori1, Kazuhide Inage1, Kentaro Uchida1, Gen Inoue1, Masashi Takaso1, 1Department of Orthopedic Surgery, Kitasato University, School of Medicine, Japan, 2Department of Orthopedic Surgery, Showa University, School of Medicine, Japan, 3Department of Orthopedic Surgery, Chiba University, Graduate School of Medicine, Japan
Disclosures: Tomohisa Koyama, None

SAT-0885  BONE STATUS OF PATIENTS WITH CHRONIC KIDNEY DISEASE STAGE 5 (CKD5) WAIT-LISTED FOR KIDNEY TRANSPLANTATION IS POORLY EVALUATED BY DXA
Vanessa Lapierre*,1, Martin Jannot1, Myriam Normand1, Pawel Szulc2, Elisabeth Sornay-Rendu2, Thierry Thomas1, Christophe Mariat1, Roland Chapurlat2, Marie-Hélène Lafage-Proust1. 1INSERM 1059, Université de Lyon, France, 2INSERM 1033, Université de Lyon, France, 3NEPHROLOGY DPT, CHU ST-ETIENNE, France
Disclosures: Vanessa Lapierre, None

SAT-0896  Skeletal Consequences of Nephropathic Cystinosis
Pablo Florenzano*,1,2, Carlos Ferreira3, Galina Nesterova2, Mary Scott Roberts3, Sri Harsha Tellia3, Luis Fernandez De Castro2, Sydney M. Brown4, Adom Whitaker4, Renata C. Pereira4, Dorothy Bulas6, Rachel I. Gafni4, Isidro B. Salusky3, William A. Gahl3, Michael T. Collins4. 1Skeletal Diseases and Mineral Homeostasis Section, National Institute of Dental and Craniofacial Research, NIH, United States, 2Department of Endocrinology, School of Medicine. Pontificia Universidad Catolica de Chile., United States, 3Medical Genetics Branch, National Human Genome Research Institute. NIH, United States, 4Skeletal Disorders and Mineral Homeostasis Section, National Institutes of Dental and Craniofacial Research, NIH, United States, 5Division of Nephrology, Department of Pediatrics, David Geffen School of Medicine at University of California, Los Angeles, United States, 6Division of Radiology, Children’s National Health System, United States
Disclosures: Pablo Florenzano, None

OSTEOPOROSIS – TREATMENT

SAT-0902  Efficacy of Teriparatide Compared With Risedronate on FRAX®-defined Major Osteoporotic Fractures: A Post-hoc Analysis of the VERO Clinical Trial
Jean-Jacques Body*,1, Fernando Marin2, Piet Geusens3, Cristiano Zerbini4, Astrid Fahrleitner-Pammer5, Ruediger Moericke6, Enrique Casado7, Jan Stepan8, Salvatore Minisola9, Eric Lespessailles10, Pedro López-Romero10, David Kendler11, 1CHU Brugmann, ULB, Belgium, 2Lilly Research Center Europe, Spain, 3Maastricht University Medical Center, Netherlands, 4Centro Paulista de Investigacao Clinica, Brazil, 5Division of Endocrinology, Medical University of Graz, Austria, 6Institut Präventiv Medizin & Klinische Forschung, Germany, 7University Hospital Parc Tauli Sabadell (UAB), Spain, 8Institute of Rheumatology and Faculty of Medicine 1, Charles University, Czech Republic, 9Sapienza Rome University, Italy, 10Regional Hospital, University of Orleans, France, 11University of British Columbia, Canada
Disclosures: Jean-Jacques Body, Eli Lilly and Company, Grant/Research Support, Amgen, Speakers’ Bureau

SAT-0903  Association of Alendronate and Risk of Cardiovascular Events in Patients with Hip Fracture
Ching-Lung Cheung*,1, Chor-Wing Sing1, Angel Wong2, Douglas Kiel3, Elaine Cheung4, Joanne Lam3, Tommy Cheung5, Esther Chan6, Annie Kung7, Ian Wong2. 1The University of Hong Kong, Hong Kong, 2Hebrew SeniorLife, Harvard Medical School, United States, 3United Christian Hospital, Hong Kong, 4Queen Mary Hospital, Hong Kong, 5UCL School of Pharmacy, United Kingdom
Disclosures: Ching-Lung Cheung, None
SAT-0904 Exploring a Teriparatide and Denosumab Sequencing Option: 18 month Interim Results
Felicia Cosman*1, David Dempster2, Donald Mcmahon3, Jeri Nieves1,2. 1Columbia University, United States, 2Helen Hayes Hospital, United States
Disclosures: Felicia Cosman, Amgen, Grant/Research Support, Radius, Speakers' Bureau, Amgen, Speakers' Bureau, Eli Lilly, Speakers' Bureau, Amgen, Consultant, Eli Lilly, Consultant, Radius, Consultant, Eli Lilly, Grant/Research Support

SAT-0905 Treatments for Osteoporosis Do Not Reduce Overall Mortality
Steven R. Cummings*1, Li-Yung Lui1, Douglas C. Bauer2, Dennis M. Black2. 1San Francisco Coordinating Center, CPMC Research Institute, United States, 2San Francisco Coordinating Center, University of California San Francisco, United States
Disclosures: Steven R. Cummings, Amgen, Consultant, Amgen, Grant/Research Support

SAT-0906 Effect of Denosumab Versus Risedronate on Cortical and Trabecular Bone Microarchitecture by High Resolution Peripheral Quantitative Computed Tomography (HR-pQCT) in Glucocorticoid-treated Individuals
Piet Geusens*1, Stefan Goemaere2, Nico Pannacciulli1, Nancy Lane1, Eric Lespessailles3, Osvaldo D. Messina1, Roland Chapurlat1, Xiang Yin1, Rachel B. Wagman1, Joop Pw Van Den Bergh1. 1Maastricht University Medical Center, Netherlands, 2Ghent University Hospital, Belgium, 3Amgen Inc., United States, 4University of California, Davis, United States, 5University Hospital Orleans, France, 6Cosme Argerich Hospital, Argentina, 7Hôpital Edouard Herriot, France
Disclosures: Piet Geusens, Pfizer, Abbott, Lilly, Amgen, MSD, Will, Roche, UCB, BMS, Celgene, Novartis, Grant/Research Support, Amgen, Lilly, Consultant, Pfizer, Abbott, Lilly, Amgen, MSD, Will, Roche, UCB, BMS, Celgene, Novartis, Speakers’ Bureau

SAT-0907 Abaloparatide Effect on Bone Mineral Density and Fracture Incidence in Postmenopausal Women with Osteoporosis Aged 80 Years or Older: Results from the ACTIVExtend Phase 3 Trial
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Disclosures: Susan Greenspan, NIH, Grant/Research Support, Lilly, Grant/Research Support, Amgen, Grant/Research Support, PCORI, Grant/Research Support

SAT-0908 Treatment gap following clinical vertebral fracture in the International Cost and Utility Related to Osteoporosis Fractures Study (ICUROS)
Mattias Lorentzon*1, Helena Johansson2,3, Nicholas C Harvey4, Anders Odén5, Kerrie Sanders6, Fredrik Borgström7, Axel Svedbom7, Eugene Mccluskey2,3, John Kanis2,3. 1Geriatric Medicine, Department of Internal Medicine and Clinical Nutrition, Institute of Medicine, Sahlgrenska Academy, University of Gothenburg, Gothenburg and Geriatric Medicine Clinic, Sahlgrenska University Hospital, Möln达尔, Sweden, 2Centre for Metabolic Bone Diseases, University of Sheffield, Sheffield, UK, Sweden, 3Institute for Health and Aging, Catholic University of Australia, Melbourne, Australia, 4MRC Lifecourse Epidemiology Unit, University of Southampton, Southampton and NIHR Southampton Biomedical Research Centre, University of Southampton and University Hospital Southampton NHS Foundation Trust, Southampton, United Kingdom, 5Department of Medicine, The University of Melbourne and Western Health, Sunshine Hospital, Melbourne, Australia, 6LIME/MMC, Karolinska Institutet, Stockholm, Sweden, 7Mapi, Stockholm, Sweden, 8Mellanby Centre for bone research, Department of Oncology and Metabolism, University of Sheffield, Sheffield, United Kingdom
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SAT-0909  A Pooled Analysis of Fall Incidence from Placebo-controlled Trials of Denosumab
Eugene Mcloskey*, Richard Eastell1, Michael Mcclung2, Nico Pannacciulli3, Christine Wang4, Susan Yue5, Steven R. Cummings6. 1The University of Sheffield, United Kingdom, 2Oregon Osteoporosis Center, United States, 3Amgen Inc., United States, 4San Francisco Coordinating Center, United States
Disclosures: Eugene Mcloskey, Warner Chilcott, Grant/Research Support, Servier, Grant/Research Support, GSK, Consultant, Consilient Healthcare, Consultant, Syneux, Consultant, Amgen, Consultant, Hologic, Grant/Research Support, Tethys, Grant/Research Support, UCB, Consultant, Sanofi-Aventis, Grant/Research Support, Pfizer, Other Financial or Material Support, Roche, Grant/Research Support, Lilly, Grant/Research Support, AstraZeneca, Other Financial or Material Support, Syneux, Grant/ Research Support, Internis, Other Financial or Material Support, Amgen, Other Financial or Material Support, Consilient Healthcare, Other Financial or Material Support, Novartis, Grant/Research Support, Pfizer, Grant/Research Support, IOF, Grant/Research Support, MRC, Grant/Research Support, GSK, Grant/Research Support, ActiveSignal, Grant/Research Support, AR UK, Grant/Research Support, Roche, Other Financial or Material Support, Consilient Healthcare, Grant/Research Support, Medtronic, Grant/Research Support, GSK, Other Financial or Material Support, Internis, Grant/Research Support, Amgen, Grant/Research Support, Servier, Other Financial or Material Support, Lilly, Other Financial or Material Support, Merck, Grant/Research Support, UCB, Grant/Research Support, Hologic, Other Financial or Material Support, AstraZeneca, Grant/Research Support. 13 Innovus, Grant/Research Support, ActiveSignal, Consultant, UCB, Grant/Research Support, Unilever, Grant/Research Support

SAT-0910  Teriparatide accelerates proximal humerus fracture consolidation – the TERAFRAP study
Christian Mutschitz*, Judith Haschka1, Georg Langs2, Markus Holzer2, Andreas Baierl1, Christoph Pümpel1, Zora Messner1, Roland Kocijan1, Xaver Feichtinger1, Rainer Mittermayer1, Jakob E. Schanda1, Thomas Hausner1, Robert Wakolbinger1, Jochen Schmidsfeld6, Christian Fialka2, Wolfgang Schima1, Heinrich Resch1. 1St. Vincent Hospital – Medical Department II – VINFORCE; Academic Teaching Hospital of the Medical University of Vienna, Stumpergasse 13, 1060 Vienna, Austria, 2Medical University of Vienna, Department of Biomedical Imaging and Image-guided Therapy, Computational Imaging Research Lab, Währinger Gürtel 18-20, 1090 Vienna, Austria, 3University of Vienna, Department of Statistics and Operations Research, Oskar-Morgenstern-Platz 1, 1090 Vienna, Austria, 4AUA Trauma Center Meidling, Kundratstrasse 37, 1120 Vienna, Austria, 5AUA Trauma Center Lorenz Böhler, Donauauehingenstraße 13, 1200 Vienna, Austria, 6Social Medicine Center East, Department of Traumatology, Langobardenstrasse 122, 1220 Vienna, Austria, 7St. Vincent Hospital – Department of Diagnostic and Interventional Radiology; Academic Teaching Hospital of the Medical University of Vienna, Stumpergasse 13, 1060 Vienna, Austria
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SAT-0911  Localization of Prefracture Lesions in Atypical Femoral Fracture on Straight and Bowed Femurs
Young Chang Park*, Kyu Hyun Yang2. 1International St. Mary’s Hospital, Catholic Kwandong University College of Medicine, Republic of Korea, 2Yonsei University College of Medicine, Republic of Korea
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SAT-0913  Persistence with Buffered Solution of Alendronate 70mg: Prospective Observational Study
Andrea Giusti*, Dennis M Black2, Antonella Barone1, Josef Hruska1, Gerolamo Bianchi1. 1La Colletta Hospital, Italy, 2University of California San Francisco, United States, 3Galliera Hospital, Italy, 4EffRx Pharmaceuticals, Switzerland
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SAT-0914  Effect of Prevalent Vertebral Fractures on Incidental Vertebral Fractures and Low Back Pain During Bisphosphonate Treatment for Osteoporosis
Yuji Kasukawa*, Naohisa Miyakoshi1, Toshitomo Ebini2, Michio Hongo1, Koji Nozaka1, Yoshinori Ishikawa1, Hiroyuki Tsuchie1, Daisuke Kudo1, Yoichi Shimada1. 1Department of Orthopedic Surgery, Akita University Graduate School of Medicine, Japan, 2Department of Orthopedic Surgery, Kakunodate General Hospital, Japan
Disclosures: Yuji Kasukawa, None
The impact of switching once-weekly teriparatide to denosumab in severe osteoporosis patients
Masayuki Miyagi*, Kosuke Murata, Tomohisa Koyama, Hisako Fujimaki, Koji Naruse, Gen Inoue, Masashi Takaso. Department of Orthopedic Surgery, Kitasato University School of Medicine, Japan  
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Effects of Intravenous Ibandronate among Patients with Insufficient Changes to Bone Resorption Markers after Oral Bisphosphonate Monotherapy
Naohisa Miyakoshi*, Yuji Kasukawa1, Michio Hongo1, Akira Horikawa2, Yoichi Shimada1.  
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The Impact of Prior Bisphosphonate Treatment on Weekly Teriparatide for Severe Osteoporosis
Kosuke Murata*, Tomohisa Koyama, Masayuki Miyagi, Eiki Shirasawa, Shuichiro Tajima, Ayumu Kawakubo, Yui Uekusa, Hiroki Saito, Maho Tsuchiya, Yusuke Mimura, Masahiro Yoneda, Koji Naruse, Kentaro Uchida, Gen Inoue, Masashi Takaso. Department of Orthopedic Surgery, Kitasato University, School of Medicine, Japan  
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Denosumab was superior to teriparatide to improve bone mineral density in patients with rheumatoid arthritis; 18 months of follow-up
Tokutaro Okawa*, Motomi Okawa1, Shuhei Ueno2, Eri Narita2, Tatsuya Koike2.  
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2Search Institute for Bone and Arthritis Disease, Shirahama Foundation for Health and Welfare, Japan  
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Comparative Analysis of new adjacent and remote fracture after vertebroplasty: survivorship analysis of 205 patients
Ye Soo Park*, Jaedong Kim1, Jin-Sung Park2, Woong Hwan Choi3.  
1Hanyang University Guri Hospital, Republic of Korea,  
2Korea University Ansan Hospital, Republic of Korea,  
3Hanyang University Hospital, Republic of Korea  
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The mechanical properties of human trabecular bone accompanying one to twenty years of bisphosphonate treatment.
David Pienkowski*, Constance Wood, Hartmut Malluche. University of Kentucky, United States  
Disclosures: David Pienkowski, None

Effectiveness of Monthly Intravenous Ibandronate Injections in a Real-World Setting: Subgroup Analysis of a Post-Marketing Observational Study
Yasuhiro Takeuchi*, Junko Hashimoto2, Hiroyuki Kakihaya2, Yosuke Nishida2, Michiko Kumagai2, Chiemi Yamagiwa2.  
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Pharmacogenomics study of denosumab
Victoria Ho-Yee Wong*, Vincent Ka-Fai Cheng, Grace Koon-Yee Lee, Ching-Lung Cheung. The University of Hong Kong, Hong Kong  
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PARACRINE REGULATORS

Beta 2 Adrenergic Receptor Gene Deletion Enhances Periosteal Response to Mechanical Stimulation in Senescent Male Mice
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Disclosures: Sundar Srinivasan, None
SAT-0963  **Plasminogen is Critical for Bone Fracture Repair by Promoting the Functions of Mesenchymal Progenitors**

Luqiang Wang1, Zhenqiang He1, Duan Hao1, Richard Mitteer2, Yanqing Gong1, Ling Qin1. 1Department of Orthopaedic Surgery, Perelman School of Medicine, University of Pennsylvania, United States, 2Division of Translational Medicine and Human Genetics, Perelman School of Medicine, University of Pennsylvania, United States, 3Radiation Oncology and Neurosurgery, Perelman School of Medicine, University of Pennsylvania, United States, 4Division of Translational Medicine and Human Genetics, Perelman School of Medicine, University of Pennsylvania, United States

**Disclosures:** Luqiang Wang, None

SAT-0964  **Racially determined, serum-mediated resistance to 25-hydroxyvitamin D induced innate immune responsivity in human macrophages**

Rene Chun1, Carter Gottlieb1, Kathryn Zavala1, Albert Shieh1, Andrea Salinas1, Vahe Yacoubian1, Samya Konda1, Jefferey Wang1, Martin Hewison2, Philip Liu1, John Adams3. 1Department of Orthopaedic Surgery, UCLA, United States, 2Institute of Metabolism and Systems Research, University of Birmingham, United Kingdom, 3Departments of Orthopaedic Surgery and Molecular, Cell and Developmental Biology, UCLA, United States

**Disclosures:** Rene Chun, None

SAT-0965  **WITHDRAWN**

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**PRECLINICAL MODELS: NUTRITION AND PHARMACOLOGY**

SAT-0973  **Strain-Specific Response of Inbred Mice to PTH Suggests Significant Genetic Control of the Bone Anabolic Response to Drug Therapy**

Douglas Adams1, Olivia Hart1, Renata Rydzik1, Dana Godfrey2, Michael Zusick2, Cheryl Ackert-Bicknell2. 1University of Connecticut, United States, 2University of Rochester, United States

**Disclosures:** Douglas Adams, None

SAT-0974  **AZP-3404, a Short Peptide Derived from Insulin-like Growth Factor Binding Protein 2 (IGFBP-2), Ameliorates Metabolic Status and Trabecular Bone in Aged-Ovariectomized (OVX) Mice**

Thomas Delale1, Stephane Milano1, Victoria Demambro2, David R Clemmons3, Clifford J Rosen2, Thierry Abribat1. 1Alizé Pharma 3, France, 2Maine Medical Center, United States, 3NPT Inc, United States

**Disclosures:** Thomas Delale, None

SAT-0975  **AZP-3404, a Short Peptide Derived from Insulin-like Growth Factor Binding Protein 2 (IGFBP-2), Improves Trabecular Bone in Ovariectomized (OVX) Mice**

Thomas Delale1, Stephane Milano1, David R Clemmons2, Clifford J Rosen2, Thierry Abribat1. 1Alizé Pharma 3, France, 2Maine Medical Center, United States, 3NPT Inc, United States

**Disclosures:** Thomas Delale, None

SAT-0976  **A Novel Bone Anabolic Conjugated Drug (C3) Can Rebuild Bone in an Ovariectomized (OVX) Rat Model: A Novel Approach for Reversing Osteoporotic Bone Loss**

Marc Grynpas1, Zeeshan Sheikh2, Robert Young1. 1Sinai Health System, Canada, 2University of Toronto, Canada, 3Simon Fraser University, Canada

**Disclosures:** Marc Grynpas, None

SAT-0977  **Abaloparatide is as Effective as PTH (1-34) in Improving Bone Formation While PTHrP (1-36) Has Less Effect in Mice.**

Carole Le Henaff1, Florante Ricarte2, Zhiming He1, Joshua Johnson1, Johanna Warshaw1, Nicola Partridge1. 1New York University, college of dentistry, United States, 2Molecular Pharmacology Training Program, Sackler Institute of Graduate Biomedical Sciences, United States

**Disclosures:** Carole Le Henaff, None
SAT-0978 Vanadyl Acetilacetonate Increases Bone Formation and Inhibits Osteoclast Differentiation in a Diabetes-Related Osteoporotic Rat Model
Jayenth Mayur*, Anthony Lin1, Maximilian Muñoz2, Kevin Mesina1, Atharva Dhole1, Savannah Roy1, Daniel Coban1, Suleiman Sudah2, Joseph Benevenia1, Jessica Cottrell1, David Paglia1, Sheldon Lin1. 1Rutgers New Jersey Medical School, United States, 2Robert Wood Johnson Medical School, United States, 3Seton Hall University, United States
Disclosures: Jayenth Mayur, None

SAT-0979 Low-intensity Pulsed Ultrasound (LIPUS) Prevents Development of BRONJ-like Pathophysiology in Rat Alveolar Bone Defect Induced by Tooth Removal after Alendronate and Porphyromonas Gingivalis Challenges
Kouki Hidaka*, Yuko Mikuni-Takagaki1, Satoko Wada-Takahashi1, Makiko Saita2, Ryota Kawamata1, Takenori Sato1, Akira Kawata1, Chihiro Miyamoto1, Yojiro Maehata1, Hirotaka Watabe2, Nobuyuki Tani-Ishii2, Nobushiro Hamada1, Shun-Suke Takahashi1, Shinji Deguchi2, Ryohei Takeuchi1. 1Kanagawa Dental University, Graduate School of Dentistry, Department of Oral Science, Japan, 2Kanagawa Dental University, Graduate School of Dentistry, Department of Oral Interdisciplinary Medicine, Japan, 3Kanagawa Dental University, Graduate School of Dentistry, Department of Dentomaxillofacial Diagnosis and Treatment, Japan, 4Professor Emeritus, Kanagawa Dental University, Japan, 5Yokosuka City Hospital, Department of Joint Surgery, Japan
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SAT-0980 A Novel Cathepsin K Inhibitor Specifically Approaching Bone Resorption Surface to Suppress Osteoclastic Bone Resorption
Xiaohao Wu*, Jun Lu, Jin Liu, Lei Dang, Aiping Lu, Ge Zhang. Hong Kong Baptist University, Hong Kong
Disclosures: Xiaohao Wu, None

SAT-0981 Allosteric or ectosteric inhibition of cathepsin K by an exosite inhibitor
Simon Law*, Dieter Bromme. University of British Columbia, Canada
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SAT-0982 Pharmacokinetic Models for Bisphosphonate-Conjugated Drugs
Jayesh Shah*, Frank H. Ehetino1, Lianping Xing1, Robert Boeckman2, Shuting Sun2, Parish Sedghizadeh3, Michael T Yin1, Suzanne Lentzsch1, Graham Russell2, Serge Cremers1. 1Columbia University Medical Center, United States, 2Biovirc, United States, 3University of Rochester, United States, 4University of Southern California, United States, 5University of Oxford, United Kingdom
Disclosures: Jayesh Shah, None

SAT-0983 Calciolytic, the calcium-sensing receptor antagonist, enhances bone remodeling and increases bone mineral density without increasing urinary calcium excretion
Bingzi Dong*, Itsuo Endo1, Yukioh Oishi1, Zhengju Fu1, Toshio Matsumoto1, Yangang Wang1. 1Department of Endocrinology and Metabolism, the Affiliated Hospital of Qingdao University, Qingdao, China, 2Department of Hematology, Endocrinology and Metabolism, Tokushima University Graduate School of Medical Sciences, Japan, 3Fujii Memorial Institute of Medical Sciences, Tokushima University, Japan
Disclosures: Bingzi Dong, None

SAT-0984 Influence of Vitamin D Restriction on Bone Strength, Body Composition, and Muscle in Ovariectomized Rats Fed a High-fat Diet
Kanae Nakaoka*, Asako Yamada, Seiko Noda, Masae Goseki-Sone. Japan Women’s University, Japan
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SAT-0985  Propranolol administration has a non-statistically significant positive effect on the osseointegration procedure of stainless steel implants. An experimental study in rats
Marinos Karanassos, Kyriakos Papavasiliou, Ioannis Mirisidis, Ioannis Margaritis, Ioannis Sarris, Pericles Papadopoulos, Dimosthenis Tsitouras, Dimitrios Tsatsalis, Fares Sayegh. 2nd Dept. of Orthopaedics and Trauma Surgery, 424 General Military Hospital, Thessaloniki, Greece, 3rd Orthopaedic dept., Aristotle University of Thessaloniki, Papageorgiou General Hospital, Thessaloniki, Greece, Dept. of Mechanical Engineering, University of Western Macedonia, Kozani, Greece, Laboratory of Physiology, Faculty of Veterinary Medicine, School of Health Sciences, Aristotle University of Thessaloniki, Greece, 1st Orthopaedic dept., Aristotle University of Thessaloniki, Papanikolaou General Hospital, Thessaloniki, Greece
Disclosures: Marinos Karanassos, None

SAT-0986  Intra-Articular Monosodium Iodoacetate Induced Knee Osteoarthritis: Effects on Bone as Measured by Micro-Computed Tomography in Rats
Jukka Vaaraniemi, Jukka Morko, Jaakko Lehtimaki, Zhiqi Peng, Jussi M Halleen.
Pharmatest Services Ltd, Finland
Disclosures: Jukka Vaaraniemi, None

SAT-0987  Effect of Age and Dietary Phosphorus Intake on Phosphorus Regulatory Hormones and Intestinal Phosphate Transporter Gene Expression
Colby Vorland, Loretta Aromeh, Pamela Lachick, Sharon Moe, Neal Chen, Kathleen Hill Gallant. Department of Nutrition Science, Purdue University, United States, Division of Nephrology, Department of Medicine, Indiana University School of Medicine, United States
Disclosures: Colby Vorland, None

SAT-0988  Effects of selective estrogen receptor modulator and low-intensity aerobic exercise on bone and fat parameters in ovariectomized rats
Yusuke Yuasa, Naohisa Miyakoshi, Yuji Kasukawa, Itsuki Nagahata, Manabu Akagawa, Yuichi Ono, Chiaki Sato, Yoichi Shimada. Department of Orthopedic Surgery, Akita University Graduate School of Medicine, Japan
Disclosures: Yusuke Yuasa, None

RARE BONE DISEASES: CLINICAL

SAT-1019  [18F]NaF PET/CT can identify a silent ‘‘chronic’’ state of Fibrodysplasia Ossificans Progressiva
Esmée Botman, Pieter Raijmakers, Maqsood Yaqub, Bernd Teunissen, Coen Netelenbos, Lothar Schwarte, Wouter Lubbers, Adriaan Lammertsma, Marelise Eekhoff. Department of Internal Medicine, section Endocrinology, Netherlands, Department of Nuclear Medicine and Radiology, Netherlands, Department of anesthesiology, Netherlands
Disclosures: Esmée Botman, None

SAT-1020  Sustained Efficacy and Safety of Burosumab, an Anti-FGF23 Monoclonal Antibody, for 88 Weeks in Children and Early Adolescents with X-Linked Hypophosphatemia (XLH)
Thomas O. Carpenter, Wolfgang Höglter, Erik Imel, Anthony A. Portale, Annemieke Boot, Agnès Linglart, Raja Padidela, William Van T Hoff, Gary S. Gottesman, Meng Mao, Alison Skirnar, Javier San Martin, Michael P. Whyte. Yale University School of Medicine, United States, Birmingham Children’s Hospital, United Kingdom, Indiana University School of Medicine, United States, University of California, San Francisco, United States, University of Groningen, Netherlands, APHP Hôpital Bicêtre Paris Sud, France, Royal Manchester Children’s Hospital, United Kingdom, Great Ormond Street Hospital, United Kingdom, Shriners Hospitals for Children, United States, Ultragenyx Pharmaceutical Inc., United States
Disclosures: Thomas O. Carpenter, Ultragenyx Pharmaceutical Inc., Consultant, Ultragenyx Pharmaceutical Inc., Other Financial or Material Support, Ultragenyx Pharmaceutical Inc., Grant/Research Support
SAT-1021 In a Randomized, Placebo-Controlled Trial Of Teriparatide (TPTD) For Premenopausal Idiopathic Osteoporosis (IOP), Tissue-Level Bone Formation Rate at Baseline and 3 Months Predicts Bone Density Response
Adi Cohen1, Stephanie Shiau2, Nandini Nair3, John Williams4, Robert Recker5, Joan Lappe6, David Dempster1, Hua Zhou7, Mafo Kamanda-Kosseh1, Mariana Bucovsky1, Julie Stubby1, Elizabeth Shane1. 1Columbia University Medical Center, United States, 2Mailman School of Public Health, United States, 3Creighton University Medical Center, United States, 4Helen Hayes Hospital, United States
Disclosures: Adi Cohen, None

SAT-1022 ASBMR 2018 Annual Meeting Young Investigator Award
Age-related Changes and the Effect of Bisphosphonates on Bone Turnover and Disease Progression in Fibrous Dysplasia of Bone
Pablo Florenzano*1,2, Kristen S Pan1,3, Sydney M Brown4, Lori C Guthrie4, Luis Fernandez De Castro1, Michael T Collins1, Alison M Boyce1. 1Skeletal Diseases and Mineral Homeostasis Section, National Institute of Dental and Craniofacial Research, National Institutes of Health., United States, 2Department of Endocrinology, School of Medicine. Pontificia Universidad Catolica de Chile., United States, 3NIH Medical Research Scholars Program (MRSP), United States
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SAT-1023 Trabecular Bone Score in Osteogenesis Imperfecta. Is it useful?
Helena Florez*1, Africa Muxi 2, Eva Gonzalez 3, Ana Monegal 1, Núria Guañabens 1, Pilar Peris 1. 1Metabolic Bone Diseases Unit, Department of Rheumatology. Hospital Clinic. University of Barcelona, Spain, 2Department of Nuclear Medicine. Hospital Clinic, University of Barcelona, Spain, 3Department of Immunology. Hospital Clinic, University of Barcelona, Spain
Disclosures: Helena Florez, None

SAT-1024 Achondroplasia Natural History: a Large, Ongoing Multi-Center Cohort Study
Julie Hoover-Fong*1, Michael Bober2, Syed Hashmi2, Jacqueline Hecht3, Janet Legare4, Mary Ellen Little5, John Mcgready1, Peggy Modaff1, Richard Pauli1, David Rodriguez-Buritica1, Kerry Schulze1, Elena Serna1, Cory Smid4, Adekemi Alade1. 1Johns Hopkins University, United States, 2AI duPont Hospital for Children, United States, 3University of Texas, United States, 4University of Wisconsin, United States
Disclosures: Julie Hoover-Fong, BioMarin, Consultant

SAT-1025 The Effect of Burosumab (KRN23), a Fully Human Anti-FGF23 Monoclonal Antibody, on Osteomalacia in Adults with X-Linked Hypophosphataemia (XLH)
Karl L. Insogna*1, Frank Rauch2, Peter Kamenický3, Nobuaki Ito4, Takuo Kubota5, Akie Nakamura6, Lin Zhang7, Matt Mealilffe7, Javier San Martin7, Anthony A. Portale8. 1Yale School of Medicine, United States, 2McGill University, Canada, 3Université Paris-Sud, France, 4University of Tokyo Hospital, Japan, 5Osaka University Hospital, Japan, 6Hokkaido University Hospital, Japan, 7Ultragenyx Pharmaceutical Inc., United States, 8University of California, San Francisco, United States
Disclosures: Karl L. Insogna, Ultragenyx Pharmaceutical Inc., Grant/Research Support, Ultragenyx Pharmaceutical Inc., Other Financial or Material Support, Ultragenyx Pharmaceutical Inc., Consultant

SAT-1026 An overview of the etiology, clinical manifestations, management strategies and complications of hypoparathyroidism from the Canadian National Hypoparathyroidism Registry
Rafik El Werfalli*, Yasser Hakami, Manoela Braga, Adam Millar, Zubin Punthakee, Farhan Tariq, J.E.M. Young, Aliya Khan. McMaster University, Canada
Disclosures: Rafik El Werfalli, None

SAT-1027 Bone Remodeling and Bone Mass in Patients with Hypophosphatasemia
Laura Lopez-Delgado*1, Leyre Riancho-Zarrabettia2, Maite Garcia-Unzueta3, Carmen Valero1,3, Jair Tenorio1, Marta Garcia-Hoyos1, Pablo Lapunzina4, Jose A. Riancho1,3. 1Hospital UM Valdecilla, Spain, 2Hospital Sierra, Spain, 3Univ Cantabria, IDIVAL, Spain, 4Institute of Medical and Molecular Genetics, Spain
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SAT-1028  ASBMR 2018 Annual Meeting Young Investigator Award
Clinical Features of Patients with Tumoral Calcinosis: The Mayo Clinic Experience
Jad Sfeir*, Kurt Kennel, Matthew Drake. Mayo Clinic, United States
Disclosures: Jad Sfeir, None

SAT-1029  Clinical features of Sternocostoclavicular Hyperostosis: a large Single Center Dutch Cohort
Ashna Ramautar*, Natasha Appelman-Dijkstra, Shannon Lakerveld, Pieter Valkema, Marieke Snel, Marielle Schroijen, Liesbeth Winter, Nevene Hamdy. LUMC, Netherlands
Disclosures: Ashna Ramautar, None

SAT-1030  Joint Replacement Procedures in Individuals with Skeletal Dysplasias
Kate Citron*, Sobiah Khan, Erin Carter, Mathias Bostrom, Mark Figgie, Cathleen Raggio. Hospital for Special Surgery, United States
Disclosures: Kate Citron, None

SAT-1031  Iatrogenic Osteosclerosis in Osteogenesis Imperfecta
Vandana Dhiman*, Anshita Aggarwal, Nirmal G Raj, Ruban Dhaliwal, Sanjay Kumar Bhadada, Naresh Sachdeva, Sudhaker D Rao. 1PhD student, India, 2DM Resident, India, 3Additional Professor, India, 4Assistant Professor, United States, 5Professor, India, 6Professor, United States
Disclosures: Vandana Dhiman, None

SAT-1032  Childhood Hypophosphatasia: Painful Bone Marrow Edema Mimicking Chronic Recurrent Multifocal Osteomyelitis Improved After Three Months of Asfotase Alfa Enzyme Replacement Therapy
Gary S Gottesman*, Deborah Wenkert, William H Mcalister, Geetika Khanna, Karen Mack, Steven Mumm, Michael P Whyte. 1Shriners Hospital for Children - St. Louis, United States, 2Washington University School of Medicine, United States
Disclosures: Gary S Gottesman, None

SAT-1033  A case report of the novel use of asfotase alfa to improve outcomes after spinal surgery for dystrophic scoliosis related to neurofibromatosis type 1
Tasma Harindhanavudhi*, Takashi Takahashi, Anna Petryk, David Polly. 1University of Minnesota, United States, 2Alexion Pharmaceuticals, United States
Disclosures: Tasma Harindhanavudhi, Alexion Pharmaceuticals, Grant/Research Support

SAT-1034  A novel TRPS1 mutation in a patient with tricho-rhino-phalangeal syndrome provides further support for the importance of this zinc-finger transcription factor in skeletal development
Anara Karaca*, Lauren Toyomi Shumate, Monica Reyes, Isilay Taskaldiran, Tulay Omma, Nese Ersoz Gulcelik, Murat Bastepe. 1Endocrine Unit, Massachusetts General Hospital and Harvard Medical School, United States, 2Ankara Training and Research Hospital, Endocrinology, Turkey, 3University of Health Sciences, Gulhane Training Hospital, Turkey
Disclosures: Anara Karaca, None

SAT-1035  Bruck Syndrome Variant Lacking Congenital Contractures Due To Novel Compound Heterozygous PLOD2 Mutations
Steven Mumm*, Gary S. Gottesman, Philippe M. Campeau, Angela Nenninger, Margaret Huskey, Vinieth N. Bijanki, Deborah J. Veis, Aileen Barnes, Joan C. Marini, Deborah Wenkert, William H. Mcalister, Michael P. Whyte. 1Division of Bone and Mineral Diseases, Department of Internal Medicine, Washington University School of Medicine, United States, 2Center for Metabolic Bone Disease and Molecular Research, Shriners Hospital for Children, United States, 3Department of Pediatrics, University of Montreal, Canada, 4National Institute of Child Health and Human Development, NIH, United States, 5Mallinckrodt Institute of Radiology, Washington University School of Medicine at St. Louis Children’s Hospital, United States
Disclosures: Steven Mumm, None
SAT-1036 Prevalence of Hypophosphatasia in a Reference Hospital in Granada (Spain)
Manuel Muñoz-Torres*, Cristina Garcia Fontana2, Juan Miguel Villa Suarez 3, Francisco Andújar-Vera 2, José María Gómez Vida 4, Tomás De Haro 3, Beatriz García-Fontana García-Fontana 2, 1Endocrinology and Nutrition Unit. University Hospital San Cecilio, Department of Medicine. University of Granada. Biomedical Research Institute of Granada. (ibs GRANADA), Spain, 2Biomedical Research Institute of Granada. (ibs GRANADA), Spain, 3Clinical Analyses Unit. University Hospital San Cecilio., Spain, 4Pediatric Unit. University Hospital San Cecilio, Spain, 1Endocrinology and Nutrition Unit. University Hospital San Cecilio. Biomedical Research Institute of Granada. (ibs GRANADA).CIBERFES. ISCIII., Spain
Disclosures: Manuel Muñoz-Torres, None

SAT-1037 Asfotase Alfa: Interference with ALP-detection systems in immunoassays
Isabelle Piec*, Beatrice Thompkins, William D. Fraser. University of East Anglia, United Kingdom
Disclosures: Isabelle Piec, Alexion Pharmaceuticals, Inc., Grant/Research Support

SAT-1038 Hypophosphatasia: Clinical Presentation
Jay R Shapiro*. Unifomed Services University of the Health Sciences, United States
Disclosures: Jay R Shapiro, None

SAT-1070 Utility of Optical Coherence Tomography in the Diagnosis of Optic Neuropathy in Fibrous Dysplasia of Bone
Kristen S Pan *, Alison M Boyce1,, Edmond J Fitzgibbon2, Michael T Collins1, Janice S Lee1, 1Skeletal Disorders and Mineral Homeostasis Section, National Institute of Dental and Craniofacial Research, National Institutes of Health, United States, 2Laboratory of Sensorimotor Research, National Eye Institute, National Institutes of Health, United States, 3Office of the Clinical Director, National Institute of Dental and Craniofacial Research, National Institutes of Health, United States
Disclosures: Kristen S Pan, None

RARE BONE DISEASES: TRANSLATIONAL

SAT-1077 Mechanisms Underlying Increased Osteoclastogenesis in the Mouse Model of Osteogenesis Imperfecta Due to Mutation in Collagen Type I
Iris Boraschi*, Eréne C Niemi2, Frank Rauch1, Mary Nakamurar, Svetlana Komarova1. 1Shriners Hospital-Canada/ McGill University, Canada, 2University of San Francisco California, United States
Disclosures: Iris Boraschi, None

SAT-1078 An antibody against ALK2 extracellular domain reveals a role of dimer formation for signal activation
Takenobu Katagiri*, Shimosuke Tsuji2, Sho Tsukamoto1, Mai Kuratani1, Satoshi Ohte1, Kiyosumi Takaishi2, Yoshihiro Kawaguchi2, Jun Hasegawa1. 1Division of Pathophysiology, Research Center for Genomic Medicine, Saitama Medical University, Japan, 2Rare Disease & LCM Laboratories, R&D Division, Daiichi-Sankyo Co., Ltd., Japan, 3Kensuke Nakamura, Modality Research Laboratories, Biologics Division, Daiichi-Sankyo Co., Ltd., Japan, 4Modality Research Laboratories, Biologics Division, Daiichi-Sankyo Co., Ltd., Japan
Disclosures: Takenobu Katagiri, Daiichi-Sankyo Co., Ltd., Grant/Research Support

SAT-1079 Activation of the pro-fibrotic TGFβ pathway contributes to the multiorgan dysfunctions in the CLCN7-dependent ADO2
Antonio Maurizi*, Mattia Capulli, Anna Curle, Rajvi Patel, Nadia Rucci, Anna Teti. University of L’Aquila, Italy
Disclosures: Antonio Maurizi, None

SAT-1080 Autologous Regulatory T Cell Transplantation Enhances Bone Repair in a Mouse Model of Osteogenesis Imperfecta
Meenal Mehrotra*, Inhong Kang, Shilpak Chatterjee, Uday Baliga, Shikhar Mehrotra. Medical University of South Carolina, United States
Disclosures: Meenal Mehrotra, None
SAT-1081  BMP signaling and BMPR dynamics and interactions are restrained by cell surface heparan sulfate, a mechanism likely altered in Hereditary Multiple Exostoses
Christina Mundy*, Evan Yang, Paul Billings, Hajime Takano, Maurizio Pacifici. The Children’s Hospital of Philadelphia, United States
Disclosures: Christina Mundy, None

SAT-1082  Gene expression profiling of sclerostin antibody-induced therapeutic response in growing Brtl/+ mouse model of osteogenesis imperfecta
Hsiao Hsin Sung*1,2,3, Rachel Surowiec3,4, Rebecca Falzon1, Lauren Battle3, Chris Stephan3, Michelle S. Caird1, Kenneth M. Kozloff3,4. 1RIMLS, Department of Rheumatology, Radboudumc, The Netherlands, 2Department of Oral and Maxillofacial Surgery, University of Michigan, United States, 3Department of Orthopaedic Surgery, University of Michigan, United States, 4Biomedical Engineering, University of Michigan, United States
Disclosures: Hsiao Hsin Sung, None

SAT-1083  FGF23 Regulates Wnt/β-catenin Signaling-mediated Osteoarthritis in Mice
Patience Meo Burt*, Liping Xiao, Marja Hurley. UConn Health, United States
Disclosures: Patience Meo Burt, None

SAT-1084  Microarray Expression Profile Analysis and its Clinical Implication for the Treatment of Fibrogenesis Imperfecta Ossium
Sanjay Kumar Bhadada*, Vandana Dhiman, Ruban Dhaliwal, Anil Bhansali, Wim Van Hul, Sudhaker D Rao. 1Professor, India, 2PhD student, India, 3Assistant Professor, United States, 4Professor, Belgium, 5Professor, United States
Disclosures: Sanjay Kumar Bhadada, None

SAT-1085  Whole-cell proteomic profiling of osteoclasts from a mouse model for craniometaphyseal dysplasia
Jitendra Kanaujiya*, Jeremy Balsbaugh, Ernst Reichenberger, I-Ping Chen. 1University of Connecticut Health, United States, 2University of Connecticut, United States
Disclosures: Jitendra Kanaujiya, None

SAT-1086  Lack of mature collagen-links is associated with osteomalacia in patients with X-linked hypophosphatemia
Nadja Fratzl-Zelman*, Stamatia Rokidi, Stéphane Blouin, Pia Plasenzotti, Kamilla Nawrot-Wawrzyniak, Katharina Roetzer, Goekhan Uyanik, Gabriele Haeusler, Klaus Klaushofer, Peter Fratzl, Eleftherios Paschalis, Paul Roschger, Elisabeth Zwettler. 1Ludwig Boltzmann Institute of Osteology at the Hanusch Hospital of WGKK and AUVA Trauma Centre Meidling, 1st Medical Department Hanusch Hospital, Austria, 21st Medical Department, Hanusch-Hospital, Austria, 3Center for Medical Genetics, Hanusch-Hospital, Austria, 4Department of Pediatrics, Medical University of Vienna, Austria, 5Max Planck Institute of Colloids and Interfaces, Department of Biomaterials, Germany, 6Medical Directorate, Hanusch-Hospital, Austria
Disclosures: Nadja Fratzl-Zelman, None

SAT-1087  Patient with resistant poliostotic Paget relapsed after discontinuing long time olpadronate oral treatment. A case-report of protracted drug exposition
Claudia Gomez Acotto*, Susana Moggia, Emilio Roldán. 1Maimonides Univ., Argentina, 2Scientific Direction Gador S.A., Argentina
Disclosures: Claudia Gomez Acotto, None
SAT-1088  Exome sequencing identifies novel variants in GATA3 and MAFA genes associated with isolated hypoparathyroidism in Korean population

Ji Hyun Lee*,1,2, Taekyeong Yoo1, Jung Hee Kim1, Hyung Jin Choi1, Kyung Sil Chae1, A Ram Hong1, Sang Wan Kim1, Murim Choi1, Chan Soo Shin1. 1Department of Internal Medicine, Seoul National University College of Medicine, Republic of Korea, 2Department of Internal Medicine, VHS Medical Center, Republic of Korea, 3Department of Biomedical Sciences, Seoul National University College of Medicine, Republic of Korea, 4Department of Anatomy, Seoul National University College of Medicine, Republic of Korea, 5Department of Internal Medicine, Seoul National University College of Medicine, Boramae Medical Center, Republic of Korea

Disclosures: Ji Hyun Lee, None

SAT-1089  Molecular Characterization of a Complex Mosaicism in Supernumerary Ring Chromosome 6 Involving Bone–Related Factors in a Proband

Yang Lou*,1, Lauren Hurd2, John A. Wixted3, Jonathan A.R. Gordon4, Katrina A. Conard5, Micheal B. Bober2, Jane B. Lian6. 1University of Massachusetts Medical School, United States, 2Department of Biomedical Research, Alfred I. duPont Hospital for Children, United States, 3University of Massachusetts Medical Center School, United States, 4Department of Biochemistry, University of Vermont, United States, 5Department of Pathology, Alfred I. duPot Hospital for Children, United States, 6Department of Biochemistry, University of Vermont Medical School, United States

Disclosures: Yang Lou, None

SAT-1090  Lithium-mediated effects on vertebral bone formation in mucopolysaccharidosis I dogs during postnatal growth


Disclosures: Sun Peck, None

SARCOPENIA, MUSCLE AND FALLS

SAT-1118  ASBMR 2018 Annual Meeting Young Investigator Award

Three months of vitamin D3, 2,800 IU/d has an unfavorable effect on muscle strength and physical performance in vitamin D insufficient, hyperparathyroid women – a randomized placebo controlled trial

Lise Sofie Bislev*,1, Lene Langagergaard Rødbro1, Lars Rolighed2, Tanja Sikjaer1, Lars Rejnmark1. 1Department of Endocrinology and Internal Medicine, Denmark, 2Department of surgery, Denmark

Disclosures: Lise Sofie Bislev, None

SAT-1119  Analyzing Fall Risk using Smart Phone Application in Subjects with Osteoporosis with and without Falls

Krupa Doshi*,1, Seong Moon2, Michael Whitaker1, Thurmon Lockhart1. 1Mayo Clinic, AZ, United States, 2Arizona State University, United States

Disclosures: Krupa Doshi, None

SAT-1120  Genetic Basis of Falling Risk Susceptibility

Katerina Trajanoska*,1, Felix Day2, Carolina Medina-Gomez 1, Andre G. Uitterlinden1, John Perry3, Fernando Rivadeneira1. 1Department of Internal Medicine, Erasmus Medical Center, Rotterdam, The Netherlands, 2MRC Epidemiology Unit, University of Cambridge School of Clinical Medicine, Cambridge, United Kingdom

Disclosures: Katerina Trajanoska, None
SAT-1121 Effects of Music-based Multitask Exercise (Jaques-Dalcroze Eurhythmics) versus Multicomponent Exercise on Physical Function, Falls and Brain Plasticity in Older Adults: A Randomized Controlled Trial

Mélany Hars*1, Natalia Fernandez2, François Herrmann2, René Rizzoli1, Gabriel Gold1, Patrik Vuilleumier2, Andrea Trombetti1, 1Division of Bone Diseases, Department of Internal Medicine Specialties, Geneva University Hospitals and Faculty of Medicine, Switzerland, 2Laboratory for Behavioural Neurology and Imaging of Cognition, Campus Biotech, University of Geneva, Switzerland, 1Division of Geriatrics, Department of Internal Medicine, Rehabilitation and Geriatrics, Geneva University Hospitals and Faculty of Medicine, Switzerland

Disclosures: Mélany Hars, None

SAT-1122 Effect of Vitamin D3 supplementation on muscle strength in HIV+ postmenopausal women

Michael Yin*1, Mariana Bucovsky1, John Williams1, Danielle Brunjes1, Arindam Roychoudhury2, Ivelisse Colon1, David Ferris3, Susan Olender1, P.Christian Schulz4, Anjali Sharma5, Cosmina Zeana3, Barry Zingman5, Elizabeth Shane1. 1Columbia University Medical Center, United States, 2Weill Cornell Medical College, United States, 3BronxCare Health System, United States, 4University Hospital Jena, Germany, 5Albert Einstein College of Medicine and Montefiore Medical Center, United States

Disclosures: Michael Yin, None

SAT-1123 Associations between Educational Attainment and Operational Definitions of Sarcopenia: Data Spanning Six Years from the Tasmanian Older Adult Cohort

Sharon Brennan-Olsen*1,2, Sara Vogrín1,2, Saliu Balogun3, David Scott4, Graeme Jones1, Alan Hayes5, Steven Phu1, Gustavo Duque1, Tania Winzenberg3. 1University of Melbourne, Australia, 2Australian Institute for Musculoskeletal Science, Australia, 3University of Tasmania, Australia, 4Monash University, Australia, 5Victoria University, Australia

Disclosures: Sharon Brennan-Olsen, None

SAT-1124 Sex- and age-related changes in body composition among population-based healthy Chinese in Taiwan

Yi-Chien Lu*1, Wing P. Chan1, Ying Chin Lin2, Ing-Jy Tseng3. 1Department of Radiology, Wan Fang Hospital, Taipei Medical University, Taiwan, 2Shuang Ho Hospital, Taipei Medical University, Taiwan, Taiwan, 3School of Gerontology Health Management, College of Nursing, Taipei Medical University, Taiwan

Disclosures: Yi-Chien Lu, None

SAT-1125 Association of bone mineral density and appendicular lean mass with fracture risk assessed by FRAX for postmenopausal women in the north part of China

Dr Dongmei*. The Second Affiliated hospital of Inner Mongolia Medical University, China

Disclosures: Dr Dongmei, None

SAT-1126 Osteosarcopenia phenotype and frailty status by CHS and SOF Criteria

Alberto Frisoli*, Angela Paes, Sheila Inghan, Antonio Carlos De Camargo Carvalho. Federal University of Sao Paulo, Brazil

Disclosures: Alberto Frisoli, None

SAT-1127 Integrated Women’s Health Programme (IWHP): A cross-sectional study of prevalence & correlates for sarcopenia in midlife Singaporean women

Win Pa Pa Thu*, Susan Jane Sinclair Logan1, E.L Yong1, Jane A. Cauley2. 1Department of Obstetrics & Gynaecology, National University of Singapore, Singapore, 2Department of Epidemiology, Graduate School of Public Health, University of Southern California, United States

Disclosures: Win Pa Pa Thu, None
ADULT METABOLIC BONE DISORDERS

LB SAT - 1147 Exploration of an epidemiological association between air pollutant exposure and the development of T2DM. A systematic review.
Marilena Marzia*. Freelance Professional Nutritionist, Italy
Disclosures: Marilena Marzia, None

BIOMECHANICS AND BONE QUALITY

LB SAT - 1150 Distribution of Stress on the Distal Femur in Advanced Osteoarthritis
Kwangkyoun Kim*. Konyang University, Republic of Korea
Disclosures: Kwangkyoun Kim, None

LB SAT - 1151 Atypical Femur Fractures: Influence of the Femoral Neck Shaft Angle and Lateral Bowing on Maximum Principal Strains within the Femur
Michael Reimeringer*1, Natalia Nuno1, Suzanne Morin1. 1Laboratoire de recherche en imagerie et orthopédie, École de technologie superieure, Canada, 2Department of Medicine, McGill University, Canada
Disclosures: Michael Reimeringer, None

LB SAT - 1152 Strength of Vertebral Bodies with Metastatic Lesions Can be Assessed by Finite Element Analysis
Marc Stadelmann*1, Christopher Lenherr1, Benjamin Voumand1, Ghislain Maquer1, Jasmin Wandel2, Ron Alkalay3, Philippe Zysset1. 1University of Bern, Switzerland, 2Bern University of Applied Sciences, Switzerland, 3Harvard Medical School, United States
Disclosures: Marc Stadelmann, None

BONE ACQUISITION AND PEDIATRIC BONE DISORDERS

LB SAT - 1157 Sleep Duration and Timing Predicts Bone Mineral Density Among Adolescents
Jonathan Mitchell*1, David Dinges2, Knashawn Morales2, Nicholas Huffnagle1, Struan Grant1, Babette Zemel1. 1Children’s Hospital of Philadelphia, United States, 2University of Pennsylvania, United States
Disclosures: Jonathan Mitchell, None

BONE INTERACTIONS WITH MUSCLE AND OTHER TISSUES

LB SAT - 1160 Rescuing age-associated decline in muscle mass by inhibition of the receptor for advanced glycosylation end products, RAGE
Alyson Essex*1,2, Hannah Davis 1,2, Fabrizio Pin1,2, Lilian Plotkin1,2,4, Andrea Bonetto1,2,3. 1Department of Anatomy & Cell Biology, Indiana University School of Medicine, 2Indiana Center for Musculoskeletal Health, United States, 3Department of Surgery, Indiana University School of Medicine, 4Roudebush Veterans Administration Medical Center, United States
Disclosures: Alyson Essex, None

LB SAT - 1163 Short-Term Intermittent PTH (1-34) Administration, Angiogenesis, and Matrix Metalloproteinase-9 in Femora of Mature and Middle-Aged C57BL/6 Mice
Seungyong Lee*, Rhonda Prisby. The University of Texas at Arlington, United States
Disclosures: Seungyong Lee, None
BONE TUMORS AND METASTASIS

LB SAT - 1164 Bone metastatic growth was not inhibited by anti-PD-1 blockage in a humanized mouse model of triple-negative breast cancer – difference in responses between primary and bone metastatic tumors
Tiina E Kähkönen*, Mari I Suominen1, Jenni Mäki-Jouppila1, Jussi M Halleen1, Teppo Haapaniemi2, Azusa Tanaka3, Michael Seiler4, Jenni Bernoulli1. 1Pharmatest Services, Finland, 2BioSiteHisto Ltd, Finland, 3Taconic Biosciences, United States
Disclosures: Tiina E Kähkönen, None

LB SAT - 1165 Exosomal release of L-plastin by breast cancer cells facilitates metastatic bone osteolysis
Kerstin Tiedemann*, Gulzhakhan Sadvakassova1, Nicolas Mikolajewicz1, Michal Juhas1, Zarina Sabirova1, Sebastien Tabaries1, Jan Gettemans2, Peter M. Siegel1, Svetlana V. Komarova1. 1McGill University, Canada, 2Gent University, Belgium
Disclosures: Kerstin Tiedemann, None

ENERGY METABOLISM, BONE, MUSCLE AND FAT

LB SAT - 1172 1,25(OH)D3 abrogates palmitic acid-induced lipotoxicity in normal human osteoblasts in vitro
Ahmed Al Saedi*, Damian Myers, Steven Phu, Gustavo Duque. Australian Institute for Musculoskeletal Science (AIMSS), The University of Melbourne and Western Health, St. Albans, VIC, Australia
Disclosures: Ahmed Al Saedi, None

LB SAT - 1173 Changes In Bone Marrow Adipose Tissue Composition Are Associated With Metabolic Improvements After Gastric Bypass-Induced Weight Loss
Tiffany Kim*, Ann Schwartz2, Xiaojuan Li2, Kaipin Xu2, Galateia Kazakia1, Carl Grunfeld1, Robert Nissenson1, Dolores Shoback1, Anne Schafer1. 1University of California, San Francisco, United States, 2Cleveland Clinic, United States
Disclosures: Tiffany Kim, None

HORMONAL REGULATORS

LB SAT - 1178 KDM6B Regulates Estrogen-Mediated Osteogenic Differentiation of Human DMSCs
Zhengqing Liu*, Chang-Ryul Lee1, Zhongkai Cui1, Michael Zhou2, Hye-Lim Lee3, Min Lee1, Cun-Yu Wang1, Christine Hong1, Tara Aghaloo1. 1University of California, Los Angeles, United States, 2University of California, Berkeley, United States, 3University of California, Irvine, United States
Disclosures: Zhengqing Liu, None

MECANOBIOLOGY

LB SAT - 1180 Effects of bone marrow regeneration on mechanoadaptation in aged bone
Judith Piet*, Roland Baron1, Sandra Shefelbine1. 1Northeastern University, United States, 2Harvard School of Dental Medicine, United States
Disclosures: Judith Piet, None

MUSCULOSKELETAL DEVELOPMENT

LB SAT - 1184 Dietary Inflammatory Index and Cortical Bone Outcomes in Healthy Adolescent Children
Lauren Coheley*, Emma Laing1, Nitin Shivappa2, James Hebert3, Richard Lewis4. 1Department of Foods and Nutrition, University of Georgia, United States, 2Cancer Prevention and Control Program, University of South Carolina, United States, 3Cancer Prevention and Control Program, Epidemiology and Biostatistics, University of South Carolina, United States, 4Department of Foods and Nutrition, University of Georgia, United States
Disclosures: Lauren Coheley, None
LB SAT - 1185 Prickle1 is Required for Chondrocyte Polarity and Terminal Differentiation during Endochondral Ossification
Yong Wan*, Heather Szabo-Rogers. University of Pittsburgh, United States
Disclosures: Yong Wan, None

MUSCULOSKELETAL PROGENITOR CELLS AND LINEAGE DETERMINATION

LB SAT - 1187 Circulating cells of the osteoblast lineage are increased in breast cancer patients with bone metastasis and could represent a novel biomarker for diagnosis and monitoring of tumor progression
Jiarong Li*, Karine Sellin, Louis Dore Savard, Richard Kremer. Research Institute of MUHC, Canada
Disclosures: Jiarong Li, None

OSTEOBLASTS

LB SAT - 1191 PERK activity in osteoblast lineage does not contribute to skeletal homeostasis in mice
Srividhya Iyer*, Alexander Harb, Christian Melendez-Suchi, Aaron Warren, Ha-Neui Kim, Maria Almeida. University of Arkansas for Medical Sciences, United States
Disclosures: Srividhya Iyer, None

LB SAT - 1192 Deletion of menin early in the osteoblast lineage reduces mineralization of dense collagen gels by primary osteoblasts
Ildi Troka*, Gabrielle Griffanti*, Showan N. Nazhat, Geoffrey N. Hendy*. 1Division of Experimental Medicine, McGill University, Canada, 2Department of Mining and Materials Engineering, McGill University, Canada
Disclosures: Ildi Troka, None

LB SAT - 1193 Adiponectin Receptor Agonist AdipoRon Increases Mitochondrial Fusion and Biogenesis in Diabetic Bone Cells
Xiaoxuan Wang*, Xingwen Wu, Qisheng Tu, Jake Chen. 1Division of Oral Biology, Tufts University School of Dental Medicine, Boston, Massachusetts, United States, 2Department of Periodontology, Peking University School of Stomatology, United States, 3Department of Developmental, Molecular and Chemical Biology Sackler School of Graduate Biomedical Sciences, Tufts University School of Medicine, Boston, Massachusetts, United States
Disclosures: Xiaoxuan Wang, None

OSTEOCLASTS

LB SAT - 1198 Osteoclasts serve as an intracellular niche for replicating Staphylococcus aureus
Anna Ballard*, Jennifer L. Krauss, Pei Ying Ng, Linda Cox, Emily Goering, Nathan J. Pavlos, Deborah J. Veis. 1Division of Bone and Mineral Diseases, Washington University School of Medicine, United States, 2School of Biomedical Sciences, University of Western Australia, Australia
Disclosures: Anna Ballard, None

LB SAT - 1199 Ciliogenesis is inherent to osteoclastogenesis and IFT proteins drive osteoclast formation
Vishwa Deepak*, Shuying Yang. University of Pennsylvania School of Dental Medicine, United States
Disclosures: Vishwa Deepak, None

LB SAT - 1200 Bone Cell Effects of Mono-unsaturated Palmitoleic Acid
Jian-Ming Lin*, Karen E Callon, Jillian Cornish. Department of Medicine, University of Auckland, New Zealand
Disclosures: Jian-Ming Lin, None
**OSTEOPOROSIS - ASSESSMENT**

**LB SAT - 1207** Fracture Risk Assessment in Patients on a Drug Holiday  
Michael Morkos*1,2, Paul Mahrous1, Alessandra Casagranda1, Muriel Tania Go2, Hasan Husni2, Mirette Hanna1, Sara Bedrose3, Dingfeng Li1, Monica Tawfic1, Yu-Chien Cheng1,2, Sanford Baim1. 1Rush University Medical Center, United States, 2John H. Stroger, Jr. Hospital of Cook County, United States  
Disclosures: Michael Morkos, None

**OSTEOPOROSIS - EPIDEMIOLOGY**

**LB SAT - 1211** Lower total hip BMD and 25OHD levels are associated with the presence of abdominal aortic calcification in the Canadian Multicentre Osteoporosis Study (CaMos)  
Claudie Berger*1, Alexandre Semionov2, Brian C. Lentle3, Christopher S Kovacs3, David A Hanley4, Stephanie M Kaiser5, Robert G Josse2, Jerilynn C Prior1, Jonathan D Adachi8, Wojciech Olszynski9, K Shawn Davison10, Nancy Kreiger11, Suzanne N Morin12, David Goltzman12. 1Research Institute of the McGill University Health Centre, Canada, 2McGill University Health Centre, Canada, 3University of British Columbia, Canada, 4Memorial University, Canada, 5University of calgary, Canada, 6Dalhousie University, Canada, 7St. Michael’s Hospital, Canada, 8McMaster University, Canada, 9University of Saskatchewan, Canada, 10CaMos, Canada, 11University of Toronto, Canada, 12McGill University, Canada  
Disclosures: Claudie Berger, None

**OSTEOPOROSIS - NUTRITION, DIETARY SUPPLEMENTS AND PHYSICAL ACTIVITY**

**LB SAT - 1214** Determinants of Bone Microarchitecture Assessed by HR-pQCT in Adults with Long-Term HIV Infection  
Sarah Foreman*1, Po Hung Wu1, Ruby Kuang1, Malcolm John2, Phyllis Tien2, Thomas Link1, Roland Krug1, Galateia Kazakia1. 1Department of Radiology and Biomedical Imaging, UCSF, United States, 2Department of Medicine, UCSF, United States  
Disclosures: Sarah Foreman, None

**LB SAT - 1215** Definition of Vitamin D Deficiency based on Free 25OH Vitamin D Concentrations  
Nicolas Heureux*. DIAsource Immunoassays, Belgium  
Disclosures: Nicolas Heureux, None

**OSTEOPOROSIS - PATHOPHYSIOLOGY**

**LB SAT - 1218** Mechanisms of Bone Loss Associated with Inflammatory Bowel Disease  
Christopher Peek*1, Caleb Ford1, Nicole Putnam1, Jacob Curry2, Blanca Piazuelo1, Keith Wilson1,2, Jim Cassat1,2. 1Vanderbilt University, United States, 2Vanderbilt University Medical Center, United States  
Disclosures: Christopher Peek, None

**OSTEOPOROSIS - SECONDARY OSTEOPOROSIS**

**LB SAT - 1221** Long-term risk of bone loss and fracture in rheumatoid arthritis and inflammatory bowel disease in the population-based Canadian Multicentre Osteoporosis Study (CaMos)  
Dana Bliuc*1, Thach Tran1, Tineke Van Geel2, Jonathan Adachi1, Claudie Berger1, Joop Van Den Bergh1, John Eisman1, Piet Geusens2, David Goltzman3, David Hanley4, Robert Josse5, Stephanie Kaiser6, Christopher Kovacs6, Lisa Langsetmo7, Jerilynn Prior1, Tuan Nguyen1, Jacqueline Center1. 1Bone Biology Garvan Institute of Medical Research, Australia, 2University of Maastricht, Netherlands, 3Department of Medicine, McMaster University, Canada, 4McGill University, Canada, 5Maastricht University, Netherlands, 6University of Calgary, Canada, 7University of Toronto, Canada, 8Dalhousie University, Canada, 9Memorial University, Canada, 10University of Minnesota, United States, 11University of British Columbia, Canada  
Disclosures: Dana Bliuc, None
OSTEOPOROSIS – TREATMENT

LB SAT - 1224 AFFs with Bisphosphonate Therapy (BP): Real Rare Side-Effect or Bad Medicine?
David B. Karpf*, Frederick Singer, Kathleen Cody. 1Stanford University, United States, 2John Wayne Cancer Institute, United States, 3American Bone Health, United States
Disclosures: David B. Karpf, None

PRECLINICAL MODELS: NUTRITION AND PHARMACOLOGY

LB SAT - 1232 Hydroxyapatite Nanoparticles Doped with Silver and Gold for Enhanced Bone Regeneration
Deepak Kumar Khajuria*, David Karasik. The Musculoskeletal Genetics Laboratory, The Azrieli Faculty of Medicine, Bar-Ilan University, Safed-1311502, Israel
Disclosures: Deepak Kumar Khajuria, None

LB SAT - 1233 Activation of guanylyl cyclase-B increases long bone mass, density and strength
Jerid Robinson*, Nicholas Blixt, Gordon Warren, Andrew Benton, Zhou Ye, Conrado Aparicio, Kim Mansky, Lincoln Potter. 1University of Minnesota, United States, 2Georgia State University, United States
Disclosures: Jerid Robinson, None

RARE BONE DISEASES: CLINICAL

LB SAT - 1236 The A242T Mutation in the Low-density Lipoprotein Receptor-related Protein 5 Gene in Korean Family with Osteopetrosis
Eunheui Kim*, Yunkyung Jeon, Injoo Kim. Pusan National University Hospital, Republic of Korea
Disclosures: Eunheui Kim, None

LB SAT - 1237 Asfotase Alfa in Adults – Functional Outcome in a Real World Setting
Lothar Seefried*, Silke Achtziger, Franca Genest. Wuerzburg University, Germany
Disclosures: Lothar Seefried, Alexion, Grant/Research Support, Alexion, Speakers’ Bureau, Alexion, Consultant

RARE BONE DISEASES: TRANSLATIONAL

LB SAT - 1241 An Acvr1[R258G] “Conditional On” Mouse Model of Atypical Fibrodysplasia Ossificans Progressiva (FOP) is Activin A dependent
Sarah J. Hatsell*, Lily Huang, Chris Schoenherr, Lili Wang, Xiailing Wen, Joyce Mcclain, Vincent Idone, Kalyan C. Nannuru, Andrew J. Murphy, Aris N. Economides. Regeneron Pharmaceuticals Inc, United States
Disclosures: Sarah J. Hatsell, None

SARCOPENIA, MUSCLE AND FALLS

LB SAT - 1243 Percent total body fat is negatively associated with muscle strength and jump test performance in older men and women, independent of age, height, and muscle mass.
Bethany Moore*, Harshvardhan Singh, Gary Hunter. University of Alabama at Birmingham, United States
Disclosures: Bethany Moore, None

LB SAT-1245 FGF-inhibition of NPR2-mediated Cyclic cGMP Production in Growth Plate Chondrocytes Is Reversed by the Phosphatase Inhibitor LB-100
Leia C Shuhaibar*, Giulia Vigone, Laurinda A Jaffe. Department of Cell Biology, University of Connecticut Health Center, United States
Disclosures: Leia C Shuhaibar, None
ADULT METABOLIC BONE DISORDERS

SUN-0019  2018 Phoebe Leboy Professional Development Award
High Frequency of Bone Mineral Density (BMD) Abnormalities in Women with Symptoms Typical of Thyroid Dysfunction and Normal Thyroid Hormones
Georgia Antoniou*, 1 Stelios Kasikis2, Charis Chourpiliadis2, Dimitra Bantouna2, Panagiota Koukoutsidi2, Juan Carlos Jaume3, Rodis D Paparodis4. 1 Agia Sofia General Pediatric Hospital, Greece, 2University of Patras Medical School, Greece, 3Division of Endocrinology, Diabetes and Metabolism and Center for Diabetes and Endocrine Research (CeDER), University of Toledo, United States, 4Division of Endocrinology Diabetes and Metabolism and Center for Diabetes and Endocrine Research (CeDER) University of Toledo, Greece

Disclosures: Georgia Antoniou, None

SUN-0020  Renal Function Change in Chronic Hypoparathyroidism Patients Treated With Recombinant Human Parathyroid Hormone (1-84) (rhPTH[1-84]) and in a Historical Control Cohort Treated With Standard Therapy
Kristina Chen*, 1 Mishaela Rubin2, Fan Mu3, Elyse Swallow3, Jing Zhao4, Jessie Wang5, Alan Krasner1, Nicole Sherry1, James Signorovitch1, Markus Ketteler5, John Bilezikian6. 1Shire Human Genetic Therapies, Inc., United States, 2Columbia University College of Physicians and Surgeons, United States, 3Analysis Group Inc., United States, 4Division of Nephrology, Klinikum Coburg, Germany

Disclosures: Kristina Chen, Shire, Other Financial or Material Support

SUN-0021  Treatment of Tertiary Hyperparathyroidism After Renal Transplant
Chee Kian Chew*, 1 Jennifer Hill2, Robert Wermers2, Tricia Veglahn2, Hatem Amer2, Matthew Hathcock3. 1Tan Tock Seng Hospital, Singapore, 2Mayo Clinic, United States

Disclosures: Chee Kian Chew, None

SUN-0022  Premenopausal women with idiopathic osteoporosis (PreMenIOP) and low bone formation have decreased responsiveness to teriparatide (TPTD) and evidence of IGF-1 resistance in skeletal and non-skeletal tissues
Adi Cohen*, 1 Nandini Nair1, Stephanie Shiau1, Robert R. Recker2, David W. Dempster1,3, Hua Zhou1, Binsheng Zhao1, Xiaotao Guo1, Mafo Kamanda-Kosseh1, Mariana Bucovksy1, Julie Stubby2, Elizabeth Shane1. 1Columbia University Medical Center, United States, 2Creighton University, United States, 3Helen Hayes Hospital, United States

Disclosures: Adi Cohen, None

SUN-0023  Functional outcomes of nonoperatively treated LC-1 pelvic ring fractures: a retrospective study
Aidan Hadad*, 1 Matthew Cohn2, Rehan Saiyed3, Omer Or4, Eric Marty1, Gülce Askin4, Joseph Lane4. 1Hospital for Special Surgery, United States, 2Rush University Medical Center, United States, 3Hebrew University Hadassah Medical Center, Israel, 4Weill Cornell Medical College, United States

Disclosures: Aidan Hadad, None

SUN-0024  Magnetic Resonance Imaging (MRI) Evidence that Trabecular Bone Structure and Marrow Adipose Tissue (MAT) Are not Affected in Type 2 Diabetes Mellitus (T2D)
Iana De Araujo*, 1 Carlos Salmon1, Carlo Rondinoni2, Marcello Nogueira-Barbosa1, Francisco De Paula3. 1Ribeirao Preme Medical School-University of Sao Paulo, Brazil, 2Faculty of Philosophy, Sciences and Arts – University of Sao Paulo, Brazil

Disclosures: Iana De Araujo, None
SUN-0025 Bone loss in hepatitis B virus-infected patients is associated with greater osteoclastic activity independently of the retroviral use
Renata Dessordi¹, Rodrigo Carvalho De Santana², Elen Almeida Romão ², Anderson Marliere Navarro². ¹Sao Paulo State University, Brazil, ²University of Sao Paulo, Brazil
Disclosures: Renata Dessordi, None

SUN-0026 Bone Tissue Composition in Post-menopausal Women Varies with Glycemic Control
Heather B. Hunt*¹, Nicholas A. Miller¹, Kimberly J. Hemmerling¹, Maho Koga¹, Kelsie A. Lopez¹, Kendall F. Moseley², Eve Donnelly¹,². ¹Department of Materials Science and Engineering, Cornell University, United States, ²Division of Endocrinology, Johns Hopkins University School of Medicine, United States
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SUN-0027 The Effect of TransCon PTH on Bone Markers in a Phase 1 Trial
David B. Karpf*¹, Susanne Pihl², Aimee Shu¹, Eva Mortensen¹, Jonathan A. Leff³. ¹Ascendis Pharma Inc., United States, ²Ascendis Pharma A/S, Denmark
Disclosures: David B. Karpf, Ascendis Pharma, Other Financial or Material Support

SUN-0028 The Relationship of Trabecular Bone Score (TBS) with Vitamin D in Older African–American Women
John Aloia*, Mageda Mikhail. NYU Winthrop hospital, United States
Disclosures: John Aloia, None

SUN-0029 A Rare Case of Bilateral Maxillary Brown Tumors in a Patient with Primary Hyperparathyroidism
Sapna Patel*, Uma Gunasekaran. University of Texas Southwestern Medical Center, United States
Disclosures: Sapna Patel, None

SUN-0030 Effect of Renal Transplantation on Bone Microstructure and Strength Assessed by MRI
Catherine Reilly*, Mary Leonard, Wenli Sun, Chamilth Rajapakse, Felix Wehrli. University of Pennsylvania, United States
Disclosures: Catherine Reilly, None

SUN-0031 Total Alkaline Phosphatase is an unreliable marker of relapse in treated Paget's Disease of the Bone
Rebecca Sagar*, Stephen Orme, Afroze Abbas. Leeds Centre for Diabetes and Endocrinology, Leeds Teaching Hospitals Trust, United Kingdom
Disclosures: Rebecca Sagar, None

SUN-0032 Cardiovascular Autonomic Neuropathy as a new complication of chronic hypoparathyroidism
Gaia Tabacco*,1, Anda Mihaela Naciu¹, Roberto Cesareo², Claudio Pedone³, Gianluigi Gaspa², Assunta Santonati², Daniela Bosco³, Daria Maggi¹, Nicola Napoli³, Paolo Pozzilli¹, Silvia Manfrini², Andrea Palermo¹. ¹Unit of Endocrinology and Diabetes, Dept. of Medicine, University Campus Bio-Medico, Italy, ²Thyroid Disease Center, “S. M. Goretti” Hospital, Italy, ³Unit of Geriatrics, University Campus Bio-Medico, Italy, ⁴Department of Endocrinology, San Giovanni Addolorata Hospital, Italy
Disclosures: Gaia Tabacco, None

SUN-0033 Cognitive and Emotional Deficits in Hypoparathyroidism and Their Relation to Undercarboxylated Osteocalcin
Mishaela Rubin*, Gaia Tabacco, Rukshana Majeed, Beatriz Omeragic, Maximo Gomez, Elzbieta Dworakowski, Christiane Hale, Adam Brickman. Columbia University, United States
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SUN-0034 A Unique Longitudinal Cohort of Hypoparathyroidism Treated for 8 Continuous Years with rhPTH (1-84)
Donovan Tay*, Gaia Tabacco, Natalie Cusano, John Williams, Beatriz Omeragic, Rukshana Majeed, Maximo Gomez Almonte, John Bilezikian, Mishaela Rubin.
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Disclosures: Donovan Tay, None

SUN-0035 Survival in primary hyperparathyroidism over five decades (1965-2010)
1Mayo Clinic, United States, 2Cleveland Clinic, United States
Disclosures: Robert Wermers, None

SUN-0072 Disuse Alters the Size of Osteocyte Lacunar Voids
Mohammed Akhter*, Diane Cullen, Robert Recker. Creighton University, United States
Disclosures: Mohammed Akhter, None

SUN-0073 Assessing Correlates of Fracture Toughness using Nanoindentation
Faisal Almehaimid*, Chelsea M Heveran, Bhavya Senwar, Virginia L Ferguson. University of Colorado, Boulder, United States
Disclosures: Faisal Almehaimid, None

SUN-0074 The effects of age and sex on viscoelastic bone properties in mice
Ingo Grafe*, Ian Tomkinson, Heather Haeberle, Yi-Chien Lee, Xiaohong Bi, Brendan Lee, Catherine G. Ambrose.
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Disclosures: Ingo Grafe, None

SUN-0075 SERUM 25-HYDROXYVITAMIN D AND ITS METABOLISM IN BONE TISSUE IS ASSOCIATED WITH IMPROVED BONE QUALITY IN ELDERLY HIP FRACTURE PATIENTS
Deepti Sharma*, Rebecca Sawyer, Roumen Stamenkov, Thomas Robertson, Catherine Stapledon, Gerald Atkins, Peter Clifton, Lucian Solomon, Morris Howard, Paul Anderson.
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Disclosures: Deepti Sharma, None

SUN-0076 Ultra-low dose MDCT allows accurate assessment of vertebral fracture risk: a finite element study
D. Anitha*, Kai Mei, Felix Kopp, Peter Noel, Thomas Baum, Karupppasamy Subburaj.
1Singapore University of Technology and Design, Singapore, 2Technical University of Munich, Germany
Disclosures: D. Anitha, None

SUN-0077 Alterations in Bone Matrix Composition During Estrogen-deficiency Induced Bone Loss are Influenced by Genetic Background
Michael-John Beltejar*, Dana A. Godfrey, Robert D. Maynard, Cheryl L. Ackert-Bicknell. Center for Musculoskeletal Research, University of Rochester Medical Center, United States
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SUN-0078 Damage under Anterior Bending is Associated with Vertebral Body Structural Organization, but not Donor Characteristics
Travis D. Eliason*, Ellen E. Quillen, Donald E. Moravits, Roberto J. Fajardo, Karl J. Jepsen, Todd L. Bredbenner.
1Materials Engineering, Southwest Research Institute, United States, 2Molecular Medicine, Wake Forest School of Medicine, United States, 3Clinically Applied Science Education, University of the Incarnate Word School of Osteopathic Medicine, United States, 4Orthopedic Surgery, University of Michigan, United States, 5Mechanical and Aerospace Engineering, University of Colorado Colorado Springs, United States
Disclosures: Travis D. Eliason, None
SUN-0079  Differential Effects of Zoledronic Acid and Teriparatide on Microdamage Across Bone Sites. A Study at the Femoral Diaphysis, Neck, Lumbar Vertebra and Iliac Crest in Ewes
Nathalie Portero-Muzy*, Pascale Chavassieux, Roland Chapurlat. INSERM UMR 1033, Université de Lyon, France
Disclosures: Nathalie Portero-Muzy, None

SUN-0080  Peripheral neuropathy is associated with diabetes-induced bone fragility
Clarissa S Craft*, Madison R Mcmanus, Madelyn R Lorenz, Amy Stickland, Kristann Magee L, Natalie K Wec, Eric D Hilker, Sungiae Park, Zhaohua Wang, Yusuf Bekirov, Aaron Diantonio, Jeff Milbrandt, Erica L Scheller. Washington University in St. Louis, United States, University of Connecticut, United States
Disclosures: Clarissa S Craft, None

SUN-0081  ASBMR 2018 Fund for Research and Education Young Investigator Award in Honor of Adele L. Boskey
Bone Mechanical Properties (nanoindentation) and Microarchitecture (micro-CT) in Type 2 Diabetes
Ruban Dhaliwal*, Jagadeesh Bose, Navin Kumar, Praveer Sihota, Ram Naresh Yadav, Vijay Goni, Sameer Agarwal, Sudhaker D. Rao, Sanjay Kumar Bhadada. Endocrinology, Diabetes and Metabolism, State University of New York Upstate Medical University, United States, Department of Endocrinology, Postgraduate Institute of Medical Education and Research, India, Department of Mechanical Engineering, Indian Institute of Technology Ropar, India, Department of Orthopedics, Postgraduate Institute of Medical Education and Research, India, Bone and Mineral Research Laboratory, Henry Ford Hospital, United States
Disclosures: Ruban Dhaliwal, None

SUN-0082  Local, but Not Global, CT-Based Texture Analysis Improves the Prediction of Femoral Strength
Fjola Johannesdottir*, Mary L. Bouxsein. Beth Israel Deaconess Medical Center and Harvard Medical School, United States
Disclosures: Fjola Johannesdottir, None

SUN-0083  MRI-Based Assessment of Proximal Femur Compared to Direct Mechanical Testing
Daniel Kargilis*, Gregory Chang, Jae Lee, Alexander Farid, Sneha Shetye, Michael Hast, Chamith Rajapakse. University of Pennsylvania, United States, New York University, United States
Disclosures: Daniel Kargilis, None

SUN-0084  Exercise driven changes in subchondral bone thickness and distribution
John Polk*, Munsur Rahman, Mariana Kersh. University of Illinois at Urbana-Champaign, United States
Disclosures: John Polk, None

SUN-0085  Lower Limb Geometry in Individuals With Atypical Femoral Fractures as Compared to Typical Fracture and Unfractured Controls
Van Krueger*, Marjolein Van Der Meulen, Jeri Nieves, Elizabeth Foley, Eric Marty, Amelia Ni, Jordan Troy, Abigail Campbell, Douglas Mintz, Jingyan Yang, Joseph Lane. Brown University, United States, Cornell University, United States, Hospital for Special Surgery, United States, Helen Hayes Hospital, United States, Columbia University, United States
Disclosures: Van Krueger, None

SUN-0086  Osseointegrated implants for trans femoral amputees: radiographic evaluation of bone remodeling
Seamus Thomson*, William Lu, Munjed Al Muderis. The University of Sydney, Australia, The Osseointegration Group of Australia, Australia
Disclosures: Seamus Thomson, Osseointegration International, Grant/Research Support
SUN-0087  The role of MEK1/2 and MEK5 on melatonin-mediated effects on bone microarchitecture, mechanical strength, osteogenic and metabolic protein expression in intact female Balb(c) mice
Fahima Munmun*,1, Van Hoang2, Matthew Burow2, Bruce Bunnell1, Paula Witt-Enderby1. 1Duquesne University Division of Pharmaceutical, Administrative and Social Sciences, United States, 2Tulane University School of Medicine Department of Pharmacology, United States, 3Tulane University School of Medicine Cancer Research Center, United States
Disclosures: Fahima Munmun, None

SUN-0088  The Relationship of Whole Bone Strength across Cadaveric Diaphyseal and Cortical-Cancellous Sites
Daniella Patton*,1, Erin Bigelow1, Stephen Schlecht2, Todd Bredbenner2, Karl Jepsen3. 1Department of Orthopedic Surgery, University of Michigan, United States, 2Mechanical Engineering, University of Michigan, United States, 3Department of Mechanical and Aerospace Engineering, University of Colorado Colorado Springs, United States
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SUN-0089  Comparative effect of deproteinized bovine bone, bioglass and synthetic hydroxyapatite on bone reparation
Andrea Mattiuzzi*,1, Miguel Angel Pellegrini1, Macarena Gonzales-Chaves1, Ricardo Orzuaz2, Susana N Zeni2, Gretel G Pellegrini1. 1CONICET-Universidad de Buenos Aires. Instituto de Inmunología, Genética y Metabolismo (INIGEM). Facultad de Farmacia y Bioquímica-Hospital de Clínicas “José de San Martín”, Buenos Aires, Argentina, Argentina, 2Universidad de Buenos Aires, Facultad de Odontología. Cátedra de Bioquímica Gral y Bucal, Buenos Aires, Argentina, Argentina
Disclosures: Andrea Mattiuzzi, None

SUN-0090  High Resolution pQCT Micro-Architectural Parameters to Predict Bone Failure in the Case of a Forward Fall
Martin Revel*, François Duboeuf, François Bermond, Jean-Paul Roux, David Mitton, Hélène Follet. Univ Lyon, INSERM, UMR1033, France
Disclosures: Martin Revel, None

BONE ACQUISITION AND PEDIATRIC BONE DISORDERS

SUN-0119  Impact of Sex and Maturation on Trabecular and Cortical Microarchitecture in Children and Young Adults
Tandy Aye*,1, Kyla Kent1, Jin Long1, Jessica Whalen1, Ariana Strickland1, Andrew Burghardt2, Mary B. Leonard1. 1Stanford University School of Medicine, United States, 2University of California San Francisco, United States
Disclosures: Tandy Aye, None

SUN-0120  Healing rickets: Lessons from the Vienna Studies 1921-1923
David Ayoub*. Southern Illinois University School of Medicine, United States
Disclosures: David Ayoub, None

SUN-0121  Irisin Levels Are Positively Associated with Bone Mineral Density and Better Glycemic Control in Healthy and Type 1 Diabetes Children
Graziana Colaianni*,1, Giacomina Brunetti2, Maria Felicia Faienza1, Lorenzo Sanesi1, Monica Celli1, Laura Piacente1, Gabriele D’Amato1, Giorgio Mori2, Silvia Colucci2, Maria Grano1. 1Department of Basic Medical Sciences, Neuroscience and Sense Organs, University of Bari, Italy, 2Department of Emergency and Organ Transplantation, University of Bari, Italy, 3Department of Biomedical Science and Human Oncology, Paediatric Unit, University of Bari, Italy, 4Tor Vergata, University of Rome, Italy, 5Department of Clinical and Experimental Medicine, University of Foggia, Italy
Disclosures: Graziana Colaianni, None

SUN-0122  Safety and Effectiveness of Stoss Therapy in the Treatment of Vitamin D Deficiency.
Paul Tannous*,1, Melissa Fiscaletti1, Chris Cowell1, Nicholas Wood1, Yvonne Zurynski2, John Coakley1, Philip Britton1, Hasantha Gunasekera1, Andrew Biggin1, Craig Munns1. 1Children’s hospital at Westmead, Australia, 2Australian Pediatric Surveillance Unit, Australia
Disclosures: Paul Tannous, None
SUN-0123  Larger muscle area is a positive predictor of bone strength while subcutaneous fat is a negative predictor of bone strength: A pQCT and HR-pQCT study of boys and girls
Saija Kontulainen*, Amy Bunyamin1, Chantal Kawallia2, Kelsey Bjorkman1, Jd Johnston2.
1University of Saskatchewan, UofS, Canada, 2UofS, Canada
Disclosures: Saija Kontulainen, None

SUN-0124  Is adiposity increased in children with achondroplasia and hypochondroplasia?
Takuo Kubota*, Yukako Nakano1, Kei Miyata1, Kenichi Yamamoto1, Shinji Takeyari1, Hirofumi Nakayama1,2, Takeshi Kimura1, Yasuhisa Ohata1, Taichi Kitaoka1, Keiichi Ozono1.
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Disclosures: Takuo Kubota, None

SUN-0125  Racial Differences in Bone Histomorphometry within Children and Young Adults on Dialysis.
Marciana Laster*, Renata Pereira, Isidro Salusky. UCLA, United States
Disclosures: Marciana Laster, None

SUN-0126  Multimodality Study of Glucocorticoid Induced Osteoporosis in Pediatric Crohn’s Disease
Jin Long*, Dale Lee2, Rita Herskovitz2, Babette Zemel2, Mary Leonard2. 1Department of Medicine, Stanford University, Stanford, United States, 2Department of Pediatrics, Seattle Children’s Hospital, Seattle, WA, United States, 3Department of Pediatrics, The Children’s Hospital of Philadelphia, Philadelphia, PA, United States, 4Division of GI, Hepatology & Nutrition, The Children’s Hospital of Philadelphia, Philadelphia, PA, United States, 5Department of Pediatrics, Stanford University, Stanford, CA, United States
Disclosures: Jin Long, None

SUN-0147  Measured Cortical Bone Strain during Muscle Contraction in a Mouse Model of Osteogenesis Imperfecta
Alycia Berman*, Rachel Surridge2, Joseph Wallace2. 1Weldon School of Biomedical Engineering, Purdue University, United States, 2Department of Biomedical Engineering, Indiana University - Purdue University Indianapolis, United States
Disclosures: Alycia Berman, None

SUN-0149  Reactive oxygen species (ROS) accumulate in skeletal muscle with age, and ROS stimulates the release of exosomes from myoblasts that can induce senescence-like changes in bone marrow derived stem cells (BMSCs)
Sadanand Fulzele*, Bharati Mendhe, Carlos Isales, William Hill, Meghan McGee-Lawrence, Kanglun Yu, Mark Hamrick. Augusta University, United States
Disclosures: Sadanand Fulzele, None

SUN-0150  Prx1-derived muscle interstitial cells contribute to bone repair and cause fibrosis in musculoskeletal trauma
Anais Julien*, Anuya Kanagalangam1, Oriane Duchamp De Lageneste1, Jerome Megret2, Frédéric Relaix1, Céline Colnot1. 1INSERM U1163, Imagine Institute, Paris Descartes University, France, 2INSERM US24 - CNRS UMS3633 Cytometry Platform, Paris Descartes University, France, 3INSERM IMRB U955, Paris Est- Créteil University, France
Disclosures: Anais Julien, None

SUN-0151  The bone anabolic effects of irisin are through preferential stimulation of aerobic glycolysis
Sung Kil Lim*, College of Medicine, Yonseii University, Republic of Korea
Disclosures: Sung Kil Lim, None
SUN-0152  Risedronate could rescue podocyte injury in Pit-1 overexpressing transgenic rats
Atsushi Masuda*1, Takeshi Takayanagi1, Yohei Asada1, Shogo Nakayama1, Eisuke Tomatsu1,
Yasunasa Yoshino1, Sahoko Sekiguchi-Ueda1, Megumi Shibata1, Eishin Yaotsu2, Atsushi
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2Department of Structural Pathology, Institute of Nephrology, Niigata University Graduate
School of Medical and Dental Sciences, Japan
Disclosures: Atsushi Masuda, None

SUN-0153  A Direct LC-MS/MS Method for the Simultaneous Quantification of Isomeric
Aminobutyric Acids in Biological Fluids and Its Application in Bone-Muscle Studies
Chenglin Mo*1, Zhiying Wang1, Liangqiao Bian2, Janalee Isaacson3, Robert Recker4, Joan
Lappe5, Lynda Bonewald6, Marco Broto7. 1College of Nursing and Health Innovation,
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6Department of Anatomy, Cell Biology and Orthopedics, Indiana Center for Musculoskeletal
Health, School of Medicine, Indiana University, IN, United States
Disclosures: Chenglin Mo, None

SUN-0154  Anti-Nerve Growth Factor Therapy Attenuates Cutaneous Hypersensitivity and
Musculoskeletal Discomfort in Mice with Osteoporosis
Miyako Suzuki*1, Magali Millecamps1, Seiji Ohtori2, Laura S. Stone1. 1The Alan Edwards
Centre for Research on Pain, Faculty of Dentistry, McGill University, Canada, 2Department
of Orthopaedic Surgery, Graduate School of Medicine Chiba University, Japan
Disclosures: Miyako Suzuki, None

SUN-0155  Advanced Age Leads to Aberrant Wnt Pathway Expression and Bone Turnover in a
Murine Model of Chronic Kidney Disease
Elizabeth Terhune*, Ryan Clark, William Schroeder, Karen King. Department of
Orthopedics, University of Colorado Anschutz Medical Campus, United States
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SUN-0156  Oncostatin M is a key effector of heterotopic ossification following spinal cord injuries
Hsu-Wen Tseng*1, Kylie Alexander1, Irina Salga2, Beulah Jose1, François
Genet2,3, Frédéric Torossian1, Bernadette Guerton1, Adrienne Anginot1, Whitney Fleming1,
Susan Millard1, Allison Pettit1, Natalie Sims1, Jean-Jacques Lataillade4, Marie-Caroline
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Brousse Hospital, Villejuif, France., 5Centre de Transfusion Sanguine des Armées, L’Institut de Recherche
Biomédicale des Armées, Clamart, France
Disclosures: Hsu-Wen Tseng, None

SUN-0157  Osteocyte markers and vascular health in kidney transplantation
Yue Pei Wang*, Aboubacar James Sidibé, Roth-Visal Ung, Karine Marquis, Mohsen
Agharazii, Fabrice Mac-Way. CHU de Québec Research Center, L’Hôtel-Dieu de Québec
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Université Laval, Canada
Disclosures: Yue Pei Wang, None

BONE MARROW MICROENVIRONMENT AND NICHES

SUN-0158  Enhanced bone growth with lipoxinA4
Amy Koh*, Justin Do, Hernan Roca, Laurie Mccauley. University of Michigan, United
States
Disclosures: Amy Koh, None
SUN-0176  In vivo Intramedullary Pressure Measurements and Femoral Bone Microarchitecture and Cortical Thickness in Young and Old Male Fischer-344 Rats
David Lee1, Sunggi Noh1, Jeong-Bong Lee1, Rhonda Prisby1. 1University of Texas, Arlington, United States, 2University of Texas, Dallas, United States
Disclosures: David Lee, None

SUN-0177  Primary Perturbations in the Myeloid Lineage, Including Neutrophils and the OsteoMac, Contribute to Cystic Fibrosis-Related Bone Disease
John Stabley1, Jessica Hook2, Shadaa Abid1, Li Li1, Megan Mead1, Abraham Behrmann1, Jessica MorelandF, Dwight Towler1, Raksha Jain1. 1Department of Internal Medicine, UT Southwestern Medical Center, United States, 2Department of Pediatrics, UT Southwestern Medical Center, United States
Disclosures: John Stabley, None

SUN-0178  Human obesity is associated with enhanced insulin signaling and accelerated differentiation of bone marrow stromal stem cell leading to premature skeletal aging
Michaela Tencerova1,2, Morten Frost1, Florence Figeac1, Anders Kristian Haakonsson1, Jens-Jacob Lauterlein1, Tina Kamilla Nielsen1, Dalia Ayesh Hafez Ali1, Kurt Hojlund1,2, Moustapha Kassem1,2. 1Department of Molecular Endocrinology, KMEB, University of Southern Denmark and Odense University Hospital, DK-5000 Odense C, Denmark, 2Danish Diabetes Academy supported by the Novo Nordisk Foundation, Denmark
Disclosures: Michaela Tencerova, None

SUN-0179  Gene Expression Profiles Associated with Angiogenesis in Human Site-Specific Bone Marrow Stromal Cells (hBMSCs)
Yifei Du1, Weina Zhou2,3, Hongbin Jiang1, Qisheng Tu1, Jinkun Chen2,4. 1Jiangsu Key Laboratory of Oral Diseases, Nanjing Medical University, Department of Oral and Maxillofacial Surgery, Affiliated Hospital of Stomatology, Nanjing Medical University, Nanjing, China, China, 2Division of Oral Biology, Tufts University School of Dental Medicine, Boston, Massachusetts, United States, 3Jiangsu Key Laboratory of Oral Disease, Nanjing Medical University, Nanjing, China, China, 4Department of Developmental, Molecular and Chemical Biology Sackler School of Graduate Biomedical Sciences Tufts University School of Medicine, United States
Disclosures: Yifei Du, None

SUN-0180  Osteal Macrophage Regulation of the Plasminogen System in Bone
Laura Zweifler*, Amy Koh, Benjamin Sinder, Megan Michalski, Herman Roca, Yuji Mishina, Laurie Mccauley. University of Michigan, United States
Disclosures: Laura Zweifler, None

BONE TUMORS AND METASTASIS

SUN-0200  The Extracellular Matrix Protein Spondin-2 Induces Osteomimicry in Prostate Tumor Cells via Primary Cilia Activation
Juan Ardura*, Bethan Kitchen, Irene Gutierrez-Rojas, Luis Álvarez-Carrión, Arancha R Gortazar, Veronica Alonso. Bone Physiopathology Laboratory, Departamento de Ciencias Médicas Básicas, Universidad San Pablo CEU. CEU Universities, Madrid (Spain), Spain
Disclosures: Juan Ardura, None

SUN-0201  LIGHT/TNFSF14 and RANKL: biomarkers and therapeutic targets of bone disease in multiple myeloma patients experiencing therapeutic regimens
Giacomina Brunetti1, Ritz Rizzi2, Giuseppina Storlino1, Sara Bortolotti1, Graziana Colaianni1, Lorenzo Sanesi1, Luciana Lippo1, Maria Grano1, Silvia Colucci1. 1Department of Basic and Medical Sciences, Neurosciences and Sense Organs, Section of Human Anatomy and Histology, University of Bari, Bari, Italy, 2Department of Emergency and Organ Transplantation, Section of Hematology with Transplantation, University of Bari, Bari, Italy, 3Department of Emergency and Organ Transplantation, Section of Human Anatomy and Histology, University of Bari, Bari, Italy
Disclosures: Giacomina Brunetti, None
SUN-0202  HDAC Inhibitors Synergize with Standard-of-Care MAP Chemotherapeutics to Block Growth of Osteosarcoma Sarcospheres  
Leah Everitt*, Christopher Collier, Gabrielle Knafler, Deep Gandhi, James Buschbach, Patrick Getty, Edward Greenfield. Case Western Reserve University Department of Orthopaedics, United States  
Disclosures: Leah Everitt, None

SUN-0203  Estrogen receptor alpha is a novel tumor suppressor in osteosarcoma  
Susan Krum*, Gustavo Miranda-Carboni, Maria Angeles Lillo Osuna. UTHSC, United States  
Disclosures: Susan Krum, None

SUN-0204  Parathyroid hormone-related protein (PTHrP) regulates CSC/EMT in a human breast cancer model and administration of anti-PTHrP therapeutic monoclonal antibodies reduces tumor burden in bone  
Jiarong Li*, Louis Dore Savard, Guoming Xiong, Richard Kremer. RI MUHC, Canada  
Disclosures: Jiarong Li, None

SUN-0205  Runx2 promotes autophagy through enhancing cytoskeletal stability in bone metastatic breast cancer cells.  
Ahmad Othman*, Manish Tandon, Jitesh Pratap. 1Rush University Medical Center, United States, 2KBI Biopharma, United States  
Disclosures: Ahmad Othman, None

SUN-0206  The JNKs/XBP1s Signaling Cascade Regulates Bone Microenvironmental Support to the Progression of Myeloma Bone Disease  
Risheng Chen*, Guoshuang Xu, Wissam Beaino, Kai Liu, Xuemei Zeng, Nathan Yates, Rong Chong, Konstas Verdelis, G Roodman, Denise Toscani, Nicola Giuliani, Yan Lin, Carolyn Anderson, Hongjiao Ouyang. 1University of Pittsburgh, United States, 2Indiana University School of Medicine, United States, 3University of Parma, Italy, 4Texas A&M University, United States  
Disclosures: Risheng Chen, None

SUN-0207  Effect of Extracellular Vesicles Derived from Osteotropic Tumors on Bone Resident Cells  
Riccardo Paone*, Alexander Loftus, Christopher George, Kirsty Shefferd, Argia Ucci, Simona Delle Monache, Alfredo Cappariello, Maurizio Muraca, Anna Maria Teti, Nadia Rucci. 1Department of Biotechnological and Applied Clinical Sciences, University of L’Aquila, Italy, 2Bambino Gesù Children Hospital, Rome, Italy, 3Department of Women’s and Children’s Health, University of Padua, Italy  
Disclosures: Riccardo Paone, None

SUN-0208  RANKL Increases Resistance to TRAIL Induced Cell Death in Oral Squamous Cell Carcinoma Tumor Cells  
Purushoth Ethiraj*, Yuvaraj Sambandam, Jessica Hathaway-Schrader, Azizul Haque, Chad Novince, Sakamuri Reddy. Medical University of South Carolina, United States  
Disclosures: Purushoth Ethiraj, None

SUN-0209  CD44 Intracellular Domain interaction with RUNX2 regulates metastasis of prostate cancer cells to the bone.  
Linda T. Senbanjo*, Meenakshi A. Chellaiah. University of Maryland Dental School, United States  
Disclosures: Linda T. Senbanjo, None

SUN-0210  Paracrine Actions of FGF23 on Bone-Metastatic Prostate Cancer  
Attaya Suvannasankha*, Douglas Tompkins, Colin Crean, John Chirgwin. Indiana University School of Medicine, United States  
Disclosures: Attaya Suvannasankha, None

SUN-0211  Targeting the Wnt/beta-catenin pathway in human osteosarcoma cells  
Jianning Tao*, Fang Fang, Ashley Vancleave, Ralph Helmuth, Jing Zhao, Kirby Rickel, Erliang Zeng. 1Sanford Research, United States, 2University of South Dakota, United States  
Disclosures: Jianning Tao, None
**SUN-0212** Remineralization of Bone Lytic Lesions in high risk myeloma patients enrolled on total therapy five protocol (TT5); the Arkansas experience.
Maurizio Zangari1*, Shivang Desai1, Meera Mohan1, Frits Van Rhe1, Sharmilan Thanendrarajan1, Carolina Schinke1, Faith Davies1, Gareth Morgan1, Larry Suva2, Donghoon Yoon1, Leo Rasche1, Niels Weinhold1, Shobhit Sharma1, Manoj Kumar1. 1University of Arkansas for Medical Sciences, United States, 2College of Veterinary Medicine and Biomedical Sciences Texas A&M University, United States
Disclosures: Maurizio Zangari, None

**CHONDROCYTES**

**SUN-0236** BMP2 signaling is required for postnatal maintenance of osteochondral tissues of the temporomandibular joint and knee
Eliane Dutra*, Mara O’Brien, Po-Jung Chen, Sumit Yadav. University of Connecticut Health, United States
Disclosures: Eliane Dutra, None

**SUN-0237** Novel TNFR2 Signaling in Osteoarthritis
Wenyu Fu*, Young-Su Yi, Jyoti Joshi Mundra, Aubryanna Hettinghouse, Chuanju Liu. New York University Medical Center, United States
Disclosures: Wenyu Fu, None

**SUN-0238** Lin28a overexpression promotes chondrocyte reprogramming and protects from osteoarthritis in mice
Yohan Jouan1,2*, Joanna Sanna1,2, Augustin Latourte1,2,3, Pascal Richette1,2,3, Hang-Korng Eal,2,3, Martine Cohen-Solal1,2, Eric Hay1,2,3, 1Paris Diderot University, Paris, France, 2Inserm 1132, Paris, France, 3Hôpital Lariboisière, Paris, France
Disclosures: Yohan Jouan, None

**SUN-0239** NFI-C is Required for Chondrocyte Proliferation in Growth Plate during Postnatal Cartilage Development
Joo-Cheol Park*, Dong-Seol Lee, Yeoung-Hyun Park, Chul Son. Seoul National University, Republic of Korea
Disclosures: Joo-Cheol Park, None

**SUN-0240** Downregulation of Sox9 in growth plate hypertrophic zone promotes chondrocyte-osteoblast transdifferentiation
Julian Lui*, Shanna Yue, Audrey Lee, Kevin Barnes, Jeffrey Baron. Section on Growth and Development, United States
Disclosures: Julian Lui, None

**SUN-0241** Glutamine and Glucose Metabolism Controls Chondrocyte Function during Endochondral Ossification
Steve Stegen1*, Kjell Laperre1, Guy Eelen2, Gianmarco Rinaldi3, Sophie Torrekens1, Sarah-Maria Fendt1, Peter Carmeliet2, Geert Carmeliet1. 1Clinical and Experimental Endocrinology, KU Leuven, Belgium, 2Angiogenesis and Vascular Metabolism, Vesalius Research Center, VIB/KU Leuven, Belgium, 3Cellular Metabolism and Metabolic Regulation, Vesalius Research Center, VIB/KU Leuven, Belgium
Disclosures: Steve Stegen, None

**SUN-0242** Salmon calcitonin exerts more preventive effects than celecoxib on cartilage degeneration, subchondral bone microarchitecture deterioration and tactile allodynia in a rat model of lumbar facet joint osteoarthritis
Faming Tian1*, Yu Gou2, Liu Zhang2. 1Medical Research Center, North China University of Science and Technology, China, 2Department of Orthopedic Surgery, Hebei Medical University, China
Disclosures: Faming Tian, None

**SUN-0243** NFAT1 Protects Articular Cartilage Against Osteoarthritis by Directly Regulating Transcription of Specific Anabolic and Catabolic Genes
Mingcai Zhang*, Qinghua Lu, Theodore Budden, Jinxi Wang. Harrington Laboratory for Molecular Orthopedics, Department of Orthopedic Surgery, University of Kansas Medical Center, United States
Disclosures: Mingcai Zhang, None
SUN-0244  Effect of Doxycycline on Osteochondral Graft Chondrocyte Viability Ex Vivo  
Brett Owens*, Li Yue. Brown University Alpert Medical School, United States  
Disclosures: Brett Owens, None

SUN-0245  Hajdu Cheney Syndrome Mutants are Susceptible to Osteoarthritis  
Stefano Zanotti*, Jennifer Wolf², David Bridgewater¹, Ernesto Canalis¹. ¹UConn Health, United States, ²University of Chicago, United States  
Disclosures: Stefano Zanotti, None

ENERGY METABOLISM, BONE, MUSCLE AND FAT

SUN-0269  Associations between Circulating Osteoprogenitor (COP) cells, Parathyroid Hormone, Vitamin D and function in older adults  
Ahmed Al Saedi *¹, Steven Phu², Gustavo Duque ³. ¹Australian Institute for Musculoskeletal Science (AIMSS), The University of Melbourne and Western Health, St. Albans, VIC, Australia, ²Department of Medicine-Western Health, Melbourne Medical School, The University of Melbourne, Australia  
Disclosures: Ahmed Al Saedi, None

SUN-0270  Total adiposity as reflected in body weight, rather than specific fat compartments, predicts incident low-trauma fractures in healthy non-osteoporotic post-menopausal women  
Emmanuel Biver*, Jessica Pepe, Alessandro De Sire, Thierry Chevalley, René Rizzoli, Serge Ferrari. Division of Bone Diseases, Geneva University Hospitals and Faculty of Medicine, University of Geneva, Switzerland  
Disclosures: Emmanuel Biver, None

SUN-0271  Overexpression of MitoNEET in osteoblasts leads to impaired bone mass and energy metabolism in mice  
Phuong Le*, Sheila Bornstein, Victoria Demambro, Clifford Rosen, Anyonya Guntur. MMCRI, United States  
Disclosures: Phuong Le, None

SUN-0272  Energy metabolism in the bone is associated with histomorphometric changes in rats with hyperthyroidism  
Liao Cui*, Zhuoqing Hu, Minqun Du, Yajun Yang. Department of pharmacology, Guangdong Medical University, China  
Disclosures: Liao Cui, None

SUN-0273  Deficiency of Long Non-Coding RNA ADPC Impairs Bone and Adipose Tissue Metabolism  
Yao Liu*, En Luo ², Junxiang Lian ¹, Qisheng Tu¹, Zoe(Xiaofang) Zhu ³, Jake(Jinkun) Chen ³. ¹Division of Oral Biology Tufts University School of Dental Medicine, Boston, MA, United States, ²State Key Laboratory of Oral Diseases, National Clinical Research Center for Oral Diseases, West China Hospital of Stomatology, Sichuan University, Chengdu, China, ³Shanghai Jiaotong University, China, ³Department of Developmental, Molecular and Chemical Biology Sackler School of Graduate Biomedical Sciences Tufts University School of Medicine, Boston, MA, United States  
Disclosures: Yao Liu, None

SUN-0274  Differentiation of Japanese Black Bears’ Adipose-Derived Stem Cells to Osteoblasts  
Alireza Nasoori*, Yuko Okamatsu-Ogura ², Woongchul Shin ³, Michito Shimozuru ⁴, Mohamed Abdallah Mohamed Moustafa ⁴, Toshio Tsubota ⁴. ¹Laboratory of Wildlife Biology and Medicine, Department of Environmental Veterinary Science, Graduate School of Veterinary Medicine, Hokkaido University, Japan, ³Department of Biomedical Sciences, Graduate School of Veterinary Medicine, Hokkaido University, Japan  
Disclosures: Alireza Nasoori, None
SUN-0275  
**Uc-dpMGP is associated with body composition and BMD in type 2 diabetes mellitus**  
Natascha Schweighofer*, Christoph Haudum¹, Michaela Goschnik², Ewald Kolesnik³,  
Ines Mursie¹, Albrecht Schmidt¹, Thomas R Pieber¹, Barbara Obermayer-Pietsch¹. ¹Div.  
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Platform, Medical University Graz, Austria, ³Div. Cardiology, Medical University Graz,  
Austria  
**Disclosures:** Natascha Schweighofer, None

SUN-0276  
**AdipoRon Alleviates Diabetic Bone Disorders via Suppressing Inflammation**  
Wei Qiu*, Jake Chen², Qisheng Tu², Xiongwen Wu², Xuedong Zhou¹, Junxiang Lian². ¹West  
China School of Stomatology, Sichuan University, China, ²Tufts Univ.School of Dental  
Medicine, United States  
**Disclosures:** Wei Qiu, None

SUN-0277  
**Lipid Droplets Contribute to the Bioenergetic Capacity of Osteoblasts by Supplying  
Endogenous Fatty Acids for Mitochondrial Respiration**  
Elizabeth Rendina-Ruedy*, Ron Helderman¹, Michael Czech², Clifford Rosen¹. ¹Maine  
Medical Center Research Institute, United States, ²Program in Molecular Medicine,  
University of Massachusetts Medical School, United States  
**Disclosures:** Elizabeth Rendina-Ruedy, None

SUN-0278  
**Complex Role for PPARγ in Bone, Inflammation and Immune function in Aging  
Animals**  
Raysa Rosario*, Ashwin Ajith, Kehong Ding, Ranya Elsayed, Yun Su, Anatolij Horuzsko,  
Mohammed Elsalanty, Meghan Mcgee Lawrence, Carlos Isales, Xing-Ming Shi. medical  
college of georgia, United States  
**Disclosures:** Raysa Rosario, None

SUN-0279  
**Mouse Model of Severe Osteogenesis Imperfecta is Protected Against High-Fat Diet  
Induced Obesity but not against High-Fat Diet Induced Insulin Resistance**  
Josephine T. Tauer*, Iris Boraschi-Diaz, Svetlana Komarova. Shriners Hospital for Children  
and Faculty of Dentistry, McGill University, Canada  
**Disclosures:** Josephine T. Tauer, None

SUN-0280  
**FSH is Positively Associated with Vertebral Bone Marrow Adiposity in  
Postmenopausal Women from the AGES-Reykjavik Cohort**  
Annegreet G. Veldhuis-Vlug*, Gina N. Woods², Sigurdur Sigurdsson¹, Susan K Ewing³,  
Phuong T. Le³, Trisha F. Hue³, Eric Vittinghoff⁴, Kaipin Xu⁴, Vilmundur Gudnason⁵,  
Gunnar Sigurdsson¹, Deborah M. Kado³, Gudny Eiriksdottir³, Tamara Harris⁶, Xiaoyuan Li⁷,  
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Center for Clinical and Translational Research, Maine Medical Center Research Institute,  
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Epidemiology and Biostatistics, University of California San Francisco, United States,  
⁵Center for Clinical and Translational Research, Maine Medical Center Research Institute,  
United States, ⁶Program of Advanced Musculoskeletal Imaging (PAMI), Cleveland  
Clinic, United States, ⁷Icelandic Heart Association Faculty of Medicine, University of  
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United States, ⁹Dept of Medicine and Family of Medicine and Public Health, University of  
California, United States  
**Disclosures:** Annegreet G. Veldhuis-Vlug, None

SUN-0281  
**Network analysis of skeletal muscle during spaceflight in male mice**  
David Waning*, Paul Childress², Raina Kumar³, George Dimitrov¹, Bintu Sowe⁴, Aarti  
Gautam¹, Nabarun Chakraborty⁵, Rasha Hammamieh⁶, Melissa Kacena². ¹Penn State  
College of Medicine, United States, ²Indiana University School of Medicine, United States,  
³Advanced Biomedical Computing Center, NCI, United States, ⁴ORISE, US Army Center  
for Environmental Health Research, United States, ⁵Integrative Systems Biology, US Army  
Center for Environmental Health Research, United States, ⁶Geneva Foundation, US Army  
Center for Environmental Health Research, United States  
**Disclosures:** David Waning, None
GENETIC MODELS OF MUSCULOSKELETAL DISEASES

SUN-0305  High Fidelity of Mouse Models Mimicking Human Genetic Skeletal Disorders Resulting from Mutations in 316 Genes (Skeletal Dysplasia Society 2015 Nosology Update)
Robert Brommage*, Claes Ohlsson. Centre for Bone and Arthritis Research, Sahlgrenska Academy, University of Gothenburg, Sweden
Disclosures: Robert Brommage, None

SUN-0306  Spontaneous Knee Osteoarthritis Caused by 1,25(OH)2D Deficiency Is Corrected by Overexpression of Sirt1 in Mesenchymal Stem Cells
Jie Chen*, Na Lu1, Lulu Chen1, David Goltzman2, Dengshun Miao1. 1Nanjing Medical University, China, 2McGill University, Canada
Disclosures: Jie Chen, None

SUN-0307  Effects of Alzheimer’s Disease and high-fat diet on bone quality and quantity in mice
Ryanne Chitjian*, Anthony Capellino2, Lisa S Robison3, Olivia J Gannon1, Abigail E Salinero1, Kristen L Zuloaga1, David E Komatsu2. 1Stony Brook University, Department of Biomedical Engineering, United States, 2Stony Brook University, Department of Orthopaedics, United States, 3Albany Medical College, Department of Neuroscience & Experimental Therapeutics, United States
Disclosures: Ryanne Chitjian, None

SUN-0308  Investigating Zbtb40 as a Determinant of Osteoblast Function and Commitment
Madison Doolittle*, Robert Maynard1, Gina Calabrese2, Charles Farber2, Cheryl Ackert-Bicknell1. 1University of Rochester, United States, 2University of Virginia, United States
Disclosures: Madison Doolittle, None

SUN-0309  Short Truncation of the C-terminus Tail of Connexin43 in Mice Causes Metaphyseal Dysplasia, Stunted Growth and Low Bone Mass
Francesca Fontana*, Marcus Watkins, Roberto Civitelli. Washington University School of Medicine, United States
Disclosures: Francesca Fontana, None

SUN-0310  Aberrant Endo-lysosomal-mitochondrial System in Skeletal Progenitors Causes Inordinate Bone Growth
Xianpeng Ge*, Lizhi He2, Haibo Liu1, Guangchuan Yu1, Bradford Tremblay1, Ben Zhang1, Cole Haynes1, Jaehyuck Shim1. 1Department of Medicine, Division of Rheumatology, University of Massachusetts Medical School, United States, 2Department of Biological Chemistry and Molecular Pharmacology, Harvard Medical School, United States, 3Department of Molecular, Cell and Cancer Biology, University of Massachusetts Medical School, United States, 4State Key Laboratory of Emerging Infectious Diseases, School of Public Health, The University of Hong Kong, China, 5Department of Orthopedics, University of Massachusetts Medical School, United States
Disclosures: Xianpeng Ge, None

SUN-0311  Identification of putative variants underlying human hip bone geometry using murine functional epigenomics data
Terence D. Capellini*, Yi-Hsiang Hsu1, Mariel Young1, Douglas P. Kiel 2, David Karasik2. 1Human Evolutionary Biology, Harvard University, United States, 2Institute for Aging Research Hebrew SeniorLife, United States
Disclosures: Terence D. Capellini, None

SUN-0312  Distinct subsets of non-coding RNAs, including miRNAs, are associated with BMD in stressed and unstressed bone
Kaare M. Gautvik*, Clara-Cecilie Günther1, Mazyar Yazdani2, Einar Lindalen1, Haldor Valland1, Vigdis T. Gautvik1, Ole K. Olstad1, Marit Holden1, Tor P. Utheim1, Sjur Reppe1. 1Lovisenberg Diakonale Hospital, Norway, 2Norwegian Computing Center, Norway, 3Oslo University Hospital, Norway, 4Diakonhjemmet Hospital, Norway
Disclosures: Kaare M. Gautvik, None
SUN-0313 An evolving classification system for the range of skeletal phenotypes encountered in IMPC mice.
David Rowe*, Douglas Adams, Hong Seung-Hyun, Caibin Zhang, Shin Dong-Guk, Sundberg John, Cheryl Ackert-Bicknell. 1School of Dental Medicine, University of Connecticut, United States, 2School of Medicine, University of Connecticut Health, United States, 3School of Engineering, University of Connecticut, United States, 4School of Dental Medicine, University of Connecticut Health, United States, 5The Jackson Laboratory, United States, 6University of Rochester School of Medicine, United States
Disclosures: David Rowe, None

SUN-0314 Male specific low bone mass phenotype in Down Syndrome humans and mouse models
Diarra Williams*, Alexis Mitchell, Alyssa Falck, Shannon Huggins, Kent McKelvey, Dana Gaddy, Larry Suva. 1Texas A&M University, United States, 2University of Arkansas for Medical Sciences, United States
Disclosures: Diarra Williams, None

GENOMICS, TRANSCRIPTOMICS, PROTEOMICS AND METABOLOMICS OF MUSCULOSKELETAL DISEASE

SUN-0331 Metabolomic signatures of high fruit and vegetable intake and reduced prevalence of osteoporosis: The Boston Puerto Rican Osteoporosis Study
Kelsey Mangano*, Sabrina Noel, Chao Qiang Lai, Laurence Parnell, Jose Ordovas, Katherine Tucker. 1University of Massachusetts, Lowell, United States, 2Nutrition and Genomics Laboratory, Jean Mayer U.S. Department of Agriculture Human Nutrition Research Center on Aging, Tufts University, Boston, MA, United States
Disclosures: Kelsey Mangano, None

SUN-0332 Exercise preconditioning promotes bone anabolism in hind-limb suspended mice via miR-152-3p-TFAM signaling dependent mitochondrial DNA replication
Jyotirmaya Behera*, Suresh C Tyagi, Kimberly E Kelly, Neetu Tyagi, Nicholas Theilen. University of Louisville, United States
Disclosures: Jyotirmaya Behera, None

SUN-0333 Transcriptional Profiling of Two Mechanisms of Bone Fracture Repair
Brandon Coates*, Jennifer Mckenzie, Evan Buettmann, Matthew Silva. Washington University in St. Louis, United States
Disclosures: Brandon Coates, None

SUN-0334 Using Co-expression Network Analysis to Inform GWAS for Bone Mineral Density
Olivia Sabik*, Gina Calabrese, Cheryl Ackert-Bicknell, Charles Farber. 1University of Virginia, United States, 2University of Rochester Medical Center, United States
Disclosures: Olivia Sabik, None

SUN-0335 WITHDRAWN

SUN-0336 Genetic Variants Associated with Circulating Parathyroid Hormone among Patients with Chronic Kidney Disease
Cassianne Robinson-Cohen*, Farzana Perwad, Myles S. Wolf, Ian H. De Boer, Bryan Kestenbaum, Loren Lipworth, Adriana Hung, T. Alp Ikizler. 1Vanderbilt University Medical Center, United States, 2University of California San Francisco, United States, 3Duke University, United States, 4University of Washington, United States
Disclosures: Cassianne Robinson-Cohen, None

HORMONAL REGULATORS

SUN-0360 PTEN REGULATION ALLEVIATES THE ALCOHOL-INDUCED OSTEOPENIA IN RAT VIA AKT/GSK-3Β/B-CATENIN PATHWAY IN BMSCS
Yi-Xuan Chen*, You-Shui Gao, Chang-Qing Zhang. Shanghai Sixth People hospital, China
Disclosures: Yi-Xuan Chen, None

SUN-0361 WITHDRAWN
SUN-0362 Megalin-Mediated 25-hydroxyvitamin D Actions in Human Mesenchymal Stem Cells
Yuan Gao*, Simon Luu, Shuanhu Zhou, Julie Glowacki. Brigham and Women’s Hospital, United States
Disclosures: Yuan Gao, None

SUN-0363 Phosphorylation of S122 in ERα is Dispensable for the Physiological Regulation of the Skeleton in Female Mice
Karin Gustafsson*1, Helen Farman1, Petra Henning1, Vikte Lionikaitė1, Sofia Movérale-Skrtic1, Klara Sjögren1, Pierre Chambon2, Claes Ohlsson1, Marie Lagerquist1. 1Centre for Bone and Arthritis Research at the Institute of Medicine, Sahlgrenska Academy at University of Gothenburg, Sweden, 2Institut de Génétique et de Biologie Moléculaire et CellulaireCentre National de la Recherche Scientifique, National de la Sante et de la Recherche Medicale, ULP, Collège de France, Illkirch-Strasbourg, France
Disclosures: Karin Gustafsson, None

SUN-0364 Glucocorticoid receptor dimerization is deleterious in trauma-induced compromised fracture healing
Yasmine Hachemi*1, Anna E. Rapp2, Ann-Kristin Pickel3, Anita Ignatus3, Jan Tuckermann1. 1Institute of Comparative Molecular Endocrinology, Ulm University., Germany, 2German Rheumatism Research Centre, Germany, 3Institute of Orthopedic Research and Biomechanics, Center for trauma research, Ulm University Medical Center., Germany
Disclosures: Yasmine Hachemi, None

SUN-0365 Relaxin Accelerates Rat Midpalatal Suture Expansion and Subsequent Bone Formation
Hiroyuki Kamimoto*, Yukiho Kobayashi, Keiji Moriyama. Department of Maxillofacial Orthognathics, Division of Maxillofacial and Neck Reconstruction, Graduate School of Medical and Dental Sciences, Tokyo Medical and Dental University, Japan
Disclosures: Hiroyuki Kamimoto, None

SUN-0366 Skeletal Effects of Non-Genomic Thyroid Hormone Receptor (TR) β1 Signaling in Mice
Richard Lindsey*1,2, Catrina Godwin1, Subburaman Mohan1,2. 1Musculoskeletal Disease Center, VA Loma Linda Healthcare System, United States, 2Department of Medicine, Loma Linda University, United States
Disclosures: Richard Lindsey, None

SUN-0367 Parathyroid Hormone is Anabolic for Bone due to Progenitor Recruitment and Adipogenic Lipolysis
David Maridas*, Elizabeth Rendina-Ruedy2, Ron Helderman2, Victoria Demambro2, Daniel Brooks3, Anyonya Guntur3, Vicki Rosen2, Beate Lanske1, Mary Bouxsein2, Clifford Rosen2. 1Harvard School of Dental Medicine, United States, 2Maine Medical School Research Institute, United States, 3Beth Israel Deaconess Medical Center, United States
Disclosures: David Maridas, None

SUN-0368 Propranolol treatment reduced sympathetic tone and prevented PTH-induced resorption in C57BL/6J mice
Annika Treyball*1, Hina Hashmi1, Daniel Brooks2, Kenichi Nagano3, Deborah Barlow4, Karen Houseknecht4, Roland Baron4, Mary Bouxsein3, Anyonya Guntur1, Katherine Motyl1. 1Maine Medical Center Research Institute, United States, 2Beth Israel Deaconess Medical Center, United States, 3Harvard School of Dental Medicine, United States, 4University of New England, United States
Disclosures: Annika Treyball, None

SUN-0369 WITHDRAWN

SUN-0370 A Novel Long-Acting PTH(1-34) Analog Containing a Palmitoylated C-Terminal Tag
Hiroshi Noda*, Ashok Khatri, Thomas J Gardella. Massachusetts General Hospital and Harvard Medical School, United States
Disclosures: Hiroshi Noda, Chugai Pharmaceutical Co., Ltd., Other Financial or Material Support
SUN-0371 Standardizing 25-Hydroxyvitamin D Concentrations Does Not Change the Number of Infants Classified as Vitamin D Deficient
Sharina Patel*1, Sherry Agellon1, Paula Lavery1, Catherine A. Vanstone1, Nora Shero1, Nathalie Gharibeh1, Maryam Razaghi1, Shuqin Wei2, Hope A. Weiler1, 1School of Human Nutrition, McGill University, Canada, 2Department of Obstetrics and Gynecology, Sainte Justine Hospital, University of Montreal, Canada
Disclosures: Sharina Patel, None

SUN-0372 Hypocalcemia from Hypoparathyroidism after Harvoni treatment for Hepatitis C
Puspalatha Sajja*, Catherine Anastasopoulou, Nissa Blocher. Einstein Medical Center, United States
Disclosures: Puspalatha Sajja, None

SUN-0373 FGF Receptor 1c Works as a Phosphate-Sensor to Regulate FGF23 Production
Yuichi Takashi*1, Yuka Kinoshita2, Nobuaki Ito2, Shun Sawatsubashi1, Hidetaka Kosako1, Masahiro Abe1, Munehide Matsuhisa1, Toshio Matsumoto1, Seiji Fukumoto1. 1Tokushima University, Japan, 2The University of Tokyo Hospital, Japan
Disclosures: Yuichi Takashi, None

SUN-0374 Effects of Biliopancreatic Diversion on Bone Turnover Markers and Association with Hormonal Factors in Patients with Severe Obesity
Anne-Frederique Turcotte*1, Thomas Grenier-Larouche2, Roth-Visal Ung1, David Simonyan1, Anne-Marie Carreau2, André Carpentier2, Fabrice Mac-Way1, Claudia Gagnon1. 1Laval University, Canada, 2Sherbrooke University, Canada, 3Chu de Quebec, Canada
Disclosures: Anne-Frederique Turcotte, None

SUN-0375 The Kruppel-like transcription factor 6 (KLF6/CPBP) plays a critical role in Colony Stimulating Factor 1-dependent transcriptional activation of the SPHK1 gene
Gang Qing Yao*, Karl Insogna. Yale university, United States
Disclosures: Gang Qing Yao, None

MECHANOBIOLOGY

SUN-0401 Specific modulation of vertebral marrow adipose tissue by physical activity
Daniel Belavy*1, Matthew Quitter1, Nicola Ridgers1, Adnan Shiekh2, Timo Rantalainen3, Guy Trudel2. 1Deakin University, Australia, 2University of Ottawa, Canada, 3University of Jyväskylä, Finland
Disclosures: Daniel Belavy, None

SUN-0402 The role of acetylcholine receptor signaling in bone mechanotransduction
Karl J Lewis*, Alexander G Robling. Indiana University School of Medicine, United States
Disclosures: Karl J Lewis, None

SUN-0403 Expression pattern of the mechanoresponsive piezo2 ion channel during skeletal development and growth
Disclosures: Jerahme Martinez, None

SUN-0404 Substantial Repair of Diffuse Damage in Bone In-Vitro Can Occur Through Physicochemical Mechanisms.
Leila Mehraban Alvandi*, Donna Chen, Samuel Stephen, Zeynep Seref-Ferlengez, Robert J Majeska, Mitchell B. Schaffler. Department of Biomedical Engineering, City College of New York, United States
Disclosures: Leila Mehraban Alvandi, None

SUN-0405 Bone Properties and the Endocannabinoid System Observed with Neurectomy and Hibernation in Marmots (Marmota flaviventris)
Emily Mulawa*, Rabecca Packer, Jay Kirkwood, Lisa Wolfe, Samantha Wojda, Jessica Prenew, Gregory Florant, Seth Donahue. Colorado State University, United States
Disclosures: Emily Mulawa, None
SUN-0406  The Role of Panx1 and P2X7R in Inflammation-induced Diabetic Bone Dysfunction
Zeynep Seref-Ferlengez*,1, Marcia Urban-Maldonado1, Herb Sun1, Mitchell Schaffler2, Sylvia Suadicani1, Mia Thi1, 1Albert Einstein College of Medicine, United States, 2City College of New York, United States
Disclosures: Zeynep Seref-Ferlengez, None

SUN-0407  Exercise in Calorie Restricted Mice fails to Increase Bone Quantity, despite suppression of Marrow Adipose Tissue (MAT)
Cody Mcgrath*, Jeyant Sankaran1, Negin Misaghian-Xanthos1, Buer Sen1, Zhihui Xie1, Martin A Styner*, Xiaopeng Zong2, Maya Styner1. 1Division of Endocrinology and Metabolism, Department of Medicine, UNC-Chapel Hill, United States, 2Departments of Computer Science and Psychiatry, UNC, United States, 3Biomedical Research Imaging Center, UNC, United States
Disclosures: Cody Mcgrath, None

SUN-0408  Mechanical signals activate YAP and TAZ in part via Piezo 1
Xuehua Li*, Charles O’Brien, Jinhu Xiong. University of Arkansas for Medical Sciences, United States
Disclosures: Xuehua Li, None

SUN-0409  Disruption of Nucleo-Cytoskeletal Connectivity Impairs Mechanical Competence of MDA-MB-231 Cells and Regulates Responses to Low Magnitude Mechanical Forces
Xin Yi*, Laura Wright1, Gabriel Pagnotti1, Gunes Uzer2, Clinton Rubin1, Uma Sankar1, Katherine Powell1, Joseph Wallace1, Khalid Mohammad1, Theresa Guise1, William Thompson1. 1Indiana University, United States, 2Boise State University, United States, 3Stony Brook University, United States
Disclosures: Xin Yi, None

SUN-0426  Defining the Role of BMP Signaling in the Development of Degenerative Disc Disease
Avionna Baldwin*, Roman Eliseev1, Addisu Mesfin1, Noriaki Yokogawa2, Alex Hollenberg1. 1University of Rochester School of Medicine and Dentistry, United States, 2Kanazawa University, Japan
Disclosures: Avionna Baldwin, None

SUN-0427  Age-related changes in bone strength of male radii depend on outer bone size
Erin M.R. Bigelow*, Daniella M. Patton1, Gurjit Mandar1, Ferrous S. Ward1, Stephen H. Schlecht1, Michael D. Morris1, David Kohn1, Todd L. Bredbenner2, Karl J. Jepsen1. 1University of Michigan, United States, 2University of Colorado Colorado Springs, United States
Disclosures: Erin M.R. Bigelow, None

SUN-0428  Adult vs. Middle-Aged Bone Responses to Hindlimb Unloading in Males and Females
Rihana Bokhari*, Corinne Metzger1, Alexandra Marich1, Emily Sturgell1, Matthew Allen2, Alyssa Flack1, Larry Suva1, Susan Bloomfield1. 1Texas A&M University, United States, 2Indiana University of Medicine, United States
Disclosures: Rihana Bokhari, None

SUN-0429  Tomographic and biomechanical differences in trabecular bone in the early stage of male osteoporosis
Ruei-Ming Chen*, Wei-Hua Chang. Taipei Medical University, Taiwan
Disclosures: Ruei-Ming Chen, None

SUN-0430  The Decline of Osteoprogenitor Number and Loss of Bone Mass with Old Age in Mice is Attenuated by Repleting NAD+ with Nicotinamide Riboside Administration
Ha-Neui Kim*,1,2, Li Han1,2, Srividhya Iyer1, Jianhui Chang1, Aaron Warren1,2, Julie Crawford1,2, Daohong Zhou1, Stavros Manolagas1,2, Maria Almeida1,2. 1University of Arkansas for Medical Sciences, United States, 2Central Arkansas Veterans Healthcare System, United States
Disclosures: Ha-Neui Kim, None
SUN-0431  Microstructural analysis of human whole spine vertebrae by using HR-pQCT
Narihiro Okazaki*1, Shuta Yamada1, Ko Chiba1, Toshiyuki Tsurumoto2, Makoto Osaki1.
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Macroscopic Anatomy, Nagasaki University Graduate School of Biomedical Sciences, Japan
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MUSCULOSKELETAL DEVELOPMENT

SUN-0448  Role of Discoidin Domain Receptor 2 in Bone Regeneration
Abdulaziz Binrayes*, Renny Franceschi. University of Michigan, United States
Disclosures: Abdulaziz Binrayes, None

SUN-0449  Cartilage-like microfiber/hydrogel composite scaffold for articular cartilage therapy
and regeneration
Young Hun Jeong*, Cheol Woo Park, Gyu Man Kim, Moon Kyu Kwak. Kyungpook
National University, Republic of Korea
Disclosures: Young Hun Jeong, None

SUN-0450  Pin1 suppression rescued impaired endochondral ossification in Fgfr2 S252W/+ Apert
mouse model
Bong-Soo Kim*, Hye-Rim Shin, Han-Sol Bae, Woo-Jin Kim, Hee-In Yoon, Won-Jun Yoon,
Hyun-Mo Ryoo. Seoul National University, Republic of Korea
Disclosures: Bong-Soo Kim, None

SUN-0451  Adult Ece1 Ablation in Mice Causes Pulmonary Dysfunction and Pectus Excavatum
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College of Wisconsin, United States, 2University of Wisconsin Madison, United States
Disclosures: Jasmin Kristianto, None

SUN-0452  A Survey of Skeletal Adaptations in Young Male Mice after Four Weeks of
Microgravity Aboard the International Space Station
Kevin Maupin*, Paul Childress1, Riley Gorden1, Alexander Brinker1, Elliott Beckner1,
Rachel Mannfeld1, Faisal Khan1, Matthew Allen1,2, Nabarun Chakraborty1, Aarti Gautam1,
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University, Japan, 2Division of Molecular Genetics, Institute for Comprehensive Medical Science, Fujita Health
University, Japan
Disclosures: Eisuke Tomatsu, None

SUN-0453  Beginning Maternal Vitamin D Supplementation Before Pregnancy is Associated with
Higher Serum Vitamin D Status in Neonates
Maryam Razaghi*, Sharina Patel1, Nathalie Gharibeh1, Nora Shero1, Sherry Agellon1,
Catherine Vanstone1, Shugin Wei1, Hope Weiler1. 1McGill University, Canada, 2Hôpital
Sainte-Justine (Montréal), Canada
Disclosures: Maryam Razaghi, None

SUN-0454  Delayed tooth eruption in Runx2+/- mice is rescued by HDAC inhibitors.
Heein Yoon*, Han-Sol Bae, Hye-Rim Shin, Bong-Soo Kim, Jeong-Hwa Baek, Yun-Sil Lee,
Kyung-Mi Woo, Hyun-Mo Ryoo. Seoul National University, Republic of Korea
Disclosures: Heein Yoon, None
MUSCULOSKELETAL PROGENITOR CELLS AND LINEAGE DETERMINATION

SUN-0477  Toll-like Receptors 3 and 4 are Critical Regulators of Bone Formation even in the Absence of Infection
Alan Davis*. Baylor College of Medicine, United States
Disclosures: Alan Davis, None

SUN-0478  Discoidin Domain Receptor 2 Controls Skeletal Stem Cell Lineage
Chunxi Ge*1, Fatma Mohamed2, Yi Tang3, Stephan Weiss3, Renny Franceschi1. 1Dept of Periodontics & Oral Medicine, University of Michigan School of Dentistry, United States, 2Dept of Periodontics & Oral Medicine, Univ. of Michigan School of Dentistry, United States, 3Life Sciences Institute, University of Michigan, United States
Disclosures: Chunxi Ge, None

SUN-0479  Sost KO mice cannot rescue the conditional knockout of the Bmp2 gene Using the Osterix-CreERT2 or aSMA-CreERT2 model
Stephen E Harris*1, Jelica Gluhak-Heinrich1, Marie A Harris1, Jian Feng2, Yong Cui1, Ivo Kalajzic1. 1uthscsa, United States, 2texas a and m Dental School, United States, 3Uconn Health, United States
Disclosures: Stephen E Harris, None

SUN-0480  Exposure of Nutrient-stressed Bone-derived Mesenchymal Stem Cells to the Tryptophan Metabolite Kynurenine Inhibits Autophagy and Promotes Cell Death
Robert Bragg*1, Thomas Barrett2, Ahmed Elmans1, Khaled Hussein2, Tanner Mobley1, Wendy Bollag3, Sadanand Fulzele4, Xingming Shi5, Meghan Mcgee-Lawrence5, Mark Hamrick5, Carlos Isales6, William Hill7. 1Medical College of Georgia, Augusta University, United States, 2Dept Cellular Biology & Anatomy, Medical College of Georgia, Augusta University, United States, 3Department of Physiology and Endocrinology, Medical College of Georgia, Augusta University, United States, 4Dept of Orthopedic Surgery, Medical College of Georgia, Augusta University, United States, 5Dept of Neuroscience and Regenerative Medicine, Medical College of Georgia, Augusta University, United States, 6Dept of Medicine Endocrinology, Medical College of Georgia, Augusta University, United States, 7Charlie Norwood V AMC, United States
Disclosures: Robert Bragg, None

SUN-0481  The role of the RhoGTPase cdc42 in the differentiation of mesenchymal stromal cells to osteoblasts and adipocytes
Katrin Huck*, Carla Sens-Albert2, Inaam Nakchbandi1. 1Max-Planck Institute for Medical Research, Germany, 2University of Heidelberg, Germany
Disclosures: Katrin Huck, None

SUN-0482  Cartilage tissue engineering using poly(PCL/PTHF urethane)/collagen nanofibers via blocking NF–kappa B signaling pathway
Tongmeng Jiang*, Xianyuan Huang, Shujun Heng, Li Zheng, Jinmin Zhao. Guangxi Engineering Center in Biomedical Materials for Tissue and Organ Regeneration & Guangxi Collaborative Innovation Center for Biomedicine, The First Affiliated Hospital of Guangxi Medical University, China
Disclosures: Tongmeng Jiang, None

SUN-0483  A Long Intergenic Noncoding RNA in Macrophages and Mesenchymal Stem Cells Regulates in vivo Trabecular Bone Formation
Coralee E. Tye*, Jonathan A.R. Gordon1, Kristaana Finstad1, Roland Elling2, Kate A. Fitzgerald2, Janet L. Stein1, Gary S. Stein1, Jane B. Lian1. 1Department of Biochemistry, University of Vermont Larner College of Medicine, United States, 2Department of Medicine, University of Massachusetts Medical School, United States
Disclosures: Coralee E. Tye, None
SUN-0484  Autograft ligament-tendon tissues formed a “new knee” in the damaged knee surface
Chi Ma\textsuperscript{a1}, Chuanju Liu\textsuperscript{a2}, Lei Zhang\textsuperscript{a1}, Hu Zhao\textsuperscript{a1}, Xiaohua Liu\textsuperscript{a1}, Yan Jing\textsuperscript{a1}, Jian Q. Feng\textsuperscript{a2}.
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Disclosures: Chi Ma, None

SUN-0485  Characterizing Osteogenic Deficiency in Neurofibromatosis Type 1 at Single-Cell Resolution
Nandina Paria\textsuperscript{a1}, Jinyan Chan\textsuperscript{a2}, Jingua Gu\textsuperscript{a2}, Carol Wise\textsuperscript{a2}, Jonathan Rios\textsuperscript{a1}. \textsuperscript{a1}Texas Scottish Rite Hospital for Children, United States, \textsuperscript{a2}Baylor Research Institute, United States

Disclosures: Nandina Paria, None

SUN-0486  \textbf{β-catenin preserves stem state of MSC through activation of EZH2}
Buer Sen\textsuperscript{a1}, Zhihui Xie\textsuperscript{a2}, Jeyant S Sankaran\textsuperscript{a1}, Amel Dudakovic\textsuperscript{a2}, Gunes Uzer\textsuperscript{a3}, Maya Styner\textsuperscript{a3}, Mark B Meyer\textsuperscript{a4}, Andre J Van Wijnen\textsuperscript{a3}, Janet Rubin\textsuperscript{a1}. \textsuperscript{a1}University of North Carolina, United States, \textsuperscript{a2}Mayo Clinic, United States, \textsuperscript{a3}Boise State University, United States, \textsuperscript{a4}University of Wisconsin, United States

Disclosures: Buer Sen, None

SUN-0487  Extracellular lipid availability determines skeletal progenitor cell fate
Nick Van Gastel\textsuperscript{a1,2,3}, Steve Stegen\textsuperscript{a1,2}, Guy Eelen\textsuperscript{a1,2}, Sandra Schoors\textsuperscript{a5}, Aurelie Carlier\textsuperscript{a2,6,7}, Veerle Daniels\textsuperscript{a4}, Maarten Depypere\textsuperscript{a8,9}, Pieter-Jan Stiers\textsuperscript{a1,2}, Riet Van Looveren\textsuperscript{a1}, Sophie Torrekens\textsuperscript{a1}, Patrizia Agostinis\textsuperscript{a10}, Frederik Maes\textsuperscript{a8,9}, Johan Swinnen\textsuperscript{a2}, Liesbet Geris\textsuperscript{a6,7}, Hans Van Oosterwyck\textsuperscript{a8,9}, Geert Carmeliet\textsuperscript{a1,2}. \textsuperscript{a1}Department of chronic diseases, metabolism and ageing, KU Leuven, Belgium, \textsuperscript{a2}Prometheus, Division of Skeletal Tissue Engineering, KU Leuven, Belgium, \textsuperscript{a3}Department of Stem Cell and Regenerative Biology, Harvard University, Cambridge, MA, United States, \textsuperscript{a4}Department of Oncology, KU Leuven, Belgium, \textsuperscript{a5}Center for Cancer Biology, VIB, Belgium, \textsuperscript{a6}Department of Mechanical Engineering, KU Leuven, Belgium, \textsuperscript{a7}Biomechanics Research Unit, GIGA In Silico Medicine, University of Liege, Belgium, Netherlands, \textsuperscript{a8}Medical Imaging Research Center, KU Leuven, Belgium, \textsuperscript{a9}Department of Electrical Engineering, KU Leuven, Belgium, \textsuperscript{a10}Department of Cellular and Molecular Medicine, KU Leuven, Belgium, \textsuperscript{a11}Center for Regenerative Medicine, Massachusetts General Hospital, Boston, MA, United States

Disclosures: Nick Van Gastel, None

SUN-0488  Nestin+ Mesenchymal Stem/Progenitor Cells essential for Type H Vessels Formation in Coupling Osteogenesis
Liang Xie\textsuperscript{a1}, Xiao Wang\textsuperscript{a2}, Manman Gao\textsuperscript{a3}, Changjun Li\textsuperscript{a2}, Hui Xie\textsuperscript{a1}, Lingling Xian\textsuperscript{a1}, Mei Wan\textsuperscript{a1}, Qianming Chen\textsuperscript{a3}, Xu Cao\textsuperscript{a1}. \textsuperscript{a1}State Key Laboratory of Oral Diseases, West China Hospital of Stomatology, Sichuan University, China, \textsuperscript{a2}Department of Orthopedic Surgery, School of Medicine, Johns Hopkins University, United States, \textsuperscript{a3}Department of Sports Medicine, Xiangya Hospital, Central South University, China, \textsuperscript{a4}Division of Hematology, Department of Medicine, The Johns Hopkins University School of Medicine, United States, \textsuperscript{a5}Department of Orthopaedic Surgery, Johns Hopkins University School of Medicine, United States

Disclosures: Liang Xie, None

OSTEOARTHRITIS AND OTHER JOINT DISORDERS

SUN-0513  RNA-Seq Based Comparative Transcriptome Profiling To Decipher The Role Of Glycogen Synthase Kinase 3 Signaling In Cartilage Biology
Supinder Kour Bali\textsuperscript{a1}, Lauren Solomon\textsuperscript{a2}, Dawn Bryce\textsuperscript{a1}, Frank Beier\textsuperscript{a3}. \textsuperscript{a1}Department of Physiology and Pharmacology, The University of Western Ontario, Canada, \textsuperscript{a2}Department of Pathology and Laboratory Medicine, The University of Western Ontario, Canada

Disclosures: Supinder Kour Bali, None

SUN-0514  The Rare Disease, Alkaptonuria, Reveals New Mechanisms of Joint Destruction, Subchondral Cracking and HDMP Formation, that may be Prevalent in Osteoarthritis
J A Gallagher\textsuperscript{a1}, N P Thomas\textsuperscript{a1}, N Jeffery\textsuperscript{a1}, L R Ranganath\textsuperscript{a1}, A Boyde\textsuperscript{a2}. \textsuperscript{a1}University of Liverpool, United Kingdom, \textsuperscript{a2}Queen Mary University of London, United Kingdom

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SUN-0515 Porous Tantalum Rods Implantation for Osteonecrosis of Femoral Head: Longitudinal Follow-up of 40 hips
Mincong He*, Qiushi Wei, Wei He, Yi-Xian Qin. 1First School of Clinical Medicine, Guangzhou University of Chinese Medicine, China, 2Department of Orthopaedics Surgery, The First Affiliated Hospital of Guangzhou University of Chinese Medicine, China, 3Department of Biomedical Engineering, Stony Brook University, United States
Disclosures: Mincong He, None

SUN-0516 TGF-β Signaling Plays an Important Role in Chondrocyte Senescence after Oxidative Stress
Jie Jiang*, Tieshi Li, Alessandra Esposito, Lai Wang, Xin Jin, Joseph Temple, Arnavaz Hakimiyan, Susan Chubinskaya, Anna Spagnoli. Department of Pediatrics, Rush University medical Center, United States
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SUN-0517 Clinical symptoms, quality of life (QOL), function and gait in community dwelling Seniors: Comparing those with and without osteoarthritic (OA) knee pain.
Angela Juby*, Christopher Davis, Justin Lewicke. 1University of Alberta, Canada, 2Glenrose Rehabilitation Hospital, Canada
Disclosures: Angela Juby, None

SUN-0518 Biochemical Profiling of MRI-detected Bone Marrow Lesions in Knee Osteoarthritis Patients: Altered Mineralization of the Subchondral Bone Matrix
Julia Kuliwaba*, Yea-Rin Lee, Dzenita Muratovic, David Findlay. Adelaide Medical School, The University of Adelaide, Australia
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SUN-0519 Subchondral tibial bone texture is related with knee replacement surgery
Thomas Janvier*, Guillaume Odri, Rachel Jennane, Hechmi Toumi, Eric Lempessailles. 1University of Orléans, I3MTO Laboratory, France, 2Hôpital Lariboisière, Orthopedics, France, 3Hospital of Orléans, Rheumatology, France
Disclosures: Thomas Janvier, None

SUN-0520 Older adults with greater severity of lumbar disc height narrowing and facet joint osteoarthritis have higher lumbar volumetric BMD, independently of body weight: Framingham QCT Study
Elizabeth Samelson*, Mohamed Jarraya, Michelle Yau, Elise Morgan, Brett Allaire, Mary Bouxsein, Marian Hannan, Douglas Kiel, Thomas Travisin, Pradeep Suri, Ali Guermazi. 1Institute for Aging Research, Hebrew SeniorLife, Harvard Medical School, United States, 2Mercy Catholic Medical Center, United States, 3Institute for Aging Research, Hebrew SeniorLife, United States, 4Boston University, United States, 5Beth Israel Deaconess Medical Center, United States, 6University of Washington, United States, 7Boston Medical Center, United States
Disclosures: Elizabeth Samelson, None

SUN-0521 Postmenopausal Women Have Increased Risk of Periprosthetic Fracture After Total Knee Arthroplasty
Blossom Samuels*, Josue Santana, Alexander Dash, Yi Liu, Alana Serota, David Mayman, Kaitlin Carroll, Michael Pitta, Timothy Wright, Emily Stein. 1Hospital for Special Surgery, United States, 2Cornell University, United States
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SUN-0522 CaMKK2-AMPK-p38MAPK Axis Regulates the Onset of Post-Traumatic Osteoarthritis
Uma Sankar*, Elsa Mevel, Yong Li, Ushashi Dadwal, William Thompson, Diane Wagner, Stephen Trippel, Matthew Allen, David Burr. 1Indiana University School of Medicine, United States, 2Indiana University Purdue University of Indianapolis, United States
Disclosures: Uma Sankar, None
SUN-0523  Targeting the IGF-1 Signaling Pathway for the Prevention of Post-Traumatic Osteoarthritis (PTOA)
Yongmei Wang**, Long Le†, Tianlu Wang‡, Tejal Desai ‡, Daniel Bikle †. 1Endocrine Unit, University of California, San Francisco and San Francisco VA Health Care System, United States, 2Department of Bioengineering and Therapeutic Sciences, University of California, San Francisco, United States
Disclosures: Yongmei Wang, None

SUN-0524  A Standardized Approach to Quantifying Pathological Parameters of Osteoarthritis in a Preclinical Model
Gregory Young*, Fadia Kamal, Vengadesh Karrupagounder, William Pinamont, Reyad Elbarbary. Department of Orthopedics and Rehabilitation, Penn State University, College of Medicine, Hershey PA., United States
Disclosures: Gregory Young, None

OSTEOBLASTS

SUN-0557  Pro-Osteoporotic mir-320a Induces Oxidative Stress and Impairs Osteoblast Function
Natalia Garcia-Giralt**, Laura De-Ugarte†, Susana Balcells‡, Xavier Nogues‡, Daniel Grinberg§, Adolfo Diez-Perez‡. 1IMIM (Hospital del Mar Medical Research Institute), CIBERFES, Spain, 2IMIM (Hospital del Mar Medical Research Institute), Spain, 3Universitat de Barcelona, CIBERER, Spain
Disclosures: Natalia Garcia-Giralt, None

SUN-0558  Role of Methylsulfonylmethane (MSM) as an osteoinductive material in the osteogenesis of stem cells from human exfoliated deciduous teeth (SHED)
Hanan Aljohani*, Meenakshi A. Chellaiah. University of Maryland- Dental School, United States
Disclosures: Hanan Aljohani, None

SUN-0559  FGF23 Counts Osteoblast Differentiation in Human Mesenchymal Stem Cells by Inhibiting Vitamin D Signaling and Metabolism
Christopher Bertucci*, Fangang Meng, Shuanhu Zhou, Julie Glowacki. Brigham and Women’s Hospital, United States
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SUN-0560  Developmental contribution of growth plate-derived hedgehog signal-responsive cells in growing bone
Ryuma Haraguchi*, Riko Kitazawa†, Yuuki Imai‡, Sohei Kitazawa†. 1Department of Molecular Pathology, Ehime University Graduate School of Medicine, Japan, 2Department of Diagnostic Pathology, Ehime University Hospital, Japan, 3Proteo-Science Center, Ehime University, Japan
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SUN-0561  The role of Fam20C on the bone and tooth formation
Katsutoshi Hirose*, Yu Usami†, Kaori Oya†, Sunao Sato†, Toshihisa Komori†, Satoru Toyosawa†. 1Osaka University Graduate School of Dentistry, Japan, 2Nagasaki University Graduate School of Biomedical Sciences, Japan
Disclosures: Katsutoshi Hirose, None

SUN-0562  Adenosine Receptors A2A and A3 are crucial in Pulsed-Electromagnetic-Field Induced Pre-Osteoblast Cell Differentiation
Niladri S. Kar*, Daniel Ferguson†, Nianli Zhang†, Erik I. Waldorff†, James T. Ryaby†, Joseph A. Didonato†. 1Cleveland Clinic, United States, 2Washington University in St. Louis, United States, 3Orthofix, United States
Disclosures: Niladri S. Kar, None

SUN-0563  The epigenetic regulator and H3K9me2 demethylase encoded by the Hairless (Hr) gene controls osteoblast differentiation
Farzaneh Khani*, Roman Thaler, Christopher Paradise, Amel Dudakovic, Andre Vanwijnen. Department of Orthopedic Surgery, Mayo Clinic, United States
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SUN-0564  Salt-inducible kinase 1 regulates bone metabolism by affecting proliferation of osteoblast precursors and differentiation of osteoblasts
Min Kyung Kim*, Hong-Hee Kim. Department of Cell and Developmental Biology, Seoul National University, Republic of Korea
Disclosures: Min Kyung Kim, None

SUN-0565  Osteoblast-Specific Cell-Surface Antigen Regulating Osteoclastogenesis and Calcification: A Possible Unique Modulator of Bone Remodeling
Tamer Badawy*, Yukari Kyumoto-Nakamura¹, Norihisa Uehara¹, Akiko Kukita², Toshio Kukita¹. ¹Molecular Cell Biology & Oral Anatomy, Faculty of Dental Science, Kyushu University, Japan, ²Microbiology, Faculty of Medicine, Saga University, Japan
Disclosures: Tamer Badawy, None

SUN-0566  Osteoblast-specific overexpression of Gαs or Gα11 leads to differential fracture healing responses.
Kathy Kyungueun Lee*, Jane Mitchell¹, Marc Grynpas². ¹University of Toronto, Canada, ²Lumenfeld-Tanenbaum Research Institute, Canada
Disclosures: Kathy Kyungueun Lee, None

SUN-0567  Analysis of osteoblast-specific histone-modifying enzymes Mof reveals novel epigenetic basis of osteoblast differentiation
Xiangzhi Li*, Jianmei Chen¹, Di Liu², Minqi Li³, Yang Yang¹, Shuang Gao¹, Meng Wang¹, Shiguo Yan¹. ¹Department of Cell Biology, Shandong University School of Basic Medical Sciences, China, ²Department of Prosthodontics, Shandong Provincial Key Laboratory of Oral Tissue Regeneration, School of Stomatologv Shandong University, China, ³Department of Bone Metabolism, School of Stomatologv Shandong University, China
Disclosures: Xiangzhi Li, None

SUN-0568  Plasticizer Di(2-ethylhexyl)phthalate Interferes with Osteoblastogenesis and Adipogenesis in vitro and in vivo
Rong-Sen Yang*, Chen-Yuan Chiu, Ding-Cheng Chan, Shing-Hwa Liu. National Taiwan University, Taiwan
Disclosures: Rong-Sen Yang, None

SUN-0569  TRAPPC9 Regulates BMP2-mediated Osteoblast Differentiation and Bone Regeneration through Down-Regulation of NF-κB Activation
Thomas Mbimba*, Gregory Sondag ¹, Fouad Moussa¹, Fayeza Safadi². ¹Musculoskeletal Research Group, NEOMED, United States, ²Musculoskeletal Research Group, NEOMED, Akron Children Hospital, United States
Disclosures: Thomas Mbimba, None

SUN-0570  Role of Hp1 family proteins Cbx1, Cbx3, and Cbx5 during osteoblastic differentiation
Christopher R. Paradise*, Pengfei Zan¹, Roman Thaler¹, Farzaneh Khani¹, Merel O. Mol², Esther Liu¹, Guodong Li³, Peter Kloen², Marianna Kruthof-De Julio³, Simon M. Cool³, David R. Deyle¹, Amel Dudakovic¹, Andre J. Van Wijnen¹. ¹Mayo Clinic, United States, ²University of Amsterdam, Netherlands, ³Tongji University, China, ³University of Bern, Switzerland, ³Agency for Science, Technology and Research, A(*)STAR, Singapore
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SUN-0571  Role of Pre-proenkephalin 1 in the response of bone to mechanical unloading and in osteoblast differentiation
Nadia Rucci*, Antonio Maurizi, Isabella Baldini, Mattia Capulli, Anna Teti. University of L’Aquila, Italy
Disclosures: Nadia Rucci, None
SUN-0572 Iron Involves in the Regulatory Effect of High Static Magnetic Field on Osteoblasts and Osteoclasts
Jiancheng Yang*1,2, Jian Zhang1,2, Dandan Dong1,2, Shenghang Wang1,2, Peng Shang2,3.
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SUN-0573 The sulforaphane-sensitive Tet2 enzyme controls osteoblast differentiation and bone homeostasis by regulating active DNA demethylation
Roman Thaler*, Farzaneh Khani, Chris Paradise, Oksana Pichurin, Amel Dudakovic, Andre J Van Wijnen. Mayo Clinic, United States
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SUN-0574 Notch activation augments bone morphogenetic protein mediated human osteoblast differentiation
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SUN-0575 Gi signaling regulates the fate of murine bone marrow mesenchymal progenitor cells
Liping Wang*, Linh Ho, Theresa Roth, Robert Nissenson. Endocrine Research Unit, San Francisco VA Medical Center, and Departments of Medicine and Physiology, University of California, United States
Disclosures: Liping Wang, None

SUN-0576 Calmodulin dependent protein kinase kinase-2 (CamKK2) activates AMPK at an early stage which is required for osteoblast differentiation
Susan D’Costa*, Gang Xi, David Clemmons. University of North Carolina at Chapel Hill, United States
Disclosures: Susan D’Costa, None

OSTEOCLASTS

SUN-0616 Snx10 and PIKfyve are Required for Lysosome Formation in Osteoclasts
Weimin Liu*, Gabriela Picotto2, Leslie Morse1, Megan Summers1, Ricardo Battaglino1. 1UC Denver, United States, 2U de Cordoba, Argentina, 3Craig Hospital, United States
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SUN-0617 Biodegradable Polymeric Nanoparticles Encapsulated with Small Molecular Weight L-Plastin Peptides Reduces Resorption Activity of Osteoclasts
Sunipa Majumdar*, Aniket Wadajkar 2, Anthony Kim2, Meenakshi Chellaiah1. 1Department of Oncology and Diagnostics, University of Maryland, School of Dentistry, United States, 2Departments of Neurosurgery and Pharmacology, University of Maryland School of Medicine, United States
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SUN-0618 HDAC4-ERK Crosstalk Regulates Osteoclast Function
Bora Faulkner*, Nicholas Blixt, Rajaram Gopalakrishnan, Eric Jensen, Kim Mansky. University of Minnesota, United States
Disclosures: Bora Faulkner, None

SUN-0619 MEF2C positively regulates osteoclastogenesis by controlling c-Fos expression
Takayuki Fujii*, Lionel Ivashkiv, Kyung Parkmin, Ye Ji Lee, Seyon Bae, Sehwan Mun, Kaichi Kaneko, Carmen Chai, Eric Sohn. Arthritis and Tissue Degeneration Program, David Z. Rosensweig Genomics Research Center, Hospital for Special Surgery, United States
Disclosures: Takayuki Fujii, None
SUN-0620 Osteoporosis and dementia common pathways and targets: Investigating the effect of acetylcholine esterase inhibitors on bone. A Mouse Model.
Charles Inderjeeth*, 1, Dian Teguh2, Warren Raymond3, Jennifer Tickner3, Jiakay Xu3. 1Sir Charles Gairdner Hospital and University of WA, Australia, 2University of WA, Australia
Disclosures: Charles Inderjeeth, None

SUN-0621 Ion-doped hydroxyapatite nanoparticles designed for bone regeneration affect osteoclastogenesis in vitro
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Disclosures: Oskar Hoffmann, None

SUN-0622 Estrogen-Related Receptor Gamma Negatively Regulates Osteoclastogenesis and Protects Against Inflammatory Bone Loss
Kyungpook National University, Republic of Korea
Disclosures: Hyun-Ju Kim, None

SUN-0623 G Protein-Coupled Receptor 120 Signaling Inhibited Osteoclast Formation and Bone Resorption
Akiko Kishikawa*, 1, Keisuke Kimura1, Masahiko Ishida1, Kazuhiro Shima1, Saika Ogawa1, Jiawei Qi1, Wei-Ren Shen1, Fumitoshi Ohori3, Takahiro Noguchi2, Aseel Marahleh1, Hideki Kitaura1. 1Division of Orthodontics and Dentofacial Orthopedics, Department of Translational Medicine, Tohoku University Graduate School of Dentistry, Japan, 2Division of Orthodontics and Dentofacial Orthopedics, Tohoku University Graduate School of Dentistry, 4-1 Seiryo-machi, Aoba-ku, Sendai 980-8575, Japan
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SUN-0624 Local Regulator Dell Inhibits Bone-resorption via Suppression of Wnt5a-Ror2 Signaling Axis
Tomoki Maekawa*, 1, Yasuhiro Kobayashi2, Hisanori Domon1, Hikaru Tamura1, Takumi Hiyoshi1, Takeyasu Maeda1, Yutaka Terao1, George Hajishengallis3. 1Niigata University, Japan, 2Matsumoto Dental University, Japan, 3University of Pennsylvania, United States
Disclosures: Tomoki Maekawa, None

SUN-0625 Fine tuning of calcium oscillations by ITAM receptors regulates RANKL-induced osteoclast differentiation
Hiroyuki Okada*, 1, Hiroshi Kajiyama2, Jun Hirose1, Takumi Matsumoto1, Koji Okabe2, Takeshi Miyamoto1, Sakae Tanaka1. 1Department of Orthopaedic Surgery, The University of Tokyo, Japan, 2Department of Physiological Science and Molecular Biology, Fukuoka Dental College, Japan, 3Department of Orthopaedic Surgery, Keio University School of Medicine, Japan
Disclosures: Hiroyuki Okada, None

SUN-0626 Molecular and cellular analyses of BMP-dependent coupling signals between osteoclasts and osteoblasts during bone remodeling
Maiko Omi*, 1, Ce Shi2, Yuji Mishina1. 1Department of Biologic and Materials Sciences, University of Michigan, School of Dentistry, United States, 2Department of Oral Pathology, School and Hospital of Stomatatology, Jilin University, China
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SUN-0627 The Effect of Retention Period and an Anti-c-Fms Antibody On Orthodontic Relapse In a Mouse Model
Jiawei Qi*, Keisuke Kimura, Masahiko Ishida , Akiko Kishikawa, Kazuhiro Shima, Saika Ogawa, Wei-Ren Shen, Fumitoshii Ohori, Takahiro Noguchi, Aseel Marahleh, Hideki Kitaura. Division of Orthodontics and Dentofacial Orthopedics, Department of Translational Medicine, Tohoku University Graduate School of Dentistry, Japan
Disclosures: Jiawei Qi, None
**SUN-0628**

**DPP-4 Inhibitor Inhibits LPS-induced Osteoclast Formation and Bone Resorption In Vivo Through Downregulating TNF-α Expression of Macrophages**

Wei-Ren Shen*, Masahiko Ishida, Keisuke Kimura, Akiko Kishikawa, Kazuhiro Shima, Saika Ogawa, Jiawei Qi, Fumitoshi Ohori, Takahiro Noguchi, Aseel Marahleh, Hideki Kitaura. Division of Orthodontics and Dentofacial Orthopedics, Department of Translational Medicine, Tohoku University Graduate School of Dentistry, Japan

**Disclosures:** Wei-Ren Shen, None

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**SUN-0629**

**Deletion of the gene encoding Nupr1/p8, a regulator of autophagy, attenuates osteoclastogenesis but increases trabecular bone mass by enhancing osteoblast differentiation**

Makoto Shiraki*, Makoto Shiraki, Hirohito Hirata, Asana Kamohara, Juan Iovanna, Toshio Kukita, Masaaki Mawatari, Akiko Kukita. 1Department of Orthopaedic Surgery, Faculty of Medicine, Saga University, Japan, 2Department of Pathology and Microbiology, Faculty of Medicine, Saga University, Japan, 3Center de Recherche en Cancérologie de Marseille, INSERM U1068, France, 4Department of Molecular Cell Biology & Oral Anatomy, Faculty of Dentistry, Kyushu University, Japan

**Disclosures:** Makoto Shiraki, None

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**SUN-0630**

**Carbon Monoxide Releasing Molecule 3 Inhibits Osteoclastogenic Differentiation of RAW264.7 Cells by Heme Oxygenase 1**

Hui Song*, Fenghe Zhang. School of Dentistry Shandong University, China

**Disclosures:** Hui Song, None

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**SUN-0631**

**The Role of G alpha 12 In Osteoclast**

Min-Kyoung Song*, Hong-Hee Kim. Department of Cell and Developmental Biology, BK21 Program and Dental Research Institute, Seoul National University, Republic of Korea

**Disclosures:** Min-Kyoung Song, None

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**SUN-0632**

**Fusion and Hemagglutinin Proteins of Canine Distemper Virus Support Osteoclast Formation Through NF-κB Dependent and Independent Mechanisms in Paget’s disease**

Wei Wang*, Dongfang Li, Minqi Li. Department of Bone Metabolism, School of Stomatology Shandong University, Shandong Provincial Key Laboratory of Oral Tissue Regeneration, Jinan, China

**Disclosures:** Wei Wang, None

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**SUN-0633**

**Mutual restriction between p38/NFATc1 and p38/Pax6 axis during osteoclastogenesis**

Ziang Xie*, Shunwu Fan. Sir Run Run Shaw Hospital, School of Medicine, Zhejiang University, China

**Disclosures:** Ziang Xie, None

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**SUN-0634**

**LRP1 suppresses bone resorption in mice by inhibiting the RANKL-stimulated NFκB and p38 pathways during osteoclastogenesis**

Di Lu*, Jianshuang Li, Huadie Liu, Gabrielle Foxa, Bart Williams, Tao Yang. Van Andel Research Institute, United States

**Disclosures:** Di Lu, None

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**SUN-0635**

**Nuclear Factor of Activated T Cells 2 Is Required for Osteoclast Differentiation and Function in vitro**

Jungeun Yu*, Stefano Zanotti, Lauren Schilling, Ernesto Canalis. UConn Health, United States

**Disclosures:** Jungeun Yu, None
OSTEOCYTES

SUN-0664 Osteocytes Are the Major Source of Circulating FGF23 During Acute Inflammation
Guillaume Courbon*, Claire Gerber1, Samantha Neuburg1, Maralee Capella1, Xueyan Wang1, Corey Dusso1, Lixin Qi1, Wenhan Chang1, Myles Wolf2, Aline Martin3, Valentino David3. 1Division of Nephrology and Hypertension, Department of Medicine, and Center for Translational Metabolism and Health, Institute for Public Health and Medicine, Northwestern University Feinberg School of Medicine, Chicago, IL, United States,
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3Division of Nephrology and Hypertension, Duke University, Durham, NC, United States
Disclosures: Guillaume Courbon, None

SUN-0665 Sclerostin regulates adipocyte fate and mediates paracrine and endocrine signaling between osteocytes and fat.
Jessica H. Nelson*, Hannah M. Davis2, Kevin Meandrews2, Meloney D. Cregor2, William R. Thompson1, Lilian I. Ptlokin2, Alexander G. Robling2, Teresita Bellido2, Jesus Delgado-Calle1. 1Indiana University School of Medicine, Dept. of Medicine, Hematology/Oncology, United States, 2Indiana University School of Medicine, Dept. of Anatomy and Cell Biology, United States,
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Disclosures: Jessica H. Nelson, None

SUN-0666 Connexin 43 Hemichannels Protect Bone Loss during Estrogen Deficiency
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SUN-0667 Mechanical Regulation of Breast Cancer Bone Metastasis via Osteocytes’ Signaling to Endothelial Cells
Yu-Heng Vivian Ma*, Liangchen Xu, Xueting Mei, Lidan You. University of Toronto, Canada
Disclosures: Yu-Heng Vivian Ma, None

SUN-0668 Stretch-stimulus activates the mechano-signaling via opening of the mechano-sensitive channel, Piezo1 and the subsequent calcium influx in osteocyte-like cells.
Takuya Notomi*, Akiko Hiyama1, Tadashige Nozaki1, Masaki Noda2. 1Osaka Dental University, Japan, 2Yokohama City Minato Red Cross Hospital, Japan
Disclosures: Takuya Notomi, None

SUN-0669 Nfat Transcription Factors are Key Regulators of Osteocyte Function Independent of c-fos
Matt Prideaux*, Lynda Bonewald. Indiana University, United States
Disclosures: Matt Prideaux, None

SUN-0670 PINCH regulates bone homeostasis through its expression in osteocytes
Yishu Wang*, Qinnan Yan1, Yiran Zhao1, Yiming Lei1, Liting Ma1, Simin Lin1, Yumei Lai2, Huiling Cao1, Chuanyue Wu1, Guozhi Xiao1. 1Department of Biology and Guangdong Provincial Key Laboratory of Cell Microenvironment and Disease Research, Southern University of Science and Technology, China,
2Department of Orthopedic Surgery, Rush University Medical Center, United States
Disclosures: Yishu Wang, None

SUN-0671 Validated analyses of osteocyte-mediated bone remodeling using in vivo and in vitro methods
Cristal S. Yee*, Tamara Alliston. UCSF, United States
Disclosures: Cristal S. Yee, None
OSTEOPOROSIS - ASSESSMENT

SUN-0700 In Vivo Analysis of Fracture Healing by HR-pQCT: The Effect of Osteosynthesis Plate on Image Quality
Ko Chiba*, Makoto Era, Yuichiro Nishino, Takashi Miyamoto, Narihiro Okazaki, Makoto Osaki. Department of Orthopedic Surgery, Nagasaki University Graduate School of Biomedical Sciences, Japan
Disclosures: Ko Chiba, None

SUN-0701 Opportunistic screening for osteoporosis using abdominopelvic CT: Direct comparison of asynchronous QCT with DXA and TBS in older healthy Chinese
Wing P. Chan*, Yi-Chien Lu¹, Ying Chin Lin². ¹Department of Radiology, Wan Fang Hospital, Taipei Medical University, Taiwan, ²Shuang Ho Hospital, Taipei Medical University, Taiwan
Disclosures: Wing P. Chan, None

SUN-0702 Trabecular Bone Score in aged postmenopausal women with type 2 diabetes without fragility fracture history
Dong Jin Chung*, Jin Ook Chung, Dong Hyeok Cho, Min Young Chung. Chonnam National University Medical School, Republic of Korea
Disclosures: Dong Jin Chung, None

SUN-0703 TBS VALUE IN POSTMENOPAUSAL WOMEN WITH AND WITHOUT FRACTURES
Edward Czerwinski¹, Maja Warzecha², Malgorzata Berwecka³, Anna Kumorek³, Jaroslaw Amarowicz², Didier Hans¹. ¹Krakow Medical Centre, Poland, ²Department of Bone and Joint Diseases Jagiellonian University Medical College, Poland, ³Healthy Statistic, Poland, ⁴Center of Bone Diseases Bone and Joint Department, Switzerland
Disclosures: Edward Czerwinski, None

SUN-0704 Trabecular Bone Score (TBS) ex-vivo performance study for the GE Healthcare ARIA system
Franck Michelet*, François De Guio, Christophe Lelong. Medimaps, France
Disclosures: Franck Michelet, Medimaps, Other Financial or Material Support

SUN-0705 Trabecular microstructure is influenced by race and sex in young adults
Julie Hughes*, Kristin Popp¹, Chun Xu¹, Amy Yuan², Ginu Unnikrishnan³, Jaques Reifman³, Mary Bouxsein³. ¹USARIEM, United States, ²MGH, United States, ³BHSAI, United States
Disclosures: Julie Hughes, None

SUN-0706 A Novel Dual-Mode Ultrasonic Method for Assessing Tibial Cortical Bone Quality
Jonathan Kaufman*, Gangming Luo¹. ¹CyberLogic, Inc., United States, ²The Mount Sinai School of Medicine, United States

SUN-0707 3D Modelling of hip DXA indicates cortical vBMD superior efficacy of denosumab versus alendronate
Mohammed Almohaya¹, Naveen Sami², Renaud Winzenrieth³, David Kendler¹. ¹King Fahad Medical City, , Saudi Arabia, ²Prohealth Clinical Research, Canada, ³Galgo Medical, Spain, ⁴University of British Columbia, Canada
Disclosures: Mohammed Almohaya, None

SUN-0708 Structural analysis at the female femoral neck for a clinically useful predictor of future hip fracture risk
Ling Wang*, Benjamin Cc Khoo², Joshua Lewis³, Keenan Brown⁴, Xiaoguang Cheng³, Richard Prince⁵. ¹Beijing Jishuitan Hospital, China, ²Medical Technology & Physics, Australia, ³Edith Cowan University, Australia, ⁴Mindways Software, United States, ⁵University of Western Australia, Australia
Disclosures: Ling Wang, None

190 American Society for Bone and Mineral Research
SUN-0709 Resorbed and Formed Bone Mass in Osteoporosis Treatment Were Correlated with the Values of the DXA and Bone Turnover Markers Measurements: by Bone Morphometry Using Multiple Detector Computed Tomography (MDCT) Images
Nobuhito Nango*, Shogo Kubota1, Kazutaka Nomura1, Yusuke Horiguchi1, Ko Chiba2, Masafumi Machida1. 1Ratoc System Engineering Co., LTD., Japan, 2Department of Orthopedic Surgery, Nagasaki University Graduate School of Biomedical Sciences, Japan, 3Department of Spine and Spinal Cord Surgery, Yokohama Brain and Spine Center, Japan
Disclosures: Nobuhito Nango, None

SUN-0710 Trabecular Bone Score in Thais with or without Type 2 Diabetes.
Hataikarn Nimitphong*, Sasima Srisukh1, Jintanan Jangsiripornpakorn1, Nantaporn Siwarasanond1, Sirimon Reutrakul1-2, Sunee Saetung1, Suchawadee Musikarat1, Chanika Sritara1, Piyamitr Sritara1, Boonsong Ongphiphadhanakul1. 1Department of Medicine, Faculty of Medicine, Ramathibodi Hospital, Mahidol University, Bangkok, Thailand, 2Division of Diabetes, Endocrinology and Metabolism, University of Illinois College of Medicine at Chicago, Chicago, Illinois, United States, 3Department of Diagnostic and Therapeutic Radiology, Faculty of Medicine, Ramathibodi Hospital, Mahidol University, Bangkok, Thailand
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SUN-0711 Optimal Bone Mineral Density Testing Intervals in Korean Women
Seung Shin Park*, Jung Hee Kim1, Hyung Jin Choi2, Eu Jeong Ku1, Seo Young Lee1, A Ram Hong1, Nam H. Cho2, Chan Soo Shin1. 1Department of Internal Medicine, Seoul National University College of Medicine, Republic of Korea, 2Department of Anatomy, Seoul National University College of Medicine, Republic of Korea, 3Department of Internal Medicine, Chungbuk National University College of Medicine, Republic of Korea, 4Department of Preventive Medicine, Ajou University School of Medicine, Suwon, Republic of Korea
Disclosures: Seung Shin Park, None

SUN-0712 Active Young Women with Current Tibial Stress Fracture have Reduced Cortical and Total Bone Area
Kristin Popp*, Sara Rudolph1, Amy Yuan1, Julie Hughes2, Chun Xu2, Ginu Unnikrishnan3, Jaques Reifman3, Mary Bouxsein4. 1Massachusetts General Hospital, United States, 2United States Army Research Institute of Environmental Medicine, United States, 3Department of Defense Biotechnology High Performance Computing Software Applications Institute, United States, 4Massachusetts General Hospital and Center for Advanced Orthopedic Studies, Beth Israel Deaconess Medical Center, United States
Disclosures: Kristin Popp, None

SUN-0713 Postmenopausal Women with Isolated Osteoporosis at the 1/3 Radius Have Generalized Abnormalities in Microarchitecture and Stiffness
Emily Stein*, Alexander Dash1, Mariana Bucovsky2, Sanchita Agarwal2, X. Edward Guo2, Elizabeth Shane2. 1Hospital for Special Surgery, United States, 2Columbia University Medical Center, United States
Disclosures: Emily Stein, None

SUN-0714 Peripheral Artery Calcification on HR-pQCT Scans and Cardiovascular Risk in Men
Pawel Szule*, Catherine Plankaert, Roland Chapurlat. INSERM UMR 1033, University of Lyon, Hôpital Edouard Herriot, France
Disclosures: Pawel Szule, None

SUN-0715 The Correction of Quantitative Computed Tomography Measurements of Vertebral Bone Mineral Density for Marrow Fat using Magnetic Resonance Imaging
Ling Wang*, Xiaoguang Cheng1, Glen Blake2, Keenan Brown1, Li Xu1, Zhe Guo1. 1Department of Radiology, Beijing Jishuitian Hospital, China, 2King’s College London Osteoporosis Research Unit, United Kingdom, 3Mindways Software Inc., United States
Disclosures: Ling Wang, None
Cortical and trabecular bone of patients with prevalent major osteoporotic fracture: a case-control study using DXA-based 3D modelling
Renaud Winzenrieth*, Ludovic Humbert1, Edward Leib2. 1Galgo Medical SL, Spain, 2Dept. of Medicine, University of Vermont College of Medicine, United States
Disclosures: Renaud Winzenrieth, Galgo Medical, Other Financial or Material Support

The Design and Validation of a New Algorithm to Identify Initial Incident and Recurrent Incident Fragility Fractures in Administrative Claims Data
Nicole Wright*, Shanette Daigle2, Mary Melton2, Elizabeth Delzell1, Akhila Balasubramanian3, Jeffrey Curtis2. 1Department of Epidemiology, University of Alabama at Birmingham, United States, 2Division of Clinical Immunology and Rheumatology, University of Alabama at Birmingham, United States, 3Center for Observational Research, Amgen Inc, United States
Disclosures: Nicole Wright, Pfizer, Consultant, Amgen, Grant/Research Support

Serum Circulating MicroRNAs as a Novel Biomarker for Osteoporotic Vertebral Fractures
Patryk Zarecki*, Matthias Hackl2, Johannes Grillari3, Miguel Debono1, Richard Eastell1. 1University of Sheffield, United Kingdom, 2TAmiRNA GmbH, Austria, 3TAmiRNA GmbH, Christian Doppler Laboratory on Biotechnology of Skin Aging, Austria
Disclosures: Patryk Zarecki, None

OSTEOPOROSIS - EPIDEMIOLOGY

Multiple missed opportunities to reduce key fragility fractures: can we afford to continue to ignore the facts?
Emese Toth*, Jonas Banefelt2, Kristina Akesson3, Anna Spangeus4, Gustaf Ortsater2, Cesar Libanati1. 1UCB Pharma, Belgium, 2Quantify Research, Sweden, 3Lund University, Skåne University Hospital, Department of Orthopaedics, Sweden, 4Department of Endocrinology/Department of Medical and Health Sciences, Linköping University Hospital, Sweden
Disclosures: Emese Toth, UCB Pharma, Other Financial or Material Support, UCB Pharma, Major Stock Shareholder

Women and Men with Diabetic Complications have a Greater Risk for Hip Fracture
Shreyasee Amin*, Elizabeth Atkinson, Sundee Khosla. Mayo Clinic, United States
Disclosures: Shreyasee Amin, None

Temporal Trends in Prevalence and Incidence of Diagnosed Osteoporosis in Quebec, Canada
Claudia Beaudoin*, Philippe Gamache1, Suzanne N. Morin1, Jacques P. Brown4, Louis Bessette1, Sonia Jean1. 1Institut national de santé publique du Québec, Canada, 2McGill University, Canada, 3CHU de Québec Research Center, Canada
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Social deprivation is associated with poor health outcomes following hospital admission for hip fracture in England
Arti Gauvri Bhimjiyani*, Jenny Neuburger2, Yoav Ben-Shlomo3, Celia L Gregson1. 1Translational Health Sciences, Bristol Medical School, University of Bristol, United Kingdom, 2Department of Health Services Research and Policy, London School of Hygiene and Tropical Medicine, United Kingdom, 3Population Health Sciences, Bristol Medical School, University of Bristol, United Kingdom
Disclosures: Arti Gauvri Bhimjiyani, None

Performance of FRAX and FRAX-Based Treatment Thresholds in Women aged 40 and Older: The Manitoba BMD Registry
Carolyn Crandall*, John Schousboe2, Suzanne Morin1, Lisa Lix3, William Leslie4. 1University of California, Los Angeles, United States, 2Park Nicollet Institute, United States, 3McGill University, Canada, 4University of Manitoba, Canada
Disclosures: Carolyn Crandall, None
SUN-0765  Increased mortality risk, but no increased subsequent fracture risk following hip fracture in elderly patients with chronic kidney disease
Irma Ja De Bruin¹, Caroline E Wyers¹, Patrick C Souverein², Tjeerd P Van Staar³, Piet Pm Geusens⁴, Joop Pw Van Den Bergh⁵, Frank De Vries⁵, Johanna H Drissen⁶, ¹VieCuri Medical Center, Department of Internal Medicine; Maastricht UMC+, NUTRIM School for Nutrition and Translational Research in Metabolism, Department of Internal Medicine, Netherlands, ²Utrecht University, Utrecht Institute of Pharmaceutical Sciences, Division of Pharmacoepidemiology and Clinical Pharmacology, Netherlands, ³London School of Hygiene & Tropical Medicine, ⁴University of Manchester, Farr Institute for Health Informatics Research, ⁵Maastricht UMC+, CAPHRI Care and Public Health Research Institute, Department of Internal Medicine subdivision of Rheumatology, Netherlands, ⁶Hasselt University, Netherlands
Disclosures: Irma Ja De Bruin, Sanoﬁ, Grant/Research Support, Pfizer, Novartis, Speakers’ Bureau

SUN-0766  Long-term impact of body mass index in childhood on adult bone mineral density
Hongbo Dong*, Yinkun Yan, Junting Liu, Dongqing Hou, Jie Mi. Capital Institute of Pediatrics, China
Disclosures: Hongbo Dong, None

SUN-0767  The distribution of prevalent and short-term incident vertebral fractures on chest CT scans according to fracture severity in smokers with and without COPD
Johanna Driessen*, Mayke Van Dort, Piet Geusens, Frank De Vries, Emiel Wouters, Joop Van Den Bergh, CAPHRI Care and Public Health Research Institute, NUTRIM School for Nutrition and Translational Research in Metabolism, Department of Clinical Pharmacy and Toxicology, Maastricht University Medical Centre+ (MUMC+), Netherlands, ¹NUTRIM School of Nutrition and Translational Research in Metabolism, Maastricht University Medical Centre+ (MUMC+), Netherlands, ²Department of Internal Medicine, Rheumatology, Maastricht University Medical Centre+ (MUMC+), the Netherlands, ³Department of Clinical Pharmacy and Toxicology, Maastricht University Medical Centre+ (MUMC+), the Netherlands, ⁴CAPHRI Care and Public Health Research Institute, Netherlands, ⁵Department of Respiratory Diseases, Maastricht University Medical Centre+ (MUMC+), the Netherlands, Netherlands, ⁶Department of Internal Medicine, VieCuri Medical Centre, Venlo, Netherlands, ⁷Department of Internal Medicine, NUTRIM School of Nutrition and Translational Research in Metabolism, Maastricht University Medical Centre+ (MUMC+), Netherlands
Disclosures: Johanna Driessen, None

SUN-0768  Lower limb muscle force is negatively associated with hip fracture risk in community-dwelling older women
April Hartley*, Yunhua Luo, Andrew Goertzen, Kimberly Hannam, Ahmed Elhakeem, Emma M Clark, William D Leslie, Jon H Tobias. ¹Bristol Medical School, University of Bristol, United Kingdom, ²Faculty of Engineering, University of Manitoba, Canada, ³Department of Radiology, University of Manitoba, Canada, ⁴Rady Faculty of Health Sciences, University of Manitoba, Canada
Disclosures: April Hartley, None

SUN-0769  Contribution of Multimorbidity to Post-Fracture Mortality: Result of a Long Term Population Based Study
Thao P. Ho-Le*, Thach S. Tran, Jacqueline R. Center², John A. Eisman², Tuan V. Nguyen², School of Biomedical Engineering, University of Technology, Sydney, Australia, ³Bone Biology Division, Garvan Institute of Medical Research, Australia, ⁴St Vincent Clinical School, UNSW Australia, Australia, ⁵School of Medicine, Notre Dame University, Australia, ⁶Bone Biology Division, lia, Australia, ⁷School of Public Health and Community Medicine, UNSW Australia, Australia
Disclosures: Thao P. Ho-Le, None
SUN-0770  Decreased Physical Health-Related Quality of Life – a Persisting State for Older Women Living with Clinical Vertebral Fracture
Lisa Johansson*, Daniel Sundh1, Hilda Svensson2, Jon Karlsson3, Lars-Eric Olsson2, Dan Mellstrom1, Mattias Lorentzon1. 1Geriatric Medicine, Department of Internal Medicine and Clinical Nutrition, Institute of Medicine, University of Gothenburg, Gothenburg, Sweden, 2Institute of Health and Care Sciences/ Centre for Person-Centred Care (GPCC) Sahlgrenska academy Gothenburg university, Sweden, 3Sahlgrenska Academy, University of Gothenburg, Gothenburg, Sweden
Disclosures: Lisa Johansson, None

SUN-0771  Effect of hemoglobin A1c and treatment regimen on fracture risk among older men with diabetes mellitus
Richard Lee*1, Richard Sloane1, Carl Pieper1, Cathleen Colon-Emeric2. 1Duke University, United States, 2Durham VAMC, United States
Disclosures: Richard Lee, None

SUN-0772  Non-trauma rib fracture in the elderly: risk factors and mortality consequence
Ha Mai*, Thach Tran, Thuy Pham, Jacqueline Center, John Eisman, Tuan Nguyen. Garvan institute of medical research, Australia
Disclosures: Ha Mai, None

SUN-0773  Is Type II Diabetes a Clinical Risk Factor for Atypical Femur Fractures? (The View from South Texas)
Kenneth Mensch*, Roberto Fajardo2, Todd Bredbenner1, Khang Dang1, Rose Huynh1, Sean Catlett1, Mitchell Hymowitz3, Patrick Ryan1, Ventrice Shillingford-Cole1, Sara Spreicher1. 1UT Health San Antonio, United States, 2Univeristy of Incarnate Word School of Osteopathic Medicine, United States, 3University of Colorado -Colorado Springs, United States
Disclosures: Kenneth Mensch, None

SUN-0774  Evidence of a Causal Effect of Estradiol on Fracture Risk in Men
Maria Nethander*,1,2, Liesbeth Vandenput1, Anna Eriksson1, Sara Windahl1, Thomas Funck-Brentano1, Claes Ohlsson1. 1Centre for Bone and Arthritis Research, Department of Internal Medicine and Clinical Nutrition, Institute of Medicine, Sahlgrenska Academy, University of Gothenburg, Sweden, 2Bioinformatics Core Facility, Sahlgrenska Academy, University of Gothenburg, Sweden
Disclosures: Maria Nethander, None

SUN-0775  WITHDRAWN

SUN-0776  Mechanisms of Injury Associated with Non-Traumatic Vertebral Fractures in Older Adults
Sara E. Rudolph*,1, Signe Caksa1, Dennis E. Anderson2,3, Mary L. Bouxsein1,2,3. 1Endocrine Unit, Massachusetts General Hospital, United States, 2Harvard Medical School, Boston, MA, United States, 3Center for Advanced Orthopedic Studies, Beth Israel Deaconess Medical Center, United States
Disclosures: Sara E. Rudolph, None

SUN-0777  A Preliminary Study of the Association Between Bone Material Properties and Clinical Risk Factors for Fracture
Pamela Rufus*,1, Kara L Holloway-Kew1, Adolfo Diez-Perez2, Mark A Kotowicz1, Julie A Pasco1. 1Deakin University, Australia, 2Department of Internal Medicine, Hospital del Mar-IMIM, Autonomous University of Barcelona and CIBERFES, Instituto Carlos III., Spain
Disclosures: Pamela Rufus, None
SUN-0778  **Urban-Rural Differences In Hip Fracture Mortality. A NOREPOS Study**
Siri Marie Solbakken*, Jeanette H. Magnus1, Haakon E. Meyer1,3, Anne Johanne Søgaard4, Grethe S. Tell2,6, Nina Emaus2, Kristin Holvik5, Siri Forsmo1, Clara G. Gjesdal1, Berit Schei10,11, Peter Vestergaard12, Tone K. Omsland1. 1Department of Community Medicine and Global Health, Institute of Health and Society, University of Oslo, Norway, 2Section for Leadership, Faculty of Medicine, University of Oslo, Norway, 3Division of Mental and Physical Health, Norwegian Institute of Public Health, Norway, 4Division of Mental and Physical Health, Norwegian Institute of Public Health, Norway, 5Department of Global Public Health and Primary Care, University of Bergen, Norway, 6Division of Mental and Physical Health, Norwegian Institute of Public Health, Norway, 7Department of Health and Care Sciences, UiT The Arctic University of Norway, Norway, 8Department of Public Health and Nursing, NTNU, Norwegian University of Science and Technology, Norway, 9Department of Clinical Science, University of Bergen and Department of Rheumatology, Haukeland University Hospital, Norway, 10Department of Public Health and Nursing, Faculty of Medicine and Health Sciences, University of Science and Technology, Norway, 11Department of Obstetrics and Gynaecology, St. Olav’s hospital, Trondheim University Hospital, Norway, 12Department of Endocrinology, Aalborg University Hospital and Department of Clinical Medicine, Aalborg University, Denmark
Disclosures: Siri Marie Solbakken, None

SUN-0779  **Factors associated with delayed wound healing longer than 8 weeks after tooth extraction in Japanese patients >60 years of age**
Akira Taguchi*, Mikio Kamimura*, Shigeharu Uchiyama*, Hiroyuki Kato*. 1Department of Oral and Maxillofacial Radiology, School of Dentistry, Matsumoto Dental University, Japan, 2Center for Osteoporosis and Spinal Disorders, Kamimura Orthopedic Clinic, Japan, 3Department of Orthopedic Surgery, Okay City Hospital, Japan, 4Department of Orthopedic Surgery, Shinshu University School of Medicine, Japan
Disclosures: Akira Taguchi, None

SUN-0780  **Prevalence of Morphometric Vertebral Fractures Does Not Differ in Patients With and Without Clinical Fractures in a Fracture Liaison Service Open Model**
Francisco Torres-Naranjo*, Alejandro Gaytán-González, Roberto González-Mendoza, Noé Albino González-Gallegos, Pilar De La Peña-Rodríguez, Hugo Gutiérrez-Hermosillo, Pedro García-Hernández, Claudia Flores-Moreno, Jorge Alberto Morales-Torres, Juan López-Taylor. 1Centro de Investigación Ósea, Universidad de Guadalajara., Mexico, 2Instituto de Ciencias Aplicadas a la Actividad Física y del Deporte, Universidad de Guadalajara, Mexico, 3Departamento de Bienestar y Desarrollo Sustentable, Centro Universitario del Norte, Universidad de Guadalajara, Colotlán, Mexico, 4Servicios Médicos De la Peña, Mexico, 5Universidad de Guanajuato Hospital Aranda de la Parra, Mexico, 6Endocrinología/Centro de Osteoporosis, Hospital Universitario de Monterrey, Mexico, 7Hospital Aranda de la Parra y CIMOVA, Mexico, 8Instituto de Ciencias Aplicadas a la Actividad Física y del Deporte, Mexico
Disclosures: Francisco Torres-Naranjo, None

SUN-0781  **Increase in Bone Mineral Density in Transwomen and Transmen During the First Ten Years of Gender-affirming Hormonal Treatment**
Chantal Wiepjes*, Christel De Blok, Mariska Vlot, Paul Lips, Renate De Jongh, Martin Den Heijer. VU University Medical Center, Netherlands
Disclosures: Chantal Wiepjes, None

**OSTEOPOROSIS - HEALTH SERVICES RESEARCH**

SUN-0811  **More Frequent and More Sustained Osteoporosis Treatment After Fragility Vertebral Fractures When Introduced Early in Inpatients Than Delayed in Outpatients: A Controlled Study**
Thierry Chevalley*, Herve Spechbach, Isabelle Fabreguet, Emilie Saule, Magaly Hars, Jerome Strememann, Serge Ferrari, Rene Rizzoli. 1Division of Bone Diseases, University Hospitals and Faculty of Medicine, Switzerland, 2Division of General Internal Medicine, University Hospitals and Faculty of Medicine, Switzerland, 3Division of General Internal Medicine, University Hospitals of Geneva and Faculty of Medicine, Switzerland
Disclosures: Thierry Chevalley, None
SUN-0812 Self-reported fracture history compared to fracture codes from an electronic health record dataset
Maria I. Danila*, Amy Mudano¹, Elizabeth Rahn¹, Andrea Lacroix², Jeffrey Curtis¹, Kenneth Saag¹.
¹University of Alabama at Birmingham, United States, ²University of California, San Diego, United States
Disclosures: Maria I. Danila, None

SUN-0813 Radiological Validation of Fracture Definitions from Administrative Data: The Manitoba Bone Mineral Density Database
Riley Epp*, Mashael Alhrbi, Linda Ward, William Leslie. University of Manitoba, Canada
Disclosures: Riley Epp, None

SUN-0814 Defining Alendronate Drug Holidays and Re-initiation in US Medicare Data
Ayesha Jaleel*, Jeffrey Curtis³, Rui Chen², Hui-Feng Yun², Tarun Arora², Suzanne Cadarette³, Nicole Wright², Amy Mudano², Phillip Foster², Kenneth Saag². ¹Brookwood Baptist Hospital, United States, ²University of Alabama at Birmingham, United States, ³University of Toronto, Canada
Disclosures: Ayesha Jaleel, None

SUN-0815 TREATMENT GAP AFTER FRACTURE IN OSTEOPOROSIS PATIENTS – RESULTS OF THE AUSTRIAN ARM OF THE INTERNATIONAL COSTS AND UTILITIES RELATED TO OSTEOPOROTIC FRACTURES STUDY (ICUROS)
Oliver Malle*, Hans Peter Dimai. Medical University of Graz, Dpt. of Internal Medicine, Div. of Endocrinology and Diabetology, Austria
Disclosures: Oliver Malle, None

SUN-0816 The category of non-osteoporotic bone mineral density in proximal hip fragility fracture cases: Preliminary data from a tertiary care hospital
Hyun Uk Moon*, Yong Jun Choi¹, Jung-Taek Kim², Ye-Yeon Won¹, Yoon-Sok Chung¹.
¹Department of Endocrinology and Metabolism, Ajou University School of Medicine, Suwon, South Korea, Republic of Korea, ²Department of Orthopedic Surgery, Ajou University School of Medicine, Suwon, South Korea, Republic of Korea
Disclosures: Hyun Uk Moon, None

SUN-0817 Improving Access to Osteoporosis Specialists through Electronic Consultations
Christopher Tran*, Krista Rostom, Clare Liddy, Erin Keely. University of Ottawa, Canada
Disclosures: Christopher Tran, None

OSTEOPOROSIS - NUTRITION, DIETARY SUPPLEMENTS AND PHYSICAL ACTIVITY

SUN-0836 Three months of vitamin D3 supplementation, 2,800 IU/d, improves trabecular bone microarchitecture and bone strength in vitamin D insufficient, hyperparathyroid women – a randomized placebo controlled trial
Lise Sofie Bislev*, Lene Langagergaard Roedbro¹, Lars Rolighed², Tanja Sikjaer¹, Lars Rejnmark¹. ¹Department of Endocrinology and Internal Medicine, Denmark, ²Department of Surgery, Denmark
Disclosures: Lise Sofie Bislev, None

SUN-0837 Trunk Muscle Endurance in Women with Osteoporotic Vertebral Fractures: an Exploratory Analysis from a Pilot Randomized Controlled Trial
Caitlin Mcarthur*, Jenna C. Gibbs², Jonathan Adachi¹, Maureen C. Ashe², Robert Bleakney¹, Angela M. Cheung³, Keith D. Hill³, David L. Kendler⁴, Aliyah Khan¹, Sandra Kim⁵, Judi Laprade⁶, Nicole Mittman⁵, Alexandra Papaioannou⁴, Sadhana Prasad⁶, Samuel C. Scherer⁵, Lehana Thabane¹, John D. Wark¹⁰, Lora Giangregorio³. ¹McMaster University, Canada, ²GERAS Centre for Aging Research, Canada, ³University of Waterloo, Canada, ⁴University of British Columbia, Canada, ⁵University of Toronto, Canada, ⁶Curtin University, Australia, ⁷Women’s College Hospital, Canada, ⁸Centre for Bone Health, Canada, ⁹Northern Health, Australia, ¹⁰University of Melbourne, Australia
Disclosures: Caitlin Mcarthur, None
SUN-0838  Different Association of Dietary Fat Intake with Femoral Neck Strength According to Gender in Korean Population (KNHANES 2008-2010)  
Hyeonmok Kim*, Sun Hee Beom, Tae Ho Kim. Seoul Medical Center, Republic of Korea  
Disclosures: Hyeonmok Kim, None

SUN-0839  Prevalence of Vitamin D Deficiency in Postmenopausal Fracture Patient  
Ji Wan Kim*, Jun Sung Lee2, Kwang Hwan Jung1, Jai Hyung Park1, Hyun Chul Shon1, Jae Suk Chang1. 1Asan Medical Center, Republic of Korea, 2Haeundae Paik Hospital, Republic of Korea, 3Ulsan University Hospital, Republic of Korea, 4Kangbuk Samsung Hospital, Republic of Korea, 5Chungbuk National University Hospital, Republic of Korea  
Disclosures: Ji Wan Kim, None

SUN-0840  Prevalence of Hypovitaminosis D In Patients from a Private Hospital in Leon, Mexico  
Jorge LA Morales Torres*, Hugo Gutierrez.Hermosillo1, Gilberto Aguilar-Orozco1, Jaime Romero-Ibarra2, Enrique Diaz De Leon-Gonzalez3, Francisco Torres-Naranjo3. 1Hospital Aranda de la Parra, Mexico, 2Morares Vargas Centro de Investigacion, Mexico, 3Medicina y Nutricion, Universidad de Guanajuato, Mexico, 4Instituto Mexicano del Seguro Social, Mexico, 5Centro de Investigacion Osea, U. de Guadalajara, Mexico  
Disclosures: Jorge L A Morales Torres, None

SUN-0841  Effects of Vitamin D Intake and Status on Changes in Distal Tibia Strength in Marine Recruits Undergoing Training  
Anna Nakayama*, Katelyn Guerriere2, Laura Lutz2, Leila Walker2, Jonathan Scott3, Heath Gasier3, James Mcclung3, Erin Gaffney-Stomberg3, James Mcclung2, Heath Gasier3, James Mcclung2, Erin Gaffney-Stomberg3, Erin Gaffney-Stomberg3, Erin Gaffney-Stomberg3. 1Oak Ridge Institute for Science and Education, United States, 2US Army Research Institute of Environmental Medicine, United States, 3Uniformed Services University of Health Sciences, United States  
Disclosures: Anna Nakayama, None

SUN-0842  Meal Phosphate Bioavailability Alters Hormonal Response in Healthy Humans  
Kathryn Neville*, Mandy Turner, Cynthia Pruss, Laura Couture, Michael Adams, Rachel Holden. Queen’s University, Canada  
Disclosures: Kathryn Neville, None

SUN-0843  Systematic Screening For Environmental And Behavioral Determinants Identifies Factors Detrimental to Skeletal Health  
Ling Oei*, Joy Wu2, Edwin Oei2, Fernando Rivadeneira1, Andre Uitterlinden1, John Ioannidis1, Michael Snyder2, Chirag Patel3. 1Erasmus MC, Dept. Internal Medicine, Netherlands, 2Stanford School of Medicine, United States, 3Erasmus MC Dept. Radiology, Netherlands, 4Stanford School of Medicine, Netherlands, 5Harvard Medical School, United States  
Disclosures: Ling Oei, None

SUN-0844  Association Between Fermented Milk Product Intake and Bone Health In Postmenopausal Women: A Systematic Review  
Angel Ong*, Hope Weiler1, Suzanne Morin2, Kai Kang1. 1School of Human Nutrition, McGill University, Canada, 2McGill University, Canada  
Disclosures: Angel Ong, None

SUN-0845  Milk and Alternatives Intervention Improves Total Hip and Whole Body Bone Mineral Accretion in 14- to 18-year Postmenarcheal Females: Results at 12 Months From a 2-year Randomized Controlled Trial  
May Slim*, Catherine Vanstone, Suzanne Morin, Elham Rahme, Hope Weiler. McGill University, Canada  
Disclosures: May Slim, None

SUN-0846  Bone formation is suppressed and resorption increased during 72 hours of sleep restriction  
Jeffery Staab*, Tracey Smith, Marques Wilson, Scott Montain, Erin Gaffney-Stomberg. US Army Research Institute of Environmental Medicine, United States  
Disclosures: Jeffery Staab, None
SUN-0847 Physical Activity Across Adulthood and Bone Health in Later Life: the 1946 Birth Cohort
Stella Muthuri*, Kate Ward, Diana Kuh, Ahmed Elhakeem, Judith Adams, Rachel Cooper. 1MRC Lifelong Health and Ageing at University College London, United Kingdom, 2MRC Lifecourse Epidemiology, University of Southampton, United Kingdom, 3MRC Integrative Epidemiology at University of Bristol, United Kingdom, 4University of Manchester, United Kingdom
Disclosures: Stella Muthuri, None

OSTEOPOROSIS - PATHOPHYSIOLOGY

SUN-0865 Validated and in-depth characterized sandwich ELISA for the quantification of mouse perioestin
Elisabeth Gadermaier*, Jacqueline Wallwitz, Gabriela Berg, Gottfried Himmler. The Antibody Lab GmbH, Austria
Disclosures: Elisabeth Gadermaier, None

SUN-0866 Local Osteoporotic Enhancement Procedure Demonstrates Analogous Implant Resorption and Bone Formation Across Three Species With or Without Antiresorptive Treatment
James Howe*, Jonathan Shaul, David Burr, Deborah Hall, Thomas Turner, Robert Urban, Bryan Huber, Ronald Hill, Klaus Engelke, Harry Genant. 1AgNovos Healthcare, United States, 2Indiana University School of Medicine, United States, 3Rush University Medical Center, United States, 4Copley Hospital, United States, 5Bioclinica-Synarc, Germany, 6Synarc-Bioclinica & University of California San Francisco, United States
Disclosures: James Howe, AgNovos Healthcare, Other Financial or Material Support

SUN-0867 Central Acetylcholine Signaling Contributes to Age-related Bone Loss
Yun Ma*, Florent Elefteriou. Baylor College of Medicine, United States
Disclosures: Yun Ma, None

OSTEOPOROSIS - SECONDARY OSTEOPOROSIS

SUN-0886 Cross sectional study of severity of bone disease in liver transplant from pre-transplant to one year post transplant and potential factors associated with bone loss
Ejigayehu Abate*. Mayo Clinic Florida, United States
Disclosures: Ejigayehu Abate, None

SUN-0887 Prevalence and Risk factors for Low Bone Mineral Density in Transfusion Dependent Anemia
Rahul Agarwal*, Farzana Sayani, Mohammad El Sibai, Mona Al Mukaddam. 1Perelman School of Medicine at the University of Pennsylvania, Division of Endocrinology, Diabetes and Metabolism, United States, 2Perelman School of Medicine at the University of Pennsylvania, Division of Hematology and Oncology, United States
Disclosures: Rahul Agarwal, None
SUN-0888  The Effects of Cortisol and Adrenal Androgen on Bone Mass in Asian Patients with and without Subclinical Hypercortisolism
Seong Hee Ahn*1, Jae Hyeon Kim2, Mi hye Jung3, Yoon Young Cho1, Sung hwan Suh4, Beom Jun Kim3, Seongbin Hong1, Seung Hun Lee3, Jung Min Koh3, Kee Ho Song4.
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Disclosures: Seong Hee Ahn, None

SUN-0889  Severe asthma and high doses of corticosteroid impair trabecular bone score more than bone mineral density
Yong Jun Choi*1, Hyun-Young Lee2, Sihoon Lee3, Yoon-Sok Chung1, Young-Min Ye4.
1Department of Endocrinology and Metabolism, Ajou University School of Medicine, Republic of Korea, 2Clinical Trial Center, Ajou University Medical Center, Republic of Korea, 3Gachon University School of Medicine, Republic of Korea, 4Department of Allergy and Clinical Immunology, Ajou University School of Medicine, Republic of Korea
Disclosures: Yong Jun Choi, None

SUN-0890  The effects TSH suppressive therapy of on changes of TBS and BMD in menopausal women with for differentiated thyroid cancer
Yun Kyung Jeon*1, Kyoung Min Kim2, In Joo Kim3, Kyoung Min Kim4, Kyoun g june Pak5, Seong-Jang Kim4. 1Endocrinology and metabolism, Pusan National University Hospital, Republic of Korea, 2Department of Nuclear Medicine and Biomedical Research Institute, Pusan National University Hospital, Republic of Korea, 3Seoul National University College of Medicine and Seoul National University Bundang Hospital, Republic of Korea, 4Department of Nuclear Medicine and Biomedical Research Institute, Yang San Pusan National University Hospital, Republic of Korea
Disclosures: Yun Kyung Jeon, None

SUN-0891  Bone Mineral Density and Trabecular Bone Score Associations with Hypertension and Diabetes in the VITamin D and OmegA-3 TriaL (VITAL): Effects on Bone Structure and Architecture Study
Meryl Leboff1,2, Catherine Donlon1, Nancy Cook3,4, Julie Buring2,3,4, Joann Manson2,3,4. 1Division of Endocrinology, Diabetes and Hypertension, Brigham and Women’s Hospital, United States, 2Harvard Medical School, United States, 3Division of Preventive Medicine, Brigham and Women’s Hospital, United States, 4Department of Epidemiology, Harvard T.H. Chan School of Public Health, United States
Disclosures: Meryl Leboff, None

SUN-0892  Accuracy of FRAX® in People with Multiple Sclerosis: A Manitoba BMD Registry-Based Cohort Study
Etienne J. Bisson*1, Marcia Finlayson1, Okechukwu Ekuma2, Ruth Ann Marrie2, William D Leslie3. 1Faculty of Health Sciences, Queen’s University, Canada, 2Rady Faculty of Health Sciences, University of Manitoba, Canada
Disclosures: Etienne J. Bisson, None

SUN-0893  Smaller but Denser Bones in Older Women with Type 2 Diabetes
Anna Nilsson*1,2, Daniel Sundh1, Mattias Lorentzon1,2. 1Geriatric unit, Institute of Medicine, Sahlgrenska Academy, University of Gothenburg, Sweden, 2Dept Endocrinology, Internal Medicine, Sahlgrenska University Hospital, Sweden
Disclosures: Anna Nilsson, None
SUN-0894  Bone Biomarkers Do Not Differ in Older Men With and Without Severe Nocturnal Hypoxemia
Christine Swanson*, Steven Shea*, Sheila Markwardt, Orfeu Buxton, Katie Stone, Thuy-Tien Dam, Nancy Lane, Susan Redline, Jane Cauley, Douglas Bauer, Eric Orwoll.
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Disclosures: Christine Swanson, None

OSTEOPOROSIS – TREATMENT

SUN-0923  Effects of Teriparatide on Bone Microarchitecture and Stiffness Assessed by High Resolution Peripheral Computed Tomography (HR-pQCT) in Premenopausal Idiopathic Osteoporosis (IOP)
Sanchita Agarwal*, Adi Cohen, Stephanie Shiau, Mafo Kamanda-Kosseh, Mariana Bucovsky, X Edward Guo, Elizabeth Shane. 1Division of Endocrinology, Department of Medicine, Columbia University, United States, 2Gertrude H. Sergievsky Center, Columbia University Medical Center, United States, 3Bone Bioengineering Laboratory, Department of Biomedical Engineering, Columbia University, United States
Disclosures: Sanchita Agarwal, None

SUN-0924  Effects Of Two Years Of Teriparatide Treatment Followed By Two Years Of Bisphosphonates In Reduction In Fracture Rate And Back Pain At Patients With Multiple Pre-Existing Vertebral Fractures.
Corina Galesanu*, Iulian Pascaru, Veronica Mocanu, Mihail Romeo Galesanu. 1University of Medicine and Pharmacy “Grigore T.Popa”, Romania, 2Sf. Spiridon Emergency Clinical Hospital, Romania, 3Grigore T. Popa University of Medicine and Pharmacy, Romania, 4Romanian Academy of Medical Sciences, Iasi, Romania
Disclosures: Corina Galesanu, None

SUN-0925  Effect of Buffered Solution of Alendronate 70mg on Bone Mineral Density and Bone ALP: Prospective Observational Study
Andrea Giusti*, Dennis M Black, Antonella Barone, Josef Hruska, Gerolamo Bianchi. 1La Colletta Hospital, Italy, 2University of California San Francisco, United States, 3Galliera Hospital, Italy, 4EffRx Pharmaceuticals, Switzerland
Disclosures: Andrea Giusti, Merck & Co, Consultant, Internis Pharma, Speakers’ Bureau, Abiogen, Consultant, Labatec, Speakers’ Bureau, EffRx Pharmaceuticals, Grant/Research Support, Chiesi, Consultant

SUN-0926  Patient Characteristics and Fracture Outcomes in Patients Previously Treated With Bisphosphonates or Treatment-naive in the Teriparatide versus Risedronate VERO Clinical Trial
Peyman Hadji*, Fernando Marin, David Kendler, Piet Geusens, Luis Russo, Jorge Malouf, Peter Lakatos, Salvatore Minisola, Pedro Lopez-Romero, Astrid Fahrleitner-Pammer. 1Krankenhaus Nordwest GHMB, Germany, 2Lilly Research Center Europe, Spain, 3University of British Columbia, Canada, 4Maastricht University Medical Center, Netherlands, 5Centro de Analises e Pesquisas Clinicas LTDA, Brazil, 6Hospital Sant Pau, Spain, 7Semmelweis University Medical School, Hungary, 8Sapienza Rome University, Italy, 9Division of Endocrinology, Medical University of Graz, Austria
Disclosures: Peyman Hadji, Eli Lilly, UCB, Amgen, Gedeon Richter, Meda, Novartis, Hexal, Pfizer and Dr. Kade/Besins, Speakers’ Bureau
SUN-0927  Combination therapies for the treatment of osteoporotic fractures are not created equal: A network meta-analysis study
Osama Haji Ahmed*, Paula Karabelas†, Abdulhafez Selim‡. 1Mouwasat Hospitals, Saudi Arabia, 1Independent Investigator, United States, 2PCOM, United States
Disclosures: Osama Haji Ahmed, None

SUN-0928  Goal-Directed Treatment of Osteoporosis in Patients with Rheumatoid Arthritis Using Daily Teriparatide for Two Years Followed by Antiresorptive Drugs for Three Years (Results in Five Years in Total)
Yuji Hirano*, Daisuke Kihira. Department of Rheumatology, Toyohashi Municipal Hospital, Japan
Disclosures: Yuji Hirano, None

SUN-0929  Determinants of Oral Bisphosphonate Therapy Beyond Five Years
Monika Izano*, Bonnie Li, Fang Niu, Romain Neugebauer, Bruce Ettinger, Susan Ott, Joan Lo, Annette Adams. 1Division of Research, Kaiser Permanente Northern California, United States, 2Department of Research & Evaluation, Kaiser Permanente Southern California, United States, 3Pharmacy Outcomes Research Group, Kaiser Permanente California, United States, 4Department of Medicine, University of Washington, United States
Disclosures: Monika Izano, None

SUN-0930  Increased iliac crest bone hardness under Denosumab treatment is accompanied by a low number of viable osteocytes
Katharina Jähn*, Björn Jobke, Eva Maria Wölfl, Tobias Barth, Christoph Riedel, Maya Hellmich, Mathias Werner, Björn Busse. 1University Medical Center Hamburg-Eppendorf, Germany, 2Telemedicine Clinic, Spain, 3Immanuel Krankenhaus Berlin, Germany, 4Helios Klinikum Emil von Behring, Germany
Disclosures: Katharina Jähn, None

SUN-0931  Influence of glucocorticoids on effect of denosumab on osteoporosis in patients with Japanese rheumatoid arthritis; 36 months of follow-up --a Multicenter Registry Study--
Yasuhide Kanayama*, Yuji Hirano, Nobunori Takahashi, Naoki Ishiguro, Toshihisa Kojima. 1Toyota Kosei Hospital, Japan, 2Toyohashi Municipal Hospital, Japan, 3Nagoya University Graduate school of Medicine, Japan
Disclosures: Yasuhide Kanayama, None

SUN-0932  Spontaneous Fusion after Vertebroplasty and Kyphoplasty in Painful Osteoporotic Compression Fracture
Jin Hwan Kim*, Jae Hyup Lee, Young Kyu Kim. 1Inje University, Ilsanpaik Hospital, Republic of Korea, 2Seoul National University, College of Medicine, Republic of Korea
Disclosures: Jin Hwan Kim, None

SUN-0933  Is early bisphosphonate treatment safe or effective for pyogenic vertebral osteomyelitis with osteoporosis?
Jihye Kim*, Tae-Hwan Kim. 1Kangdong Sacred Heart Hospital, Hallym University College of Medicine, Republic of Korea, 2Hallym University Sacred Heart Hospital, Hallym University College of Medicine, Republic of Korea
Disclosures: Jihye Kim, None

SUN-0934  Effect of Medications on Secondary Prevention of Osteoporotic Vertebral Compression Fracture: a Meta-analysis of Randomized Controlled Trials
Yuan-Zhe Jin*, Jae Hyup Lee, Jin-Hwan Kim. 1Seoul National University, College of Medicine, Republic of Korea, 2Inje University, College of Medicine, Republic of Korea
Disclosures: Yuan-Zhe Jin, None
SUN-0935 Incidence of Complete Atypical Femur Fracture among Women with Oral Bisphosphonate Exposure in an Integrated Healthcare System
Joan Lo¹, Christopher Grimsrud³, Susan Ott³, Malini Chandra¹, Rita Hui², Monika Izano¹, Annette Adams², Bruce Ettinger¹. ¹Division of Research, Kaiser Permanente Northern California, United States, ²Department of Orthopedic Surgery, Kaiser Permanente Oakland Medical Center, United States, ³Department of Medicine, University of Washington, United States, ⁴Pharmacy Outcomes Research Group, Kaiser Permanente California, United States, ⁵Research and Evaluation, Kaiser Permanente Southern California, United States

Disclosures: Joan Lo, Sanofi, Grant/Research Support

SUN-0936 Compliance, Adverse Effects, Bone-related Mineral and Vitamin D Status, and Literature Review of Denosumab Therapy for Osteoporosis in Japan
Yukio Nakamura*, Takako Suzuki, Hiroyuki Kato. Shinshu University School of Medicine, Japan

Disclosures: Yukio Nakamura, None

SUN-0937 Subgroup Analysis of the Effect of Denosumab Compared With Risedronate on Percentage Change in Lumbar Spine Bone Mineral Density at 24 Months in Glucocorticoid-treated Individuals
Ken Saag*, Nicole Pannacciulli, Piet Geusens, Jonathan Adachi, Eric Lespessailles, Jorge Malouf-Sierra, Bente Langdahl, Peter W. Butler, Xiang Yin, Willem F. Lems. ¹University of Alabama, Birmingham, United States, ²Amgen Inc., United States, ³Maastricht University Medical Center, Netherlands, ⁴McMaster University, Canada, ⁵University Hospital Orleans, France, ⁶Hospital San Pablo, Spain, ⁷Aarhus University Hospital, Denmark, ⁸VU University Medical Centre, Netherlands

Disclosures: Ken Saag, Amgen, Lilly, Merck, Radius, Consultant. Amgen, Merck. Grant/Research Support

SUN-0938 Teriparatide re-activates bone metabolism of the patients with bisphosphonates treatment failures.
Shinya Tanaka*, Katsuya Kanesaki, Yoichi Kishikawa, Sathoshi Ikeda, Masato Nagashima, Tsuoshi Miyajima, Hiromi Oda. ¹Saitama medical university, Japan, ²Nagat orthopedic hospital, Japan, ³Saitama medical university, Japan, ⁴Nagat orthopedic hospital, Japan, ⁵Ken-ai memorial hospital, Japan, ⁶Katsuki brain and orthopedic surgery, Japan

Disclosures: Shinya Tanaka, None

SUN-0939 Two-year persistence with Teriparatide improves significantly after extension of an educational and motivational support program
Maud Van Maren*, Caroline E Wyers, Johanna Hm Driessen, Jonathan V Visser, Frank De Vries, Katrien Van De Wijdeveld, Sonja Gevers, Willem F Lems, Marielle H Emmelot-Vonk, Joop Pw Van Den Bergh, VieCuri Medical Center, Department of Internal Medicine, Netherlands, ²Maastricht University Medical Center (Maastricht UMC+), NUTRIM School for Nutrition and Translational Research in Metabolism, Department of Internal Medicine, Netherlands, ³Maastricht UMC+, CAPHRI Care and Public Health Research Institute, NUTRIM School for Nutrition and Translational Research in Metabolism, Department of Clinical Pharmacy and Toxicology, Netherlands, ⁴ApotheekZorg (Pharmacy), Netherlands, ⁵Maastricht UMC+, Department of Clinical Pharmacy and Toxicology, Netherlands, ⁶VU Medical Centre, Amsterdam Rheumatology and Immunology Center, Netherlands, ⁷University Medical Center Utrecht, Department of Geriatric Medicine, Netherlands, ⁸Hasselt University, Netherlands

Disclosures: Maud Van Maren, None

SUN-0940 Treatment Patterns in the Management of Osteoporotic Fractures in Older Adults
Lagari Violet*, Levis Silvina, Naomi Leonore, Berger Hara, Rodriguez Gracielena. ¹Miami VA Healthcare System, United States, ²Reproductive Health Physicians, United States

Disclosures: Lagari Violet, None
SUN-0941  Forearm Bone Mineral Density and Fracture Incidence in Postmenopausal Women with Osteoporosis: Results from the ACTIVExtend Phase 3 Trial  
Nelson B. Watts*, Robin K. Dore, Sanford Baim, Gary Hattersley, Greg Williams*, Yamei Wang, Tamara D. Rozental, Meryl S. Lebbo, 1Mercy Health Osteoporosis and Bone Health Services, United States, 2Robin K Dore M.D., Inc., United States, 3Rush University Medical Center, United States, 4Radius Health, Inc., United States, 5Beth Israel Deaconess Medical Center, United States, 6Brigham and Women’s Hospital, United States  
Disclosures: Nelson B. Watts, Abbvie, Consultant, Amgen, Speakers’ Bureau, Janssen, Consultant, Sanofi, Consultant, Amgen, Consultant, Radius Health, Consultant, Shire, Speakers’ Bureau  

SUN-0942  Eldecalcitol Increases BMD More Than Alfacalcidol in Chinese Osteoporotic Patients without Vitamin D or Calcium Supplementation  
Yan Jiang*, Hai Tang, Xinlong Ma, Qin Cheng, Hua Lin, Xiaolan Jin, Zhenlin Zhang, Wei Yu, Tsuyoshi Kobayashi, Satomi Uehara, Toshio Matsumoto, Weiibo Xia. 1Beijing Union Medical College Hospital, China, 2Beijing Friendship Hospital, Capital Medical University, China, 3Tianjin Hospital, China, 4Huadong Hospital affiliated to Fudan University, China, 5Nanjing Drum Tower Hospital Affiliated of Nanjing University Medical School, China, 6Chengdu Military Central Hospital, China, 7Shanghai Sixth People Hospital, China, 8Chugai Pharmaceutical Co., Ltd., Japan, 9okushima University, Fujii Memorial Institute of Medical Sciences, Japan  
Disclosures: Yan Jiang, None  

PARACRINE REGULATORS  
SUN-0966  Gender Differences in Tibial Fracture Healing in Normal and Muscular Dystrophic Mouse Models  
Zhenhan Deng*, Xueqin Gao, Xuying Sun, Yan Cui, Sara Amara, Walter R. Lowe, Johnny Huard. University of Texas Health Science Center at Houston, United States  
Disclosures: Zhenhan Deng, None  

SUN-0967  IGF1 Signaling Regulation of Bone Lining Cells Osteogenic Differentiation Through CXCL12 Expression is Critical in Fracture Repair and Bone Homeostasis  
Alessandra Esposito*, Jing Jiang, Lai Wang, Tieshi Li, Xin Jin, Anna Spagnoli. Rush University Medical Center, United States  
Disclosures: Alessandra Esposito, None  

SUN-0968  The C-terminal domain of PTHrP limits PTH receptor-mediated changes in gene expression in osteocytes  
Yao Sun*, Patricia W M Ho, Rachelle W Johnson, T John Martin, Natalie A Sims. 1St. Vincent’s Institute of Medical Research, Australia, 2Vanderbilt University, United States  
Disclosures: Yao Sun, None  

SUN-0969  Myeloid Wnts control cortical and trabecular bone formation through paracrine and autocrine production of recruitment and differentiation factors  
Megan Weivoda*, Ming Ruan, Glenda Evans, Christine Hachfeld, Jean Vacher, Bart Williams, Sundee Khosla, Jennifer Westendorf, Merry Joy Oursler. 1Mayo Clinic, United States, 2McGill University, Canada, 3Van Andel Institute, United States  
Disclosures: Megan Weivoda, None  

PRECLINICAL MODELS: NUTRITION AND PHARMACOLOGY  
SUN-0989  Phytic acid, a phosphate store in plants, inhibits osteogenic differentiation in ectopic calcifications but not in bone.  
Faisal Ahmed*, Tomoko Minamizaki, Masaaki Toshishige, Yuji Yoshiko. Department of Calcified Tissue Biology, Hiroshima University Graduate School of Biomedical and Health Sciences, Japan  
Disclosures: Faisal Ahmed, None  

SUN-0990  Doses of 1,25-Dihydroxyvitamin D Supplementation in CKD Rats Influence Bone Mineralisation and Vascular Calcification  
Sarah-Kim Bisson*, Roth-Visal Ung, Sylvain Picard, Mohsen Agharazii, Richard Larivière, Fabrice Mac-Way. Centre de recherche de l’Hôtel-Dieu de Québec, Canada  
Disclosures: Sarah-Kim Bisson, None
SUN-0991  A cysteine peptidase inhibitor from the Orange tree (Citrus sinensis) inhibits periodontitis-induced bone loss by retaining osteoclasts at the macrophage stage.
Natalia Da Ponte Leguizamon¹, Glaucia Coletto-Nunes ², Daniela Morilha Néo-Justino³, Vanessa Karine Schneider⁴, Andressa Vilas Boas Nogueira⁵, Rafael Seaf Molon⁶, Flavio Henrique Da Silva⁷, Andrea Soares Da Costa Fuentes⁸, Ulf Holger Lerner⁹, Joni Augusto Cirelli¹⁰, Pedro Paulo Chaves Souza¹¹. ¹Department of Diagnosis and Surgery, School of Dentistry at Araraquara, Sao Paulo State University, Brazil, ²Department of Physiology and Pathology, School of Dentistry at Araraquara, Sao Paulo State University-UNESP, Brazil, ³Department of Genetics and Evolution, Federal University of São Carlos, Brazil, ⁴Department of Diagnosis and Surgery, School of Dentistry at Araraquara, Sao Paulo State University-UNESP, Brazil, ⁵Centre for Bone and Arthritis Research at the Sahlgrenska Academy, University of Gothenburg, Sweden

Disclosures: Natalia Da Ponte Leguizamon, None

SUN-0992  Compositional Heterogeneity in Lumbar Vertebral Trabecular Bone as a Function of Disease and Treatment
Isabel Colon-Bernal*¹, Phillip Yang², Taeyong Ahn², Le Duong³, Brenda Pennypacker², Meagan Cauble⁴, Sriram Vaidyanathan⁵, Kenneth Kozloff⁶, Bradford Orr⁷, Mark Banaszak Holl⁸. ¹Chemistry Department, University of Michigan, United States, ²Biomedical Engineering, University of Michigan, United States, ³Macromolecular Science and Engineering, University of Michigan, United States, ⁴Merck & Co, Inc (Retired), United States, ⁵Merck & Co, Inc, United States, ⁶Department of Orthopaedic Surgery, University of Connecticut Health Center, United States, ⁷Department of Pediatrics, Stanford University, United States, ⁸Department of Orthopaedic Surgery and Biomedical Engineering, University of Michigan, United States, ⁹Physics Department, University of Michigan, United States, ¹⁰Department of Chemical Engineering, Monash University, Australia

Disclosures: Isabel Colon-Bernal, None

SUN-0993  Comparison of Calcitonin Receptor Fragment Peptide to Teriparatide for the Prevention of Ovariectomy-Induced Bone Loss
David E Komatsu*¹, Anthony Cappellino², Ryanne Chitjian², Anne Savitt³, Sardar Mz Uddin⁴, Suressh Anaganti³, Srinivas Pentyala⁵. ¹Stony Brook University, Department of Orthopaedics, United States, ²Stony Brook University, Department of Biomedical Engineering, United States, ³AJES Lifesciences, United States, ⁴Stony Brook University, Department of Anesthesiology, United States

Disclosures: David E Komatsu, None

SUN-0994  Biological Effects of Abaloparatide on Bone Mass and Bone Turnover in Mice, a Comparison with Teriparatide.
Akito Makino*¹, Tomoka Hasegawa¹, Norio Amizuka². ¹Pharmacology Research Department, Teijin Pharma Limited, Japan, ²Developmental Biology of Hard Tissue, Graduate School of Dental Medicine, Hokkaido University, Japan

Disclosures: Akito Makino, Teijin Pharma Limited, Grant/Research Support

SUN-0995  Analgesic Effects of Morphine on Knee Osteoarthritis Induced by Intra-Articular Monosodium Iodoacetate in Rats
Jukka Morko*, Jukka Vaaraniemi, Jaakko Lehtimaki, Zhiqi Peng, Jussi M Halleen. Pharmatest Services Ltd, Finland

Disclosures: Jukka Morko, None

SUN-0996  Targeted Delivery of Peptide Therapeutics to Bone Fractures
Jeffery Nielsen*, Philip Low, Stewart Low. Purdue University, United States

Disclosures: Jeffery Nielsen, None

SUN-0997  In Vitro and In Vivo Assessment of Poloxamers as a Drug Delivery System for Bone Regeneration
Young-Eun Park*¹, Kaushik Chandramouli², Maureen Watson³, Karen Callon³, Mark Zhu⁴, Donna Tuari⁵, Dorit Naot⁶, David Musson⁷, Darren Svirskis⁸, Manisha Sharma⁹, Jillian Cornish¹⁰. ¹Miss, New Zealand, ²Mr, New Zealand, ³Ms, New Zealand, ⁴Dr, New Zealand, ⁵Professor, New Zealand

Disclosures: Young-Eun Park, None
SUN-0998  Distinct mechanisms regulate the response of female and male skeletons to sex steroid deficiency and to the bone protective effects of blueberry containing diets. 
Amy Y Sato*, Gretel G Pellegrini, Meloney Gregor, Kevin Mcandrews, Emily Atkinson, Roy B Choi, Maria Maiz, Lilian I Plotkin, Linda D Mccabe, George P Mccabe, Munro Peacock, Connie Weaver, David Burr, Teresita Bellido. 1Department of Anatomy & Cell Biology, Indiana University School of Medicine, United States, 2CONICET-Universidad de Buenos Aires. Instituto de Inmunología, Genética y Metabolismo (INIGEM). Facultad de Farmacia y Bioquímica-Hospital de Clínicas, Universidad de Buenos Aires, Facultad de Odontología. Cátedra de Bioquímica Gral y Bucal, Argentina, 3Department of Nutrition Science, Purdue University, United States, 4Department of Statistics, Purdue University, United States, 5Department of Medicine, Division of Endocrinology, Indiana University School of Medicine, United States, 6Department of Anatomy & Cell Biology, Department of Biomedical Engineering, Indiana University School of Medicine, United States, 7Department of Anatomy & Cell Biology, Department of Medicine, Division of Endocrinology, Indiana University School of Medicine, Roudebush Veterans Administration Medical Center, United States
Disclosures: Amy Y Sato, None

SUN-0999  Pasteurized Akkermansia muciniphila reduces fat mass accumulation after ovariectomy but induces bone-loss in the femur of gonadal intact mice
Lina Lawenius*, Julia Scheffler, Petra Henning, Karin Gustafsson, Karin Nilsson, Hannah Colldén, Ulrika Islander, Willem M De Vos, Patrice Cani, Hubert Plovier, Claes Ohlsson, Klara Sjögren. 1Centre for Bone and Arthritis Research, Institute of Medicine, Sahlgrenska Academy at University of Gothenburg, Sweden, 2Laboratory of Microbiology, Wageningen University, Netherlands, 3Université catholique de Louvain, Louvain Drug Research Institute, WELBIO (Wallon Excellence in Life sciences and BIOtechnology), Metabolism and Nutrition Research Group, Belgium
Disclosures: Lina Lawenius, None

SUN-1000  Assessing the effects of a ketogenic diet on the development of osteoarthritis in obese mice
Thomas Solé*, Thierry Thomas, Laurence Vico, Maura Strigini. 1INSERM, U1059 and University of Lyon, UJM Saint-Etienne, France, 2INSERM, U1059 and University of Lyon, University Hospital Saint-Etienne, France
Disclosures: Thomas Solé, None

SUN-1001  Effects of Metformin and Exercise on Material Properties of Ovariectomized Rat Femurs
Matthew Tice*, Mats Mosti, Astrid Kamilla Stunes, Unni Syversen, Deepak Vashishth. 1Rensselaer Polytechnic Institute, United States, 2Norwegian University of Science and Technology, Norway
Disclosures: Matthew Tice, NIH, Grant/Research Support

SUN-1002  Effect of Kidney Disease Progression on Intestinal Phosphorus Absorption in Male C57/ Chronic Kidney Disease Rats
Colby Vorland*, Pamela Lachcik, Sharon Moe, Neal Chen, Kathleen Hill Gallant. 1Department of Nutrition Science, Purdue University, United States, 2Department of Medicine, Indiana University School of Medicine, United States
Disclosures: Colby Vorland, None

SUN-1003  EXD Chinese Herbal Formula Did Not Alter the Bone Protective Effects of SERMs in Mature Ovariectomized Rats
Liping Zhou*, Ka Ying Wong, Christina Chui Wa Poon, Wenxuan Yu, Chi-On Chan, Daniel Kam-Wah Mok, Hui-Hui Xiao, Man-Sau Wong. 1The Hong Kong Polytechnic University, Hong Kong, 2The Hong Kong Polytechnic University Shenzhen Research Institute, China
Disclosures: Liping Zhou, None
RARE BONE DISEASES: CLINICAL

SUN-1039  Efficacy and Safety of Denosumab Treatment in Bisphosphonate-resistant Fibrous Dysplasia: a Case Series
Natasha M. Appelman-Dijkstra*, Bas C.J. Majoord, P.D. Sander Dijkstra*, Socrates E. Papapoulos*, Neveen A.T. Hamdyl. 1Leiden University Medical Center; Center for Bone Quality: Department of Medicine: Division Endocrinology, Netherlands, 2Leiden University Medical Center; Center for Bone Quality: Department of Orthopedic Surgery, Netherlands

Disclosures: Natasha M. Appelman-Dijkstra, None

SUN-1040  Long-term complications of patients with hypophosphatemic rickets treated in a public institution
Julia Oberger*, Tatiana Lemos Costa, Carolina Moreira, Victoria Borba. Serviço de Endocrinologia e Metabologia do Hospital de Clinicas da Universidade Federal do Paraná, Brazil

Disclosures: Julia Oberger, None

SUN-1041  Low Bone Mineral Density and Increased Bone Resorption in Loeys-Dietz Syndrome
Alison Boyce*, Caeden Dempsey, Samara Levin, Marjohn Rasooly, Pamela Guerriero. National Institutes of Health, United States

Disclosures: Alison Boyce, None

SUN-1042  Bone Mineral Status in Adults X-Linked Hypophosphatemia Rickets
Rosa Arboiro Pinel*, Manuel Díaz Curiel, Natalia Bravo Martín, Manuel Quesada Gómez, Miguel Torralbo García. 1Bone Mineral Department. Fundación Jiménez Díaz. Quironsalud, Spain, 2Internal Medicine Department. Fundación Jiménez Díaz. Quironsalud, Spain, 3Endocrinology Department. Hospital Reina Sofia, Spain

Disclosures: Rosa Arboiro Pinel, None

SUN-1043  Hypophosphatasia among patients presenting for osteoporosis evaluation
Roger Fan*, Ananya Kondapalli, John Poindexter, Naim Maalouf, Khashayar Sakhaee. University of Texas Southwestern Medical Center, United States

Disclosures: Roger Fan, None

SUN-1044  High Prevalence of Nephrolithiasis and Hypercalciuria in Women with Osteogenesis Imperfecta
Vivian Rf Simoes*, Adriana M Fernandes, Manuela Gm Rocha-Braz, Regina M Martin, Bruno Ferraz-De-Souza. Endocrinology/LIM-25, Hospital das Clinicas, University of Sao Paulo School of Medicine, Brazil

Disclosures: Vivian Rf Simoes, None

SUN-1045  A Comprehensive Study of Bone Manifestations in Adult Patients with Gaucher Disease type I
Beatriz Oliveri*, Diana Gonzalez, Felisa Quiroga, Claudio Silva, Paula Rozenfeld, Camilo Lis, Omar Riemersma, Martin Kot. 1Conicet UBA Hospital de Clinicas, Argentina, 2Mautalen Salud e Investigacion, Argentina, 3Diagnostico Maipu, Argentina, 4IFP, Universidad Nacional de La Plata, CONICET, Facultad de Ciencias Exactas, Departamento de Ciencias Biológicas, Argentina, 5Shire Argentina, Argentina

Disclosures: Beatriz Oliveri, Shire, Speakers’ Bureau

SUN-1046  6 years experience of a multidisciplinary approach to Osteogenesis Imperfecta in a Swiss Tertiary Health Center: bone management and quality of life
Bérengère Aubry-Rozier*, Céline Richard, Sheila Unger, Didier Hans, Belinda Campos-Xavier, Luisa Bonafe, Aline Bregou. 1Rheumatology and Centre of Bone Diseases, Lausanne University Hospital, Switzerland, 2ENT, Head and Neck Surgery Department, Lausanne University Hospital, Switzerland, 3Service of Genetic Medicine, Lausanne University Hospital, Switzerland, 4Centre of Bone Diseases, Lausanne University Hospital, Switzerland, 5Orthopaedic Surgery UPCOT, Lausanne University Hospital, Switzerland

Disclosures: Bérengère Aubry-Rozier, None
SUN-1047  EFFECTS OF BUROSUMAB, AN ANTI-FGF23 ANTIBODY, IN PATIENTS WITH TUMOR-INDUCED OSTEOMALACIA: RESULTS FROM AN ONGOING PHASE 2 STUDY
Nobuaki Ito*, Yasuo Imanishi, Yasuhiro Takeuchi, Yutaka Takahashi, Yumie Rhee, Chan Soo Shin, Hironori Kanda, Seiji Fukumoto. 1University of Tokyo Hospital Division of Nephrology and Endocrinology, Japan, 2Osaka City University Graduate School of Medicine, Department of Metabolism, Endocrinology and Molecular Medicine, Japan, 3Toranomon Hospital Endocrine Center, Japan, 4Division of Diabetes and Endocrinology, Department of Internal Medicine, Kobe University Graduate School of Medicine, Japan, 5Department of Internal Medicine, Yonsei University College of Medicine, Democratic People’s Republic of Korea, 6Department of Internal Medicine, Seoul National University Hospital, Democratic People’s Republic of Korea, 7Kyowa Hakko Kirin Co., Ltd., Japan, 8Department of Molecular Endocrinology, Fujii Memorial Institute of Medical Sciences, Institute of Advanced Medical Sciences, Tokushima University, Japan
Disclosures: Nobuaki Ito, Kyowa Hakko Kirin, Grant/Research Support

SUN-1048  Effectiveness of asfotase alpha in an 18-year-old prenatal benign hypophosphatasia patient with prolonged tibial pseudo-fracture.
Minae Koga*, Yuka Kinoshita, Nobuaki Ito. Division of Nephrology and Endocrinology, The University of Tokyo, Japan
Disclosures: Minae Koga, None

SUN-1049  A Unique Case of Chronic Hypocalcemia and Ectopic Cushing Syndrome
Lima Lawrence*, Susan Williams, Peng Zhang, Humberto Choi, Usman Ahmad, Vinni Makin. Cleveland Clinic, United States
Disclosures: Lima Lawrence, None

SUN-1050  Long term health-related quality of life in patients with achondroplasia and hypochondroplasia
Masaki Matsushita*, Hiroshi Kitoh, Kenichi Mishima, Naoki Ishiguro, Sayaka Fujiwara, Nobuhiko Haga, Taichi Kitaoka, Takuo Kubota, Keiichi Ozono. 1Department of Orthopaedic Surgery, Nagoya University Graduate School of Medicine, Japan, 2Department of Rehabilitation Medicine, The University of Tokyo, Japan, 3Department of Pediatrics, Osaka University Graduate School of Medicine, Japan
Disclosures: Masaki Matsushita, None

SUN-1051  Congenital Hypophosphatemia in Adults: Determinants of Bone Turnover Markers and Changes Following Total Parathyroidectomy
Malachi Mckenna*, Rachel Crowley, Julie Grace-Martin, Patrick Twomey, Mark Kilbane. St. Vincent’s University Hospital, Ireland
Disclosures: Malachi Mckenna, None

SUN-1052  Comprehensive Genetic Analysis by Targeted Next Generation Sequencing and Genotype-phenotype Correlation of 47 Japanese Patients with Osteogenesis Imperfecta
Yasuhisa Ohata*, Shinji Takeyari, Taichi Kitaoka, Hirofumi Nakayama, Varoona Bizaou, Yukako Nakano, Kenichi Yamamoto, Kei Miyata, Keiko Yamamoto, Takuo Kubota, Katsusuke Yamamoto, Toshimi Michigami, Takehisa Yamamoto, Keiichi Ozono. 1Department of Pediatrics Osaka University Graduate School of Medicine, Japan, 2The 1st. Department of Oral and Maxillofacial Surgery Osaka University Graduate School of Dentistry, Japan, 3The Japan Environment and Children’s Study Osaka unit center, Japan, 4Department of Medical Genetics Reference Center for Skeletal Dysplasia Hôpital Necker - Enfants Malades, Japan, 5Department of Statistical Genetics Osaka University Graduate School of Medicine, Japan, 6Department of Bone and Mineral Metabolism Osaka Women’s and Children’s Hospital, Japan, 7Department of Pediatric Nephrology and Metabolism Osaka Women’s and Children’s Hospital, Japan, 8Department of Bone and Mineral Metabolism Osaka Women’s and Children’s Hospital, Japan, 9Department of Pediatrics Minoh City Hospital, Japan
Disclosures: Yasuhisa Ohata, None
SUN-1053 Aortic Measurements in Children with Osteogenesis Imperfecta Remain Stable At Short Term Surveillance Interval
Eric Rush*, Shelby Kutty2, Rose Kreikemeier1, Ling Li2, Mary Craft2, David Danford3.  
1Children’s Mercy Hospital, United States, 2University of Nebraska Medical Center, United States, 3Children’s Hospital and Medical Center, United States  
Disclosures: Eric Rush, None

SUN-1054 Twelve Chinese Patients with Primary Hypertrophic Osteoarthropathy: Mutation Identification and Clinical Features
Yang Xu*, Zhen-Lin Zhang. Department of Osteoporosis and Bone Diseases, Metabolic Bone Disease and Genetics Research Unit, Shanghai Jiao Tong University Affiliated Sixth People’s Hospital, China  
Disclosures: Yang Xu, None

SUN-1055 Loss of Gaisignaling induces osteoblast differentiation in soft tissues of POH patients and during normal cranial bone development by activating Hedgehog signal
Yingzi Yang*, Ruoshi Xu2, Xuedong Zhou3, Eileen Shore4, Fred Kaplan5. 1Harvard University, United States, 2Harvard School of Dental Medicine and West China Hospital of Stomatology, United States, 3West China Hospital of Stomatology, China, 4University of Pennsylvania School of Medicine, United Kingdom, 5University of Pennsylvania School of Medicine, United States  
Disclosures: Yingzi Yang, None

SUN-1056 Hypoparathyroidism, real life experience in 55 patients
Maria Belen Zanchetta*, Damian Robbiani1, Fernando Silveira2, Jose Ruben Zanchetta1.  
1IDIM, Universidad del Salvador, Argentina, 2IDIM, Argentina  
Disclosures: Maria Belen Zanchetta, None

SUN-1057 Novel Mutation in the P4HB Gene in Chinese Patient of Osteogenesis Imperfecta with Cole-Carpenter Syndrome
Hao Zhang*, Yangjia Cao, Zhenlin Zhang. Shanghai Jiao Tong University Affiliated Sixth People’s Hospital, China  
Disclosures: Hao Zhang, None

RARE BONE DISEASES: TRANSLATIONAL

SUN-1091 Bone Marrow Transplantation as a Therapy for Autosomal Dominant Osteopetrosis Type II in Mice
Imranul Alam*, Erik Imel, Rita Gerard-O’Riley, Dena Acton, Dana Oakes, Marta Alvarez, Melissa Kacena, Michael Econs. Indiana University School of Medicine, United States  
Disclosures: Imranul Alam, None

SUN-1092 Cystinosin Deficiency Primarily Affects Bone Remodeling In Cystinosin
Giulia Battafarano*, Michela Rossi1, Laura Rita Rega2, Gianna Di Giovamberardino1,  
Anna Pastore2, Matteo D’Agostini3, Ottavia Porzio3, Francesco Emma2, Anna Taranta2, Andrea Del Fattore1. 1Bone Physiopathology Group, Multifactorial Disease and Complex Phenotype Research Area, Bambino Gesù Children’s Hospital, IRCCS, Italy, 2Department of Nephrology and Urology, Division of Nephrology, Bambino Gesù Children’s Hospital, IRCCS, Italy, 3Laboratory of Metabolomics and Proteomics, Bambino Gesù Children’s Hospital, IRCCS, Italy, 4Laboratory of Metabolomics and Proteomics, Bambino Gesù Children’s Hospital, IRCCS, Italy, 5Clinical Laboratory, Bambino Gesù Children’s Hospital, IRCCS, Italy  
Disclosures: Giulia Battafarano, None
SUN-1093 Enhanced activation of Rac1/Cdc42 and MITF as a possible mechanism of augmented osteoclastogenesis in autosomal dominant osteopetrosis type II with G215R mutation of chloride channel 7 gene
Gun-Woo Kim*, Youn-Kwan Jung†, Ji-Ae Jang‡, Min-Su Han§, Seungwoo Han∥.
†Laboratory for arthritis and bone biology, Fatima Research Institute, Department of Internal medicine, Daegu Fatima Hospital, Republic of Korea, ‡Laboratory for arthritis and bone biology, Fatima Research Institute, Daegu Fatima Hospital, Republic of Korea, §Department of Internal medicine, Kyungpook National University Hospital, Republic of Korea
Disclosures: Gun-Woo Kim, None

SUN-1094 Antioxidant and anti-inflammatories dampen the PSACH chondrocyte pathology
Karen Posey*, Jacqueline Hecht. McGovern Medical School at UTHealth, United States
Disclosures: Karen Posey, None

SUN-1095 Upregulated Transforming Growth Factor Beta (TGFβ) Signaling in Osteoblast-like cells from Osteogenesis Imperfecta Patients
Nathalie Bravenboer*, Elise Riesebos, Huib Van Essen, Marelise Eekhoff, Gerard Pals, Dimitra Michia. VU University Medical Center, Netherlands
Disclosures: Nathalie Bravenboer, None

SUN-1096 Igf1 Derived from Osteoclasts in Paget’s Disease Increases Bone Formation via Signaling through EphrinB2/EphB4
Kazuaki Miyagawa*, Yasuhisa Ohata1, Jolene J. Windle2, G. David Roodman1,3, Noriyoshi Kurihara1. 1Medicine/Hematology-Oncology; Indiana University, United States, 2Human and Molecular Genetics, Virginia Commonwealth University, United States, 3Roudebush VA Medical Center, United States
Disclosures: Kazuaki Miyagawa, None

SUN-1097 Kyphosis, moderate restrictive lung disease and sleep apnea of X-linked hypophosphatemia: a case study.
Gregory Newman*, Carolyn Macica. Frank H. Netter School of Medicine Quinnipiac University, United States
Disclosures: Gregory Newman, None

SUN-1098 A Mutation in Cx43(R239Q) Causes Craniometaphyseal Dysplasia (CMD)-like Phenotype in Knock-in Mice
Iichiro Okabe*, Jitendra Kanaujiya, Nelson Monteiro, Ernst Reichenberger, I-Ping Chen. University of Connecticut Health, United States
Disclosures: Iichiro Okabe, None

SUN-1099 Macrophages and TNFα Regulate Fibroproliferation and Muscle Degradation Preceding Heterotopic Ossification in an ALK2R206H Model of Fibrodysplasia Ossificans Progressiva
Chuanmin Cheng*, Michael R Convente1, Nicole Fleming1, Yueqi Zhang1, Amisha Kalra1, Cody M Elkins1, Eileen M Shore2, Daniel S Perrien1. 1Vanderbilt University Medical Center, United States, 2University of Pennsylvania, United States
Disclosures: Chuanmin Cheng, None

SUN-1100 Cell-Autonomous And Systemic Alterations In Gorham-Stout Disease
Michela Rossi*, Giulia Battafarano1, Eda Mariani1, Paola Sabrina Buonuomo1, Ippolita Rana2, Alessandro Jenkner1, Rita De Vito1, Simone Pelle1, Matteo D’Agostini1, Andrea Bartuli1, Andrea Del Fattore1. 1Bone Physiopathology Group Multifactorial Disease and Complex Phenotype Research Area Bambino Gesù Children’s Hospital, IRCCS, Italy, 2Rare Disease and Medical Genetic Unit, Bambino Gesù Children’s Hospital, IRCCS, Italy, 3UO Rare Diseases, Bambino Gesù Children’s Hospital, IRCCS, Italy, 4Division of Immunology and Infectious Diseases Department of Pediatrics, Bambino Gesù Children’s Hospital, IRCCS, Italy, 5Histopathology Unit, Bambino Gesù Children’s Hospital, IRCCS, Italy, 6Division Laboratory, Bambino Gesù Children’s Hospital, IRCCS, Italy
Disclosures: Michela Rossi, None
SUN-1101 Osteoclast formation is inhibited by Activin-A in healthy controls and fibrodysplasia ossificans progressiva patients
Ton Schoenmaker*, 1, Fenne Wouters¹, Dimitra Micha², Coen Netelenbos¹, Marelise Eekhoff³, Nathalie Bravenboer⁴, Teun De Vries¹. ¹Department of Periodontology, Academic Centre for Dentistry Amsterdam (ACTA), University of Amsterdam and Vrije Universiteit, Netherlands, ²Department of Clinical Genetics, VU University Medical Center, Amsterdam, ³Department of Movement Sciences, The Netherlands, ⁴Department of Internal Medicine, Endocrinology Section, VU University Medical Center, Netherlands, ⁵Department of Clinical Chemistry, VU University Medical Center, Netherlands
Disclosures: Ton Schoenmaker, None

SUN-1102 In Vitro and In Vivo Treatment Response of Osteogenesis Imperfecta Bone Tissue to Bone Forming Sclerostin Antibody
Rachel Surowiec*¹, Lauren Battle², Stephen Schlecht³, Michelle Caird¹, Kenneth Kozloff¹. ¹Departments of Biomedical Engineering and Orthopaedic Surgery, University of Michigan, United States, ²Department of Orthopaedic Surgery, University of Michigan, United States, ³Departments of Mechanical Engineering and Orthopaedic Surgery, University of Michigan, United States
Disclosures: Rachel Surowiec, None

SUN-1103 Hyperphosphatemia in Hypophosphatasia of Childhood is Associated with Decreased FGF7 and Normal FGF23 Levels in the Circulation
Michael P. Whyte*, 1, Fan Zhang¹, Gary S. Gottesman¹, Steven Mumm², Rajiv Kumar³. ¹Center for Metabolic Bone Disease and Molecular Research, Shriners Hospital for Children, United States, ²Division of Bone and Mineral Diseases, Department of Internal Medicine, Washington University School of Medicine, United States, ³Division of Nephrology and Hypertension, Departments of Medicine and Biochemistry & Molecular Biology, Mayo Clinic College of Medicine, United States
Disclosures: Michael P. Whyte, None

SUN-1104 Plasma microRNA as novel biomarker for curve progression in Adolescent Idiopathic Scoliosis (AIS) – a 6 years longitudinal follow up study
Jia Jun Zhang¹,², Yu Jia Wang¹,², Ka Yee Cheuk¹,², Carol Cheng¹,², Tsz Ping Lam¹,², Bobby Kin-Wah Ng³,⁴, Yong Qiu²,⁴, Jack Chun Yiu Cheng¹,², Wayne Yuk-Wai Lee¹,². ¹Department of Orthopaedics and Traumatology, SH Ho Scoliosis Research Laboratory, The Chinese University of Hong Kong, Hong Kong, ²Joint Scoliosis Research Center of the Chinese University of Hong Kong and Nanjing University, The Chinese University of Hong Kong, Hong Kong, ³Department of Orthopaedics and Traumatology, The Chinese University of Hong Kong, Hong Kong, ⁴Spine Surgery, The Affiliated Drum Tower Hospital of Nanjing University Medical School, Nanjing, China
Disclosures: Wayne Yuk-Wai Lee, None

SUN-1128 Prospective Associations of Osteosarcopenia and Osteodynapenia with Incident Fracture and Mortality over 10 years in Community-dwelling Older Adults
Saliu Balogun*, 1, Tania Winzenberg¹, Karen Wills¹, David Scott²,³, Michele Callisaya¹, Flavia Cicuttini³, Graeme Jones¹, Dawn Aitken¹. ¹Menzies Institute for Medical Research, University of Tasmania, Australia, ²Department of Medicine, School of Clinical Sciences at Monash Health, Australia, ³Faculty of Medicine, Nursing and Health Sciences, & Peninsula Clinical School, Central Clinical School, Monash University, Australia, ⁴Department of Epidemiology and Preventive Medicine, Monash University, Australia
Disclosures: Saliu Balogun, None

SUN-1129 Associations between home environmental modifications and falls from the Women’s Health Initiative
Daniel Beavers*, 1, Laura Welti², Annie Mampieri², Stephen Rapp¹, Kristen Beavers², Edward Ip¹, Sally Shumaker¹. ¹Wake Forest School of Medicine, United States, ²Wake Forest University, United States
Disclosures: Daniel Beavers, None
SUN-1130  Dynapenia and Muscle Loss in Older-Aged Women  
1Centro de Investigación Ósea, Universidad de Guadalajara, Mexico, 2Instituto de Ciencias Aplicadas a la Actividad Física y del Deporte, Universidad de Guadalajara, Mexico, 3Universidad de Guadalajara, Mexico, 4Universidad de Guanajuato, Hospital Aranda de la Parra, Mexico, 5Departamento de Bienestar y Desarrollo Sustentable, Centro Universitario del Norte, Universidad de Guadalajara, Colotlán, Mexico, 6Endocrinología/Centro de Osteoporosis, Hospital Universitario de Monterrey, Mexico, 7Servicios Médicos De la Peña, Mexico, 8Servicio de Endocrinología, Hospital Universitario, UANL, Mexico 
Disclosures: Francisco Torres-Naranjo, None

SUN-1131  Insulin-like growth factor-I is required to maintain muscle volume in adult mice  
Satoshi Nakamura*, Arihiko Kanaji, Takeshi Miyamoto, Morio Matsumoto, Masaya Nakamura. Department of Orthopedic Surgery, Keio University School of Medicine, Japan 
Disclosures: Satoshi Nakamura, None

SUN-1132  The body composition changes in elderly people which relations with dysmobility syndrome  
Woong Hwan Choi*, Sang Mo Hong, Ye Soo Park. 1College of medicine, Hanyang university, Republic of Korea, 2College of medicine, Hanleem University, Republic of Korea, 3Hanyang university hospital, Republic of Korea 
Disclosures: Woong Hwan Choi, None

SUN-1133  Appendicular Lean Mass Adjusted for Body Mass Index: Reference Data for Australian Men and Women  
Julie Pasco*, Kara Holloway-Kew, Monica Tembo, Sophia Sui, Kara Anderson, Pamela Rufus, Natalie Hyde, Mark Kotowicz. Deakin University, Australia 
Disclosures: Julie Pasco, None

SUN-1134  Phenotypic Features of Sarcopenic Older Adults According to Current Operational Definitions: Data from the GERICO Study  
Mélany Hars*, Emmanuel Biver, Thierry Chevalley, René Rizzoli, Serge Ferrari, Andrea Trombetti. Division of Bone Diseases, Department of Internal Medicine Specialties, Geneva University Hospitals and Faculty of Medicine, Switzerland 
Disclosures: Mélany Hars, None

SUN-1135  Greater visceral adiposity is associated with lower paraspinal muscle density: the Framingham Study  
Timothy Tsai*, Brett Allaire, Ilean Isaza, Marian Hannan, Mary Bouxsein, Douglas Kiel, Thomas Travison. 1Hebrew SeniorLife Institute for Aging Research, United States, 2Beth Israel Deaconess Medical Center, United States, 3Harvard Medical School, United States 
Disclosures: Timothy Tsai, None

SUN-1136  Serum DHEA and its Sulfate Are Associated with Incident Fall Risk in Older Men - the MrOS Sweden Study  
Liesbeth Vandenput*, Maria Nethander, Magnus Karlsson, Björn Rosengren, Eva Ribom, Dan Mellström, Claes Ohlsson. 1Centre for Bone and Arthritis Research, Department of Internal Medicine and Clinical Nutrition, Institute of Medicine, Sahlgrenska Academy, University of Gothenburg, Sweden, 2Bioinformatics Core Facility, Sahlgrenska Academy, University of Gothenburg, Sweden, 3Clinical and Molecular Osteoporosis Research Unit, Department of Clinical Sciences, Lund University, and Department of Orthopaedics, Skåne University Hospital, Sweden, 4Department of Surgical Sciences, University of Uppsala, Sweden, 5Centre for Bone and Arthritis Research and Department of Geriatric Medicine, Institute of Medicine, Sahlgrenska Academy, University of Gothenburg, Sweden 
Disclosures: Liesbeth Vandenput, None
Regucalcin Signaling Is Involved in Advanced Glycation End Products-induced Muscle Cell Senescence and Atrophy
Rong-Sen Yang*, Chen-Yuan Chiu, Ding-Cheng Chan, Shing-Hwa Liu. National Taiwan University, Taiwan
Disclosures: Rong-Sen Yang, None

LATE-BREAKING POSTERS II
12:30 pm - 2:30 pm Palais des congrès de Montréal
ASBMR Discovery Hall - Exhibit Hall 220 B-E

ADULT METABOLIC BONE DISORDERS
LB SUN - 1148 Circulating miRNAs are associated with higher tibial cortical porosity in postmenopausal women with history of osteoporotic fractures
Ursula Heilmeier*, Matthias Hackl, Susanna Skalicky, Janina Patsch, Thomas Baum, Fabian Schröder, Clemens Vierlinger, Andrew Burghardt, Ann Schwartz, Johannes Grillari, Thomas Link. 1Department of Radiology & Biomedical Imaging, United States, 2TamiRNA GmbH, Austria, 3Department of Biomedical Imaging and Image-Guided Therapy, Medical University of Vienna, Austria, 4Department of Neuroradiology, Technical University Munich, Germany, 5Department of Molecular Diagnostics, Austrian Institute of Technology (AIT), Austria, 6Musculoskeletal Quantitative Imaging Research Group, Department of Radiology & Biomedical Imaging, University of California San Francisco, United States, 7Department of Epidemiology and Biostatistics, University of California San Francisco, United States, 8Department of Biotechnology, University of Natural Resources and Life Sciences, Austria, 9Musculoskeletal Quantitative Imaging Research Group, Department of Radiology & Biomedical Imaging, University of California San Francisco, United States
Disclosures: Ursula Heilmeier, None

BIOMECHANICS AND BONE QUALITY
LB SUN - 1153 Serum Free Testosterone-Estradiol Ratio and Dehydroepiandrosterone Sulfate Levels Are Associated With Muscle Strength Independent of Muscle Mass in the Elderly
Sung Hye Kong*, Jung Hee Kim, Ji Hyun Lee, A Ram Hong, Chan Soo Shin, Nam H. Cho. 1Seoul National University College of Medicine, Republic of Korea, 2Ajou University College of Medicine, Republic of Korea
Disclosures: Sung Hye Kong, None

LB SUN - 1154 Organic Matrix Quality discriminates between Age- and BMD-matched Fracturing versus Non-Fracturing Post-menopausal Women
Eleftherios Paschalis*, Stamatia Rokidi, Klaus Klaushofer, Severin Vennin, Anastasia Desyatova, Joseph Turner, P Watson, Joan Lappe, Mohammed Akhter, Robert Recker. 1Ludwig Boltzmann Institute of Osteology at the Hanusch Hospital of WGKK and AUVA Trauma Centre Meidling, 1st Medical Department, Hanusch Hospital, Austria, 2University of Nebraska, United States, 3Osteoporosis Research Center, Creighton University, United States
Disclosures: Eleftherios Paschalis, None
BONE ACQUISITION AND PEDIATRIC BONE DISORDERS

LB SUN - 1158 The Influence of Maternal Diet on Offspring Bone Acquisition at Birth among Samoan Infants
1Institute for Physical Activity and Nutrition, Deakin University, Australia, 2Department of Anthropology, Yale University, United States, 3Yale-Ministry of Health Research Center, Samoa, 4Community Studies Program, University of California-Santa Cruz, United States, 5International Health Institute, Brown University, United States, 6Department of Chronic Disease Epidemiology, Yale School of Public Health, United States, 7Ministry of Health, Samoa, 8Epi-Centre for Healthy Ageing, Deakin University, Australia

Disclosures: Rachel L Duckham, None

BONE INTERACTIONS WITH MUSCLE AND OTHER TISSUES

LB SUN - 1161 FGF23 induces ventricular arrhythmias in mouse hearts mediated through the phospholipase C pathway
Jonah M. Graves*, Julian A. Vallejo, Chelsea Hamill, Michael J. Wacker. University of Missouri-Kansas City School of Medicine, United States

Disclosures: Jonah M. Graves, None

BONE TUMORS AND METASTASIS

LB SUN - 1166 Identification of Novel Notch1 Interacting Partners in Osteosarcoma Cells
Haydee Torres*,1,2, Fang Fang1, Danielle May1, Kyle Roux1,2,3, Jianning Tao1,2,3. 1Sanford Research, United States, 2South Dakota State University, United States, 3The University of South Dakota, United States

Disclosures: Haydee Torres, None

LB SUN - 1167 The Runt domain of RUNX2 induces the migration of melanoma cells to bone
Maria Teresa Valenti*,1, Michela Deiana1, Michela Serena1, Samuele Cheri1, Francesca Parolini1, Giulia Marchetto1, Mihaela Mina1, Antonio Mori1, Alberto Gandini1, Franco Antoniazzi1, Natascia Tiso1, Giovanni Malerba1, Luigi Gennari1, Monica Mottes1, Donato Zipeto1, Luca Dalle Carbonare1. 1University of Verona, Italy, 2University of Padova, Italy, 3University of Siena, Italy

Disclosures: Maria Teresa Valenti, None

LB SUN - 1168 Activation of PI3K in the Myeloid Lineage Results in Myeloproliferative Neoplasm, Increase in Myeloid-Derived Suppressor Cells and Bone Loss
Jungeun Yu*,1, Laura Doherty1, Evan Jellison2, Ernesto Canalis1, Archana Sanjay1. 1UConn Musculoskeletal Institute, UConn Health, Farmington, CT 06030, United States, 2Department of Immunology, UConn Health, Farmington, CT 06030, United States

Disclosures: Jungeun Yu, None

ENERGY METABOLISM, BONE, MUSCLE AND FAT

LB SUN - 1174 PGC1α deficiency negatively regulates bone mass and strength
Graziana Colaianni*,1, Luciana Lippo1, Lorenzo Sanesi1, Giacomina Brunetti2, Monica Celi3, Nunzio Cirulli2, Giovanni Passeri1, Janne Reseland4, Ernestina Schipani5, Maria Felicia Faienza6, Umberto Tarantino1, Silvia Colucci7, Maria Grano1. 1Department of Emergency and Organ Transplantation, University of Bari, Italy, 2Department of Basic Medical Science, Neuroscience and Sense Organs, University of Bari, Italy, 3Department of Orthopedics and Traumatology, Tor Vergata University of Rome, Italy, 4Department of Clinical and Experimental Medicine, University of Parma, Italy, 5Department of Biomaterials, Institute for Clinical Dentistry, University of Oslo, Norway, 6Departments of Medicine and Orthopaedic Surgery, University of Michigan, United States, 7Department of Biomedical Science and Human Oncology, Pediatric Unit, University of Bari, Italy

Disclosures: Graziana Colaianni, None
LB SUN - 1175 Metabolic Fuel Selection During the Osteoblast to Osteocyte Transition
Thomas O’Connell*, Matt Prideaux, Yukiko Kitase, Lynda Bonewald. Indiana University, United States
Disclosures: Thomas O’Connell, None

MECHANOBIOLOGY

LB SUN - 1181 Mechanically-stimulated ATP release from murine bone cells is regulated by a balance of injury and repair
Nicholas Mikolajewicz*1, Elizabeth Zimmermann2, Bettina Willie3, Svetlana Komarova3.
1McGill University, Canada, 2Shriners Hospital for Children-Canada, Canada
Disclosures: Nicholas Mikolajewicz, None

MUSCULOSKELETAL AGING

LB SUN - 1182 Association of osteosarcopenia and cognitive impairment in a community dwelling older population: The Bushehr Elderly Health (BEH) program
Bagher Larijani*, Gita Shafiee2, Afshin Ostovar1, Ramin Hessmat1, Farshad Sharifi2, Iraj Nabipour1. 1Endocrinology and Metabolism Research Center, Endocrinology and Metabolism Clinical Sciences Institute, Tehran University of Medical Sciences, Tehran, Iran, Islamic Republic of Iran, 2Chronic Diseases Research Center, Endocrinology and Metabolism Population Sciences Institute, Tehran University of Medical Sciences, Tehran, Iran, Islamic Republic of Iran, 3Osteoporosis Research Center, Endocrinology and Metabolism Clinical Sciences Institute, Tehran University of Medical Sciences, Tehran, Iran, Islamic Republic of Iran, 4Chronic Diseases Research Center, Endocrinology and Metabolism Population Sciences Institute, Tehran University of Medical Sciences, Tehran, Iran, Islamic Republic of Iran, 5The Persian Gulf Tropical Medicine Research Center, Bushehr University of Medical Sciences, Bushehr, Iran, Islamic Republic of Iran
Disclosures: Bagher Larijani, None

MUSCULOSKELETAL PROGENITOR CELLS AND LINEAGE DETERMINATION

LB SUN - 1188 Building a single-cell transcriptome atlas of mouse bone marrow mesenchymal lineage cells for analyzing MSC heterogeneity
Disclosures: Robert Tower, None

OSTEOBLASTS

LB SUN - 1194 Investigating the Dose-Dependent Response of Black Tea Polyphenols in SaOS-2 Cells
Riley Cleverdon*, Michael D. Mcalpine, William Gittings, Wendy E. Ward. Brock University, Canada
Disclosures: Riley Cleverdon, None

LB SUN - 1195 The impact of tissue oxygenation on antibacterial immunity during Staphylococcus aureus osteomyelitis
Caleb Ford*, Aimee Wilde1, Nicole Putnam1, Jacob Curry2, Jim Cassat1,2. 1Vanderbilt University, United States, 2Vanderbilt University Medical Center, United States
Disclosures: Caleb Ford, None

LB SUN - 1196 Antagonism between Bone Morphogenetic Protein and Activin signaling pathways in osteoprogenitor cells
Madeline Totten*, Sydni Yates, Kelli Jestes, Sylvia Chlebek, Jordan Newby, Jon Arthur, Jonathan Lowery. Division of Biomedical Science, Marian University College of Osteopathic Medicine, United States
Disclosures: Madeline Totten, None
OSTEOCLASTS

LB SUN - 1201 Pattern recognition and IL-1 receptor signaling drive host immunity and altered bone homeostasis during Staphylococcus aureus osteomyelitis
Nicole Putnam*, Laura Fulbright, Jacob Curry, Jenna Petronglo, Jim Cassat. Vanderbilt University Medical Center, United States
Disclosures: Nicole Putnam, None

LB SUN - 1202 AP-002: A novel inhibitor of osteoclast differentiation and function without disruption of osteogenesis
Yongqiang Wang*, Yixue Mei, Yushan Song, Carly Bachus, Chunxiang Sun, Hooshmand Sheshbazaradan, Michael Glogauer. 1University of Toronto, Canada, 2Altum Pharmaceuticals Inc, Canada
Disclosures: Yongqiang Wang, None

LB SUN - 1203 MicroRNA-335-5p Inhibits Alveolar Bone Resorption and Inflammation in Periodontitis
Junxiang Lian*, Qisheng Tu, Jake Chen. 1Division of Oral Biology, Tufts University School of Dental Medicine, United States, 2State Key Laboratory of Oral Diseases, West China School of Stomatology, Sichuan University, United States, 3Department of Cellular, Molecular, Developmental Biology, United States
Disclosures: Junxiang Lian, None

OSTEOCYTES

LB SUN - 1206 PPARγ: A Molecular Brake for Osteocyte Energy Metabolism and Bone Mass
Sudipta Baroi*, Lance Stechschulte, Amit Chougule, Patrick Griffin, Beata Lecka-Czernik. 1University of Toledo College of Medicine, United States, 2Scripps Research Institute, United States
Disclosures: Sudipta Baroi, None

OSTEOPOROSIS - ASSESSMENT

LB SUN - 1208 Assessment of bone density using QCT on single and dual energy CT data. An Ex-vivo Study on Human Femur
Philippe P Wagner*, Jean-Paul Roux, Quentin Chuzel, Francois Duboeuf, Roland Chapurlat, Helene Follot, Jean-Baptiste Pialat. 1Univ Lyon, Université Claude Bernard Lyon 1, INSERM, Lyons UMR1033, Lyon, France, 2Hospices Civils de Lyon, Lyon, France
Disclosures: Philippe P Wagner, None

OSTEOPOROSIS - HEALTH SERVICES RESEARCH

LB SUN - 1212 High Levels of Abdominal Aortic Calcification Predict Higher Health Care Costs
John Schousboe*, Tien Vo, Lisa Langsetmo, Brent Taylor, Allyson Kats, Susan Diem, Pawel Szulc, Joshua Lewis, Kristine Ensrud. 1HealthPartners Institute, United States, 2University of Minnesota, United States, 3INSERM UMR 1033, University of Lyon, Hospices Civils de Lyon, France, 4University of Western Australia, Australia
Disclosures: John Schousboe, None

OSTEOPOROSIS - NUTRITION, DIETARY SUPPLEMENTS AND PHYSICAL ACTIVITY

LB SUN - 1216 WITHDRAWN
OSTEOPOROSIS - PATHOPHYSIOLOGY

LB SUN - 1219 Long-term immobilization is associated with increased cortical porosity, osteocyte deficiency and high matrix mineralization
Tim Rolvien*1, Petar Milovanovic2, Felix N. Schmidt1, Matthias Krause1, Klaus Püschel1, Robert O. Ritchie4, Michael Amling1, Björn Busse1. 1Department of Osteology and Biomechanics, University Medical Center Hamburg-Eppendorf, Germany, 2Laboratory for Anthropology, Institute of Anatomy, Faculty of Medicine, University of Belgrade, Serbia, 3Department of Legal Medicine, University Medical Center Hamburg-Eppendorf, Germany, 4Materials Sciences Division, Lawrence Berkeley National Laboratory, United States
Disclosures: Tim Rolvien, None

OSTEOPOROSIS - SECONDARY OSTEOPOROSIS

LB SUN - 1222 Fragility Fracture Risk Reduction in Women with Breast Cancer on Aromatase Inhibitors Treated with Anti-Osteoporosis Therapy
Yu-Chien Cheng*, Cydney Bullock, Shriya Gandhi, Andrea Sterenstein, Megan Randall, Sara Ahmad, Samarthkumar Thakkar, Michael Morkos, Garnet Meier, Sanford Baim. Rush University Medical Center, United States
Disclosures: Yu-Chien Cheng, None

LB SUN - 1223 Impact of Thyroid Hormone Therapy on Bone Health in Older Adults with Subclinical Hypothyroidism: a Randomized Clinical Trial
Elena Gonzalez Rodriguez*1,2, Axel Lennart Löwe3,4, Cinzia Del Giovane3, Martin Feller3,4, Patricia Kearney1, Jacobijn Gussekloo5, Simon P. Mooijaart6, Rudi Gj Westendorp7, David J Stott8, Daniel Aeberli9, Doug Bauer10, Didier Hans10, Nicolas Rodondi11,12. 1Center of Bone Diseases, Rheumatology Unit, Bone and Joint Department, CHUV, Switzerland, 2Endocrinology, Diabetology and Metabolism Unit, Internal Medicine Department, CHUV, Switzerland, 3Institute of Primary Health Care (BIHAM), University of Bern, Switzerland, 4Department of General Internal Medicine, Inselspital, Bern University Hospital, University of Bern, Switzerland, 5Department of Epidemiology and Public Health University College Cork, Ireland, 6Departments of Gerontology and Geriatrics Leiden University Medical Center, Netherlands, 7Department of Public Health and Center for Healthy Aging, University of Copenhagen, Denmark, 8Institute of Cardiovascular and Medical Sciences, University of Glasgow, United Kingdom, 9Department of Rheumatology and Clinical Immunology/ Allergology, Bern University Hospital, Switzerland, 10Departments of Medicine, Epidemiology and Biostatistics, University of California, United States
Disclosures: Elena Gonzalez Rodriguez, None

OSTEOPOROSIS – TREATMENT

LB SUN - 1225 PF708, a Therapeutic Equivalent/Biosimilar Teriparatide Candidate, Demonstrates Comparable Clinical Profiles Relative to Forteo in Osteoporosis Patients
Hubert Chen*,1, Michael Noss2, Jonathan Lee1, Hongfan Jin1, Carrie Schneider1, Christine Thai1. 1Pfenex Inc, United States, 2Synexus, United States
Disclosures: Hubert Chen, Pfenex, Other Financial or Material Support

LB SUN - 1226 Fragility Fractures after Initiation of a Drug Holiday in a Real Life Setting
Michael Morkos*1,2, Alessandra Casagrande1, Paul Mahrous1, Muriel Tania Go2, Hasan Husni2, Mirette Hanna1, Sara Bedrose2, Dingfeng Li2, Yu-Chien Cheng1,2, Sanford Baim1. 1Rush University Medical Center, United States, 2John H. Stroger, Jr. Hospital of Cook County, United States
Disclosures: Michael Morkos, None

LB SUN - 1227 Patterns of Osteoporosis Medications Selection after Drug Holiday or Continued Therapy: A Real World Experience
Michael Morkos1,2, Alessandra Casagrande1, Paul Mahrous1, Muriel Tania Go2, Hasan Husni2, Mirette Hanna1, Dingfeng Li2, Sara Bedrose2, Mishita Goel1, Yu-Chien Cheng1,2, Sanford Baim1. 1Rush University Medical Center, United States, 2John H. Stroger, Jr. Hospital of Cook County, United States
Disclosures: Michael Morkos, None
LB SUN - 1228 Apparent Response Rate by PINP to Oral Bisphosphonates in Clinical Practice and Clinical Trial Settings
Antonia Ugur*1, Fatma Gossiel1, Kim Naylor1, Jennifer Walsh1, Nicola Peel2, Eugene Mcloskey3, Richard Eastell1,2, 1Academic Unit of Bone Metabolism, Oncology and Metabolism, University of Sheffield, United Kingdom, 2Metabolic Bone Centre, Sheffield Teaching Hospitals, United Kingdom, 3Mellanby Centre for Bone Research, United Kingdom
Disclosures: Antonia Ugur, None

PRECLINICAL MODELS: NUTRITION AND PHARMACOLOGY

LB SUN - 1234 Additive Adverse Effects: Use of Multiple Fracture Associated Drugs and Hip Fracture Risk
Rebecca Emeny*1, Chiang-Hua Chang1, Jonathan Skinner1, A. James O’Malley1, Jeremy Smith1, Gouri Chakraborti1, Clifford J. Rosen2, Nancy E. Morden1. 1The Dartmouth Institute for Health Policy & Clinical Practice, The Geisel School of Medicine at Dartmouth, United States, 2Maine Medical Center Research Institute, United States
Disclosures: Rebecca Emeny, None

RARE BONE DISEASES: CLINICAL

LB SUN - 1238 Bone Mineral Density and fracture risk in adult Hypophosphatasia
Franca Genest*, Lena Clausen, Silke Achtziger, Lothar Seefried. University of Wuerzburg, Germany
Disclosures: Franca Genest, Alexion, Speakers’ Bureau

LB SUN - 1239 Asfotase Alfa Therapy in Adults with Pediatric-Onset Hypophosphatasia: Compassionate Use Results
Michaël Laurent*1, David Alster2, Evelien Gielen1, David Cassiman1, Franz Jakob3, Lothar Seefried1. 1University Hospitals Leuven, Belgium, 2Tucson Endocrine, United States, 3University of Würzburg, Germany
Disclosures: Michaël Laurent, Alexion, Consultant

LB SUN - 1240 Successful treatment of osteoporosis with intermittent parathyroid hormone related peptide (Tymlos) injections in patients with Ehlers-Danlos syndrome
Juliana Barsony*. Georgetown University Medical Center, United States
Disclosures: Juliana Barsony, None

RARE BONE DISEASES: TRANSLATIONAL

LB SUN - 1242 Homozygous knock-in Gly682Arg mutation in mouse Col27a1 gene phenocopies human steel syndrome with osteochondrodysplasia
Kalyan Nannuru*1, Claudia Gonzaga-Jauregui2, Harikiran Nistala2, Johanna Jimenez2, Silvia Smaldone1, Saathyaki Rajamani1, Johnathon Walls2, Chia-Jen Siao1, Andrew Murphy1, Sarah Hartsell1, Aris N Economides1. 1Regeneron Pharmaceutical Inc, United States, 2Regeneron Genetic Center, United States
Disclosures: Kalyan Nannuru, Regeneron Pharmaceuticals Inc, Other Financial or Material Support

POSTER SESSION III

12:00 pm - 2:00 pm
Palais des congrès de Montréal
ASBMR Discovery Hall - Exhibit Hall 220 B-E

ADULT METABOLIC BONE DISORDERS

MON - 0036 Vitamin D and bone turnover markers dynamics during the first year after liver transplantation.
Gonzalo Allo Miguel*1, Soledad Librizzi1, Mercedes Aramendi Ramos2, Carlos Jiménez3, Federico Hawkins1, Guillermo Martinez Diaz-Guerra1. 1Endocrinology Service, 12 de Octubre University Hospital, Spain, 2Laboratory Service, 12 de Octubre University Hospital, Spain, 3General Surgery Service, 12 de Octubre University Hospital, Spain
Disclosures: Gonzalo Allo Miguel, None
MON-0037 Persistently elevated PTH after parathyroidectomy at one year: experience in a tertiary referral center
Marie Caldwell*, 1, Marshall Clark2, Lawrence Kim2, Janet Rubin2. 1University of North Carolina Hospitals, United States, 2University of North Carolina, United States
Disclosures: Marie Caldwell, None

MON-0038 A Novel Mutation in the Calcium Sensing Receptor Gene in an Italian Family Affected by Autosomal Dominant Hypocalcemia
Filomena Cetani*, 1, Simona Borsari2, Federica Saponaro1, Elena Pardi1, Chiara Banti2, Laura Mazoni2, Matteo Apicella2, Claudio Marcocci2. 1University Hospital of Pisa, Endocrine Unit 2, Italy, 2Department of Clinical and Experimental Medicine, University of Pisa, Italy, 3Department of Surgical, Medical, Molecular Pathology and Clinical Area, University of Pisa, Italy
Disclosures: Filomena Cetani, None

MON-0039 Burden of Illness Among Patients With Chronic Hypoparathyroidism Not Adequately Controlled With Standard Therapy by Self-Perception
Heide Siggelkow*, 1, Bart L. Clarke2, Helen Dahl-Hansen3, Elizabeth Glenister1, Davneet Judge2, Nawal Bent-Ennakhil4, Katie Gibson5, John Germak6, Kristina Chen5, Claudio Marelli5, Jens Bollerslev5. 1Department of Gastroenterology and Endocrinology, University of Göttingen, Germany, 2Mayo Clinic Division of Endocrinology, Diabetes, Metabolism, and Nutrition, United States, 3Nordic hypoPARA Organisation, Norway, 4Hypopara UK, United Kingdom, 5Adelphi Real-World, United Kingdom, 6Shire International GmbH, Switzerland, 7Shire Human Genetic Therapies, Inc., United States, 8Section of Specialized Endocrinology, Oslo University Hospital, Norway
Disclosures: Heide Siggelkow, Shire. Consultant, Shire. Speakers’ Bureau

MON-0041 Adults With Hypophosphatasia Enrolled in the Global HPP Registry Have Delayed Diagnosis and Systemic Manifestations of the Disease
Lothar Seefried*, 1, Wolfgang Högler1, Hugo Gomes Da Silva1, Anna Petryk1, Shona Fang1, Agnes Linglart4, Keiichi Ozono4, Cheryl Rockman-Greenberg5, Craig Langman6, Priya Kishnani7. 1Orthopaedic Clinic King-Ludwig-Haus, University of Würzburg, Germany, 2Department of Endocrinology and Diabetes, Birmingham Children’s Hospital, and Institute of Metabolism and Systems Research, University of Birmingham, United Kingdom, 3Alexion Pharmaceuticals, Inc., United States, 4APHP, Bicêtre Paris-Sud, University Paris Saclay, France, 5University of Manitoba, Rady Faculty of Health Sciences, Max Rady College of Medicine, and Children’s Hospital Research Institute of Manitoba, Canada, 6Feinberg School of Medicine, Northwestern University, and Lurie Children’s Hospital of Chicago, United States, 7Department of Pediatrics, Duke University Medical Center, United States
Disclosures: Lothar Seefried, Alexion Pharmaceuticals, Inc., Grant/Research Support, Alexion Pharmaceuticals, Inc., Other Financial or Material Support

MON-0042 Value of periostin and tartrate-resistant acid phosphatase 5b as biochemical markers of activity in Paget’s disease of bone
Nuria Guanabens*, 1, Xavier Filella2, Silvia Ruiz-Gaspa2, Helena Florez1, Arantxa Conesa1, Pilar Peris1, Ana Monegal1, Ferran Torres1. 1Metabolic Bone Diseases Unit, Hospital Clinic, IDIBAPS, CIBERehd, University of Barcelona, Spain, 2Biochemistry and Molecular Genetics Department, Hospital Clinic, Spain, 3Hospital Clinic, CIBERehd, Spain, 4Rheumatology Department, Hospital General Universitario, Spain, 5Biostatistics and Data Management Platform, Hospital Clinic, IDIBAPS, Spain
Disclosures: Nuria Guanabens, None
MON-0043 A Highly Sensitive Fluorescence Immunoassay for the Biomarker NOGGIN
**FluoBolt™**: A New Tool for Bone Research
Gerhard Hawa*, Linda Sonnleitner, Albert Missbichler. FIANOSTICS GmbH, Austria
**Disclosures**: Gerhard Hawa, None

MON-0044 Evaluation of a Radiophosphorus Method for Intestinal Phosphorus Absorption Assessment in Humans
Kathleen M. Hill Gallant*, Mun Sun Choi, Elizabeth R. Stremke, George P. McCabe, Munro Peacock, Meryl E. Wastney. 1Purdue University, United States, 2Indiana University School of Medicine, United States, 3Purdue University, New Zealand
**Disclosures**: Kathleen M. Hill Gallant, Chugai Pharmaceutical, Grant/Research Support

MON-0045 The Design and Results of a Phase 1 TransCon PTH Trial in Healthy Volunteers
David B. Karpf*, Susanne Pihl, Eva Mortensen, Kennett Sprogøe, Jonathan A. Left. 1Ascendis Pharma Inc., United States, 2Ascendis Pharma A/S, Denmark
**Disclosures**: David B. Karpf, Ascendis Pharma, Other Financial or Material Support

MON-0046 Does Cerebral Vascular Stiffness Contribute to Altered Cognition in Primary Hyperparathyroidism?
Minghao Liu*, Yunglin Gazes, Ivelisse Colon, Mariana Bucovsky, Kevin Slane, John Williams, Randolph Marshall, Ronald Lazar, James Lee, Jennifer H. Kuo, Shonni Silverberg, Marcella Walker. 1Columbia University Medical Center, United States, 2University of Alabama at Birmingham, United States
**Disclosures**: Minghao Liu, None

MON-0047 A microRNA approach to diagnosing renal osteodystrophy
Thomas Nickolas*, Neal Chen, Donald McMahon, David Dempster, Hua Zhou, Sharon Moe. 1Columbia University, United States, 2Indiana University, United States, 3Helen Hayes Hospital Regional Bone Center, United States
**Disclosures**: Thomas Nickolas, None

MON-0048 Incidence of fracture in Kidney Transplantation: A population-based Healthcare administrative study
Aboubacar Sidibé*, Sonia Jean, Philippe Gamache, Lynne Moore, Fabrice Mac-Way. 1Chu de Québec-Université Laval, Institut National de Santé Publique de Québec, Canada, 2Université Laval, Institut National de Santé Publique, Canada, 3Université Laval, Institut National de Santé Publique de Québec, Canada, 4Chu de Québec-Université Laval Research center, Enfant-Jésus Hospital, Traumatology Axis, Canada, 5Chu de Québec-Université Laval, Hotel-Dieu de Quebec Hospital, Canada
**Disclosures**: Aboubacar Sidibé, None

MON-0049 TBK1 expression and activity in OCL lineage cells generates a pagetic-like bone disease in mice
Quanhong Sun*, Peng Zhang, Juraj Adamik, Mark A. Subler, Noriyoshi Kurihara, Laëtitia Michou, Jacques P. Brown, G. David Roodman, Philip E Auron, David W. Dempster, Jolene J. Windle, Kostas Verdelis, Hua Zhou, Deborah L. Galson. 1Department of Medicine, Hematology-Oncology Division, University of Pittsburgh, UPMC Hillman Cancer Center, Pittsburgh, PA, United States, 2Department of Medicine, Hem-Onc Division, UPCL, University of Pittsburgh, United States, 3Department of Human and Molecular Genetics, Virginia Commonwealth University, Richmond, VA, United States, 4Department of Medicine, Hem-Onc Division, Indiana University, Indianapolis, IN, United States, 5Department of Medicine, Laval University, CHU de Quebec Research Center and Department of Rheumatology, CHU de Quebec, Quebec City, Canada, 6Veterans Administration Medical Center, Indianapolis, IN, United States, 7Department of Biological Sciences, Duquesne University, Pittsburgh, PA, United States, 8Regional Bone Center, Helen Hayes Hospital, Route 9W, West Havenstraw, NY 10993, United States, 9Department of Pathology, College of Physician and Surgeons, Columbia University, New York, NY 10993, United States, 10The Center for Craniofacial Regeneration, University of Pittsburgh, Pittsburgh, PA, United States
**Disclosures**: Quanhong Sun, None
MON-0050 Anatomic distribution of single and multiple parathyroid adenomas in primary hyperparathyroidism
Gaia Tabacco*, Randy Yeh, Donovan Tay Yu-Kwang, Laurent Derclé, Jennifer Kuo, Leonardo Bandeira, Catherine Mcmanus, James Lee, John Bilezikian. 1Department of Medicine, Division of Endocrinology, College of Physicians & Surgeons, Columbia University, United States, 2Department of Radiology Columbia University, New York, United States, 3Department of Surgery GI/Endo, Columbia University, United States, 4Columbia University, United States
Disclosures: Gaia Tabacco, None

MON-0051 Estrogen Decreases Bone Turnover and Increases Bone Mineral Density in Transwomen: a Prospective Study
Mariska Vlot*, Chantal Wiepjes, Annemieke Heijboer, Martin Den Heijer. VU University Medical Center, Netherlands
Disclosures: Mariska Vlot, None

MON-0052 WITHTDRAWN

BIOMECHANICS AND BONE QUALITY

MON-0091 Regional Analysis of Cortical Bone Using Second-generation High-resolution Peripheral Quantitative Computed Tomography (HR-pQCT)
Sanchita Agarwal*, Fernando R Rosete, Ivelisse Colon, Mariana Bucovsky, Kyle K Nishiyaama, Elizabeth Shane. Division of Endocrinology, Department of Medicine, Columbia University, United States
Disclosures: Sanchita Agarwal, None

MON-0092 Microgravity exposure diminishes trabecular microarchitecture and cortical bone structure differently in growing and skeletally mature mice
Jennifer C. Coulombe*, Eric W. Livingston, Alicia M. Ortega, Ted A. Bateman, Eric A. Vance, Louis S. Stodieck, Virginia L. Ferguson. 1Department of Mechanical Engineering, University of Colorado, Boulder CO, United States, 2Department of Biomedical Engineering, University of North Carolina, Chapel Hill, NC, United States, 3Department of Applied Mathematics, University of Colorado, Boulder CO, United States, 4BioServe Space Technologies, University of Colorado, Boulder, CO, United States
Disclosures: Jennifer C. Coulombe, None

MON-0093 Effect of High Fat Diet on the Fracture Resistance of Bone in Mice with and without Type 2 Diabetes
Amy Creecy*, Sasidhar Uppuganti, Alyssa Merkel, Deanna Bradley, Daniel Fernandes, Jeffry Nyman. 1Vanderbilt University, United States, 2Vanderbilt University Medical Center, United States
Disclosures: Amy Creecy, None

MON-0094 Finite Element Modelling based Prediction of Vertebral Bone Strength using Statistical Iterative Reconstruction (SIR)
Anitha D.*, Kai Mei, Felix Kopp, Peter Noel, Thomas Baum, Subburaj Karupppasamy. 1Singapore University of Technology and Design, Singapore, 2Technical University of Munich, Germany, 3Technical University of Munich, Dominican Republic
Disclosures: Anitha D., None

MON-0095 Supervised Machine Learning Techniques for Hip Fracture Prediction from DXA-based 3D Patient-Specific Femur Model Fall Simulations.
Sara Guardiola*, Carlos Ruiz, Jérôme Noailly, Jordi Moretó, Silvana Di Gregorio, Ludovic Humbert, Luis Del Rio. 1CETIR Fundació Privada, Spain, 2BCN MedTech, Universitat Pompeu Fabra, Spain, 3CETIR Medical Centre, Spain, 4Galgo Medical, Spain
Disclosures: Sara Guardiola, None
MON-0096  Load Sharing of Cancellous and Cortical Bone in Rat Vertebrae Under Uniaxial Compression Determined Using Finite Element Analysis (FEA)
Madeleine G. Driver*1, W. Brent Lievers2, A. Keith Pilkey3. 1Department of Mechanical and Materials Engineering, Queen’s University, Canada, 2Bharti School of Engineering, Laurentian University, Canada
Disclosures: Madeleine G. Driver, None

MON-0097  Voluntary Jumping Exercise in Rats Produces a Greater Anabolic Response in the Forelimbs than the Hindlimbs
Jon Elizondo*1, Corinne Metzger2, Scott Lenfest1, Jessica Brezichia, Amelia Looper1, Nicholas Igbinedie2, Peter Phan2, Susan Bloomfield2, Harry Hogan1. 1Department of Mechanical Engineering, Texas A&M University, United States, 2Department of Health & Kinesiology, Texas A&M University, United States, 3College of Veterinary Medicine, Texas A&M University, United States, 4Departments of Mechanical Engineering and Biomedical Engineering, Texas A&M University, United States
Disclosures: Jon Elizondo, None

MON-0098  Alterations in Gut Microbiome Secreted Vitamin K are Associated with Impaired Bone Quality
Christopher J. Hernandez*1, Jason D. Guss1, Erik A. Taylor1, C. Hazel Higgins1, Eve Donnelly1, M. Kyla Shea2, Sarah L. Booth3, Rodrigo C. Bicarlo1. 1Cornell University, United States, 2Jean Mayer USDA Human Nutrition Research Center on Aging, Tufts University, United States, 3Jean Mayer USDA Health Nutrition Research Center on Aging, Tufts University, United States
Disclosures: Christopher J. Hernandez, None

MON-0099  Strength training performed prior to fracture improves oxidative profile and fracture healing in aging female rats
Melise Jacon Peres Ueno*, Fernanda Fernandes, Amanda Pinatti, Camila Stringhetta Garcia, Angela Cristina Nicola, Mário Jefferson Quirino Louzada, Paulo Cesar Ciurlini, Rita Cásia Menegatti Dornelles. UNESP, Brazil
Disclosures: Melise Jacon Peres Ueno, None

MON-100  Composition of Hyperelastic Bone Composite Scaffolds Affects De Novo Bone formation
Soyeon Jeong*1, Adam Jakus2-3, Chawon Yun1, Ryan J. Lubbe1, Adam Driscoll1, Meraaj S. Haleem1, Kevin Y. Chang1, Wellington K. Hsu1, Ramille Shah2, Stuart R. Stock4, Erin L. Hsu1. 1Northwestern University Department of Orthopaedic Surgery, United States, 2Northwestern University Department of Materials Science and Engineering, United States, 3Simpson Querrey Institute for BioNanotechnology, United States, 4Northwestern University Department of Cell and Molecular Biology, United States
Disclosures: Soyeon Jeong, None

MON-101  Panx3 is important for tibial morphogenesis during skeletal development and bone homeostasis
Xian Jin*1, Xiangguo Che1, Na-Rae Park1, Yu-Min Hong1, Clara Park2, Yu-Ra Choi1, Je-Yong Choi1. 1Department of Biochemistry and Cell Biology, Cell and Matrix Research Institute, BK21 Plus KNU Biomedical Convergence Program, Korea Mouse Phenotyping Center, School of Medicine, Kyungpook National University, Daegu, South Korea., 2Division of Food and Nutrition Chonnam National University 77 Yongbong-ro, Buk-gu, Gwangju, Korea, Republic of Korea
Disclosures: Xian Jin, None

MON-102  Guided Bone Regeneration with rhBMP-2 Improves Bone Quality Surrounding Dental Implants
Trenton Johnson*1, Jung-Suk Han2, Toru Deguchi1, Frank Beck1, Do-Gyoon Kim1. 1Ohio State University, United States, 2Seoul National University, Republic of Korea
Disclosures: Trenton Johnson, None
MON-0103  ASBMR 2018 Fund for Research and Education Young Investigator Award in Honor of Adele L. Boskey
Morphology of bird bone during egg-laying
Leeann Louis*. University of California, Berkeley, United States
Disclosures: Leeann Louis, None

MON-0104  Influence of Age, Sex, and Anatomical Location on Human Cortical Bone Microarchitecture: A Synchrotron Radiation Micro-CT Study
Lindsay Loundagin¹, David Cooper², W. Brent Edwards¹. ¹Human Performance Laboratory, Faculty of Kinesiology, University of Calgary, Canada, ²Department of Anatomy and Cell Biology, College of Medicine, University of Saskatchewan, Canada
Disclosures: Lindsay Loundagin, None

MON-0105  Zoledronate and Raloxifene Combination Therapy Enhances Architecture and Mechanical Properties
Katherine Powell¹, Joseph Wallace¹, Alexis Pulliam¹, Alycia Berman¹, Matt Allen¹. ¹IUPUI Department of Biomedical Engineering, United States, ²Purdue University Weldon School of Biomedical Engineering, United States, ³IU School of Medicine Department of Anatomy and Cell Biology, United States
Disclosures: Katherine Powell, None

MON-0106  Investigating pharmaceutical-induced alterations to matrix maturation using the lactation during low calcium model.
Ryan Ross*, Matthew Meagher, Rick Sumner. Rush University Medical Center, United States
Disclosures: Ryan Ross, None

MON-0107  Local and Global Microarchitecture Control Different Features of Bone Biomechanics
Jean-Paul Roux¹, Stephanie Boutroy¹, Mary L Bouxsein², Roland Chapurlat¹, Julien Wegrzyn¹,². ¹INSERM UMR 1033, Université de Lyon, France, ²Center for Advanced Orthopedics Studies, Harvard Medical School - Beth Israel Deaconess Medical Center, United States, ³Department of Orthopedic Surgery, Pavillon T, Hôpital Edouard Herriot, France
Disclosures: Jean-Paul Roux, None

MON-0108  BMP-2 Revealed Enhanced Healing in Fractured Mouse Tibia using Micro-CT and Torsion Test
Sotcheadt Sim¹, Theresa Farhat², Martin Pellicelli², Martin Garon¹, Eric Quenneville¹, René St-Arnaud². ¹Biomomentum Inc., Canada, ²Shriners Hospital for Children, Canada
Disclosures: Sotcheadt Sim, Biomomentum Inc., Grant/Research Support

MON-0109  Effects of Carboxymethyl-lysine on Bone Matrix
Deepak Vashishth*, Grazyna Sroga, Ondrej Nikel. RPI, United States
Disclosures: Deepak Vashishth, None

BONE ACQUISITION AND PEDIATRIC BONE DISORDERS

MON-0127  Comparison of Zoledronate and Pamidronate in Children with Skeletal Disorders: Short Term Safety Experience from a Single Institution
Alison M. Boyce¹,², Andrea Estrada²,³, Marianne Floor², Mirini Kim², Lindsay Weigley², Elizabeth Carlson¹, Christina Dollar³, Austin Gillies², Mary Scott Roberts², Rachel L. Gafni¹,², Laura L. Tosī. ¹Skeletal Disorders and Mineral Homeostasis Section, National Institute of Dental and Craniofacial Research, NIH, United States, ²Bone Health Program, Division of Orthopaedics and Sports Medicine, Children’s National Health System, United States, ³Division of Endocrinology and Diabetes, Children’s National Health System, United States, ⁴Children’s National Health System, United States
Disclosures: Alison M. Boyce, None

MON-0128  Diagnosis of recurrent fracture in a pediatric cohort
Melissa Fiscaletti*, Craig Peter Coorey², Julie Briody², Andrew Biggin², David Little², Aaron Schindeler¹, Craig Munns¹. ¹Children’s hospital at Westmead, Australia, ²University of Sydney, Australia
Disclosures: Melissa Fiscaletti, None
MON-0129 Three Patient Kindred with Novel Phenotype of Osteogenesis Imperfecta due to a Mutation in the COL1A1 gene
Nidhi Gupta*, Seth Gregory2, David Deyle3, Peter Tebben1. 1Vanderbilt University Medical Center, United States, 2Mayo Clinic Health System, United States, 3Mayo Clinic, United States
Disclosures: Nidhi Gupta, None

MON-0130 Calcemia and inflammatory markers in neonatal sepsis
Stepan Kutilek*, Martina Vracovska1, Kamila Pecenkova1, Zlata Fejfarkova2, Richard Pikner2, Hana Brozikova1. 1Dept. of Pediatrics, Klatovy Hospital, Czech Republic, 2Dept. of Clinical Biochemistry; Klatovy Hospital, Czech Republic
Disclosures: Stepan Kutilek, None

MON-0131 The effect of growth hormone treatment in a child with a novel TRPS1 gene mutation
Yael Levy-Shraga*, Shlomo Wientroub2, Leonid Zeitlin2. 1Pediatric Endocrinology Unit, The Edmond and Lily Safra Children’s Hospital, Chaim Sheba Medical Center, Tel-Hashomer, Israel, 2Pediatric Orthopaedics, Dana Children’s Hospital, Israel
Disclosures: Yael Levy-Shraga, None

MON-0132 Prevalence of Low BMD in Pediatric Cancer Survivors When Z Scores are Height Adjusted
Chanthu Pillai*1, Avni Shah1, Anita Ying2, Steven Waguespack2. 1McGovern Medical School, United States, 2The University of Texas MD Anderson Cancer Center, United States
Disclosures: Chanthu Pillai, None

MON-0133 Vitamin D level of toddlers with “physiologic” genu varum is lower than that of control toddlers: 1:2 case-control study
Yuko Sakamoto*, Satoshi Nakano2, Mitsuyoshi Suzuki2, Akifumi Tokita†, Ayaka Kaneko2, Eri Maeda-Murohara4, Masashi Nagao2, Toshiaki Shimizu2, Kazuo Kaneko4, Masahiko Nozawa2, Muneaki Ishijima4. 1Department of Orthopaedics, Juntendo University Nerima Hospital, Japan, 2Department of Pediatrics, Juntendo University Graduate School of Medicine, Japan, 3Clinic Bambini, Japan, 4Department of Medicine for Orthopaedics and Motor Organ, Juntendo University Graduate School of Medicine, Japan
Disclosures: Yuko Sakamoto, None

MON-0134 Measured Versus Calculated Free serum 25(OH)-Vitamin D Level: which one is better?
Judith Vansickle*, Tarak Srivastava, Uttam Garg, Uri Alon. Division of Pediatric Nephrology, Children’s Mercy Hospital, University of Missouri Kansas City, United States
Disclosures: Judith Vansickle, None

BONE INTERACTIONS WITH MUSCLE AND OTHER TISSUES
MON-0158 Critical sex- and age-dependent role of osteocytic pannexin1 on bone and muscle mass and strength
Alexandra Aguilar-Perez*, Lilian Plotkin1, Hannah Davis1, Emily Atkinson1, Matthew Allen1, Leland Gomez2, Padmini Deosthale1, Carmen Herrera3, Julian Dilley1, Angela Bruzzaniti2, Teresa Zimmers1, Ziyue Liu2, Rafael Pacheco3, Joseph Rupert1. 1Indiana University School of Medicine, United States, 2Indiana University, United States, 3Indiana University School of Dentistry, United States, 4Brazil, Brazil
Disclosures: Alexandra Aguilar-Perez, None

MON-0159 Soft-tough cartilage scaffold with a patterned nanofibrous frame
Haider Ali*, Kyung Won Kim, Moon Kyu Kwak, Young Hun Jeong, Gyu Man Kim, Cheol Woo Park. Kyungpook National University, Republic of Korea
Disclosures: Haider Ali, None
The osteocyte apoptosis inhibitor IG9402 prevents bone loss of the mouse mandibular condyle during masseter muscle atrophy
Sonja Buvinic*1, Julián Balanta-Melo2, Viviana Toro-Ibacache2, María Angélica Torres-Quintana2, Kornelius Kupczik3, Lilian Plotkin4. 1Institute for Research in Dental Sciences, Faculty of Dentistry; CEMC, Faculty of Medicine; Universidad de Chile, Chile, 2Institute for Research in Dental Sciences, Faculty of Dentistry, Universidad de Chile, Chile; School of Dentistry, Universidad del Valle, Colombia; Max Planck Weizmann Center, Max Planck Institute for Evolutionary Anthropology, Germany, Chile, 3Institute for Research in Dental Sciences, Center for Quantitative Analysis in Dental Anthropology, Faculty of Dentistry, Universidad de Chile, Chile; Department of Human Evolution, Max Planck Institute for Evolutionary Anthropology, Germany, Chile, 4Department of Pathology and Oral Medicine, Faculty of Dentistry, Universidad de Chile, Chile, 5Max Planck Weizmann Center, Max Planck Institute for Evolutionary Anthropology, Germany, 6Department of Anatomy and Cell Biology, Indiana University School of Medicine, Roudebush Veterans Administration Medical Center, and Indiana Center for Musculoskeletal Health, United States
Disclosures: Sonja Buvinic, None

Gut microbiota manipulation promotes bone formation mediated through regulatory T-Cell differentiation in obese mice
Jyotirmaya Behera*, Suresh C Tyagi, Kimberly E Kelly, Nandan K Mondal, Neetu Tyagi. University of Louisville, United States
Disclosures: Jyotirmaya Behera, None

Elucidation of mechanisms governing the activity of SOXC-inflammatory cytokine molecular axis in synovial fibroblasts
Kyle Jones*, Veronique Lefebvre, Pallavi Bhattacharya. Cleveland Clinic, United States
Disclosures: Kyle Jones, None

CARNITINE PALMITOYL TRANSFERASE-1A VARIANT 2: A NEW METABOLIC TARGET IN OSTEOPOROSIS RELATED SARCOPENIA?
Umberto Tarantino*, Monica Celi, Chiara Greggi, Elena Gasbarra, Sabina Pucci. university of rome tor vergata, Italy
Disclosures: Umberto Tarantino, None

Fibroblast Growth Factor 9 (FGF9) Acts as an Inhibitory Osteokine in Mouse C2C12 and Human Skeletal Muscle Cells
Jian Huang*, Kun Wang1, Lora Shiflett2, Leticia Brotto1, Lynda Bonewald3, Sarah Dallas4, Marco Brotto5. 1Bone-Muscle Collaborative Sciences, College of Nursing and Health Innovation, University of Texas at Arlington, United States, 2Department of Oral and Craniofacial Sciences, School of Dentistry, University of Missouri-Kansas City, United States, 3Department of Anatomy, Cell Biology and Orthopedics, Indiana Center for Musculoskeletal Health, School of Medicine, Indiana University, United States
Disclosures: Jian Huang, None

Muscle-Derived IGF-1 Affects Bone Elongation in a Gender-Specific Manner
Gisele Martins*, Vitor Torres1, Bianca Neofiti-Papi1, Joao Silvestre1, William Silva1, Antonio Musarò2, Anselmo Moriscot3, Cecilia Gouveia4. 1Institute of Biomedical Sciences, University of São Paulo, Brazil, 2Sapienza Universita di Roma, Italy
Disclosures: Gisele Martins, None

Mechanisms Responsible for Pamidronate Rescue of Post-Burn Muscle Loss in Children
Fabrizio Pin*, David Herndon2, Andrea Bonetto1, Celeste Finnerty2, Christopher Nieten2, Lynda Bonewald1, Gordon Klein2. 1Indiana University Medical Center, United States, 2University of Texas Medical Branch, Shriners Burns Hospital, United States
Disclosures: Fabrizio Pin, None
MON-0167 Electrical Stimulation of Hindlimb Skeletal Muscle has a Beneficial Effect on Sublesional Muscle and Bone in a Rat Model of Spinal Cord Injury. Wei Zhao*, Yuanzhen Peng, Yizhong Hu, Edward X. Guo, William A Bauman, William A Bauman, William A Bauman, Weiping Qin. 1Icahn School of Medicine at Mount Sinai, United States, 2James J. Peters VA Medical Center, United States, 3Columbia University, United States

Disclosures: Wei Zhao, None

MON-0168 Osteocytic Connexin Channels Regulate Skeletal Muscle Structure and Function Guo Bin Li*, Lan Zhang, Peng Shang, Jean X. Jiang, Huiyun Xu. 1Key Laboratory for Space Bioscience and Biotechnology, School of Life Sciences, Northwestern Polytechnical University, Xi’an, Shaanxi, China, 2Key Laboratory for Space Bioscience and Biotechnology, Research & Development Institute in Shenzhen, Northwestern Polytechnical University, Gaoxin Fourth South Road 19, 518057, Shenzhen, Guangdong, China, 3Department of Biochemistry and Structural Biology, University of Texas Health Science Center, San Antonio, TX, United States

Disclosures: Guo Bin Li, None

BONE MARROW MICROENVIRONMENT AND NICHEs

MON-0181 Effects of Sclerostin Depletion on Hematopoietic Stem Cells in the Bone Marrow and Spleen Cristine Donham*, Jennifer Manilay, Gabriela Loots, Aris Edonomides. 1University of California Merced, United States, 2University of California Merced, Lawrence Livermore National Laboratory, United States, 3Regeneron Pharmaceuticals, United States

Disclosures: Cristine Donham, None

MON-0182 MicroRNA-17-5p Facilitates Bone Remodeling in Periapical Periodontitis Daimo Guo*, Xinyu He, Ruoshui Xu, Xin Zhou, Liwei Zheng, Xuedong Zhou. State Key Laboratory of Oral Diseases;West China School of Stomatology, Sichuan University, China

Disclosures: Daimo Guo, None

MON-0183 SINGLE-CELL RNA SEQUENCING ANALYSIS OF FRESHLY-ISOLATED HUMAN SKELETAL STEM/PROGENITOR CELLS FROM HUMAN BONE MARROW Randall Merling*, Joseph Featherall, Danielle Bonfim, Natasha Cherman, Sergei Kuznetsov, Pamela Robey. Skeletal Biology Section, National Institute of Dental and Craniofacial Research, National Institutes of Health, United States

Disclosures: Randall Merling, None

MON-0184 Novel function of BMP-2 in inhibiting bone formation in marrow environment Ha Nguyen Thi*, Mitsuaki Ono, Yasutaka Oida, Emilio Satoshi Hara, Taishi Komori, Kentaro Akiyama, Ha Nguyen Thi Thu, Hai Thanh Pham, Kyawthu Aung, Toshitaka Ohashi, Takuo Kuboki. 1Department of Oral Rehabilitation and Regenerative Medicine, Okayama University Graduate School of Medicine, Dentistry and Pharmaceutical Sciences, Japan, 2Department of Molecular Biology and Biochemistry, Okayama University Graduate School of Medicine, Dentistry and Pharmaceutical Sciences, Japan, 3Department of Biomaterials, Okayama University Graduate School of Medicine, Dentistry and Pharmaceutical Sciences, Japan

Disclosures: Ha Nguyen Thi, None

MON-0185 The Effects of Interleukin-1 Receptor Antagonism on Endothelium-Dependent and Endothelium-Independent Vasodilation of Femoral Principal Nutrient Artery and Femoral Bone Parameters in Young Male Fischer-344 Rats Sunggi Noh*, Seungyong Lee, David Lee, Rhonda Prisby. University of Texas at Arlington, United States

Disclosures: Sunggi Noh, None

MON-0186 Mitochondrial Function in Mesenchymal Stem Cells and New Bone Formation During Spinal Fusion Laura Shum*, Avionna Baldwin, Addisu Mesfin, Roman Eliseev. University of Rochester, United States

Disclosures: Laura Shum, None
BONE TUMORS AND METASTASIS

MON-0213 Aplidin (Plitidepsin) is a Novel Anti-Myeloma Drug with Potent Anti-Resorptive Activity Mediated by Direct Effects on Osteoclasts.
Jesus Delgado-Calle*1, Noriyoshi Kurihara1, Jessica H. Nelson1, Emily G. Atkinson2, Carlos Galmarini3, G. David Roodman1, Teresita Bellido2. 1Indiana University School of Medicine, Dept. of Medicine, Hematology/Oncology, United States, 2Indiana University School of Medicine, Dept. of Anatomy and Cell Biology, United States, 3PharmaMar S.A., Spain
Disclosures: Jesus Delgado-Calle, PharmaMar, Grant/Research Support

MON-0214 Automatic Bone Measurement from X-Ray Computed Tomography and New Snake Osteosarcoma
Alexander Hall*. Thermo Fisher Scientific, United States
Disclosures: Alexander Hall, None

MON-0215 The effects of castration on prostate cancer tumor growth in bone
Tiina E Kähkönen*1, Mari I Suominen1, Jenni Mäki-Jouppila1, Jussi M Halleen1, Jenni Bernoulli1, Pascale Lejeune2. 1Pharmatest Services, Finland, 2Bayer AG, Germany
Disclosures: Tiina E Kähkönen, None

MON-0216 α4β1 Integrin and vascular cell adhesion molecule (VCAM) 1 interactions regulate myeloid-derived suppressor cells (MDSC) mobilization from the bone metastatic tumor hosts
Kyung Jin Lee*1, Eun Jeong Lee1, Bo Yeon Seo1, Sun Wook Cho2, Serk In Park1. 1Korea University College of Medicine, Republic of Korea, 2Seoul National University Hospital, Republic of Korea
Disclosures: Kyung Jin Lee, None

MON-0217 WITHDRAWN

MON-0218 Microfluidic Platform for Investigation of Mechanoregulation of Breast Cancer Bone Metastasis
Xueting Mei*1, Kevin Middleton2, Yu-Heng Ma2, Liangcheng Xu2, Noosheen Walji1, Edmond Young1,2. 1Department of Mechanical and Industrial Engineering, University of Toronto, Canada, 2Institute of Biomaterials and Biomedical Engineering, University of Toronto, Canada
Disclosures: Xueting Mei, None

MON-0219 IL-6 family cytokines and receptors regulate breast cancer bone colonization and tumor progression
Tolu Omokehinde*1, Miranda Sowder1, Rachelle Johnson2. 1Vanderbilt Center for Bone Biology, Vanderbilt University Medical Center, United States, 2Vanderbilt Center for Bone Biology, Department of Medicine, Division of Clinical Pharmacology, Vanderbilt University Medical Center, United States
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MON-0220 Extracellular ATP Reduces Osteosarcoma Single and Collective Migration Through the P2X7 Receptor
Daniel Shropshire*, Manuel Riquelme, Jean Jiang. UT Health Science Center San Antonio, United States
Disclosures: Daniel Shropshire, None

MON-0221 A role for immunoglobulins in the osteolytic bone disease of multiple myeloma
Marita Westhrin*1, Vlado Kovic1, Albert Bondt2, Stephanie Holst2, Zeijan Zhang3, Tobias Slordahl4, Anders Sundan1, Anders Waage1, Manfred Wuhrer2, Therese Standal1. 1Department of Clinical and Molecular Medicine/Centre of Molecular Inflammation Research, Norwegian University of Science and Technology (NTNU), Norway, 2Leiden University Medical Center, Leiden University, Netherlands, 3Key Laboratory of Glycoconjugate Research Ministry of Public Health, School of Basic Medical Sciences, Fudan University, China, 4Department of Clinical and Molecular Medicine, Norwegian University of Science and Technology (NTNU), Norway
Disclosures: Marita Westhrin, None
MON-0222  HIF-2α is Sufficient to Cause Aggressive Fibroproliferative Lesions in the Developing Limb  
Zachary Tata*, Christophe Merceron, Mohd Parvez Khan, Ernestina Schipani. Department of Orthopedic Surgery, School of Medicine, University of Michigan, United States  
Disclosures: Zachary Tata, None

MON-0223  Opposite effects of TRAIL on the Sp1-c-FLIP survival pathway in myeloma cells and osteoclasts.  
Department of Orthodontics and Dentofacial Orthopedics, Institute of Biomedical Sciences, Tokushima University Graduate School, Japan, 2Department of Tissue Regeneration, Institute of Biomedical Sciences, Tokushima University Graduate School, Japan, 3Department of Hematology, Endocrinology and Metabolism, Institute of Biomedical Sciences, Tokushima University Graduate School, Japan, 4Division of Transfusion Medicine and Cell Therapy, Tokushima University Hospital, Japan, 5Fujii Memorial Institute of Medical Sciences, Tokushima University, Japan  
Disclosures: Hirofumi Tenshin, None

MON-0224  Disruption of a progressive vicious cycle between myeloma tumor growth and bone destruction by TAK1 inhibition  
Tokushima University, Japan  
Disclosures: Jumpei Teramachi, None

MON-0225  In Situ Imaging of Collagen Degradation May Assess Myeloma Bone Disease Activity  
University of Arkansas for Medical Sciences, United States, 2University of Utah Department of Bioengineering, United States  
Disclosures: Donghoon Yoon, None

MON-0246  Postnatal Chondrocyte-Specific RUNX2 Overexpression Results in Accelerated Development of Osteoarthritis Following Traumatic Knee Joint Injury  
Sarah Catheline*, Elizabeth Botto, Christopher Dean, Martin Chang, Jennifer Jonason. University of Rochester, United States  
Disclosures: Sarah Catheline, None

MON-0247  Fibroblast Growth Factor 1 (FGF-1) impinges on Chondrocyte Degradation in OA through Matrix Metalloproteinase 13 (MMP-13) and Connective Tissue Growth Factor (CCN2)  
Abdellatif Elseoudi*, Tarek Abd El Kader, Takashi Nishida, Eriko Aoyama, Takanori Eguchi, Masaharu Takigawa, Satoshi Kubota.  
Biochemistry and Molecular Dentistry, Okayama University Graduate School of Medicine, Dentistry and Pharmaceutical Sciences., Japan, 2Assistant professor, Health and Social Sciences Cluster Singapore Institute of Technology (SIT), Singapore, 3Advanced Research Center for Oral and Craniofacial Sciences, Okayama University Graduate School of Medicine, Dentistry and Pharmaceutical Sciences., Japan, 4Dental Pharmacology, Okayama University Graduate School of Medicine, Dentistry and Pharmaceutical Sciences., Japan  
Disclosures: Abdellatif Elseoudi, None

MON-0248  Role of II-36α signaling in human chondrocyte homeostasis  
Tieshi Li*, Xin Jin, Arnavaz Hakimiyan, Susan Chubinskaya, Jie Jiang, Lai Wang, Alessandra Esposito, Joseph Temple, Anna Spagnoli. Rush University Medical Center, United States  
Disclosures: Tieshi Li, None
MON-0249  Targeted Deletion of Claudin (Cldn)-11 Gene Promotes Chondrocyte Differentiation and Reduces Articular Cartilage Thickness in Mice  
Richard Lindsey*1,2, Weirong Xing1,2, Catrina Godwin1, Sheila Pourteymoor1, Subburaman Mohan1,2. 1Musculoskeletal Disease Center, VA Loma Linda Healthcare System, United States, 2Department of Medicine, Loma Linda University, United States  
Disclosures: Richard Lindsey, None

MON-0250  SMPD3 Deficiency in Chondrocytes and Osteoblasts Affects Fracture Healing  
Garthiga Manickam*1, Pierre Moffatt2,3, Monzur Murshed1,4. 1Faculty of Dentistry, McGill University, Montreal, Quebec, Canada, 2Shriners Hospital for Children, McGill University, Montreal, Quebec, Canada, 3Department of Human Genetics, McGill University, Montreal, Quebec, Canada, 4Department of Medicine, McGill University, Montreal, Quebec, Canada  
Disclosures: Garthiga Manickam, None

MON-0251 PTHrP+ Chondrocytes in the Resting Zone Maintain the Growth Plate Integrity  
Koji Mizuhashi*, Noriaki Ono. University of Michigan School of Dentistry, United States  
Disclosures: Koji Mizuhashi, None

MON-0252  Small molecule G-protein βγ subunit inhibition potentiates parathyroid hormone chondroprotection in osteoarthritis  
William Pinamont*, Fadia Kamal, Elijah Carlson. Penn State College of Medicine, United States  
Disclosures: William Pinamont, None

MON-0253  Periosteal Cells Derived from Long Bone are Unique from those Derived from Calvaria  
Reut Shainer*1, Vardit Kram1, Tina M. Kilts1, Carl G Simon Jr2, Marian F. Young1. 1Molecular Biology of Bones and Teeth Section, NIDCR, NIH, United States, 2Biosystems and Biomaterials Division, NIST, United States  
Disclosures: Reut Shainer, None

MON-0254  Role of Glycolysis in PHD2/HIF-Iα-Mediated Chondrocyte Differentiation  
Aruni Wilsonsanthoshkumar*, Sheila Pourteymoor1, Subburaman Mohan2. 1VA Loma Linda Healthcare System, United States, 2VA Loma Linda Healthcare System, Loma Linda University, United States  
Disclosures: Aruni Wilsonsanthoshkumar, None

ENERGY METABOLISM, BONE, MUSCLE AND FAT

MON-0282  The Age-Dependent Decrease of Insulin Sensitivity in Mice is Unaffected by the Deletion of PPARγ in Mesenchymal Lineage Cells of the Appendicular and Craniofacial Skeleton and of Subcutaneous Fat  
Elena Ambrogini*, Michela Palmieri, Stavros C Manolagas, Robert L Jilka, Maria Almeida. Center for Osteoporosis and Metabolic Bone Diseases, University of Arkansas for Medical Sciences and the Central Arkansas Veterans Healthcare System, United States  
Disclosures: Elena Ambrogini, None

MON-0283  A Greater Proportion of the Variance in Body Fat and Bone Mineral Content is accounted for by Serum Estradiol than Follicle Stimulating Hormone (FSH), and Estradiol not FSH Contributed to the Variance in Cortical and Trabecular Microarchitecture  
Camilla Andreassen*, Ann Kristin Hansen1,2, Ken Sikaris3, Clifford J Rosen4, Ashild Bjørnerem1,5. 1Department of Clinical Medicine, UiT The Arctic University of Norway, Tromsø, Norway, 2Department of Orthopaedic Surgery, University Hospital of North Norway, Tromsø, Norway, 3Melbourne Pathology, Melbourne, Australia, 4Maine Medical Center Research Institute, Scarborough, Maine 04074, United States, 5Department of Obstetrics and Gynecology, University Hospital of North Norway, Tromsø, Norway  
Disclosures: Camilla Andreassen, None

MON-0284  The consequences of postnatal androgenization in bone markers, micro and macroarchitecture in a rodent model of polycystic ovary syndrome  
Fabio Comim*, Lady Serrano Mujica, Alfredo Antoniazzi, Paulo Gonçalves, Melissa Premaor. Federal University of Santa Maria, Brazil  
Disclosures: Fabio Comim, None
MON-0285  Exercise increases UCP1 expression but decreases trabecular bone acquisition in mice during cold exposure and at thermoneutrality
Amy Robbins*, Christina Tom, Rebecca Tutino, Miranda Cosman, Taylor Spencer, Cleo Moursi, Rachel Hurwitz, Maureen Devlin. University of Michigan, United States
Disclosures: Amy Robbins, None

MON-0286  Estrogen deficiency: the only cause behind senile osteoporosis?
Deeksha Malhan*, Sabine Stoetzel1, Diah Eldin S Daghma1, Fathi Hassan1, Stefanie Kern1, Markus Rupp2, Christian Heiss2, Thaïf El Khassawna1. 1Institute for Experimental Trauma Surgery, Faculty of Medicine, Justus Liebig University of Giessen, Germany, 2Department of Trauma, Hand, and Reconstruktive Surgery, University Hospital of Giessen and Marburg, Germany
Disclosures: Deeksha Malhan, None

MON-0287  Butyrate enhances myogenesis and muscle function through modulation of intracellular calcium and bioactive lipid mediators
Chenglin Mo*, Zhiying Wang1, Xuejun Li2, Jianxun Yi2, Leticia Brotto1, Marco Brotto1, Jingsong Zhou2. 1College of Nursing and Health Innovation, the University of Texas-Arlington, Arlington, TX, United States, 2Department of Physiology, Kansas City University of Medicine and Bioscience, Kansas City, MO, United States
Disclosures: Chenglin Mo, None

MON-0288  Lysosomal Acid Lipase and Its Role in Osteoblast Differentiation
Elizabeth Rendina-Ruedy*, Madalina-Cristina Duta-Mare2, Dagmar Kratky3, Clifford Rosen1. 1Maine Medical Center Research Institute, United States, 2Gerot Lannach Pharma, Medical University of Graz, Austria, 3Gottfried Schatz Research Center for Cell Signaling, Metabolism and Aging Molecular Biology and Biochemistry Medical University of Graz, Austria
Disclosures: Elizabeth Rendina-Ruedy, None

MON-0289  Roles of macrophages and plasminogen activator inhibitor-1 in delayed bone repair induced by diabetic state in female mice
Takeshi Shimoide*, Naoyuki Kawao1, Yukinori Tamura2, Kiyotaka Okada1, Katsumi Okumoto1, Shinji Kurashimo1, Yoshitaka Horiuchi1, Kohei Tatsumi1, Osamu Matsuo1, Hiroshi Kaji1. 1Department of Physiology and Regenerative Medicine, Kindai University Faculty of Medicine., Japan, 2Kobe Gakuin University, Faculty of Nutrition., Japan, 3Life Science Research Institute, Kindai University., Japan
Disclosures: Takeshi Shimoide, None

MON-0290  Inducible Sirt1 Knockout Mice Exhibit Increased Bone Mineral Density, Uphill Sprint Capacity, and Open Field Activity
Ramkumar Thiyagarajan*, Kenneth Seldeen, Merced Leiker, Yonas Redae, Bruce Troen. University at Buffalo and VA Western New York Healthcare System, United States
Disclosures: Ramkumar Thiyagarajan, None

MON-0291  Association Between Changes in Bone Remodeling and Glucose Homeostasis After Biliopancreatic Diversion in Patients with Severe Obesity
Anne-Frederique Turcotte*, Thomas Grenier-Larouche2, Roth-Visal Ung1, David Simonyan1, Anne-Marie Carreau1, André Carpentier2, Fabrice Mac-Way1, Claudia Gagnon1. 1Laval University, Canada, 2Sherbrooke University, Canada, 3CHU de Quebec, Canada
Disclosures: Anne-Frederique Turcotte, None
MON-0292 Effect of Abaloparatide and Teriparatide on marrow adipose tissue in postmenopausal osteoporosis
Annegreet G. Veldhuis-Vlug*, Rob J Van ‘T Hof†, Roland Baron‡, Dennis M. Black§, Clifford J Rosen∥. 1Academic Medical Center Amsterdam and Center for Clinical and Translational Research, Maine Medical Center Research Institute, Netherlands, 2Institute of Ageing & Chronic Disease, University of Liverpool, United Kingdom, 3Department of Oral Medicine, Infection and Immunity, Harvard School of Dental Medicine, Harvard Medical School, United States, 4Department of Epidemiology and Biostatistics, University of California San Francisco, United States, 5Center for Clinical and Translational Research, Maine Medical Center Research Institute, United States
Disclosures: Annegreet G. Veldhuis-Vlug, None

MON-0293 Characterization of Bone Marrow Adiposity with Computed-Tomography (CT) scan in Relation to Mineral and Bone Disorders in Dialysis Patients
Yue Pei Wang*, Cyrille De Halleux, Roth-Visal Ung, Nada Khelifi, Claudia Gagnon, Fabrice Mac-Way. CHU de Québec Research Center, Endocrinology and Nephrology Unit, Faculty and Department of Medicine, Université Laval, Canada
Disclosures: Yue Pei Wang, None

MON-0294 Bone Quality Analyses in Cases with Type 2 Diabetes Mellitus Reflect Patterns of Femoral Cortical Bone Reorganization Along with High Porosity
Eva Maria Wölfel*, Petar Milovanovic†, Katharina Jähn†, Felix N. Schmidt‡, Birgit Wulff‡, Michael Amling†, Klaus Püschel§, Graeme M. Campbell∥, Björn Busse∥. 1Department of Osteology and Biomechanics, University Medical Center Hamburg, Germany, 2Department of Forensic Medicine, University Medical Center Hamburg, Germany, 3Institute of Biomechanics, Hamburg University of Technology, Germany
Disclosures: Eva Maria Wölfel, None

GENETIC MODELS OF MUSCULOSKELETAL DISEASES

MON-0315 Cranial Neural Crest-Targeted Deletion of Cdc73 Results in Embryonic Lethality
Jessica Costa-Guda, Lilia Shen, Wade Berry, Robert Romano, Haeyoung Yi, Justin Bellizzii, Andrew Arnold. 1UConn SDM, United States, 2UConn, United States
Disclosures: Jessica Costa-Guda, None

MON-0316 Enpp1-Fc treatment reduces renal calcifications in Npt2anull mice
Jonathan Fetene*, Daniel Caballero, Xiaofeng Li, Dillon Kavanagh, Demetrios Braddock, Clemens Bergwitz. Yale School of Medicine, United States
Disclosures: Jonathan Fetene, None

MON-0317 Skeletal muscle mitochondrial dysfunction in the osteogenesis imperfecta murine (oim) mouse model of Osteogenesis imperfecta (OI)
Victoria L. Gremminger*, Youngjae Jeong, Rory Cunningham, Grace Meers, R. Scott Rector, Charlotte L. Phillips. 1Department of Biochemistry, University of Missouri, United States, 2Departments of Nutrition and Exercise Physiology and Medicine-GI, University of Missouri, United States, 3Research Service-Harry S Truman Memorial VA Hospital, United States, 4Departments of Biochemistry and Child Health, University of Missouri, United States
Disclosures: Victoria L. Gremminger, None

MON-0318 The 839(C/A) Polymorphism in the ECE1 Isoform b Promoter Associates with Hip Bone Mineral Density in Postmenopausal Women
Karen Hansen*, Michael Johnson, Tonia Carter, Nicholas Keuler, Robert Blank. 1University of Wisconsin-Madison, United States, 2Lucigen, United States, 3Marshfield Clinic, United States, 4Medical College of Wisconsin, United States
Disclosures: Karen Hansen, None
MON-0319  **Understanding the Role of Protein Gamma-Carboxylation in Craniofacial Development**
Jane Hendrickson-Rebizant*, Julia Marulanda Montoya1, Omar Al Rifai2, Genevieve Chiasson1, Mathieu Ferron2, Monzur Murshed1,4. 1Faculty of Dentistry, McGill University, Canada, 2Institut de Recherches Cliniques de Montreal, Canada, 4Faculty of Dentistry and Department of Medicine, McGill University, Canada, 5Shriners Hospital for Children, Canada
Disclosures: Jane Hendrickson-Rebizant, None

MON-0320  **Biomechanical evaluation of enthesopathy in a murine model of X-linked hypophosphatemia**
Jack Luo*,1, Steven Tommasini2, Carolyn Macica1. 1Frank H. Netter, M.D., School of Medicine at Quinnipiac University, United States, 2Yale School of Medicine, United States
Disclosures: Jack Luo, None

MON-0321  **Type 1 diabetes (T1DM) impacts bone phenotype and fracture healing in Akita mice**
Pei Hu*, Jennifer Mckenzie, Evan Buettmann, Nicole Migotsky, Matthew Silva. Washington University in St. Louis, United States
Disclosures: Pei Hu, None

MON-0322  **Generation and Characterization of a Conditional Mouse Model for Atypical Type VI Osteogenesis Imperfecta**
Samantha Robinson*, Frank Rauch, Pierre Moffatt. Shriners Hospitals for Children - Canada, Canada
Disclosures: Samantha Robinson, None

MON-0323  **Sexual Dimorphism in Skeletal Abnormalities in Down Syndrome Mice**
Jared Thomas*,1, Adam Knox1, Randall Roper1, Elizabeth Fisher1, Victor Tybulewicz2, Joseph Wallace1. 1Indiana University-Purdue University Indianapolis, United States, 2UCL Institute of Neurology, United Kingdom, 3The Francis Crick Institute, United Kingdom
Disclosures: Jared Thomas, None

MON-0324  **Knockout and Human Transgenic Mouse Models Reveal a Role for the Cathelicidin Antimicrobial Peptide (Camp/CAMP) Gene in Bone Metabolism**
Yang Zhang*,1, Carmen P. Wong2, Richard L. Gallo2, Amanda R. Gamboa2, Dawn A. Olson2, Malcolm B. Lowry1, Mary L. Fantacone1, Claudia S. Maier*, Jan F. Stevens2, Russell T. Turner2, Urszula T. Iwaniec2, Adrian F. Gombart3. 1School of Biological and Population Health Sciences, Linus Pauling Institute, Oregon State University, United States, 2School of Biological and Population Health Sciences, Oregon State University, United States, 3Department of Dermatology, University of California San Diego, United States, 4Department of Microbiology, Oregon State University, United States, 5Linus Pauling Institute, Oregon State University, United States, 6Department of Chemistry, Oregon State University, United States, 7Linus Pauling Institute, Department of Pharmaceutical Sciences, Oregon State University, United States, 8School of Biological and Population Health Sciences, Linus Pauling Institute, Department of Integrative Biology, College of Science, Oregon State University, United States
Disclosures: Yang Zhang, None

GENOMICS, TRANSCRIPTOMICS, PROTEOMICS AND METABOLOMICS OF MUSCULOSKELETAL DISEASE

MON-0337  **Circulating MicroRNA Expression is Upregulated after 30 Days of Head-Down Bed Rest**
Debra Bemben*,1, Breanne Baker1, Samuel Buchanan1, Carl Ade2. 1University of Oklahoma, United States, 2Kansas State University, United States
Disclosures: Debra Bemben, None
MON-0338 Novel genetic variants of OFD1 gene are associated with a familial form of stress fractures of long bones and a sporadic case of atypical femur fracture associated with bisphosphonate use
Marie-Eve Boisvert*, Jacques P Brown, Rachel Laframboise, Maxime Vallée, Frédéric Fournier, Suzanne N Morin, Edith Gagnon, Arnaud Droit, Laetitia Michou. CHU de Québec-Université Laval Research Centre, Canada, Department of medicine, Université Laval, Canada.

Disclosures: Marie-Eve Boisvert, None

MON-0339 Is serum free DNA methylation a bone biomarker?
Alvaro Del Real*, Carolina Sañudo, Carmen García Ibarbia, Carmen Valero, Mario F. Fraga, Agustin F. Fernandez, Flor M. Perez-Campo, Maria Isabel Perez-Nuñez, Esther Laguna, Jose A. Riancho. Department of Internal Medicine, Hospital Universitario Marqués de Valdecilla-IDIIVAL, University of Cantabria, Spain, Nanomaterials & Nanotechnology Research Center (CINN-CSIC), University of Oviedo, Spain, Cancer Epigenetics Laboratory, Institute of Oncology of Asturias (IUOPA), HUCA, University of Oviedo, Spain, Department of molecular biology, University of Cantabria-IDIIVAL, Santander, Spain.

Disclosures: Alvaro Del Real, None

MON-0340 Search for modifier genes by whole exome sequencing in familial form of Paget’s disease of bone linked to the SQSTM1/P392L mutation
Mariam Dessay*, Maxime Vallée, Frédéric Fournier, Arnaud Droit, Edith Gagnon, Jacques P. Brown, Laetitia Michou. CHU de Québec-Université Laval Research Centre, Quebec, Canada, Department of Medicine, Division of Rheumatology, Université Laval, Quebec, Canada, Department of Rheumatology, CHU de Québec-Université Laval, Quebec, Canada.

Disclosures: Mariam Dessay, None

MON-0341 Associations Between Single Nucleotide Polymorphisms in the Vitamin D Receptor and Vitamin D Binding Protein Genes and Tibia Bone Mineral Content, Density and Strength in Young Adults Entering Initial Military Training
Erin Gaffney-Stomberg*, Laura Lutz, Anna Nakayama, Philip Fremont-Smith, Darrell Ricke, Martha Petrovick, James Mcclung. US Army Research Institute of Environmental Medicine, United States, MIT Lincoln Laboratory, United States.

Disclosures: Erin Gaffney-Stomberg, None

MON-0342 Differential prevalence of CYP2R1 variants across populations reveals pathway selection for vitamin D homeostasis.

Disclosures: Alex Casella, None

HORMONAL REGULATORS

MON-0376 Inhibition of FGF23 signaling corrects LPS-induced hypoferremia through the erythropoiesis-inflammation axis
Rafiou Agoro*, Anna Montagna, Moosa Mohammadi, Despina Sitara. New York University, United States, New York University School of Medicine, United States.

Disclosures: Rafiou Agoro, None

MON-0377 Hypoxia enhances EPO-mediated FGF23 expression in hematopoietic cells
Erica Clinkenbeard*, Maegan Capitano, Megan Noonan, Pu Ní, Mark Hanudel, Kenneth White. Indiana University School of Medicine, United States, David Geffen School of Medicine at UCLA, United States.

Disclosures: Erica Clinkenbeard, None
MON-0378  FGF23 impairs osteocyte maturation by inhibition of Wnt/b-catenin pathway and is associated with bone alterations in early CKD
Juan Miguel Diaz Tocados*, Maria Encarnacion Rodriguez Ortiz', Yolanda Almaden', Julio Manuel Martinez Moreno1, Carmen Herencia Bellido1, Noemi Vergara Segura1, Antonio Casado Diaz1, Catarina Carvalho1, João Miguel Frazão1, Mariano Rodriguez Portillo1, Juan Rafael Muñoz Castañeda1. 1Maimonides Institute for Biomedical Research (IMIBIC), Reina Sofia University Hospital, University of Cordoba, Spain, 2Maimonides Institute for Biomedical Research (IMIBIC), 6Internal Medicine Service, Reina Sofia University Hospital, Spanish Biomedical Research Networking Centre consortium for the area of Physiopathology of Obesity and Nutrition (CIBEROBN), Spain, 3Braga Hospital, Department of Nephrology, Institute of Investigation and Innovation in Health (I3S), National Institute of Biomedical Engineer (INEB), University of Porto, Portugal, 4Department of Nephrology, São João Hospital Center, Institute of Investigation and Innovation in Health (I3S), National Institute of Biomedical Engineer (INEB), University of Porto, Portugal
Disclosures: Juan Miguel Diaz Tocados, None

MON-0379  Estrogen Receptor-a Knockout Affects Femoral Cortical Geometry and Trabecular Microarchitecture, but not Osteocyte Sclerostin Expression, in Aged Male Mice
Rebecca Dirkes*, Nathan Winn1, Thomas Jurrissen1, Dennis Lubahn2, Victoria Vieira-Potter1, Jaume Padilla1, Pamela Hinton1. 1Department of Nutrition and Exercise Physiology, University of Missouri, Columbia MO, United States, 2Department of Biochemistry, University of Missouri, Columbia MO, United States
Disclosures: Rebecca Dirkes, None

MON-0380  Effects of Sodium Glucose Cotransporter 2 Deletion on Bone and Mineral Metabolism
Claire Gerber*, Nicole Valentin David, Susan Quaggin, Aline Martin, Tamara Isakova. Northwestern University, United States
Disclosures: Claire Gerber, None

MON-0381  Estrogens Suppress the Senescence-Accelerated Secretory Phenotype (SASP) in Osteoprogenitors by Restraining NF-κB Activation, but not GATA4 Expression or Transcriptional Activity
Ha-Neui Kim*, Li Han1,2, Srividhya Iyer1, Aaron Warren1,2, Maria Almeida1,2, Stavros Manolagas1,2. 1University of Arkansas for Medical Sciences, United States, 2Central Arkansas Veterans Healthcare System, United States
Disclosures: Ha-Neui Kim, None

MON-0382  Intestinal calcium absorption increases markedly during pregnancy and lactation despite absence of the vitamin D receptor (VDR) or calcitriol
Beth J. Kirby*, Brittany A. Ryan1, K. Berit Sellars1, René St-Arnaud2, Christopher S. Kovač1. 1Memorial University of Newfoundland, Canada, 2Shriner’s Hospital and McGill University, Canada
Disclosures: Beth J. Kirby, None

MON-0383  Regulation of IGF-1- and Mechano-responsive Signaling by the RhoGAP MYO9B
Monica Sun*, Emma Hassell1, Benjamin Scandling2, Beth Lee1. 1The Ohio State University College of Medicine, United States, 2The Ohio State University College of Engineering, United States
Disclosures: Monica Sun, None

MON-0384  Acute Calcitriol-Mediated PTH Suppression Attenuated by High Dietary Phosphate Intervention in Experimental Model of CKD
Lok Hang Lee*, Mandy Turner, Cynthia Pruss, Kim Laverty, Rachel Holden, Michael Adams. Queen’s University Department of Biomedical and Molecular Sciences, Canada
Disclosures: Lok Hang Lee, None
MON-0385  Attenuated parathyroid megalin expression contributes to the pathogenesis in hyperfunctioning parathyroid tumors
Daichi Miyaoaka*1, Yasuo Imanishi1, Masayo Yamagata2, Ikue Kobayashi1, Noriyuki Hayashi1, Masaya Ohara1, Yuki Nagata1, Katsuhito Mori1, Masanori Emoto1, Toshimi Michigami1, Masaaki Inaba1. 1Osaka City University Graduate School of Medicine, Japan, 2Osaka Ohtani University, Japan, 3Osaka Women’s and Children’s Hospital, Japan
Disclosures: Daichi Miyaoaka, None

MON-0386  Directly targeting HIF activity controls FGF23 expression and has implications for translational outcomes
Megan L. Noonan*1, Erica L. Clinkenbeard1, Pu Ni1, Mircea Ivan1, Matthew Prideaux1, Gerald J. Atkins2, William R. Thompson1, Mark R. Hanudel3, Kenneth E. White1. 1Indiana University School of Medicine, United States, 2The University of Adelaide, Australia, 3David Geffen School of Medicine at UCLA, United States
Disclosures: Megan L. Noonan, None

MON-0387  Interference with atrophy signaling prevents GC actions on bone and muscle in vitro and ex vivo.
Amy Y Sato*1, Lilian I Plotkin1, Teresita Bellido2. 1Department of Anatomy & Cell Biology, Indiana University School of Medicine, United States, 2Department of Anatomy & Cell Biology, Indiana University School of Medicine, Roudeshell Veterans Administration Medical Center, United States
Disclosures: Amy Y Sato, None

MON-0388  Tributyltin Increases Trabecular Bone in Female C57BL/6J Mice and Protects Against Ovariectomy-Induced Trabecular Bone Loss
Jennifer Schlezinger*1, Rachel Fried1, Amira Hussein Ali1, James Watt1, Paola Divieti Pajevic2, Elise Morgan3, Louis Gerstenfeld4. 1Boston University School of Public Health, United States, 2Boston University School of Medicine, United States, 3Boston University College of Engineering, United States
Disclosures: Jennifer Schlezinger, None

MON-0389  Dynamics of Vitamin D Metabolism in the Maternal-Fetal Dyad in Response to Vitamin D Supplementation
Inez Schoenmakers*1, Kerry Jones2, Shima Assar2, Stefania D’Angelo1, Ann Prentice2, Nick Bishop3, Stephen Kennedy4, Aris Papageorgiou5, Robert Fraser1, Saurabh Gandhi1, Elisabeth Curtis1, Sarah Crozier1, Rebecca Moon1, Keith Godfrey6, Hazel Inskip3, Elaine Dennison3, Richard Eastell7, Kassim Javaid8, Cyrus Cooper1, Nick Harvey4, The Mavidos Study Group (Arden, Carr, Mughal, Reid, Robinson)1. 1Department of Medicine, University of East Anglia and MRC Elsie Widdowson Laboratory, United Kingdom, 2MRC Elsie Widdowson Laboratory, United Kingdom, 3MRC Lifeourse Epidemiology Unit, University of Southampton, United Kingdom, 4Academic Unit of Child Health, Sheffield Children’s Hospital, University of Sheffield, United Kingdom, 5NIHR Oxford Biomedical Research Centre, University of Oxford, United Kingdom
Disclosures: Inez Schoenmakers, None

MON-0390  IN PGE1 BONE ANABOLIC PREDOMINATES MODELING-BASED FORMATION WITHOUT HYPERCALCEMIA
Francisco Velasquez-Forero*, Mariela Esparza, Pedro Valencia Mayoral. Hospital Infantil de México Federico Gómez, Mexico
Disclosures: Francisco Velasquez-Forero, None

MON-0391  Salt inducible kinases control responses to parathyroid hormone in the renal proximal tubule
Maureen Omeara*1, Han Xie1, Alexandra Clifford1, Jinhua Gray2, Nathanael Gray2, Kei Sakamoto2, Michael Mannstadt1, Marc Wein1. 1MGH Endocrine Unit, United States, 2Dana Farber Cancer Institute, United States
Disclosures: Maureen Omeara, None
MON-0410 Loss of Bone Volume and Bone Strength from Unloading is Mouse Strain-Dependent
Michael Friedman*1, Yue Zhang1, Jennifer Wayne1, Charles Farber2, Henry Donahue1.
1Virginia Commonwealth University, United States, 2University of Virginia, United States
Disclosures: Michael Friedman, None

MON-0411 CLINICALLY RELEVANT DOSES OF VITAMIN A DECREASES THE ANABOLIC BONE RESPONSE TO MECHANICAL LOADING BY INHIBITING BONE FORMATION
Vikte Lionikaite*, Petra Henning, Christina Drevinge, Sara Windahl, Ulf Lerner. Centre for Bone and Arthritis Research, Institute for Medicine, Sahlgrenska Academy at University of Gothenburg, Sweden
Disclosures: Vikte Lionikaite, None

MON-0412 Fluid Shear Stress Affects Morphology and Osteogenic Differentiation of Pre-osteoblasts
Jianfeng Jin*1, Richard T. Jaspers2, Astrid D. Bakker1, Gang Wu1, Johanna F.M. Verstappen1, Mohammad Haroon2, Joannes A.M. Korfage3, Behrouz Zandieh-Doulabi1, Jenneke Klein-Nulend1. 1Dept Oral Cell Biology, Academic Centre for Dentistry Amsterdam (ACTA), University of Amsterdam and Vrije Universiteit Amsterdam, Amsterdam Movement Sciences, Netherlands, 2Laboratory for Myology, Faculty of Behavioral and Movement Sciences, Vrije Universiteit Amsterdam, Amsterdam Movement Sciences, Netherlands, 3Dept Oral Implantology and Prosthetic Dentistry, Academic Centre for Dentistry Amsterdam (ACTA), University of Amsterdam and Vrije Universiteit Amsterdam, Amsterdam Movement Sciences, Netherlands, 4Dept Functional Anatomy, Academic Centre for Dentistry Amsterdam (ACTA), University of Amsterdam and Vrije Universiteit Amsterdam, Amsterdam Movement Sciences, Netherlands
Disclosures: Jianfeng Jin, None

MON-0413 Bone (Re)modeling in Response to Load is Targeted to Mechanically Advantageous Structures and Further Enhanced with PTH Treatment
Samuel Robinson*, Yizhong Hu, X. Edward Guo. Bone Bioengineering Lab, Columbia University, United States
Disclosures: Samuel Robinson, None

MON-0414 Cyclosporin A Enhances Loading Induced Trabecular and Cortical Bone Formation at Senescence
Sundar Srinivasan*, Dewayne Threet, Philip Hubber, Ted Gross, Steven Bain. University of Washington, United States
Disclosures: Sundar Srinivasan, None

MON-0415 Is Chronic Hypergravity Able to Protect the Musculoskeletal System in a Murine Model of Knee Osteoarthritis?
Benoit Dechaumet*, Damien Cleret, Norbert Laroche, Arnaud Vanden-Bossche, Marie-Hélène Lafrage-Proust, Laurence Vico. INSERM, U1059, University of Lyon, UJM Saint-Etienne, France
Disclosures: Benoit Dechaumet, None

MON-0416 The contribution of TRPV4-dependent calcium influx and purinergic calcium oscillations to the regulation of sclerostin during osteocyte mechano-sensing
Katrina Williams*, Derek Jones, Christopher Ward, Joseph Stains. University of Maryland, United States
Disclosures: Katrina Williams, None

MON-0417 Novel in vitro Microfluidic Platforms for Osteocyte Mechanotransduction Studies
Liangcheng Xu*, Lilia Fuller-Thomson2, Lidan You12. 1Institute of Biomaterials and Biomedical Engineering, University of Toronto, Canada, 2Department of Mechanical and Industrial Engineering, University of Toronto, Canada
Disclosures: Liangcheng Xu, None
MON-0418 Mechanical loading regulates Hippo signaling in a three-dimensional osteocyte culture model
Mylène Zarka*1, François Etienne2, Morgane Bourmaud¹, Christophe Helary3, François Rannou4, Eric Hay5, Martine Cohen-Solal1. ¹Inserm UMR1132, Hôpital Lariboisière; Univ Paris Diderot, Sorbonne Paris Cité, Paris France, France, ²Inserm UMR-S1124, Université Paris Descartes, Sorbonne Paris Cité, Paris France, France, ³Sorbonne Universités UPMC Univ Paris 06, CNRS, Collège de France, Laboratoire Chimie de la Matièr Condensée de Paris UMR7574, France
Disclosures: Mylène Zarka, None

MUSCULOSKELETAL AGING

MON-0432 A WINDOW OF OPPORTUNITY: IDENTIFICATION OF MEDICALLY HOSPITALIZED PATIENTS WITH FRAGILITY FRACTURE RISK
Vafa Tabatabaie*, Wanda Horn, Brandon Tauberg, Gabriel Lopez Vega, Mikhail Bekarev, Paul Levin, Sara Merwin. Montefiore Medical Cener, United States
Disclosures: Vafa Tabatabaie, None

MON-0433 Trends towards Decreased Cortical Thickness and Increased Cortical Porosity in a One-Year Pilot Study of Premenopausal BRCA Mutation Carriers Undergoing Prophylactic Salpingo-Oophorectomy
Angela Cheung *1,2, Madeline Dwyer 3, Jeevitha Srijanthan 1, Joan Murphy 3, Amy Finch 4, Joanne Kotsopoulos 5, Marcus Bernardini 2, Michelle Jacobson 2, Gabrielle E.V. Ene 1, Irene Ho 1, Suzanne Cohen 1, Paula Harvey 1, Barry Rosen 1, Steven Narod 1. ¹University Health Network, Canada, ²University of Toronto, Canada, ³Trillium Health Partners, Canada, ⁴Sunnybrook Health Sciences Centre, Canada, ⁵Women’s College Hospital, Canada
Disclosures: Angela Cheung, Clementia, Grant/Research Support, Amgen, Grant/Research Support, Mereo, Grant/Research Support, Amgen, Consultant, Gilead, Consultant

MON-0434 Hyperkyphosis and Self-reported and Objectively Measured Sleep Quality in Older Men
Christopher Kaufmann*1, Jian Shen1, Katie Stone 2, Deborah Kado 1. ¹University of California San Diego, United States, ²California Pacific Medical Center Research Institute, United States
Disclosures: Christopher Kaufmann, None

MON-0435 The Role of Megakaryocytes and Osteomacs in Skeletal Homeostasis and Aging
Kevin Maupin*1, Safa Mohamad 1, Alexandra Aguilar-Perez 2, Artur Plett 2, Hui Lin Chua 1, Paul Childress 1, Marta Alvarez 1, Joydeep Ghosh 1, Irushi Abeysekera 1, Evan Himes 1, Chi Zhang 1, Jung Min Hong 2, Louis Pelus 1, Christie Orschell 1, Angela Bruzzaniti 1, Melissa Kacena 1. ¹Indiana University School of Medicine, United States, ²Indiana University School of Dentistry, United States
Disclosures: Kevin Maupin, None

MON-0436 Comparing CT bone density values of middle-aged daughters with their elderly fall-prone mothers confirms heritability of BMD except in cases of maternal hip fracture
Kenneth Poole*, Monika Kondratowicz, Karen Blesic, Daniel Chappell. University of Cambridge, United Kingdom
Disclosures: Kenneth Poole, None

MON-0437 Increased Cortical Porosity and Reduced Trabecular Density are Not Necessarily Synonymous With Bone Loss and Microstructural Deterioration
Roger Zebaze*1,2, Elizabeth J. Atkinson ³, Yu Peng ¹, Ali Ghasem-Zadeh ¹, Sundee Khosla², Ego Seeman¹², ¹Depts. Medicine and Endocrinology, Austin Health, University of Melbourne, Australia, ²Straxcorp Pty Ltd, Australia, ³Mayo Clinic, United States, ⁴Australian Catholic University, Australia
Disclosures: Roger Zebaze, StrAx Corp, Major Stock Shareholder
MON-0456  Impaired tooth development and mineralization in Slc20a2-deficient mice
Laure Merametdjian*, Céline Gaucher1, Nina Bon1, Sophie Source1, Jérôme Guicheux1, Sarah Beck-Cornier1, Laurent Beck1. 1INSERM UMR 1229, France, 2EA 2496, France
Disclosures: Laure Merametdjian, None

MON-0457  Gestational exposure to nicotine administered by e-cig juice accelerates osteogenesis and bone formation in dams, but suppresses bone growth and development in the pups.
Alyssa Falck*, Marcus Orzabal, Raine Lunde, Shannon Huggins, Alexis Mitchell, Josue Ramirez, Vishal Naik, Jayanth Ramadoss, Dana Gaddy, Larry Suva. Texas A&M University, United States
Disclosures: Alyssa Falck, None

MON-0458  Deletion of the Auxiliary Voltage Sensitive Calcium Channel Subunit and Gabapentin Receptor δ1 Results in Impaired Skeletal Density, Mass, and Strength
Madison Kelly*, Karan Sharma1, Xin Yi2, Christian Wright2, Megan Noonan2, Taylor Gorrell1, Aaron Gegg2, Brandon Chenoweth2, Uma Sankar2, Julia Hum1, Alexander Robling1, Mary Farach-Carson1, William Thompson2. 1Marian University, United States, 2Indiana University, United States, 3University of Texas Health Science Center at Houston, United States
Disclosures: Madison Kelly, None

MON-0459  Global and Conditional Disruption of the Igf-I Gene in Osteoblasts and/or Chondrocytes Reveals Cell Type- and Compartment-Specific Effects of IGF-I in Bone
Chandrasekhar Kesavan*, Jon Wergedal1, Catrina Godwin2, Subburaman Mohan1. 1VA Loma Linda Healthcare System, Loma Linda University, United States, 2VA Loma Linda Healthcare System, United States
Disclosures: Chandrasekhar Kesavan, None

MON-0460  Vertebrate Lonesome Kinase is Required in Early Stages of Skeletogenesis
David Maridas*, Laura Gamer, Leila Revollo, Malcom Whitman, Vicki Rosen. Harvard School of Dental Medicine, United States
Disclosures: David Maridas, None

MON-0461  High Bone Mass Phenotype is Present as Early as 8 weeks in CFW Mice
Meghan Moran*, Kelsey Carpenter1, Brittany Wilson1, Abraham Palmer2, D. Rick Sumner1. 1Rush University Medical Center, United States, 2University of California San Dieto, United States
Disclosures: Meghan Moran, None

MON-0462  Trajectories of Human Trabecular Bone Adaptation within a 4D Landscape of Tissue Anisotropy
Nicolas Piche*, Natalie Reznikov2, Ievgeniiia Morozova3, Iskandar Tamimi3, Jun Song2, Faleh Tamimi2. 1Objects Research Systems Inc., Canada, 2McGill University, Canada, 3Trikon Technologies Inc, Canada, 4Hospital Carlos Haya, Spain
Disclosures: Nicolas Piche, Object Research Systems Inc, Major Stock Shareholder

MON-0463  Forward-genetic ENU screen identifies genes regulating skeletal development in mice
Jonathan Rios*, Carol Wise1, Bruce Beutler2. 1Texas Scottish Rite Hospital for Children, United States, 2University of Texas Southwestern Medical Center, United States
Disclosures: Jonathan Rios, None

MUSCULOSKELETAL PROGENITOR CELLS AND LINEAGE DETERMINATION

MON-0489  NF-kB Activation in BMSC’s Drives Bone Loss Via Cell Intrinsic and Extrinsic Effects
Manoj Arra*, Gaurav Swarnkar, Gabriel Mbalaviele, Yousef Abu-Amer. Washington University in St. Louis School of Medicine, United States
Disclosures: Manoj Arra, None
MON-0490  Loss of the histone methyltransferase Ezh2 induces cellular senescence in mesenchymal stem cells
Amel Dudakovic*, Catalina Galeano-Garces, Christopher Paradise, Daniela Galeano-Garces, Farzaneh Khani, Roman Thaler, Andre Van Wijnen. Mayo Clinic, United States
Disclosures: Amel Dudakovic, None

MON-0491  The Effect of Ascorbic Acid on BMP-2 Treated C3H10T1/2 Mesenchymal Stem Cells in Phosphate Deficient Conditions
Matthew Bui*, Amira Hussein, Louis Gerstenfeld. Boston University School of Medicine, United States
Disclosures: Matthew Bui, None

MON-0492  Notch and Wnt Signaling Crosstalk Regulates Skeletal Stem/Progenitor Cell Behavior during the Early Stages of Fracture Repair
Sooyeon Lee*, Anna Josephson†, Philipp Leucht†. †Dept. of Orthopaedic Surgery, NYU Langone Orthopedic Hospital, United States, ‡Dept. of Cell Biology, NYU School of Medicine, United States
Disclosures: Sooyeon Lee, None

MON-0493  Differences in osteoprogenitor populations between bone compartments
Brya Matthews*, Francesca Sbrana, Sanja Novak, Danka Greevic, Ivo Kalajzic. 1Department of Molecular Medicine and Pathology, University of Auckland, New Zealand, 2School of Dental Medicine, University of Connecticut, United States, 3Department of Physiology and Immunology, University of Zagreb, Croatia
Disclosures: Brya Matthews, None

MON-0494  Cartilage is Derived from Nerve in Trauma-Induced Heterotopic Ossification
Elizabeth Olmsted-Davis*, Elizabeth Salisbury. 1Baylor College of Medicine, United States, 2UTMB, United States
Disclosures: Elizabeth Olmsted-Davis, None

MON-0495  Nucleoskeletal Actin-Lamin Architecture Regulates MSC Runx2 Directed Osteogenesis
Jeyantt S. Sankaran*, Buer Sen, Zhihui Xie, Cody Megrath, Maya Styner, Amel Dudakovic, Andre J. Van Wijnen, Janet Rubin. 1UNC Chapel Hill, United States, 2Mayo Clinic, United States
Disclosures: Jeyantt S. Sankaran, None

MON-0496  Oxidized Phospholipids Are Ligands for LRP6 in Bone Marrow MSCs
Lei Wang*, Weiping Su, Xiaonan Liu, Janet Crane, Xu Cao, Mei Wan. Johns Hopkins University School of Medicine, United States
Disclosures: Lei Wang, None

MON-0497  The Power and Potential of Alternative Splicing to Dictate Stem Cell Fates in Bone
Yuanyuan Wang*, Rene Chun, Emad Bahrami-Samani, Lan Lin, Yi Xing, John Adams. 1Bioinformatics Interdepartmental Graduate Program, University of California, Los Angeles, United States, 2Department of Orthopaedic Surgery, University of California, Los Angeles, United States, 3Department of Microbiology, Immunology and Molecular Genetics, University of California, Los Angeles, United States, 4Department of Orthopaedic Surgery, Department of Molecular, Cell & Developmental Biology, University of California, Los Angeles, United States
Disclosures: Yuanyuan Wang, None

MON-0498  Multipotent Schwann cell precursors contribute to chondro- and osteo-progenitors during embryogenesis
Meng Xie*, Dmitrii Kamenev, Baoyi Zhou, Maria Eleni Kastriti, Kaj Fried, Igor Adameyko, Viacheslav Dyachuk, Andrei Chagin. 1Department of Physiology and Pharmacology, Karolinska Institutet, Stockholm SE-171 77, Sweden., Sweden, 2Department of Neuroscience, Karolinska Institutet, Stockholm SE-171 77, Sweden., Sweden
Disclosures: Meng Xie, None
MON-0499 The perivascular progenitor cell vesicular secretome incites bone repair via pleiotropic effects on endogenous skeletal progenitor cells
Jiajia Xu*, Carolyn Meyers, Leslie Chang, Leititia Zhang, Yiyun Wang, Kristen Broderick, Bruno Peault, Aaron James. 1Johns Hopkins University, United States, 2University of California, Los Angeles, United States
Disclosures: Leslie Chang, None

MON-0500 Specific Knockout of Gsα in Murine Osteoblast Precursors Leads to Blunted Response to Intermittent PTH Administration in vivo
Mingxin Xu*, Deepak H. Balani, Sophia Trinh, Henry M. Kronenberg. Endocrine Unit, Massachusetts General Hospital, Harvard Medical School, United States
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OSTEOARTHRITIS AND OTHER JOINT DISORDERS

MON-0525 Quantitative analysis of juxta-articular osteoporosis by HR-pQCT in patients with rheumatoid arthritis
Ko Chiba*, Kounosuke Watanabe, Oki Nozomi, Naoki Iwamoto, Narihiro Okazaki. 1Department of Orthopedic Surgery, Nagasaki University Graduate School of Biomedical Sciences, Japan, 2Department of Radiological Sciences, Nagasaki University Graduate School of Biomedical Sciences, Japan, 3naoki_iwa@hotmail.com, Japan
Disclosures: Ko Chiba, None

MON-0526 The Therapeutic Effect of GPNMB in a Traumatically-Induced Osteoarthritic Model
Bryson Cook*, Asaad Aladlaan, Matthew Desanto, Fayeza Safadi. 1Musculoskeletal Research Group, NEOMED, United States, 2Musculoskeletal Research Group, United States, 3Akron Children’s Hospital Research Institute, United States
Disclosures: Bryson Cook, None

MON-0527 CCL21 Promotes Post Knee Injury Inflammation and Osteoarthritis Progression In part via Inducing T-Cell Recruitment
Bouchra Edderkaoui*, Neha Mohindroo, Salma Khan, Mohan Subburaman. 1V ALLHCS, LLU, United States, 2VALLHCS, United States, 3Loma Linda University, United States
Disclosures: Bouchra Edderkaoui, None

MON-0528 Cell Death and IL-1β Release Induced by TI Particles Depends on Lysosomal Membrane Disruption
Brian Fort*, Edward Greenfield, Givenchy Manzano, Alexander Rascoe, Matthew Hoffa, George Dubyak. Case Western Reserve University, United States
Disclosures: Brian Fort, None

MON-0529 Circulating sclerostin is associated with preserved joint space in non-weight bearing joints in a population enriched for high Bone Mineral Density
April Hartley*, Lavinia Paternoster, Aaron Murphy, Sarah Hardcastle, Jon H Tobias, Celia L Gregson. Bristol Medical School, University of Bristol, United Kingdom
Disclosures: April Hartley, None

MON-0530 Blood-Induced Bone Loss In A Mouse Model Of Hemophilic Arthropathy Is Prevented By Blocking The iRhom2/ADAM17/TNFα Pathway
Coline Haxaire*, Narine Hakobyan, Tania Panellini, Camila Carballo, David Mcilwain, Tak W. Mak, Suchitra Acharya, Dan Li, Jackie Szymonifka, Scott Rodeo, Xiangqian Song, Sébastien Monette, Alok Srivastava, Jane Salmon, Carl Blobel. 1Hospital for Special Surgery at Weill Cornell Medicine, United States, 2Pediatric Hematology/Oncology, Rush University Medical Center, United States, 3Baxter Laboratory in Stem Cell Biology, Department of Microbiology and Immunology, Stanford University, United States, 4Campbell Family Institute for Breast Cancer Research, Princess Margaret Cancer Center, University Health Network, Canada, 5Pediatric Hematology/Oncology, Northwell Health, United States, 6Laboratory of Comparative Pathology, Memorial Sloan Kettering Cancer Center, The Rockefeller University, Weill Cornell Medicine, United States, 7Department of Hematology, Christian Medical College, India
Disclosures: Coline Haxaire, None
MON-0531 Vitamin D Status in Patients with Hip Dysplasia Undergoing Periacetabular Osteotomy and Its Influence on the Postoperative Results  
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Disclosures: Taro Mawatari, None

MON-0532 Chronic Antibiotic Use Pre-Injury Reduces Severity of Post-Traumatic Osteoarthritis on ACL rupture STR/ort Mouse Models  
Melanie Mendez*, Deepa Murugesh², Jillian Mccool¹, Edward Kuhn², Allison Hsia³, Blaine Christiansen¹, Gabriela Loots¹. ¹University of California-Merced, Lawrence Livermore National Laboratory, United States, ²Lawrence Livermore National Laboratory, United States, ³University of California-Davis, United States  
Disclosures: Melanie Mendez, None

MON-0533 An ectosteric tanshinone inhibitor of cathepsin K prevents the progression of joint inflammation and destruction in an arthritis mouse model  
Preety Panwar*, Dieter Bromme. University of British Columbia, Canada  
Disclosures: Preety Panwar, None

MON-0534 Synovial B-cell infiltration as a novel candidate mediator of OA in obese mice and humans  
Eric Schott¹, Jacquelyn Lillis¹, Christopher Farnsworth², Javier Rangel-Moreno¹, John Ketzi¹, Douglas Adams¹, Jennifer Anolik¹, Cheryl Ackert-Bicknell¹, Robert Mooney¹, Michael Zusckik¹. ¹University of Rochester School of Medicine and Dentistry, United States, ²Washington University in St. Louis, United States, ³University of Connecticut, United States  
Disclosures: Eric Schott, None

MON-0535 Blocking Transforming Growth Factor-β1 By Oral Intake Of Losartan Can Improve Microfracture-Mediated Cartilage Healing- A Rabbit Model  
Hajime Utsunomiya*, Xueqin Gao², Zhenhan Deng², Gilberto Nakama¹, Haizi Cheng², Sudheer Ravuri¹, Julia Goldman², Tamara Alliston², Walter Lowe², William Rodkey¹, Marc J Philippson¹, Johnny Huard¹. ¹Steadman Philippon Research Institute, United States, ²University of Texas Health, United States, ³University of California San Fransisco, United States  
Disclosures: Hajime Utsunomiya, None

MON-0536 Conditional Bone and Muscle Correlates of Osteoarthritis Influenced by Use of Antiresorptive Therapy in Postmenopausal Women– the AMBERS study  
Andy Kin On Wong*, Shannon Reitsma², Hana Gillick², Abinaa Chandrakumar¹, Eva Szabo¹, Justin Chee², Angela M Cheung¹, Jonathan D Adachi². ¹Joint Department of Medical Imaging, University Health Network, Canada, ²Department of Medicine, McMaster University, Canada, ³CESHA, University Health Network, Canada  
Disclosures: Andy Kin On Wong, None

MON-0537 Dephosphorylation of NACA by PP1A enhances c-JUN transcriptional activity  
William N. Addison*, Martin Pellicelli, René St-Arnaud. Shriners Hospitals for Children - Canada, Canada  
Disclosures: William N. Addison, None

MON-0578 miR-219a-5p Regulates Rorβ During Osteoblast Differentiation and in Age-related Bone Loss  
Ruben Aquino-Martinez*, David Monroe. MAYO CLINIC, United States  
Disclosures: Ruben Aquino-Martinez, None

MON-0579 Blastema formation and periosteal ossification in the regenerating adult mouse digit.  
Lindsay A. Dawson*, Connor Dolan, Felisha Imholt, Osama Qureshi, Katherine Zimmel, Ken Muneoka. Texas A&M University, United States  
Disclosures: Lindsay A. Dawson, None

OSTEOBLASTS
MON-0580 CALM1 and GARS: novel biomarkers to diagnose Pseudarthrosis
Thaqif El Khassawna*1, Stefanie Kern1, Deeksha Malhan1, Markus Rupp2, Christian Heiss2.
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MON-0581 Long Non-coding RNA RP11-45A16.3 Promotes Osteoblast Differentiation of Human Periodontal Ligament Stem Cells via Runt-Related Transcription Factor 2 by Sponging miR-103a-2-5p
Fuchun Fang*1,2, Jianjia Li1, Qisheng Tu1, Jake Chen1,3. 1Division of Oral Biology, Tufts University School of Dental Medicine, Boston, MA 02111, USA, American Samoa, 2Department of Stomatology of Nanfang Hospital, Southern Medical University, Guangzhou 510515, China, 3Department of Cellular, Molecular and Developmental Biology, Tufts University School of Medicine, Boston, MA 02111, USA, American Samoa

Disclosures: Fuchun Fang, None

MON-0582 Grainyhead-like 3 Mediates BMP and Wnt Signaling in Skeletal Stem Cells during Bone Formation and Repair
Laura Gamer*, Valérie Salazar, David Maridas, Vicki Rosen. Harvard School of Dental Medicine, United States

Disclosures: Laura Gamer, None

MON-0583 MACF1 Promotes Osteoblast Differentiation by Sequestering Repressors of Wnt Signaling
Lifang Hu*, Chong Yin, Zixiang Wu, Zizhan Huang, Airong Qian. Laboratory for Bone Metabolism, Key Laboratory for Space Biosciences and Biotechnology, School of Life Sciences, Northwestern Polytechnical University, China

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MON-0584 How Acid Transport Supports Formation of Dense Bone Mineral
Quitterie C Larrouture*, Harry C Blair2, Irina L Tourkova1, Jing H Bian3, Li Liu3, Donna Beer Stolz1, Deborah J Nelson4, Paul H Schlesinger5, Bohumil J Slavik6. 1Nuffield Department of Orthopaedics, Rheumatology and Musculoskeletal Sciences, Botnar Research Centre, Oxford University, United Kingdom, 2Veteran’s Affairs Medical Center and Department of Pathology, University of Pittsburgh, United States, 3Department of Pathology, University of Pittsburgh, United States, 4Department of Cell Biology, University of Pittsburgh, United States, 5Department of Pharmacological and Physiological Sciences, University of Chicago, United States, 6Department of Cell Biology, Washington University, United States

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MON-0585 Bone formation in osteoblast cell culture
Elena Makareeva*, Edward Mertz, Anna Roberts-Pilgrim, Sergey Leikin. NICHD, NIH, United States

Disclosures: Elena Makareeva, None

MON-0586 Opposing Effects of Inorganic Phosphate and Trps1 Transcription Factor on Expression of SerpinB2 in Bone and Tooth
Mairobyss Socorro*, Daisy Monier, Sana Khalid, Victoria Smethurst, Dobrava Napierala. Center for Craniofacial Regeneration, Dept. of Oral Biology, McGowan Institute for Regenerative Medicine, University of Pittsburgh School of Dental Medicine, United States

Disclosures: Mairobyss Socorro, None

MON-0587 PTHrP (1-36) and Abaloparatide: Weaker Modulators of SIK2/CRTC2-CRTC3 Signaling Axis Compared with PTH (1-34)
Florante Ricarte*1, Carole Le Henaff2, Nicola Partridge2. 1New York University School of Medicine, United States, 2New York University College of Dentistry, United States

Disclosures: Florante Ricarte, None
MON-0588  A Comparison Between Osteoactivin and Bone Morphogenetic Protein-2 in Rat Spinal Fusion Model
Jeremey Robinson *, Scott Medermott, Kevin Budge, Nazar Hussein, Fatima Jaber, Omar Azem, Matt Desanto, Adhan Raslan, Maleck Saleh, Bradley Inkrott, Fayez Safadi.
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MON-0589  Global Gene Expression Analysis Identifies Mef2c as a Wnt16 Target in Osteoblasts
Aimy Sebastian*, Nicholas Hum, Cesar Morfin, Deepa Murugesh, Gabriela Loots.
Lawrence Livermore National Laboratory, United States
Disclosures: Aimy Sebastian, None

MON-0590  Potential usefulness of osteogenic exosomes as a therapeutic agent for bone engineering
Takaki Sugihara*, Yoshinori Sumita, Myumi Iwatake, Naomi Sakashita, Izumi Asahina.
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MON-0591  Bone Morphometric and Immunohistological Study on Mechanism of Longitudinal Overgrowth of Femur of Developing Rat Following Circumferential Periosteal Division
Shinjiro Takata*, Tokushima National Hospital, National Hospital Organization, Japan
Disclosures: Shinjiro Takata, None

MON-0592  Lnc-OIF, A newly identified Long noncoding RNA, Inhibits Osteoblast Differentiation and Bone Formation
Ye Tian*, Chong Yin, Xue Wang, Chaofei Yang, Zixiang Wu, Xiaoli Ma, Zizhan Huang, Airong Qian. Northwestern Polytechnical University, China
Disclosures: Ye Tian, None

MON-0593  JNK MAP Kinase is required for both BMP and Notch induced Human Osteoblast Differentiation
Yadav Wagley*, Kurt D. Hankenson. Department of Orthopaedic Surgery, University of Michigan, United States
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MON-0594  The Regulatory Actions of TRPC3 Channels in the Differentiation and Functions of Osteoblastic Cells
Yu-Mi Yang*, Dong Min Shin. Department of Oral Biology, Yonsei University College of Dentistry, Republic of Korea
Disclosures: Yu-Mi Yang, None

MON-0595  Effect of Cannabinoid Receptor Ligands on Osteogenic Differentiation
Chawon Yun*, Adam Driscoll, Ryan Lubbe, Soyeon Jeong, Kevin Chang, Meraaj Harleem, Richard Pahapill, Mark Oyer, Stuart Stock, Wellington Hsu, Erin Hsu.
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MON-0636  WITHDRAWN

MON-0637  Phlpp1 controls osteoclastogenesis and bone resorption
Dana Begun*, David Molstad, Jennifer Westendorf, Merry Jo Oursler, Elizabeth Bradley.
Mayo Clinic, United States
Disclosures: Dana Begun, None

OSTEOCLASTS
MON-0638  Trpm8 Knockout causes compartment-specific bone loss and altered osteoclast number and activity  
Adriana Carvalho*, Trevor Morin, Katherine Motyl. MMCRI, United States  
Disclosures: Adriana Carvalho, None

MON-0639  Models of Elevated Cortical Bone Remodeling in the Rabbit: Platforms for Longitudinal Imaging of Basic Multicellular Units  
Beverly Hiebert*, Kim Harrison1, Arash Panahifar2, Amir Ashique1, Terra Arnason1, Janna Andronowski2, Kurtis Sweekla1, David Cooper1. 1University of Saskatchewan, Canada, 2University of Akron, United States  
Disclosures: Beverly Hiebert, None

MON-0640  miR-29 Targets E-cadherin Complex Members in the Osteoclast Lineage  
Henry Hrdlicka*, Sun-Kyeong Lee, Anne Delany. UConn Health, United States  
Disclosures: Henry Hrdlicka, None

MON-0641  WITHDRAWN

MON-0642  IgG complex with protein A of Staphylococcus aureus enhances osteoclastogenesis and bone resorption.  
Asana Kamohara*, Xianghe Xu1, Makoto Shiraki1, Hirohito Hirata1, Toshio Kukita3, Akiko Kukita1, 1Department of Microbiology, Faculty of Medicine, Saga University, Japan, 2Department of Orthopedic Surgery, Faculty of Medicine, Saga University, Japan, 3Department of Molecular Cell Biology & Oral Anatomy, Faculty of Dentistry, Kyushu University, Japan  
Disclosures: Asana Kamohara, None

MON-0643  Effect of C-X-C Motif Chemokine 12 in Lipopolysaccharide-induced Osteoclast Formation and Bone Resorption  
Hideki Kitaura*, Kazuhiro Shima, Keisuke Kimura, Masahiko Ishida, Akiko Kishikawa, Saika Ogawa, Jiawei Qi, Wei-Ren Shen, Fumitoshi Ohtori, Takahiro Noguchi, Aseel Marahleh. Division of Orthodontics and Dentofacial Orthopedics, Department of Translational Medicine, Tohoku University Graduate School of Dentistry, Japan  
Disclosures: Hideki Kitaura, None

MON-0644  Haptoglobin acts as a novel ligand for TLR4, suppressing osteoclastogenesis via activation of TLR4 - INF-β signaling pathway  
Zang Hee Lee*, Hong-Hee Kim, Jun-Oh Kwon. Department of Cell and Developmental Biology, Dental Research Institute, School of Dentistry, Seoul National University, Republic of Korea  
Disclosures: Zang Hee Lee, None

MON-0645  RANK PVQET560-565 and PVQEQG604-609 Motifs play important roles in Porphyromonas gingivalis-mediated regulation of osteoclastogenesis  
Yuyu Li*, Shenyuan Chen2, Zhenqu Shi2, Xu Feng3, Ping Zhang4. 1Sichuan University, China, 2Stomatological Hospital of Chongqing Medical University, Chongqing Key Laboratory of Oral Diseases and Biomedical Sciences, Chongqing Municipal Key Laboratory of Oral Biomedical Engineering of Higher Education, Chongqing, 400015, China, 3Department of Pathology, University of Alabama at Birmingham, AL35284, United States, 4Department of Pediatric Dentistry, University of Alabama at Birmingham, AL35294, United States  
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MON-0646  Asiatic Acid Attenuates Bone Loss by Regulating Smad7/TAK1/NF-κB Signaling Pathway in Osteoclastogenesis  
Sien Lin*, Haixing Wang1, Bo Wei1, Yuk Wai Lee1, Liao Cui1, Gang Li1. 'The Chinese University of Hong Kong, Hong Kong, 'Guangdong Medical University, China  
Disclosures: Wayne Yuk Wai Lee, None
MON-0647  Protease Activated Receptor 2 (PAR2): A Novel Regulator of Osteoclastogenesis
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MON-0648  Targeted Deletion of TAF12 in Osteoclasts Decreases Osteoclast Activity in Vivo
Kazuaki Miyagawa*, Yasuhisa Ohata1, Jolene J. Windle2, G. David Roodman1,3, Noriyoshi Kurihara1. 1Medicine/Hematology-Oncology, Indiana University, United States, 2Human and Molecular Genetics, Virginia Commonwealth University, United States, 3Roudebush VA Medical Center, United States
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MON-0649  Effects of advanced glycation end products on bone cells
Hyoung-Moo Park*, Ho- Yeon Chung1, In-Jin Cho2, You Cheol Hwang1, In-Kyung Jeong2, Kyu Jeung Ahn1. 1Grace woman’s Hospital, Republic of Korea, 2Kyung Hee University, Republic of Korea
Disclosures: Hyoung-Moo Park, None

MON-0650  SLIT2 inhibits osteoclastogenesis and bone resorption via the suppression of Cdc42 activity
So Jeong Park*, Beom-Jun Kim1, Mi Kyung Kwak1, Seung Hun Lee1, Jung-Min Koh1. 1ASAN Institute for Life Sciences, Republic of Korea, 2ASAN MEDICAL CENTER, Republic of Korea, 3Division of Endocrinology and Metabolism, Asan Medical Center, University of Ulsan College of Medicine, Republic of Korea
Disclosures: So Jeong Park, None

MON-0651  CD55 is a negative regulator of inflammation induced osteoclastogenesis
Bongjin Shin*, Sun-Kyeong Lee. University of Connecticut Health Center, United States
Disclosures: Bongjin Shin, None

MON-0652  Sialic acid-binding immunoglobulin-like lectin 15 (Siglec-15) plays important roles in the induction of both bone-resorbing activity of osteoclasts and osteoblast differentiation
Nobuyuki Udagawa*, Masanori Koide2, Shunsuke Uehara3, Atsushi Arai2, Toshihide Mizoguchi2, Teruhito Yamashita2, Midori Nakamura4, Yasuhiro Kobayashi2, Naoyuki Takahashi2, Seiichiro Kumakura2, Chie Fukuda2, Eisuke Tsuda3. 1Department of Biochemistry, Institute for Oral Science, Matsumoto Dental University, Japan, 2Department of Oral Science, Matsumoto Dental University, Japan, 3Department of Biochemistry, Matsumoto Dental University, Japan, 4Department of Biochemistry, Institute for Oral Science, Matsumoto Dental University, Japan, 5Rare Disease & LCM Laboratories, R&D Division, Daiichi Sankyo Co., Ltd., Japan
Disclosures: Nobuyuki Udagawa, Daiichi Sankyo Co., Ltd., Grant/Research Support

MON-0653  IL-3 inhibits osteoclastogenesis by upregulating the cytoprotective enzymes and diverts the cells toward M2 macrophages
Suhas Mhaske*, Anil Kumar1, Mohan Wani1. 1National Centre for Cell Science, India
Disclosures: Suhas Mhaske, None

MON-0654  Zscan10 Suppresses Osteoclast Differentiation through Expression of Haptoglobin.
Yuta Yanagihara*, Kazuki Inoue1, Noritaka Saeki1, Yuichiro Sawada2, Jiwon Lee1, Tadahiro Iimura1, Yuuki Imai1. 1Division of Integrative Pathophysiology, Proteo-Science Center, Ehime University, Japan, 2Department of Urology, Ehime University Graduate School of Medicine, Japan, 3Division of Bio-Imaging, Proteo-Science Center, Ehime University, Japan
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OSTEOCYTES

MON-0672 Enhancement of Morphological and Functional Changes of Osteocyte in Osteoporotic Metaphyseal Fracture Healing Model with Low-Magnitude High-Frequency Vibration
Man Huen Victoria Choy*, Ronald Man Yeung Wong, Simon Kwoo Ho Chow, Meng Chen Li, Jack Chun Yiu Cheng, Wing-Hoi Cheung. 1Department of Orthopaedics and Traumatology, Faculty of Medicine, The Chinese University of Hong Kong, Prince of Wales Hospital, Shatin, NT, Hong Kong, 2Department of Orthopaedics and Traumatology, The Chinese University of Hong Kong, Shatin, NT, Hong Kong SAR, China, Hong Kong
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MON-0673 Osteocyte regulates osteoclasts formation through Neuropilin1
Ehab Azab*, Kevin Chandler, Yuwei Uda, Amira Hussein, Raghad Shujaikhan, Bingyuan Sun, Mark Mccombe, Paola Divieti Pajevic. 1Molecular and Cell Biology, Boston University, United States, 2Department of Biochemistry, Boston University, United States, 3Department of Orthopedics, Boston University, United States
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MON-0674 MLO-Y4 osteocyte response to simulated microgravity in a 3D scaffolding
Roxanne Fournier*, Rene Harrison. University of Toronto, Scarborough, Canada
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MON-0675 WITHDRAWN

MON-0676 Exogenous Irisin Treatment Ameliorates Inflammatory Changes in Osteocyte Proteins and Altered Bone Turnover in Chronic DSS-induced Inflammatory Bowel Disease
Corinne E Metzger*, S Anand Narayanan, Anne Michal Anderson, David C Zawieja, Susan A Bloomfield. 1Texas A&M University, United States, 2Texas A&M University Health Science Center, United States
Disclosures: Corinne E Metzger, None

MON-0677 Osteocytes Maintain Mechano sensing Following Long-Term Dosing with Sclerostin Antibody
Andrea Morrell*, Samuel Robinson, Jingyi Wang, Gill Holdsworth, Hua Zhu Ke, X. Edward Guo. 1Columbia University, United States, 2Southern University of Science and Technology, China, 3UCB Pharma, United Kingdom
Disclosures: Andrea Morrell, UCB Pharma, Grant/Research Support

MON-0678 Voluntary Wheel Running Exercise Maintains Osteocyte Connectivity and Muscle-Secre ted Osteocyte Protective Factors in Aged C57BL6 Mice
Leann Tiede-Lewis*, Yukiko Kitase, Kaitlyn Tom, Mark Dallas, Hong Zhao, Yixia Xie, Michael Wacker, Marco Broto, Lynda Bonevald, Sarah Dallas. 1University of Missouri, Kansas City, United States, 2Indiana University, United States, 3University of Texas, Arlington, United States
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MON-0679 The Role of Osteocyte Estrogen Receptor β in Bone Turnover and Skeletal Mechanotransduction Differs in Male and Female Mice.
Xiaoyu Xu*, Haisheng Yang, Rachel Embry, Whitney Bullock, Teresita Bellido, Russell Main. 1Weldon School of Biomedical Engineering Purdue University, United States, 2Beijing University of Technology, China, 3Musculoskeletal Biology and Mechanics Lab, Department of Basic Medical Sciences, Purdue University, United States, 4Department of Anatomy and Cell Biology, Indiana University School of Medicine, United States
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OSTEOPOROSIS - ASSESSMENT

MON-0719 IMMINENT RISK OF NEW VERTEBRAL FRACTURE IN PATIENTS WITH RECENT CLINICAL VERTEBRAL FRACTURE
Enrique Casado*, Silvia García-Cirena, Marta Arévalo, Luis Del Río, Joan Carles Oliva, Jordi Gratacos. 1Rheumatology Dpt. University Hospital Parc Taulí (UAB), Spain, 2CETIR Centre Medec, Spain, 3Statistics Dpt. University Hospital Parc Taulí (UAB), Spain
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MON-0720 High bone marrow fat in osteopenic older adults may cause overestimation of DXA-measured BMD: A quantitative MRI study
Wing P. Chan*, 1Shiou-Ping Lee1, Yi-Chien Lu1, Hou-Ting Yang2, Yi-Jui Liu3. 1Department of Radiology, Wan Fang Hospital, Taipei Medical University, Taiwan, 2Department of Nuclear Medicine, Chang Gung Memorial Hospital, Taiwan, 3Department of Automatic Control Engineering, Feng Chia University, Taiwan

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MON-0721 Trabecular Bone Score in Conditions of Extremely High BMD. Does it have any utility?
Manju Chandran*, 1Ann Kerwen Kwee2, Matthew Bingfeng Chuah2. 1Osteoporosis and Bone Metabolism Unit, Singapore General Hospital, Singapore, 2Department of Endocrinology, Singapore General Hospital, Singapore

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MON-0722 The association between muscle mass deficits estimated from bioelectrical impedance analysis and osteoporosis in elderly people
Hee-Jeong Choi*, 1Han-Jin Oh1, Hyeok-Jung Kweon2. 1Department of Family Medicine, Eulji University School of Medicine, Republic of Korea, 2Department of Family Medicine, Konkuk University School of Medicine, Republic of Korea

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MON-0723 Cortical and Trabecular Bone Response in Proximal Femur from Women with Osteoporosis Treated with Denosumab or Zolendronic Acid using 3D Modelling Techniques obtained from DXA.
Fidencio Cons Molina*, 1Mario Feuchter1, Luis Ernesto Bejarano1, Diana Wiluzanski2, Carla Altieri2, Edison Edgardo Romero Galvan1, Jose Luis Mansur1, Yves Martelli4, Ludovic Humbert1. 1Centro de Investigacion Artritis & Osteoporosis, Mexico, 2CENTROSEO, Uruguay, 3Centro de Endocrinología y Osteoporosis, Argentina, 4Gallo Medical, Spain

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MON-0724 Sandwich Immunoassay for the Specific Detection of Circulating Bioactive Sclerostin in comparison with other Sclerostin ELISA
Jacqueline Wallwitz*, Elisabeth Gadermaier, Gabriela Berg, Gottfried Himmler. The Antibody Lab GmbH, Austria

Disclosures: Jacqueline Wallwitz, None

MON-0725 Combined model of QCT derived bone mass and microarchitecture parameters for improved vertebral fracture discrimination
Luks Maximilian Huber*, 1Timo Damm1, Stefan Reinhold2, Wolfram Timm3, Jan Borggreve4, Julian Ramin Andresen1, Claus-Christian Glüer1, Reimer Andresen6. 1Section Biomedical Imaging, Department of Radiology and Neuroradiology, UKSH, Christian-Albrechts-Universität zu Kiel, Germany, 2Department of Computer Science, Multimedia Information Processing Group, Christian-Albrechts-Universität zu Kiel, Germany, 3MINDWAYS CT, United States, 4Department of Diagnostic and Interventional Neuroradiology, University Hospital Cologne, Germany, 5Medical School, Sigmund Freud University, Austria, 6Institute of Diagnostic and Interventional Radiology/Neuroradiology, Westkuestenklinikum Heide, Academic Teaching Hospital of the Universities of Kiel, Luebeck and Hamburg, Germany

Disclosures: Luks Maximilian Huber, None

MON-0726 Prevalence of Diabetes in Patients with Osteoporotic Hip Fractures: A tertiary Care Center Fracture Consultation Service Experience
Sabrina Huq*, Lakshmi Das, Arti Bhan, Mahalakshi Honasoge, Sudhaker D. Rao. Henry Ford Hospital, United States

Disclosures: Sabrina Huq, None

MON-0727 Peripheral Quantitative Computed Tomography Based Finite Element Modeling (pQCT-FE) in the Classification of Fracture Patients
Hongyuan Jiang*, 1Dale Robinson1, Peter Lee1, Christopher Yates2, John Wark1. 1The University of Melbourne, Australia, 2The Royal Melbourne Hospital, Australia

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MON-0728 Bone Marrow Fat and its Associations with Bone Quality in the Proximal Femur
Roland Krug*, Julio Carballido-Gamio. ¹Department of Radiology and Biomedical Imaging, University of California, San Francisco, CA, United States, ²Department of Radiology, School of Medicine, University of Colorado Denver, Denver, CO, United States
Disclosures: Roland Krug, None

MON-0729 Low-grade morphometric vertebral deformities result from historical events and are unlikely to be primarily osteoporotic in provenance
Brian C Lentle*, Jacques P Brown, Linda Probyn, Ian Hammond, Jeffrey Hu, Ben Fine, Kevin Lian, Arvind Shergill, Jacques Trollip, Claudie Berger, William D Leslie, Jerilynn C Prior, David A Hanley, Jonathan D Adachi, Robert G Josse, Angela M Cheung, K Shawn Davison, Stephanie M Kaiser, Tanveer Towheed, Christopher S Kovacs, Andy Ko Wong, David Goltzman. ¹University of British Columbia, Canada, ²University of Toronto, Canada, Canada, ³University of Ottawa, Canada, ⁴Research Institute of the McGill University Health Centre, Canada, ⁵University of Manitoba, Canada, ⁶University of Calgary, Canada, ⁷McMaster University, Canada, ⁸A Priori Medical Sciences Inc, Canada, ⁹Dalhousie University, Canada, ¹⁰Queen’s University, Canada, ¹¹Memorial University, Canada, ¹²McGill University, Canada
Disclosures: Brian C Lentle, None

MON-0730 Feasibility of QCT internal density calibration for site-specific osteoporosis assessment
Andrew Michalski*, Bryce Besler, Geoff Michalak, Steven Boyd. University of Calgary, Canada
Disclosures: Andrew Michalski, None

MON-0731 Utility of the Forearm Dual X-ray Absorptiometry (DXA) as a Screening Tool for Early Osteoporosis Diagnosis in Postmenopausal Women with Primary Fragility Fractures at Distal Radius
Satoshi Miyamura*, Kosuke Ebina, Kohji Kuriyama, Kunihiro Oka, Hiroyuki Tanaka, Tsuyoshi Murase. ¹Department of Orthopaedic Surgery, Osaka University, Graduate School of Medicine, Japan, ²Department of Orthopaedic Surgery, Japan Community Health Care Organization Hoshigaoka Medical Center, Japan
Disclosures: Satoshi Miyamura, None

MON-0732 Opportunistic Screening of FDG-PET/CT Reveals Undiagnosed Low Bone Mass in Patients Being Evaluated for Oncology Purposes
Fernando Kay*, Edmund Dosunmu, Keenan Brown, Orhan Oz. ¹UT Southwestern Medical Center, United States, ²UT Southwestern Medical Center - Radiology, United States, ³Mindways Software, United States
Disclosures: Fernando Kay, None

MON-0733 Lower Trabecular Bone Score is Associated with the Use of Proton Pump Inhibitors
Young Ho Shin*, Hyun Sik Gong. ¹Department of Orthopedic Surgery, Asan Medical Center, Republic of Korea, ²Department of Orthopedic Surgery, Seoul National University Bundang Hospital, Seoul National University College of Medicine, Republic of Korea
Disclosures: Young Ho Shin, None

MON-0734 Percent total body fat, independent of muscle mass, is negatively associated with bone mineral density in women
Harshvardhan Singh*, Roshita Rathore, Gary Hunter, Debra Bemben, Zhaojing Chen, Kenneth Saag. ¹Department of Physical Therapy, University of Alabama at Birmingham, United States, ²Department of Physical Therapy, Temple University, United States, ³Nutrition and Obesity Research Core, University of Alabama at Birmingham, United States, ⁴Department of Health and Exercise Science, University of Oklahoma, United States, ⁵Department of Kinesiology, California State University San Bernardino, United States, ⁶School of Medicine, University of Alabama at Birmingham, United States
Disclosures: Harshvardhan Singh, None
MON-0735  The risk of incident vertebral fractures in current or former heavy smokers with and without COPD is associated with baseline vertebral bone attenuation and prevalent vertebral fractures: a 3-year chest-CT follow-up study
Mayke Van Dort*,1, Johanna Driessen1,2,3, Piet Geusens4, Elisabeth Romme5, Frank Smeenk6, Emiel Wouters*, Joop Van Den Bergh1. 1NUTRIM School of Nutrition and Translational Research in Metabolism, Maastricht University Medical Centre+ (MUMC+), Netherlands, 2CAPHR Care and Public Health Research Institute, Netherlands, 3Department of Clinical Pharmacy and Toxicology; Maastricht University Medical Centre+ (MUMC+), Netherlands, 4Department of Internal Medicine, Rheumatology, Maastricht University Medical Centre+ (MUMC+), Netherlands, 5Department of Respiratory Medicine, Catharina Hospital, Eindhoven, Netherlands, 6Department of Respiratory Diseases, Maastricht University Medical Centre+ (MUMC+), Netherlands
Disclosures: Mayke Van Dort, None

MON-0736  Investigation of Second-Generation HR-pQCT to Improve Assessment of Hip Fracture Risk in Women
Danielle E Whittier*, Lauren A Burt, Prism S Schneider, Steven K Boyd. McCaig Institute for Bone & Joint Health, Cumming School of Medicine, University of Calgary, Canada
Disclosures: Danielle E Whittier, None

MON-0737  The true relationship between bone marrow adipose tissue and volumetric BMD in the human spine
Xiaoguang Cheng*,1, Kai Li1, Yong Zhang1, Ling Wang1, Li Xu1, Yangyang Duanmu1, Cliff J Rosen1, Glen M Blake1. 1Department of Radiology, Beijing Jishuitan Hospital, China, 2Center for Clinical & Translational Research, Maine Medical Center Research Institute, United States, 3Biomedical Engineering Department, King’s College London, United Kingdom
Disclosures: Xiaoguang Cheng, None

OSTEOPOROSIS - EPIDEMIOLOGY

MON-0782  Fall Risk Is a Predictor of Fracture Independent of Bone Mineral Density and Bone Strength: Results from the FOCUS study
Annette L. Adams*,1, Heidi Fischer1, David L. Kopperdahl2, David C. Lee2, Tony M. Keaveny3. 1Kaiser Permanente Southern California, United States, 2O.N. Diagnostics, United States, 3University of California, Berkeley, United States
Disclosures: Annette L. Adams, Merck, Grant/Research Support, Amgen, Grant/Research Support

MON-0783  Cognitive Decline Is Associated with an Accelerated Rate of Bone Loss and Increased Fracture Risk in Women 65 years or Older in the Population-based Canadian Multicentre Osteoporosis Study (CaMos)
Dana Bluic*, Thach Tran1, Tineke Van Geel1, Jonathan Adachi1, Claudia Berger2, Joop Van Den Bergh1, John Eisman1, Piet Geusens2, David Goltzman3, David Hanley4, Robert Josse4, Stephanie Kaiser6, Christopher Kovacs5, Lisa Langsetmo10, Jerilynn Prior11, Tuan Nguyen1, Jacqueline Center1. 1Bone Biology Group, Garvan Institute of Medical Research, Australia, 2Maasricht University Medical Center, Netherlands, 3Department of Medicine, McMaster University, Canada, 4CaMos National Coordinating Centre, McGill University, Canada, 5Department of Medicine, McGill University, Canada, 6Department of Medicine, University of Calgary, Canada, 7Department of Medicine, University of Toronto, Canada, 8Department of Medicine, Dalhousie University, Canada, 9Faculty of Medicine, Memorial University, Canada, 10School of Public Health, University of Minnesota, Twin cities, United States, 11Department of Medicine and Endocrinology, University of British Columbia, Canada
Disclosures: Dana Bluic, None
MON-0784  Thiazide Diuretics and Fracture Risk: A Systematic Review and Meta-Analysis of Randomized Clinical Trials
Louis-Charles Desbiens*, Nada Khelifi, Yue-Pei Wang, Aboubacar Sidibe, Alexis F-Turgeon, Fabrice Mac-Way. CHU de Québec - Université Laval, Canada
Disclosures: Louis-Charles Desbiens, None

MON-0785  The association between prevalent vertebral fractures and coronary artery calcification on chest CT in smokers with and without COPD
Johanna Driessen*1, Mayke Van Dort2, Piet Geusens3, Elisabeth Romme4, Frank Smeenk4, Bram Rahel5, Emiel Wouters6, Joop Van Den Bergh7. 1CAPHRI Care and Public Health Research Institute, NUTRIM School for Nutrition and Translational Research in Metabolism, Department of Clinical Pharmacy and Toxicology, Maastricht University Medical Centre+ (MUMC+), Netherlands, 2NUTRIM School of Nutrition and Translational Research in Metabolism, Maastricht University Medical Centre+ (MUMC+), Netherlands, 3Department of Internal Medicine, Rheumatology, Maastricht University Medical Centre+ (MUMC+), the Netherlands, Netherlands, 4Department of Respiratory Medicine, Catharina Hospital, Eindhoven, the Netherlands; Netherlands, 5Department of Cardiology, VieCuri Medical Centre, Venlo, the Netherlands; Netherlands, 6Department of Respiratory Diseases, Maastricht University Medical Centre+ (MUMC+), the Netherlands; Netherlands, 7Department of Internal Medicine, VieCuri Medical Centre, Venlo and Department of Internal Medicine, NUTRIM School of Nutrition and Translational Research in Metabolism, Maastricht University Medical Centre+ (MUMC+), the Netherlands; Netherlands
Disclosures: Johanna Driessen, None

MON-0786  Impact of Comorbidity and Prognosis on Hip Fracture and Mortality Incidence Among Women in Late Life
Kristine Ensrud*1,2, Allyson Kats1, Cynthia Boyd2, Susan Diem1,2, John Schousboe3, Brent Taylor1,2, Douglas Bauer4, Katie Stone5, Lisa Langsetmo1. 1University of Minnesota, United States, 2Johns Hopkins University, United States, 3HealthPartners Institute / University of Minnesota, United States, 4University of California - San Francisco, United States
Disclosures: Kristine Ensrud, None

MON-0787  High Prevalence of Vertebral Fractures in Healthy Community-Dwelling Oldest Old: Longevous Study
Fernanda Gazoni*1, Jane Erika Frazão Okazaki2, Daniela Regina Brandão Tavares1, Lais Abreu Bastos3, Flavia Kurebayashi4, Fania Cristina Santos5. 1Doctorate Student at São Paulo Federal University, Brazil, 2Associated Physician at São Paulo Federal University, Brazil, 3Affiliated physician at São Paulo Federal University, Brazil, 4Post-graduate student at São Paulo Federal University, Brazil, 5Professor at São Paulo Federal University, Brazil
Disclosures: Fernanda Gazoni, None

MON-0788  Impact Microindentation in Impaired Fasting Glucose and Diabetes
Kara Holloway-Kew*, Pamela Rufus1, Adolfo Diez-Perez2, Lelia De Abreu1, Mark Kotowicz1, Muhammad Sajjad1, Julie Pasco1. 1Deakin University, Australia, 2Autonomous University of Barcelona, Spain
Disclosures: Kara Holloway-Kew, None
MON-0789 Comparing Utility Loss Due to Fractures, in Cohorts With and Without a Previous Fracture
Helena Johansson*, 1, John A Kanis2, Anders Odén3, Nicholas C Harvey4, Vilmundur Gudnason5, Kerrie Sanders6, Gunnar Sigurdsson7, Kristin Siggeirsdottir4, Lorraine Fitzpatrick1, Mattias Lorentzon8, Fredrik Borgström9, Eugene Mccloskey10. 1Institute for Health and Aging, Australian Catholic University, Melbourne, Australia, Sweden, 2Institute for Health and Aging, Catholic University of Australia, Melbourne, Australia, 3Centre for Metabolic Bone Diseases, University of Sheffield, Sheffield, United Kingdom, 4MRC Lifecourse Epidemiology Unit, University of Southampton, Southampton, United Kingdom, 5Icelandic Heart Association Research Institute, Kopavogur, Iceland, 6Department of Medicine, The University of Melbourne and Western Health, Sunshine hospital, Melbourne, VIC, Australia, 7Radius Health, Waltham, MA, United States, 8Centre for Bone and Arthritis Research, Geriatric Medicine, Department of Internal Medicine and Clinical Nutrition, Institute of Medicine, Sahlgrenska Academy, University of Gothenburg, Gothenburg, Sweden., 9Mellanby Centre for bone research, Department of Oncology and Metabolism, University of Sheffield, Sheffield, United Kingdom
Disclosures: Helena Johansson, None

MON-0790 Impact of a personal history of breast cancer on bone mineral density among women with a BRCA1 or BRCA2 mutation undergoing prophylactic bilateral salpingo-oophorectomy
Joanne Kotsopoulos*, 1, Elizabeth Hall2, Amy Finch1, Barry Rosen3, Joan Murphy4, Steven A. Narod1, Angela M. Cheung5. 1Women’s College Research Institute, Women’s College Hospital, Canada, 2University of Toronto, Canada, 3Beaumont Health, United States, 4Trillium Health Partners, Canada, 5University Health Network, Canada
Disclosures: Joanne Kotsopoulos, None

MON-0791 Calcaneal Quantitative Ultrasonography Measures and Cardiovascular and All-Cause Mortality in Older Women: a Prospective Study
Joshua Lewis*, 1, Kun Zhu2, Wai Lim3, Richard Prince4. 1School of Medical and Health Sciences, Edith Cowan University, Australia, 2University of Western Australia, Australia, 3University of Western Australia, Australia, 4Sir Charles Gairdner Hospital, Australia, 5Medical School, University of Western Australia, Australia
Disclosures: Joshua Lewis, None

MON-0792 Influence of combined hormonal contraception on 10-year areal bone mineral density change in premenopausal women in the population-based Canadian Multicentre Osteoporosis Study (CaMos)
Heather Macdonald*, 1, Claudie Berger2, Suzanne Morin2, Christopher Kovacs3, David Hanley4, Tassos Anastassiades5, Stephanie Kaiser6, David Goltzman2, Jerilynn Prior1. 1University of British Columbia, Canada, 2McGill University, Canada, 3Memorial University of Newfoundland, Canada, 4University of Calgary, Canada, 5Queen’s University, Canada, 6Dalhousie University, Canada
Disclosures: Heather Macdonald, None

MON-0793 Osteoporosis risk factors in elder Chinese and Caucasian Canadians: the Canadian Multicentre Osteoporosis Study
Suzanne N Morin*, 1, Claudie Berger2, David A Hanley3, Steven K Boyd1, Jerilynn C Prior4, Andy Ko Wong5, Angela M Cheung5, Alexandra Papaoannou5, Elham Rahme1, David Goltzman1. 1McGill University, Canada, 2Research Institute of the McGill University Health Centre, Canada, 3University of Calgary, Canada, 4University of British Columbia, Canada, 5University of Toronto, Canada, 6McMaster University, Canada
Disclosures: Suzanne N Morin, None
MON-0794  Prospective Study of Body Mass Index, Waist Circumference and Risk of Clinical Vertebral Fracture in Women
Julie M Paik*, Harold N Rosen1, Jeffrey N Katz1, Bernard A Rosner1, Catherine M Gordon1, Gary C Curhan1. 1Brigham and Women’s Hospital, Harvard Medical School, United States, 2Beth Israel Deaconess Medical Center, Harvard Medical School, United States, 3Cincinnati Children’s Hospital Medical Center, University of Cincinnati College of Medicine, United States

Disclosures: Julie M Paik, None

MON-0795  Long-Term Effect of Aromatase Inhibitors on Fracture Risk Compared to Tamoxifen: a “Real World” Cohort Study of Continued Treatment Up to Ten Years of Follow-Up
Marta Pineda-Moncusí1,2, Natalia García-Giralt1, Adolfo Diez-Perez1, Ignasi Tusquets1, Sonia Servitja2, Joan Albanell2,3, Daniel Prieto-Alhambra4, Xavier Nogues1. 1IMIM (Hospital del Mar Research Institute), Centro de Investigación Biomédica en Red de Envejecimiento y Saludable (CIBERFES), Spain, 2Cancer Research Program, IMIM (Hospital del Mar Research Institute), Spain, 3Medical Oncology Department of Hospital del Mar-CIBERONC, Spain, 4Nuffield Department of Orthopaedics, Rheumatology and Musculoskeletal Sciences, University of Oxford, and NIHR Oxford Biomedical Research Centre, United Kingdom

Disclosures: Marta Pineda-Moncusí, None

MON-0796  Community dwelling Premenopausal Women with Polycystic Ovary Syndrome/Anovulatory Androgen Excess (PCOS/AAE) Experience more Prevalent Fractures than Regional Population-based Control Women from the BC Centre of the Canadian Multicentre Osteoporosis Study (CaMos)
Azita Gostasebi*, Shirin Kalyan, Bernice Liang, Jerilynn Prior. University of British Columbia, Canada

Disclosures: Azita Gostasebi, None

MON-0797  Why does low self-rated health increase the risk of hip fractures?
Hans Ranch Lundin*, Helena Salminen. Karolinska Institutet, Sweden

Disclosures: Hans Ranch Lundin, None

MON-0798  Differences in Geometric Strength at the Contralateral Hip between Men with Hip Fracture and Non-Fractured Comparators
Alan Rathbun1, Jay Magaziner1, Michelle Shardell1, Thomas Beck1, Laura Yerges-Armstrong2, Denise Orwig1, Gregory Hicks2, Shabnam Salimi1, Alice Ryan1, Marc Hochberg1. 1University of Maryland School of Medicine, United States, 2National Institute on Aging, United States, 3Beck Radiological Innovations, United States, 4GlaxoSmithKline, United States, 5University of Delaware, United States

Disclosures: Alan Rathbun, None

MON-0799  The Impact of a Beta Trabecular Bone Score (TBS) Algorithm Accounting for Soft Tissue Thickness Correction on the Prediction of Incident Major Osteoporotic Fracture (MOF) Risk in Postmenopausal Women: The OsteoLaus Study
Enisa Shevroja*, Olivier Lamy, Berengere Aubry-Rozier, Gabriel Hans, Elena Gonzalez Rodriguez, Delphine Stoll, Didier Hans. Center of Bone Diseases, Bone and Joint Department, Lausanne University Hospital, Switzerland

Disclosures: Enisa Shevroja, None

MON-0800  WITHDRAWN

MON-0801  Weight Gain is Associated with Increased Bone Mineral Density (BMD) Even in Postmenopausal Women
Sikarin Upala*, Amber Olson, Tamara Vokes. University of Chicago, United States

Disclosures: Sikarin Upala, None

MON-0802  Fracture Risk is not Increased in Transwomen and Transmen Receiving Long-term Gender-affirming Hormonal Treatment: a Nationwide Cohort Study
Chantal Wiepjes*, Christel De Blok, Renate De Jongh, Martin Den Heijer. VU University Medical Center, Netherlands

Disclosures: Chantal Wiepjes, None
MON-0803 Decreased mortality risk, but unchanged subsequent fracture risk after introduction of a fracture liaison service: a 3 year follow-up survey

Caroline E Wyers*,1,2, Johanna Hm Driessen,1, Lisanne Vranken1,4, Irna Ja De Bruin1,4, Piet P Geusens2, Robert Y Van Der Velde3,4, Heinrich M Janzing6, Sjoerd Kaarsemaker2, Jacqueline Center6,9, Dana Blue4, John A Eisman10, Joop Pw Van Den Bergh1,4. 1Department of Internal Medicine, VieCuri Medical Center, Netherlands, 2Maastricht UMC+, CAPHRI Care and Public Health Research Institute, NUTRIM School for Nutrition and Translational Research in Metabolism, Department of Clinical Pharmacy and Toxicology, Netherlands, 3VieCuri Medical Center, Department of Internal Medicine, Netherlands, 4Maastricht UMC+, NUTRIM School for Nutrition and Translational Research in Metabolism, Department of Internal Medicine, Netherlands, 5Maastricht UMC+, CAPHRI Care and Public Health Research Institute, Department of Internal Medicine subdivision of Rheumatology; Hasselt University, Netherlands, 6VieCuri Medical Center, Department of Surgery, Netherlands, 7VieCuri Medical Center, Department of Orthopedic Surgery, Netherlands, 8Osteoporosis and Bone Biology Program, Garvan Institute of Medical Research, Australia, 9Clinical School St Vincent’s Hospital, Faculty of Medicine, UNSW Australia, Australia, 10Osteoporosis and Bone Biology Department, Clinical Translation and Advanced Education, Garvan Institute, Clinical School, St Vincent’s Hospital, Faculty of Medicine UNSW Australia, School of Medicine, University of Notre Dame, Australia

Disclosures: Caroline E Wyers, None

OSTEOPOROSIS - HEALTH SERVICES RESEARCH

MON-0818 Health Literacy and Readiness to Initiate Treatment for Osteoporosis in an At-risk Sample of US Women

Michael Miller*, Maria I. Danila, Amy Mudano, Ryan Outman, Elizabeth Rahn, Kenneth Saag. University of Alabama at Birmingham, United States

Disclosures: Michael Miller, None

MON-0819 The Burden of Recurrent Fragility Fractures in a Regional Hospital in Singapore

Linsey Gani*, Nicholas Tan, Vivien Tan, Joan Khoo, Thomas King. Changi General Hospital, Singapore

Disclosures: Linsey Gani, None

MON-0820 Service level predictors of bone treatment recommendations after a fragility fracture: Baseline findings from the first UK patient level Fracture Liaison Service Audit

Muhammad Javaid*,1, Xavier Griffin1, David Stephens2, Tim Jones3, Sonya Stephenson4, Michael Stone5, Clare Cockill1, Alison Smith2, Iona Price5, Celia Gregson5, Frances Dockery3, Rachel Bradley6, Neil Gittoes9, Daniel Prieto-Alhambra1, Cyrus Cooper11, Catherine Gallagher12, Naomi Vasilakis12. 1NDORMS, University of Oxford, United Kingdom, 2NHS West Kent CCG, United Kingdom, 3National Osteoporosis Society, United Kingdom, 4Bone Research Unit, University Hospital Llandough, United Kingdom, 5Rheumatology Department, Yeovil Hospital, United Kingdom, 6Patient representative, Royal College of Physicians, United Kingdom, 7School of Clinical Sciences, University of Bristol, United Kingdom, 8Ageing and Health Services, Guy’s and St Thomas’ NHS Foundation Trust, United Kingdom, 9Geriatric Medicine, University Hospitals Bristol NHS Foundation Trust, United Kingdom, 10Centre for Endocrinology, Diabetes and Metabolism, University of Birmingham, United Kingdom, 11MRC Lifecourse Epidemiology Unit, University of Southampton, United Kingdom, 12Royal College of Physicians, United Kingdom

Disclosures: Muhammad Javaid, UCB, Speakers’ Bureau, UCB, Amgen, Consultant, Amgen, Grant/Research Support
MON-0821  Cost-effectiveness Evaluation of a Screening Programme for Fracture Risk in UK
Fredrik Borgström*,1, Emma Jonsson1, Nick Harvey2, Lee Shepstone1, Elizabeth Lenaghan3, Shane Clarke1, Neil Gittos3, Ian Harvey4, Richard Holland5, Alison Heawood6, Niamh Redmond6, Amanda Howe7, Tanya Marshall7, Tim Peters1, David Torgerson1, Terence O’Neill1, Eugene Mccluskey2, Cyrus Cooper4, John Kanis1, 1Quantify Research, Sweden, 2MRC LifeCourse Epidemiology Unit, University of Southampton, United Kingdom, 3University of East Anglia, School of Medicine, University Kingdom, 4University Hospitals Bristol, Bristol BS2 8HW, United Kingdom, 5University Hospital Birmingham, Endocrinology, United Kingdom, 6University of East Anglia, School of Medicine, Health Policy and Practice, United Kingdom, 7Bristol Medical School, University of Bristol, United Kingdom, 8University of Bristol, United Kingdom, 9University of Manchester, United Kingdom, 10Norfolk and Norwich University Hospital, Department of Rheumatology, United Kingdom, 11York University, York Trials Unit, United Kingdom, 12University of Sheffield, United Kingdom
Disclosures: Fredrik Borgström, None

MON-0822  Understanding the Patient Experience and Challenges to Osteoporosis Care Delivered Virtually by Telemedicine
Patricia Palcu*,1, Sarah Muncé2, Susan B. Jaglal3, Sonya Allin1, Arlene Silverstein4, Sandra Kim5. 1University of Toronto, Canada, 2Toronto Rehabilitation Institute, University Health Network, Canada, 3University of Toronto, Department of Physical Therapy, Canada, 4Women’s College Hospital, Canada, 5University of Toronto, Women’s College Hospital, Canada
Disclosures: Patricia Palcu, None

MON-0823  Knowledge Translation: Implementation of Recommendations for Fracture Prevention in Long-Term Care
Alexandra Papaioannou*,1, George Ioannidis1, Mary-Lou Van Der Horst2, Caitlin McArthur2, Loretta M. Hillier2, Ravi Jain1, Susan Jaglal2, Jonathan D. Adachi1, Lora Giangregorio1. 1McMaster University, Canada, 2Geriatric Education and Research In Aging Sciences (GERAS) Centre, Canada, 3Osteoporosis Canada, Canada, 4University of Toronto, Canada
Disclosures: Alexandra Papaioannou, None

OSTEOPOROSIS - NUTRITION, DIETARY SUPPLEMENTS AND PHYSICAL ACTIVITY

MON-0848  Hip Bone Loss Persists One Year Following an Intentional Weight Loss Intervention in Older Adults
Kristen Beavers*,1, Michael Walkup2, Walter Ambrosius2, Leon Lenchik2, Sue Shapses3, Barbara Nicklas2, Anthony Marsh2, Jack Rejeski1. 1Wake Forest University, United States, 2Wake Forest School of Medicine, United States, 3Rutgers University, United States
Disclosures: Kristen Beavers, None

MON-0849  Effective exercise for osteoporosis in the real world: Three year observations from The Bone Clinic
Belinda Beck*,1, Lisa Weis2. 1Griffith University, Australia, 2The Bone Clinic, Australia
Disclosures: Belinda Beck, The Bone Clinic, Other Financial or Material Support

MON-0850  Effect of high dose vitamin D on free 25(OH)D and ionised calcium in vitamin D-deficient postmenopausal women
Simon Bowles*,1, Jennifer Walsh1, Richard Jacques2, Eastell Richard1, Thomas Hill3. 1University of Sheffield, United Kingdom, 2Newcastle University, United Kingdom
Disclosures: Simon Bowles, None
MON-0851  Effect of Home Exercise on Functional Performance, Posture, Quality of Life and Pain in Older Women with Vertebral Fractures: A Pilot Feasibility Trial
Jenna C. Gibbs*, Jonathan D. Adachi†, Maureen C. Ashe‡, Robert Bleakney§, Angela M. Cheung¶, Keith D. Hill∥, David L. Kendler¶, Aliya Khan∥∥, Sandra Kim¶¶, Judi Laprade∥∥∥, Caitlin Mearthur∥∥∥∥, Nicole Mittmann∥∥∥∥∥, Alexandra Papaioannou∥∥∥∥∥∥, Sadhana Prasad∥∥∥∥∥∥∥, Samuel C. Scherer∥∥∥∥∥∥∥∥, Lehana Thabane∥∥∥∥∥∥∥∥∥, John D. Wark∥∥∥∥∥∥∥∥∥∥, Lora M. Giangregorio∥∥∥∥∥∥∥∥∥∥∥. 1University of Waterloo, Canada, 2McMaster University, Canada, 3University of British Columbia, Canada, 4University of Toronto, Canada, 5Curtin University, Australia, 6Women’s College Hospital, Canada, 7GERAS Centre for Aging Research, Canada, 8Cancer Care Ontario, Canada, 9University of Melbourne, Australia
Disclosures: Jenna C. Gibbs, None

MON-0852 Changes in Vascular Calcification and Bone Mineral Density in Calcium Supplement Users from the Canadian Multi-center Osteoporosis Study (CaMOS).
Maggie Hulbert*, Rachel Holden. 1Queen’s University, Canada, 2Kingston General Hospital, Canada
Disclosures: Maggie Hulbert, None

MON-0853 3D analysis of the cortical and trabecular bone of elite female athletes involved in high- and low-impact sports
Ludovic Humbert*, Luis Del Río, Antonia Lizzarraga, Montserrat Bellver, Renaud Winzenrieth, Aminéh Amáni, Franck Drobnic. 1Galgo Medical, Spain, 2CETIR Centre Medica, Spain, 3Football Club Barcelona, Spain, 4Centro de alto Rendimiento, Spain
Disclosures: Ludovic Humbert, Galgo Medical, Major Stock Shareholder

MON-0854 Yoga-related bony spine injuries
Melody Lee*, Mehrsheed Sinaki. Mayo Clinic, United States
Disclosures: Melody Lee, None

MON-0855 Relationships between high sodium intake and trabecular bone score as well as fracture in postmenopausal women
Kiyoko Nawata*, Mika Yamauchi, Masahiro Yamamoto, Toshihito Sugimoto. 1Health and Nutrition, The University of Shimane, Faculty of Nursing and Nutrition, Japan, 2Internal Medicine 1, Shimane University Faculty of Medicine, Japan
Disclosures: Kiyoko Nawata, None

MON-0856 A Randomized Trial of Vitamin D Supplementation in Healthy Inner-city Children
Christine Simpson*, Jane Zhang, Dirk Vanderschueren, Lei Fu, Teresa Pennestri, Roger Bouillon, David Cole, Thomas Carpenter. 1Yale University School of Medicine, United States, 2VA Connecticut Healthcare System, United States, 3Katholieke Universiteit Leuven, Belgium, 4University of Toronto, Canada
Disclosures: Christine Simpson, None

MON-0857 Low T3 is Associated with Decreased Bone Turnover Rate in Exercising Women with Eumenorrhea and Amenorrhea
Emily Southmayd*, Andrew Oneglia, Rebecca Mallinson, Nancy Williams, Mary Jane De Souza. The Pennsylvania State University, United States
Disclosures: Emily Southmayd, None

MON-0858 Supervised high intensity resistance and impact training does not cause vertebral crush fractures and improves thoracic kyphosis in postmenopausal women with low to very low bone mass: The LIFTMOR Trial
Steven Watson*, Benjamin Weeks, Lisa Weis, Amy Harding, Sean Horan, Belinda Beck. 1School of Allied Health Sciences, Griffith University, Gold Coast, Australia, 2The Bone Clinic, Brisbane, Queensland, Australia
Disclosures: Steven Watson, None
POSTERS - PATHOPHYSIOLOGY

MON-0871 Kynurenine Regulates Osteogenesis in Aging Through miRNAs 29b-1-5p and 141-3p
Khaled Hussein*, Ahmed Elmansi, Sudharsan Periyasamy-Thanadav, Galina Kondrikova, Wendy Bollag, Sadanand Fulzele, Xingming Shi, Meghan Meege-Lawrence, Mark Hamrick, Carlos Isales, William Hill. 1Department of Cellular Biology and Anatomy, Augusta University, United States, 2Department of Cellular Biology and Anatomy, Augusta University, Georgia, 3Department of Physiology, Augusta University, United States, 4Department of Orthopedic Surgery, Medical College of Georgia, United States, 5Department of Neuroscience and Regenerative Medicine, Augusta University, United States
Disclosures: Khaled Hussein, None

MON-0872 Exome sequencing and functional follow-up identifies KIF26B as a novel genetic determinant of familial osteoporosis
Melissa M Formosa*, Robert Formosa, Herma C Van Der Linde, Juriaan R Metz, Gert Flik, Deepak Kumar Khajuria, David Karasik, M Carola Zillikens, Rob Willemsen, Andre G Uitterlinden, Tjakko J Van Ham, Fernando Rivadeneira, Annemiek Jnh Verkerk, Angela Xuer-e-Anastasi. 1Department of Applied Biomedical Science, Faculty of Health Sciences, University of Malta, Msida, Malta, 2Department of Medicine, Faculty of Medicine and Surgery, University of Malta, Msida, Malta, 3Department of Clinical Genetics, Erasmus University Medical Center, Rotterdam, Netherlands, 4Department of Animal Physiology, Institute for Water and Wetland Research, Faculty of Science, Radboud University Nijmegen, Nijmegen, Netherlands, 5The Musculoskeletal Genetics Laboratory, Azrieli Faculty of Medicine, Bar-Ilan University, Safed 1311502, Israel, 6Department of Internal Medicine, Erasmus University Medical Center, Rotterdam, Netherlands
Disclosures: Melissa M Formosa, None

MON-0873 MIR4697HG knockdown prevents ovariectomy-induced osteoporosis in mice
Chanyuan Jin*, Yongsheng Zhou. Peking University School and Hospital of Stomatology, China
Disclosures: Chanyuan Jin, None

MON-0874 Age related changes in bone microstructure, bone turnover markers, and serum pentosidine levels: HR-pQCT study in healthy Japanese men
Narihiro Okazaki*, Ko Chiba, Mitsuru Doi, Kazuaki Yokota, Makoto Osaki. Department of Orthopaedic Surgery, Nagasaki University Hospital, Japan
Disclosures: Narihiro Okazaki, None

MON-0875 Upregulated osteoclastogenesis and accelerated mineralization associated with perlecan deficiency were rescued by exogenous heparin treatment in vitro
Ashutosh Parajuli*, Ping Li, Jerahme Martinez, Catherine Kiri-Safran, Liyun Wang. University of Delaware, United States
Disclosures: Ashutosh Parajuli, None

MON-0876 Atrophic Non-union Fracture is Caused by Severe Damage on Periosteal Mesenchymal Progenitors and Fibrosis Derived from Non-osseous Tissue.
Luqiang Wang*, Robert Tower, Abhishek Chandra, Yeqia Zhang, Xiaowei Liu, Joel Boerckel, Xiaodong Guo, Jaimo Ahn, Ling Qin. 1Department of Orthopaedic Surgery, Perelman School of Medicine, University of Pennsylvania, United States, 2Department of Physiology and Biomedical Engineering, Division of Geriatric Medicine & Gerontology, Mayo Clinic, United States, 3Department of Orthopaedics, Union Hospital, Tongji Medical college, Huazhong University of science and Technology, China, 4Orthopaedic Trauma and Fracture Reconstruction, Perelman School of Medicine, University of Pennsylvania, United States
Disclosures: Luqiang Wang, None

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MON-0895  Bone mass of bariatric patients may recalibrate to new body weight
Andrew Froehle*1, Richard Sherwood2, Richard Laughlin1, Dana Duren2. 1Wright State University, United States, 2University of Missouri, United States
Disclosures: Andrew Froehle, None

MON-0897  Evaluation of bone indices by DXA and HR-pQCT in newly diagnosed hyperthyroidism due to Graves’ Disease and associations with disease severity.
Diana Grove-Laugesen*1, Klavs Würgler Hansen2, Eva Ebbehoj1, Torquil Watt1, Lars Rejnum1, 1Aarhus University Hospital, Denmark, 2Regionsospitalta Silkeborg, Denmark
Disclosures: Diana Grove-Laugesen, None

MON-0898  Bone Fragility after Spinal Cord Injury: Reductions in Stiffness and Bone Mineral at the Distal Femur and Proximal Tibia as a Function of Time.
Ifaz Haider*1, Stacey Lobos1, Narina Simonian2, Thomas Schnitzer3, W Brent Edwards1. 1University of Calgary, Canada, 2Northwestern University, United States
Disclosures: Ifaz Haider, None

MON-0899  EFFECT OF TNF INHIBITORS ON BONE MICROARCHITECTURE IN PATIENTS WITH ANKYLOSING SPONDYLITIS: A LONGITUDINAL STUDY BASED ON HIGH-RESOLUTION PERIPHERAL QUANTITATIVE BASED (HRPQCT)
Nisha Nigil Haroon*1, Angela Cheung2, Robert Inman1. 1NOSM, Canada, 2University of Toronto, Canada
Disclosures: Nisha Nigil Haroon, AMGEN, Grant/Research Support

MON-0900  Bone Mass, Geometry and Strength in Postmenopausal Women with Type 1 Diabetes
Viral Shah*, Prakriti Joshee, Rachel Sippl, Dana Carpenter, Wendy Kohrt, Janet Snell-Bergeon. University of Colorado Denver, United States
Disclosures: Viral Shah, None

MON-0901  Longitudinal Analysis of the Association between Glycemic Control and Sclerostin in Male Patients with Type 2 Diabetes
Reiko Watanabe*, Nobuyuki Tai, Junko Hirano, Yoshiyuki Ban, Daisuke Inoue, Ryo Okazaki. Teikyo University Chiba Medical Center, Japan
Disclosures: Reiko Watanabe, None

MON-0943  Improvement of the functional status after CT-guided radiofrequency sacroplasty (RFS) and cement sacroplasty (CSP) in patients with insufficiency fractures of the sacrum – a prospective randomised comparison of methods
Reimer Andresen*1, Sebastian Radmer1, Julian Ramin Andresen1, Mathias Wollny1, Urs Nissen1, Hans-Christof Schober1. 1Institute of Diagnostic and Interventional Radiology/Neuroradiology, Westkuestenklinikum Heide, 2Academic Teaching Hospital of the Universities of Kiel, 3Luebeck and Hamburg, Heide, Germany
Disclosures: Reimer Andresen, None

MON-0944  Abaloparatide Increases Bone Formation and Mass in Orchiectomized Male Rats with No Effect on Bone Resorption
Heidi Chandler*, Daniel Brooks1, Kenichi Nagano2, Dorothy Hu3, Mary Bouxsein2, Roland Baron1, Gary Hattersley1, Beate Lanske1. 1Radius Health Inc, United States, 2Beth Israel Hospital, Harvard Medical School, United States, 3Harvard School of Dental Medicine and Harvard Medical School, United States
Disclosures: Heidi Chandler, Radius Health Inc, Other Financial or Material Support
MON-0945 A Bisphosphonate with Low HA-Binding Affinity Prevents Bone Loss after Estrogen Loss and Reverses Rapidly when Treatment Ceases
City College of New York, United States, Indiana University School of Medicine, United States, University of Rochester, United States
Disclosures: Abigail Coffman, None

MON-0946 Denosumab treatment improves health related quality of life in patients with osteoporosis
Koji Fukuda, Shinya Hayashi, Hanako Nishimoto, Yoshitada Sakai, Yasushi Miura, Ryosuke Kuroda, Tomoyuki Matsumoto, Koji Takayama, Shingo Hashimoto. Kobe University Graduate School of Medicine, Japan
Disclosures: Koji Fukuda, None

MON-0947 Multiple spontaneous vertebral fractures only 2 months after a missed dose of Denosumab
Sonaina Imtiaz, Tamara Vokes. University of Chicago, United States
Disclosures: Sonaina Imtiaz, None

MON-0948 Assessing the Ability of Baseline Bone Turnover Markers to Predict the BMD Response for Denosumab Treatment in Patients with Osteoporosis: A Multicenter, Retrospective, Observational Study.
Koji Ishikawa, Takashi Nagai, Yusuhe Oshita, Msayuku Miyagi, Gen Inoue, Takeshi Eguro, Kazuaki Handa, Tomoaki Toyone, Katsunori Inagaki.
Department of Orthopaedic Surgery, Showa University School of Medicine, Japan, Department of Orthopaedic Surgery, Showa University Northern Yokohama Hospital, Japan, Department of Orthopaedic Surgery, Kitasato University, School of Medicine, Japan, Department of Orthopaedic Surgery, Yamanashi Red Cross Hospital, Japan
Disclosures: Koji Ishikawa, None

MON-0949 An Approach to Defining Bisphosphonate Exposure in Observational Studies Using Pharmacy Databases
Monika Izano, Romain Neugebauer, Bruce Ettinger, Rita Hui, Malini Chandra, Annette Adams, Fang Niu, Susan Ott, Joan Lo.
Division of Research, Kaiser Permanente Northern California, United States, Pharmacy Outcomes Research Group, Kaiser Permanente California, United States, Department of Research & Evaluation, Kaiser Permanente Southern California, United States, Department of Medicine, University of Washington, United States
Disclosures: Monika Izano, None

MON-0950 Denosumab therapy improved bone mineral density in Japanese geriatric osteoporotic patients previously treated with bisphosphonates
Jiro Kato, Shusuke Ota, Takanobu Doi, Daiki Yonezu, Yasuyoshi Okamoto, Yuji Joyo. Department of Orthopaedic Surgery, Shizuoka Medical Center, National Hospital Organization, Japan
Disclosures: Jiro Kato, None

MON-0951 Osteoporosis Treatment Rate Following Hip Fracture in a Community Hospital
Farhan Tariq, Moin Khan, Madiha TAUqir, Paul Zalzal, Sacha Dubois, Rafik El Werfalli, Simona Abd, Bradley Weening, Mark Ginty, Hajar Abu Alrob, Aliya Khan.
McMaster University, Canada, Lakehead University, Canada
Disclosures: Farhan Tariq, None

MON-0952 Improvement of anti-osteoporosis medication after multimodal intervention in patients with hip fracture: prospective multicenter study
Deog-Yoon Kim, Hyoung Moo P, Yong-Chan Ha. Kyung Hee University Hospital, Republic of Korea, Grace Women’s Hospital, Republic of Korea, Chung-Ang University, Republic of Korea
Disclosures: Deog-Yoon Kim, None
MON-0953  A retrospective review of initial bisphosphonate infusion in an inpatient vs. outpatient setting for bisphosphonate naïve patients.
Rose Kreikemeier*, Eric Rush, Lisa Halbur, Heather Gosnell. Childrens Hospital & Medical Center, United States

Disclosures: Rose Kreikemeier, None

MON-0954  Local Osteo-Enhancement Procedure Increases Femoral Raw Trabecular Bone Score (rTBS) at 5-7 Year Follow-up in Osteoporotic Patients
Christophe Lelong*, John Stroncek, James Howe, Bryan Huber, Ronald Hill, Didier Hans. 1Medimaps Group Plan-les-Ouates, Switzerland, 2AgNovos Healthcare, United States, 3Copley Hospital, United States, 4Lausanne University Hospital, Switzerland

Disclosures: Christophe Lelong, Medimaps, Other Financial or Material Support

MON-0955  Global Development of Bone Health TeleECHO to Improve the Care of Patients with Skeletal Diseases
E. Michael Lewiecki*, Rachelle Rochelle, Matthew F. Bouchonville, Avery Jackson, Anne Lake, John Carey, Zhanna Belaya, Varta Babalyan, Diana Wiluzanski. 1New Mexico Clinical Research & Osteoporosis Center, United States, 2UNM Health Sciences Center, United States, 3University of Michigan Neurosurgical Institute, United States, 4Wake Forest University, United States, 5NUI Galway, Ireland, 6National Centre for Endocrinology, Russian Federation, 7Armenian Osteoporosis Association, Armenia, 8Centroseo - Densitometria Osea, Uruguay

Disclosures: E. Michael Lewiecki, None

MON-0956  The Effects of Bisphosphonate at the Nanoscale: Effects on Bone Collagen, Mineral Strain and Collagen-Mineral Interaction
Shaocheng Ma*, En Lin Goh, Angelo Karunaratne, Crispin Wiles, Yong Wu, Oliver Boughton, Tabitha Tay, John Churchwell, Rajarshi Bhattacharya, Nick Terrill, Justin Cobb, Ulrich Hansen, Richard Abel. 1MEng, United Kingdom, 2BSc, United Kingdom, 3PhD, MEng, Sri Lanka, 4MSc, United Kingdom, 5MBBS, MRCS, BSc, United Kingdom, 6PhD, MSc, United Kingdom, 7MBBS, MRCS, MRCSGlas, MSc, FRCS, United Kingdom, 8PhD, United Kingdom, 9MBBS, MRCS, FRCS, United Kingdom

Disclosures: Shaocheng Ma, None

MON-0957  A multicenter, randomized, open label, parallel group study to evaluate the efficacy of loxoprofen on acute-phase reactions in Japanese primary osteoporosis patients treated with zoledronic acid
Akinori Sakai*, Satoshi Ikeda, Hidehiro Matsumoto, Nobukazu Okimoto, Kunitaka Menuki, Tomohiro Kobayashi, Toru Yoshioka, Toru Ishikura, Saeko Fujiwara. 1Department of Orthopedic surgery, School of Medicine, University of Occupational and Environmental Health, Fukuoka, Japan, 2Department of Orthopedic Surgery, Ken-Ai Memorial Hospital, Japan, 3Department of Orthopedic Surgery, Sanzai Hospital, Japan, 4Okimoto Clinic, Japan, 5Department of Orthopedic surgery, Shimura Hospital, Japan, 6Department of Orthopedics, Youmeikai Obase Hospital, Japan, 7Faculty of Pharmacy, Yasuda Women’s University, Japan

Disclosures: Akinori Sakai, None

MON-0958  Anti-sclerostin Antibodies for the Treatment of Osteoporosis: A Systematic Review and Meta-analysis
Xerxes Pundole*, Maria Lopez-Olivo, Maria Suarez-Almazor, Huifang Lu. Department of General Internal Medicine, Section of Rheumatology and Clinical Immunology, The University of Texas MD Anderson Cancer Center, United States

Disclosures: Xerxes Pundole, None
MON-0959 Effectiveness of Intravenous Ibandronate on Bone Mineral Density in Patient with Osteoporosis Treated with Oral Bisphosphonate Low-responders -MOVEMENT Study-
Hiroshi Hagino*, Akinori Sakai ², Satoshi Ikeda ³, Yasuo Imanishi ⁴, Hiroshi Tsurukami ⁴, Satoru Nakajo ⁵, Naohisa Miyakoshi ⁷. ¹Tottori University, Japan, ²University of Occupational and Environmental Health, Japan, ³Ken-Ai Memorial Hospital, Japan, ⁴Osaka City University Graduate School of Medicine, Japan, ⁵Tsurukami Clinic of Orthopedics and Rheumatology, Japan, ⁶Nakajou Orthopaedic Clinic, Japan, ⁷Akita University Graduate School of Medicine, Japan

MON-0960 A fracture liaison in an orthopaedic office did not improve adherence to treatment for patients with osteoporosis
Patricia Seuffert*, Carlos A. Sagebein ², Dorene O’ Hara ². ¹University Orthopaedic Associates, LLC, United States, ²UOA, LLC, United States
Disclosures: Patricia Seuffert, None

MON-0961 Teriparatide improves healing of medication-related osteonecrosis of the jaw: a placebo-controlled, randomized trial
Ie-Wen Sim*, Gelsomina Borromeo ², John Seymour ³, Peter Ebeling ⁴. ¹Melbourne Medical School, University of Melbourne, Australia, ²Eastern Health Clinical School, Monash University, Australia, ³Department of Haematology, Peter MacCallum Cancer Centre, Australia, ⁴Department of Medicine, Monash University, Australia
Disclosures: Ie-Wen Sim, None

PARACRINE REGULATORS

MON-0970 Sex and Diet Specific Differences In Bone Mass of 4 Mouse Strains: Can Mice Tell Us What to Eat for Bone Health?
Rihana Bokhari*, Peter Schneider, William Barrington, Alyssa Falck, Alexis Mitchell, Shannon Huggins, Diarra Williams, Larry Suva, David Threadgill, Dana Gaddy. Texas A&M University, United States
Disclosures: Rihana Bokhari, None

MON-0971 Immune system, bone and fat axis: the role of LIGHT/TNFSF14
Giacomina Brunetti*, Graziana Colaianni ², Sara Bortolotti ², Giuseppina Storlino ², Adriana Di Benedetto ³, Maria Felicia Faienza ³, Carl Ware ³, Silvia Colucci ³, Maria Grano ³. ¹Department of Basic and Medical Sciences, Neurosciences and Sense Organs, Section of Human Anatomy and Histology, University of Bari, Italy, ²Department of Emergency and Organ Transplantation, Section of Human Anatomy and Histology, University of Bari, Italy, ³Department of Clinical and Experimental Medicine, University of Foggia, Foggia, Italy, ⁴Department of Biomedical Sciences and Human Oncology, Section of Pediatrics University of Bari, Bari, Italy, ⁵Infectious and Inflammatory Disease Center, Sanford Burnham Prebys Medical Discovery Institute, La Jolla, CA, United States
Disclosures: Giacomina Brunetti, None

MON-0972 Deletion of CXCL12 in Osteoblasts and Osteocytes Results in Lower Trabecular Bone Volume
Chao Liu*, Pamela Cabahug, Shahar Qureshi, Olivia Patton, Cinyee Cai, Alesha Castello. New York University, United States
Disclosures: Chao Liu, None
MON-1004  Intra-articular Parathyroid Hormone (1-34) Improved Knee function in Aging-related Osteoarthritis without Affecting Subchondral Bone
Chung-Hwan Chen*, Ling-Hua Chang, Sung-Yen Lin, Lin Kang, Yi-Shan Lin, Shun-Cheng Wu, Je-Ken Chang, Mei-Ling Ho, Shih-Tse Chen. 1. Kaohsiung Medical University, Taiwan, 2. National Cheng Kung University, Taiwan, 3. National Taiwan University Hospital Hsin-Chu Branch, Taiwan

Disclosures: Chung-Hwan Chen, None

MON-1005  Bariatric Surgery in mice leads to decreased bone mass over time
Katrien Corbeels*, Lieve Verlinden, Matthias Lannoo, Ann Mertens, Christophe Matthys, Annemieke Verstuyf, Ann Meulemans, Geert Carmeliet, Bart Van Der Schueren. KU Leuven, Department of Chronic Diseases, Metabolism & Ageing (CHROMETA), Clinical and Experimental Endocrinology, Leuven, Belgium

Disclosures: Katrien Corbeels, None

MON-1006  High Dose Calcitriol Induces Vascular Calcification in Non-CKD Rats
Corey Forster*, Kimberly Laverty, Cynthia Pruss, Mandy Turner, Rachel Holden, Michael Adams. 1. Queen’s University Department of Biomedical and Molecular Sciences, Canada, 2. Queen’s University Department of Medicine, Canada

Disclosures: Corey Forster, None

MON-1007  Treatment with LpPLA2 inhibitor reduces osteoporotic bone loss in diabetic and hypercholesterolemic pig model.
Theresa Freeman*. Thomas Jefferson University, United States

Disclosures: Theresa Freeman, None

MON-1008  Combined Caloric and Dietary Protein Restriction Has a Synergistic Negative Impact on Bone Mass
Ke-Hong Ding*, Tianyang Guo, Jianrui Xu, Qing Zhong, Wendy Bollag, Meghan Mcgee-Lawrence, William Hill, Xing-Ming Shi, Mohammed Elsalanty, Sadanand Fulzele, Beom-Jun Kim, Mark Hamrick, Carlos Isales. 1. Medical College of Georgia, United States, 2. Charlie Norwood VA Medical Center, United States, 3. School of Dental Medicine, United States, 4. University of Ulsan College of Medicine, Republic of Korea

Disclosures: Ke-Hong Ding, None

MON-1009  Repurposing PDE5 Inhibitors for Osteoporosis – Erecting Bone
Se-Min Kim*, Li Sun, Lubna Munshi, Tony Yuen, Mone Zaidi. Icahn School of Medicine at Mount Sinai, United States

Disclosures: Se-Min Kim, None

MON-1010  Apolipoprotein A-I Prevents Osteoporosis and Promotes Osteogenesis of Mesenchymal Stem Cells via STAT3 and CXCL6/8
Yu-Chuan Liu*, Jean Lu. Genomic Research Center, Academia Sinica, Taiwan

Disclosures: Yu-Chuan Liu, None

MON-1011  Butyrate Mediates The Bone Anabolic Activity Of The Probiotic L. rhamnosus GG Via A Regulatory T Cell Mediated Pathway
Abdul Malik Tyagi*, Mingcan Yu, Trevor M. Darby, Chiara Vaccaro, Jau-Yi Li, Joshua A. Owens, Emory Hsu, Jonathan Adams, Rheinallt M. Jones, Roberto Pacifici. Emory University, United States

Disclosures: Abdul Malik Tyagi, None

MON-1012  Influence of a 17β-hydroxysteroid dehydrogenase type 2 (17β-HSD2) selective inhibition on ovariectomy induced bone loss in Wistar rats
Sebastian T. Müller*, Sophie Pählig, Ahmed Merabet, Chris Van Koppen, Sandrine Marchais-Oberwinkler, Rolf W. Hartmann, Günter Vollmer. 1. Technische Universität Dresden, Molecular Cell Physiology and Endocrinology, Institute for Zoology, Dresden, Germany, 2. Institute for Pharmaceutical Chemistry, Philipps University Marburg, 35032 Marburg, Germany, 3. Pharmaceutical and Medicinal Chemistry, Saarland University, Campus E8.1, 66123 Saarbrücken, Germany

Disclosures: Sebastian T. Müller, None
MON-1013  Bilateral Distal Femoral Epiphyseal Defect Models for Safety Testing: A 5-Week Rat Bone Healing Study  
Luis Fernando Negro Silva*, Julius Haruna1, Pritpal Malhi1, Simon Authier1, Yannick Trude2, Raluca Kubaszky1, Michel Assad2.  
1Citoxlab North America, Canada, 2AcceLAB Inc., Canada  
Disclosures: Luis Fernando Negro Silva, None

MON-1014  Prevention of spaceflight-induced Osteoarthritis: a potential dietary countermeasure  
Elizabeth Blaber*, Ann-Sofie Schreurs. NASA USRA, United States  
Disclosures: Elizabeth Blaber, None

MON-1015  Anatomic Deconvolution of Vascular and Osteoanabolic Responses in Osseointegration  
Kathleen Turajane*, Ed Purdue1, Gang Ji1, Ugur Ayturk1, Matthew Greenblatt2, Xu Yang1, Mathias Bostrom1.  
1Hospital for Special Surgery, United States, 2Weill Cornell Medical College, United States  
Disclosures: Kathleen Turajane, None

MON-1016  Measurement of lipid metabolites in a mouse model of breast cancer using imaging mass spectrometry shows specific signals linked to CYP27B1 gene ablation  
Mengdi Xing *, Jiarong Li1, Ethan Yang 2, Pierre Chaurand 2, Richard Kremer1.  
1RI MUHC, Canada, 2University Montreal, Canada  
Disclosures: Mengdi Xing, None

MON-1017  Calcium absorption is positively affected by feeding a yogurt containing GOS obtained from enzymatic action on milk lactose. Experimental study.  
1Laboratorio de Enfermedades Metabólicas Óseas, Instituto de Inmunología, Genética y Metabolismo (INGEM). Facultad de Farmacia y Bioquímica. Hospital de Clínicas, CONICET-UBA, Argentina, 2Instituto de Lactología Industrial (INLAIN) –Universidad Nacional del Litoral/CONICET, Facultad de Ingeniería Química, Santa Fe. Argentina, Argentina, 3Cátedra de Nutrición. Facultad de Farmacia y Bioquímica – UBA, Argentina  
Disclosures: M Seijo, None

MON-1018  Engineering Dual-Specific M-CSF Antagonists That Inhibit c-FMS And αvβ3 Integrin As Anti Resorptive Compounds  
Yuval Zur*, Lior Rosenfeld1, Gali Guterman - Ram2, Niv Papo1, Noam Levaot2.  
1Department of Biotechnology Engineering and the National Institute of Biotechnology in the Negev, Ben-Gurion University of the Negev, Beer-Sheva, Israel, 2Department of Physiology and Cell Biology, Ben-Gurion University of the Negev, Beer-Sheva, Israel  
Disclosures: Yuval Zur, None

RARE BONE DISEASES: CLINICAL

MON-1058  Novel mutations in fibronectin associated with metaphyseal fractures – Expanding the phenotype of patients with a subtype of spondylomethaphyseal dysplasia with “corner fractures”  
Jessica J. Alm*, Alice Costantini1, Helena Valta2, Nissan Vida Baratang3, Patrick Yap4, Débora Bertola4, Guilherme Yamamoto5, Chong A. Kim5, Jiani Chen6, Klaas J. Wierenga6, Elizabeth A Fanning6, Luis Escobar7, Kirsty Mcwalter8, Débora Bertola, Jennifer A. Price9, Dieter P. Reinhardt9, Outi Mäkitie10, Philippe M Campeau11,12,13,14.  
1Clinical Genetics, Center for Molecular Medicine, Karolinska Institutet, Sweden, 2Children’s Hospital, University of Helsinki and Helsinki University Hospital, Finland, 3CHU Sainte Justine Research Centre, University of Montr, Canada, 4Genetic Health Service New Zealand (Northern Hub), New Zealand, 5Clinical Genetics Unit, Instituto da Criança HC-FMUSP and Instituto de Biociências- Universidade de São Paulo, Brazil, 6University of Oklahoma Health Sciences Center, United States, 7Medical Genetics and Neurodevelopmental Pediatrics, St Vincent Children’s Hospital, Indianapolis, United States, 8GeneDx, United States, 9Department of Anatomy and Cell Biology, McGill University, Montreal, Canada, 10Children’s Hospital, University of Helsinki and Helsinki University Hospital, Finland, 11Department of pediatrics, University of Montreal, Canada  
Disclosures: Jessica J. Alm, None
MON-1059 **Quality Of Life is Not Impaired In Patients With Isolated Craniofacial Fibrous Dysplasia**
Marlous Rotman*, Natasha Appelman-Dijkstra, Stijn Genders, Sander Dijkstra, Neven Hamdy. LUMC, Netherlands
*Disclosures: Marlous Rotman, None

MON-1060 **High prevalence of enthesopathies in patients with X-Linked Hypophosphatemia**
Axelle Salcian *, Louis Lassalle², Valérie Merzoug³, Alessia Usardi ⁴, Anya Rothenbuhler⁴, Peter Kamenicky⁵, Christian Roux ⁶, Agnès Linglart ⁷, Karine Briot ⁸. ¹French Reference Center for Genetic Bone Diseases, Cochin Hospital, AssistancePublique- Hôpitaux de Paris, Paris, France, ²Department of Radiology, Cochin Hospital, AssistancePublique- Hôpitaux de Paris, France, ³Kremlin Bicêtre, France, ⁴Department of Pediatric Endocrinology, Reference Center for Rare Disorders of Calcium and Phosphate, Kremlin Bicêtre Hospital Assistance, France, ⁵Department of Endocrinology, Kremlin Bicetre Hospital, Assistance, France, ⁶Department of Rheumatology, French Reference Center for Genetic Bone Diseases, Cochin Hospital, AssistancePublique- Hôpitaux de Paris, France, ⁷Department of Pediatric Endocrinology, Reference Center for Rare Disorders of Calcium and Phosphate, France
*Disclosures: Axelle Salcian, None

MON-1061 **Homozygous Calcium-sensing Receptor Polymorphism R544Q Presents as Hypocalcemic Hypoparathyroidism**
Lucie Canaff*, Branca M. Cavaco², Alexis Nolin-Lapalme¹, Margarida Vieira², Tiago Silva¹, Ana Saramago², Rita Domingues², Valeriano Leite², Geoffrey N. Hendy¹. ¹Metabolic Disorders and Complications, McGill University Health Centre Research Institute, Canada, ²Instituto Português de Oncologia de Lisboa Francisco Gentil, Portugal
*Disclosures: Lucie Canaff, None

MON-1062 **Cardiopulmonary Outcomes in Adults with Osteogenesis Imperfecta**
Sobiah Khan*, Erin Carter¹, Robert Sandhaus², Cathleen Raggio¹. ¹Hospital for Special Surgery, United States, ²National Jewish Health, United States
*Disclosures: Sobiah Khan, None

MON-1063 **Asymmetric metaphyseal dysplasia due to COL2A1 mutation with mosaicism**
Lisa Cruz-Aviles, Md¹*, Thomas O. Carpenter, Md¹, Allen E. Bale, Md², Cemre Robinson, Md². ¹Yale University School of Medicine, Department of Pediatrics, Section of Endocrinology, United States, ²Department of Genetics, Yale School of Medicine, United States
*Disclosures: Lisa Cruz-Aviles, Md, None

MON-1064 **Multiple Endocrine Neoplasia, type 4 - a Novel CDKN1B Mutation with High Penetrance of Primary Hyperparathyroidism**
Anja Lisbeth Frederiksen*, Maria Rosling¹, Anne Pernille Hermann³, Charlotte Ejersted⁴, Morten Frost¹. ¹Dept.of Clinical Genetics, Odense University Hospital, Denmark, ²Center of Genomic Medicine, Copenhagen University Hospital, Denmark, ³Dept. of Endocrinology M, Odense University Hospital, Denmark, ⁴Dept of Endocrinology M, Odense University Hospital, Denmark, ⁵Steno Diabetes Centre, Odense, Dept. of Endocrinology M and KMEB, Odense University Hospital, Denmark
*Disclosures: Anja Lisbeth Frederiksen, None

MON-1065 WITHDRAWN
MON-1066  Palovarotene Reduces New Heterotopic Ossification in Fibrodysplasia Ossificans Progressiva (FOP)  
Frederick S. Kaplan*, Edward C. Hsiao†, Geneviève Baujat‡, Richard Keen¶, Carmen De Cunto†, Maja Di Rocco§, Matthew A. Brown¶, Mona M. Al Mukaddam¶, Donna R. Grogan†, Robert J. Pignolo∥. 1Perelman School of Medicine, The University of Pennsylvania, United States, 2Division of Endocrinology and Metabolism, University of California, San Francisco, United States, 3Groupe Hospitalier Necker Enfants Malades, France, 4Royal National Orthopaedic Hospital, Brockley Hill, United Kingdom, 5Affiliation Department of Pediatrics/Hospital Italiano de Buenos Aires, Argentina, 6Unit of Rare Diseases, Department of Pediatrics, Gaslini Institute, Italy, 7Institute of Health and Biomedical Innovation, Queensland University of Technology, Australia, 8The University of Pennsylvania, Center for Research in FOP and Related Disorders, United States, 9Clementia Pharmaceuticals Inc., United States, 10Mayo Clinic College Of Medicine, Division of Geriatric Medicine & Gerontology, United States  
Disclosures: Frederick S. Kaplan, None

MON-1067  Melorheostosis: a case series of different imaging phenotypes  
Anupam Kotwal*, Bart Clarke, Jane Matsumoto. 1Division of Endocrinology, Diabetes, Metabolism, and Nutrition, Mayo Clinic, United States, 2Department of Radiology, Mayo Clinic, United States

MON-1068  Vitamin D Deficiency Rickets Complicating Severe Childhood Hypophosphatasia: Response to Sequential Therapy with Vitamin D then Asfotase Alfa  
Elizabeth L. Lin*, Gary S. Gottesman, William H. McAlaster, Steven Mumm, Michael P. Whyte. 1Division of Bone and Mineral Diseases, Department of Internal Medicine, Washington University School of Medicine, United States, 2Center for Metabolic Bone Disease and Molecular Research, Shriners Hospital for Children, United States, 3Mallinckrodt Institute of Radiology, Washington University School of Medicine at St. Louis Children’s Hospital, United States

MON-1069  Early Diagnosis of Gaucher Disease with Focus in Bone Affection (BIG Project) Argentinean Experience  
Beatriz Oliveri*, Diana Gonzalez, Paula Rozenfeld, Camilo Lis, Omar Riemersma, Martin Kot. 1Laboratorio de Osteoporosis y Enfermedades Metabólicas Óseas. Instituto de inmunología, Genética y Metabolismo (INIGEM) CONICET-UBA Hospital de Clinicas, Argentina, 2Mautalen, Salud e Investigación, Argentina, 3IFP, Universidad Nacional de La Plata, CONICET, Facultad de Ciencias Exactas, Departamento de Ciencias Biológicas, Argentina, 4Shire, Argentina  
Disclosures: Beatriz Oliveri, shire, Speakers’ Bureau

MON-1071  Cone-Beam Computed Tomography of Osteogenesis Imperfecta Types III and IV: Three-Dimensional Evaluation of Craniofacial Features and Upper Airways  
Natalie Reznikov*, Didem Dagdeviren, Faleh Tamimi, Francis Glorieux, Frank Rauch, Jean-Marc Retrouvey. McGill University, Canada

MON-1072  A Novel Case of Human Osteopetrosis Associated with Glanzmann’s Thrombasthenia Due to a Homozygous Pathogenic Mutation in ITGB3  
Jennifer Sarhis Avigdor*, Gary M Kupfer, Allen Bale, Thomas O Carpenter. Yale University School of Medicine, United States  
Disclosures: Jennifer Sarhis Avigdor, None

MON-1073  Complications in patients with autosomal dominant hypocalcemia compared with non-surgical hypoparathyroidism  
Line Underbjerg*, Tanja Sikjaer, Lars Rejnmark. 1MD, PhD, Denmark, 2Professor, senior consultant, Denmark  
Disclosures: Line Underbjerg, None
MON-1074  
**Identification and Molecular Analysis of a Potential Disease-causing Mutation in ZMAT2 in Congenital Radioulnar Synostosis**

Takako Suzuki*, Yukio Nakamura*, Tatsuya Kobayashi, Hirohiko Kato. 1Shinshu University School of Medicine, Japan, 2Endocrine Unit, Massachusetts General Hospital and Harvard Medical School, United States

*Disclosures:* Takako Suzuki, None

MON-1075  
**Follow-up After Discontinuation of Bisphosphonate Treatment in Osteogenesis Imperfecta When Skeletal Maturity is Complete**

Pamela Trejo*, Telma Palomo, Francis Glorieux, Frank Rauch. 1Clinica Alemana Santiago, Chile, 2Shriners Hospital for Children Canada, Canada

*Disclosures:* Pamela Trejo, None

MON-1076  
**Lifelong Hyperphosphatasemia Without Low Plasma Pyridoxal 5′-Phosphate In A Healthy Boy With Uniquely Aberrant Bone Alkaline Phosphatase Yet Normal ALPL Gene Structure**

Michael P. Whyte*, Nina S. Ma, Gary S. Gottesman, Pamela S. Smith, Vinieth N. Bijani, Steven Mumm, Per Magnusson. 1Center for Metabolic Bone Disease and Molecular Research, Shriners Hospital for Children, United States, 2Division of Endocrinology, Boston Children’s Hospital, United States, 3Division of Pediatric Endocrinology and Diabetes, Washington University School of Medicine, United States, 4Division of Bone and Mineral Diseases, Department of Internal Medicine, Washington University School of Medicine at Barnes-Jewish Hospital, United States, 5Department of Clinical Chemistry, Linköping University, Sweden

*Disclosures:* Michael P. Whyte, None

**RARE BONE DISEASES: TRANSLATIONAL**

MON-1105  
**Controlling Periodontitis Prevents Medication-related Osteonecrosis of the Jaw-like Lesions in Rice Rats (Oryzomys palustris)**

Evelyn Castillo*, Abel Abraham, Jessica Jiron, Jonathan Messer, Joshua Yarrow, Donald Kimmel, Jose Aguirre. 1University of Florida, United States, 2Malcom Randall VAMC; University of Florida, United States

*Disclosures:* Evelyn Castillo, None

MON-1106  
**Pyrophosphate regulators, ANK and ENPP1, regulate cementogenesis and extracellular matrix protein expression**

Emily Chu*, Atsuhiro Nagasaki, Michael Chavez, Daniel Leigh, Tammy Vo, Alyssa Coulter, Vivek Thumbigere-Math, Demetrios Braddock, Martha Somerman, Brian Foster. 1NIAMS/NIH, United States, 2College of Dentistry, The Ohio State University, United States, 3University of Maryland School of Dentistry, United States, 4Yale School of Medicine, United States

*Disclosures:* Emily Chu, None

MON-1107  
**Health Burden of Hypophosphatasia in Adults: Results from a Self-Reported Study in the United Kingdom**

Sara Jenkins-Jones*, Laura Scott, Robert Desborough, Ioannis Tomazos, Richard Eastell. 1Global Epidemiology and Medical Statistics, Pharmatelligence, United Kingdom, 2University of Sheffield, United Kingdom, 3Alexion Pharmaceuticals, Inc., United States

*Disclosures:* Sara Jenkins-Jones, Alexion Pharmaceuticals, Inc, Other Financial or Material Support

MON-1108  
**Activation of the RANKL/OPG pathway is central to the pathophysiology of fibrous dysplasia and is associated with disease burden and pain**

Luis Fernandez De Castro Diaz*, Andrea B Burke, Howard Wang, Pablo Florenzano, Jeffrey Tsai, Kristen Pan, Bhattacharyya Nisan, Alison M Boyce, Rachel I Gafni, Alfredo Molinolo, Pamela G Robey, Michael Collins. 1Section on Skeletal Disorders and Mineral Homeostasis, National Institute of Dental and Craniofacial Research, National Institutes of Health, United States, 2National Institutes of Health, United States, 3University of California, San Diego, United States

*Disclosures:* Luis Fernandez De Castro Diaz, None
MON-1109 When bone collagen cross-linking fails: how abnormal collagen post-translational chemistry and cross-linking causes bone fragility in Bruck syndrome caused by PLOD2 mutations.

Charlotte Gistelinck*, Maryann Weis, Jyoti Rai, Peter H. Byers, David R. Eyre. University of Washington, United States

Disclosures: Charlotte Gistelinck, None

MON-1110 Inhibition of tyrosine kinase receptor C-ROS-1 as a novel treatment for patients with TWIST haploinsufficiency induced craniosynostosis

Esther Camp*, Peter Anderson, Andrew Zannettino, Stan Gronthos. 1Mesenchymal Stem Cell Laboratory, Adelaide Medical School, Faculty of Health and Medical Sciences, The University of Adelaide, Australia, 2Australian Craniofacial Unit Women’s & Children’s Hospital, Australia, 3Myeloma Research Laboratory, Adelaide Medical School, Faculty of Health and Medical Sciences, The University of Adelaide, Australia

Disclosures: Esther Camp, None

MON-1111 Identifying Molecular Pathways in Autosomal Recessive Hypophosphatemic Rickets Type 2 (ARHR2) by Mapping Genetic Changes Associated with ENPP1 Loss of Function

Nathan Maulding*, Kristin Zimmerman, Dillon Kavanagh, Mark Horowitz, Thomas Carpenter, Demetrios Braddock. 1Yale University, United States, 2Yale, United States

Disclosures: Nathan Maulding, None

MON-1112 Continuous infusion of PTHrP(7-36) Inverse Agonist Ameliorates the Delay in Endochondral Bone Formation in a Mouse Model of Jansen’s Metaphyseal Chondrodysplasia

Shigeki Nishimori*, Hiroshi Noda, Ernestina Schipani, Jun Guo, Thomas Gardella, Harald Juepner. 1Massachusetts General Hospital, United States, 2University of Michigan, United States

Disclosures: Shigeki Nishimori, None

MON-1113 X-Linked Hypophosphatemia: PHEX 3’UTR c.*231A>G Causes a Uniquely Mild Phenotype Including Three Large American Kindreds (A Retrospective, Case-Control Study)

Pamela S. Smith*, Gary S. Gottesman, Fan Zhang, William H. Mcalister, Fiona Cook, Valerie Wollberg, Margaret Huskey, Steven Mumm, Michael P. Whyte. 1Division of Pediatric Endocrinology and Diabetes, Washington University School of Medicine, United States, 2Center for Metabolic Bone Disease and Molecular Research, Shriners Hospital for Children, United States, 3Mallinckrodt Institute of Radiology, Washington University School of Medicine at St. Louis Children’s Hospital, United States, 4Division of Endocrinology, Brody School of Medicine, United States, 5Division of Bone and Mineral Diseases, Department of Internal Medicine, Washington University School of Medicine at Barnes-Jewish Hospital, United States

Disclosures: Pamela S. Smith, None

MON-1114 Novel c.G630A TCIRG1 Mutation Causes Aberrant Splicing Resulting in Unusually Mild Form of Osteopetrosis

Ralph Zirngibl*, Andrew Wang, Yeqi Yao, Morris Manolson, Joerg Krueger, Roberto Mendoza-Londono, Irina Voronov. 1University of Toronto, Canada, 2Hospital for Sick Children, Canada

Disclosures: Ralph Zirngibl, None

MON-1115 Development and characterization of a hypophosphatasia (HPP) tooth and muscle phenotype in sheep to model disease in an index HPP patient

Diarra Williams*, Shannon Huggins, Alexis Mitchell, Alyssa Falcik, Jane Pryor, Cassandra Skenandore, Grant Read, Hays Boyd, Sierra Long, Brian Foster, Mark Westhusin, Charles Long, Larry Suva, Dana Gaddy. 1Texas A&M University, United States, 2Ohio State University, United States

Disclosures: Diarra Williams, None
Continued development of hiPSCs as an in vivo platform for exploring heritable disorders of the human skeleton
Xiaonan Xin*, Kronenberg Mark, Alexander Lichtler, David Rowe. School of Dental Medicine, University of Connecticut Health, United States
Disclosures: Xiaonan Xin, None

Clinical characteristics and pathogenic gene mutations identification of Paget’s disease of bone in Chinese population
Hua Yue*, Zhenlin Zhang. Metabolic Bone Disease and Genetic Research Unit, Department of Osteoporosis and Bone Diseases, Shanghai Jiao Tong University Affiliated Sixth People’s Hospital, China
Disclosures: Hua Yue, None

SARCOPENIA, MUSCLE AND FALLS

Prospective Associations of Sarcopenic obesity and dynapenic obesity with joint replacement over 13 years in Community-dwelling Older Adults
Saliu Balogun*, David Scott², Stephen Graves¹, Michelle Lorimer¹, Flavia Cicuttini⁵, Graeme Jones¹, Dawn Aitken¹. ¹Menzies Institute for Medical Research, University of Tasmania, Australia, ²Department of Medicine, School of Clinical Sciences at Monash Health, Faculty of Medicine, Nursing and Health Sciences, & Peninsula Clinical School, Central Clinical School, Monash University, Australia, ³Australian Orthopaedic Association, University of Melbourne, Parkville, Australia, ⁴South Australian Health and Medical Research Institute (SAHMRI), Australia, ⁵Department of Epidemiology and Preventive Medicine, Monash University, Australia
Disclosures: Saliu Balogun, None

Secular Trends in Mortality Due to Falls and Hip Fracture in the US
Jane Cauley*, Kendra Jean Bobby, Elsa Strotmeyer, Jeanine Buchanich. University of Pittsburgh, United States
Disclosures: Jane Cauley, None

A new CT based approach to quantify adipose tissue in paraspinal muscle
Klaus Engelke*, Oleg Museyko², Daniel Günzel¹, Andreas Meier¹, Jean-Denis Laredo⁴. ¹Inst. of Medical Physics, University of Erlangen-Nuremberg, Germany, ²Inst. of Medical Physics, Univ. of Erlangen, Germany, ³Inst. of Informatics, University of Erlangen-Nuremberg, Germany, ⁴Radiologie Ostéo-Articulaire, Hôpital Lariboisière, AP-HP, CNRS UMR 7052, France
Disclosures: Klaus Engelke, None

Neither Sarcopenia, Body Composition Parameters, nor Salivary Cortisol Circadian Rhythm are Associated to Increased Risk of Falls in Women 50 to 80 Years. The OsteoLaus Cohort
Elena Gonzalez Rodriguez*, Didier Hans¹, Georgios Papadakis², Peter Vollenweider⁴, Martin Preisig⁵, Gerard Waerber⁶, Pedro-Manuel Marques-Vidal⁷, Olivier Lamy¹,⁶. ¹Center of Bone Diseases, Rheumatology Unit, Bone and Joint Department, CHUV, Switzerland, ²Endocrinology, Diabetology and Metabolism Unit, Internal Medicine Department, CHUV, Switzerland, ³Endocrinology, Diabetology and Metabolism Unit, Internal Medicine Department, CHUV, Switzerland, ⁴Internal Medicine Unit, CHUV, Switzerland, ⁵Epidemiology and Psychopathology Research Unit, Psychiatric Department, CHUV, Switzerland, ⁶Internal Medicine Unit, Internal Medicine Department, CHUV, Switzerland, ⁷Internal Medicine Unit, Internal Medicine Department, CHUV, Switzerland
Disclosures: Elena Gonzalez Rodriguez, None

Dysmobility syndrome is associated with prevalent morphometric vertebral fracture in older adults: The Korean Urban-Rural Elderly (KURE) study
Namki Hong*, Chang Oh Kim, Yoosik Youn, Jin-Young Choi, Hyeon Chang Kim, Yumie Rhee. Yonsei University College of Medicine, Republic of Korea
Disclosures: Namki Hong, None
MON-1143 Alteration in Skeletal Muscle Mass in Women with Primary Aldosteronism
Mi Kyung Kwak*1, Jae Hyeon Kim2, So Jeong Park3, Seong Hee Ahn4, Hyeonmok Kim5, Yoon Young Cho6, Sungwhan Suh7, Beom-Jun Kim1, Kee-Ho Song1, Seung Hun Lee8, Jung-Min Koh6. 1Division of Endocrinology and Metabolism, Asan Medical Center, University of Ulsan College of Medicine, Republic of Korea, 2Division of Endocrinology and Metabolism, Department of Medicine, Samsung Medical Center, Sungkyunkwan University School of Medicine, Republic of Korea, 3Asan Institute for Life Sciences, Republic of Korea, 4Department of Endocrinology, Inha University School of Medicine, Republic of Korea, 5Division of Endocrinology and Metabolism, Department of Internal Medicine, Seoul Medical Center, Republic of Korea, 6Division of Endocrinology and Metabolism, Department of Medicine, Gyeongsang National University School of Medicine, Republic of Korea, 7Division of Endocrinology and Metabolism, Department of Medicine, Dong-A University Medical Center, Dong-A University School of Medicine, Republic of Korea, 8Division of Endocrinology and Metabolism, Department of Medicine, Asan Medical Center, University of Ulsan College of Medicine, Republic of Korea, 9Division of Endocrinology and Metabolism, Department of Medicine, Konkuk University Medical Center, Konkuk University School of Medicine, Republic of Korea
Disclosures: Mi Kyung Kwak, None

MON-1144 Leisure-time aerobic physical activity and vitamin D concentrations in U.S. older adults
Carlos Orces*1, Daniella Orces2. 1Laredo Medical Center, United States, 2Southwestern University, United States
Disclosures: Carlos Orces, None

MON-1145 Alterations in Body Composition and Appendicular Lean Mass Assessed Using Whole-Body Dual-Energy X-ray Absorptiometry in BRCA Carriers Undergoing Prophylactic Salpingo-oophorectomy
Jeevitha Srighanthan*1, Joan Murphy2, Joanne Kotsopoulos3, Gabrielle E. V. Ene1, Marcus Q. Bernardini1, Queenie Wong1, Diana Yau1, Paula Harvey5, Steven Narod4, Barry Rosen1, Amy Finch4, Angela M. Cheung1. 1University Health Network, Canada, 2Trillium Health Partners, Canada, 3Women’s College Hospital, Canada, 4Sunnybrook Hospital, Canada
Disclosures: Jeevitha Srighanthan, None

MON-1146 Falls are the most frequent provocative factor for subsequent clinical fractures during 1-year follow-up in patients with a recent clinical fracture evaluated and treated according to current osteoporosis guideline at a Fracture Liaison Service
Lisanne Vranken*1,2, Caroline E Wyers1,2, Robert Y Van Der Velde1,2, Irma Ja De Bruin1,2, Heinrich MJ Janzing1, Sjoerd Kaarsemaker1, Piet Pm Geusens1,2, Joop Pw Van Den Bergh1,2,3. 1VieCuri Medical Center, Department of Internal Medicine, Netherlands, 2Maastricht UMC+, NUTRIM School for Nutrition and Translational Research in Metabolism, Department of Internal Medicine, Netherlands, 3Hasselt University, Netherlands, 4VieCuri Medical Center, Department of Surgery, Netherlands, 5VieCuri Medical Center, Department of Orthopaedic Surgery, Netherlands
Disclosures: Lisanne Vranken, None

LATE-BREAKING POSTERS III
12:00 pm - 2:00 pm Palais des congrès de Montréal
ASBMR Discovery Hall - Exhibit Hall 220 B-E

ADULT METABOLIC BONE DISORDERS
LB MON - 1149 Evidence for a direct role of Erythropoietin in the Regulation of FGF23 in Humans
Kelly Roszko*, Sydney Brown, Ying Pang, Thanh Huynh, Karel Pacak, Michael Collins. NIDCR, NIH, United States
Disclosures: Kelly Roszko, None
BIOMECHANICS AND BONE QUALITY

LB MON - 1155
Gene expression changes are associated with severe bone loss and delayed fracture healing in paraplegic rats
Mariana Butezloff*, Kelly Astolphi1, Vitó Reis2, Rui Reis2, João Paulo Ximenez3, João Paulo Issa4, Raquel Assed Silva5, Antonio Carlos Shimano1, José Batista Volpon1, Ariane Zamarioli1. 1University of São Paulo, Brazil, 2University of Minho, Portugal
Disclosures: Mariana Butezloff, None

LB MON - 1156
Age and Gender Effects on Architectural, Biomechanical and Muscle Performance in C57BL/6 Mice
Hammad Mumtaz*, Julian Valdejo, Mark Dallas, Núria Lara-Castillo, Joanna Scott, Michael Wacker, Mark Johnson, Thiagalaraj Ganesan. University of Missouri Kansas City, United States
Disclosures: Hammad Mumtaz, None

BONE ACQUISITION AND PEDIATRIC BONE DISORDERS

LB MON - 1159
Quantifying Bone Marrow Adiposity Using T1-weighted Magnetic Resonance Images in Children With Typical Development and in Children With Cerebral Palsy
Chuan Zhang*, Freeman Miller2, Christopher Modlesky1. 1University of Georgia, United States, 2AI duPont Hospital for Children, United States
Disclosures: Chuan Zhang, None

LB MON - 1162
Late adulthood skeletal muscle weakness and atrophy in osteoporotic OPG null mice
Dounia Hamoudi*, Laetitia Marcadet1, Louis-Bénédet Landry2, Antoïne Boulanger-Piette1, Françoise Morin1, Anteneh Agraw3, Jérôme Frenette3. 1PhD student, Canada, 2Trainee, Canada, 3Professional Research, Canada, 4PhD, Canada, 5Professor, Canada
Disclosures: Dounia Hamoudi, None

BONE INTERACTIONS WITH MUSCLE AND OTHER TISSUES

LB MON - 1169
Heterozygous ZNF687 P937R mutation underlies giant cell tumors arising from Paget's disease of bone also in non-Caucasian patients
Fernando Gianfrancesco*, Giuseppina Divisato1, Deborah J Veis3, Yasmine Abbas1, Federica Scotto Di Carlo1, Teresa Esposito1,4, Michael P Whyte5,6, 1Institute of Genetics and Biophysics, National Research Council of Italy, Italy, 2Division of Bone and Mineral Diseases, Department of Internal Medicine, Washington University School of Medicine at Barnes-Jewish Hospital, United States, 3Department of Pathology, Washington University School of Medicine at Barnes-Jewish Hospital, United States, 4IRCCS INM Neuromed, Italy, 5Department of Internal Medicine, and Department of Pathology, Washington University School of Medicine at Barnes-Jewish Hospital, United States, 6Center for Metabolic Bone Disease and Molecular Research, Shriners Hospital for Children, United States
Disclosures: Fernando Gianfrancesco, None

LB MON - 1170
Ultra-Fast Na18F Whole Body Dynamic Using Digital PET/CT in a Preclinical Phase I Study
Maria Menendez*, Richard Moore, Katherine Binzel, Zhang Jun, Rebecca Jackson, Michael Knopp. The Ohio State University, United States
Disclosures: Maria Menendez, None

CHONDROCYTES

LB MON - 1171
Heat Increases IGF-I Uptake in Growth Plate and Perichondrium Measured by in vivo Multiphoton Imaging
Maria A Serrat*, Gabriela Ion, Dominic Thomas. Marshall University School of Medicine, United States
Disclosures: Maria A Serrat, None
ENERGY METABOLISM, BONE, MUSCLE AND FAT

LB MON - 1176
Differentiated Osteocytes Synthesize Taurine Which Reduces Sclerostin Expression and Prevents Osteocyte Cell Death
Matt Prideaux*, Yukiko Kitase, Morris Kimble, Thomas O’Connell, Lynda Bonewald. Indiana University, United States
Disclosures: Matt Prideaux, None

GENETIC MODELS OF MUSCULOSKELETAL DISEASES

LB MON - 1177
A Novel Mouse Model to Elucidate the Role of Gdf5 in Postnatal Joints
Steven Pregizer*, Vicki Rosen1. 1Boston Children’s Hospital, United States, 2Harvard School of Dental Medicine, United States
Disclosures: Steven Pregizer, None

HORMONAL REGULATORS

LB MON - 1179
Bone is a major contributor of plasma FGF23 elevation in a model of chronic kidney disease in wildtype mice and mice lacking the extra-large G protein α-subunit (XLαs)
Julia Matthias1, Lauren Shumate1, Antonius Plagge2, Harald Jüppner1, Qing He1, Murat Bastepe1. 1Endocrine Unit, Massachusetts General Hospital, Harvard Medical School, United States, 2Institute of Translational Medicine, University of Liverpool, United Kingdom
Disclosures: Julia Matthias, None

MUSCULOSKELETAL AGING

LB MON - 1183
Associations of Joint Trajectories of Appendicular Lean Mass and Grip Strength with Risk of Non-Spine Fractures
Rodrigo Valderrabano*, Neeta Parimi, Peggy M. Cawthon, Jennifer S. Lee3,4, Joy Y. Wu1, Andrew R Hoffman3,4, Marcia L. Stefanick1, Mark Horowitz4, Clifford Rosen5, Steve Tommasini6, Petr Simecek7. 1Division of Endocrinology, University of Miami Miller School of Medicine, Miami, FL, United States, 2California Pacific Medical Center, San Francisco, CA and Department Epidemiology and Biostatistics, UCSF, SF, United States, 3Division of Endocrinology, Stanford University School of Medicine, Stanford, CA, United States, 4Palo Alto Veteran Affairs Health Care System, Palo Alto, CA, United States, 5Stanford University School of Medicine, Stanford, CA, United States
Disclosures: Rodrigo Valderrabano, None

MUSCULOSKELETAL DEVELOPMENT

LB MON - 1186
Qsox1 is a novel genetic determinant of bone size in mice
Basel Al-Barghouthi*, Gina Calabrese1, Larry Mesner1, Kevin Nguyen1, Mary Bouxsein1, Daniel Brooks2, Mark Horowitz3, Clifford Rosen3, Steve Tommasini4, Petr Simecek5, Gary Churchill6, Cheryl Ackert-Bicknell6, Daniel Pomp7, Charles Farber8,9. 1Center for Public Health Genomics, University of Virginia, Charlottesville, VA 22911, United States, 2Department of Biochemistry and Molecular Genetics, University of Virginia, Charlottesville, VA 22911, United States, 3Center for Advanced Orthopedic Studies, Beth Israel Deaconess Medical Center, Department of Orthopedic Surgery, Harvard Medical School, Boston, MA 02215, United States, 4Department of Orthopaedics and Rehabilitation, Yale School of Medicine, New Haven, CT 06520, United States, 5Maine Medical Center Research Institute, 81 Research Drive, Scarborough, ME 04074, United States, 6Department of Orthopaedics and Rehabilitation, Yale School of Medicine, New Haven, CT 06520, United States, 7The Jackson Laboratory, Bar Harbor, Maine 04609, United States, 8Department of Orthopaedics and Rehabilitation, Rochester Medical Center, Rochester, NY, 14627, United States, 9Department of Genetics, University of North Carolina Medical School, Chapel Hill, NC 27599, United States, 10Departments of Pubic Health Sciences and Biochemistry and Molecular Genetics, University of Virginia, Charlottesville, VA 22911, United States
Disclosures: Basel Al-Barghouthi, None
Deletion of the auxiliary α2δ1 voltage sensitive calcium channel subunit regulates adipogenesis

Department of Physical Therapy, School of Health and Rehabilitation Sciences, Indiana University, United States

Disclosures: Christian S. Wright, None


Han-Saem Park*, Seung-Hee Kim, Clara Yongjoo Park. Dept of Food and Nutrition, Chonnam National University, Republic of Korea

Disclosures: Han-Saem Park, None

Zika virus infection perturbs osteoblast function

Bram Van Der Eerden*, Noreen Mumtaz, Marijke Schreuders-Koedam, Marion Koopmans, Barry Rockx, Johannes Van Leeuwen. Erasmus MC, Internal Medicine, Netherlands, Erasmus MC, Viroscience, Netherlands

Disclosures: Bram Van Der Eerden, None

Role of fibrillin-1 fragments in bone resorption

Muthu Lakshmi Muthu*, Kerstin Tiedemann, Svetlana Komarova, Dieter Reinhardt. McGill University, Canada

Disclosures: Muthu Lakshmi Muthu, None

Fluid flow shear stress alters interactions of osteoclasts to migratory tumor cells

Yao Fan*, Aydin Jalali, Andy Chen, Bai-Yan Li, Ping Zhang, Hiroki Yokota. Indiana University, United States, Harbin Medical University, United States, Tianjin Medical University, China

Disclosures: Yao Fan, None

Including Iodine based IV-Contrast Enhanced CT-Images into Screening Techniques for Osteoporosis


Differences in Bone Mineral Density and Trabecular Bone Score in Hip Fracture Patients with Type 2 Diabetes

Linsey Gani*, Thomas King, K. Reddy Saripalli, Karen Fernandes, Carmen Kam, Le Roy Chong. Changi General Hospital, Singapore

Disclosures: Linsey Gani, None

The effect of screening of high fracture risk and subsequent treatment on osteoporotic fractures: a systematic review and meta-analysis

Thomas Merlijn*, Karin Swart, Coen Netelenbos, Petra Elders. Department of General Practice and Elderly Care Medicine, VU University Medical Center, Netherlands, Department of Internal Medicine, Endocrine Section, VU University Medical Center, Netherlands

Disclosures: Thomas Merlijn, None
OSTEOPOROSIS - NUTRITION, DIETARY SUPPLEMENTS AND PHYSICAL ACTIVITY

**LB MON - 1217**

Time-dependent enhancement of osteoblast mineral deposition by green and black tea polyphenols originates during mineralization and not the differentiation phase

William Gittings*, Michael D. Mcalpine, Adam J. Macneil, Wendy E. Ward. Brock University, Canada

*Disclosures: William Gittings, None*

**OSTEOPOROSIS - PATHOPHYSIOLOGY**

**LB MON - 1220**

Microglial Progranulin Promotes Age-Related Bone Loss in Female Mice

Liping Wang*, Jiasheng Zhang2, Eric Huang2, Robert Nissenson1. 1San Francisco VA Medical Center, United States, 2University of California San Francisco, United States

*Disclosures: Liping Wang, None*

**OSTEOPOROSIS – TREATMENT**

**LB MON - 1229**

An oral PTH 1-34 formulation with a pharmacokinetic profile optimized for the treatment of osteoporosis

Gregory Burshtien*, Hillel Galitzer1, Ariel Rothner1, Phillip Schwartz1, Eric Lang2, Roger Garceau2, Jonathan C.Y. Tang2, William D. Fraser1, Yoseph Caraco1. 1Entera Bio Ltd., Israel, 2Entera Bio Ltd., United States, 3University of East Anglia, United Kingdom, 4Hadassah Clinical Research Center, Israel

*Disclosures: Gregory Burshtien, None*

**LB MON - 1230**

Patient Engagement in Clinical Guidelines Development: Input from > 1000 Members of the Canadian Osteoporosis Patient Network

Larry Funnel*, Marija Djekic-Ivankovic2, Rachel Chepesiuk1, Lora Giangregorio3, Isabel Braganca Rodrigues1, Rowena Ridout4, Sidney Feldman5, Sandra Kim4, Heather Mcdonald-Blumer4, Gregory Kline5, Wendy E Ward6, Nancy Santesso7, William D Leslie8, Suzanne N Morin9. 1Osteoporosis Canada, Canada, 2Research Institute of the McGill University Health Center, Canada, 3University of Waterloo, Canada, 4University of Toronto, Canada, 5University of Calgary, Canada, 6Brock University, Canada, 7McMaster University, Canada, 8University of Manitoba, Canada, 9McGill University, Canada

*Disclosures: Larry Funnel, None*

**LB MON - 1231**

Osteoporosis Treatment In Patients With Atypical Femur Fractures

Denise Van De Laarschot*, Malachi Mckenna2, M Carola Zillikens1. 1Erasmus Medical Centre, Netherlands, 2St. Vincent’s University Hospital, Ireland

*Disclosures: Denise Van De Laarschot, None*

**PRECLINICAL MODELS: NUTRITION AND PHARMACOLOGY**

**LB MON - 1235**

Macromolecular Dexamethasone Prodrug Ameliorates Neuroinflammation and Prevents Bone Loss Associated with Traumatic Brain Injury

Gang Zhao*, Xin Wei1, Rongguo Ren1, Zhifeng Zhao1, Yuanyuan Sun1, Ningrong Chen1, Dexuan Kong2, Dong Wang1. 1University of Nebraska Medical Center, United States, 2China Pharmaceutical University, China

*Disclosures: Gang Zhao, None*
Association between nutritional status and sarcopenia in a community dwelling older population: The Bushehr Elderly Health (BEH) Program

Bagher Larijani*1, Gita Shafiee2, Zahleh Shadman3, Afshin Ostovar3, Ramin Heshmat2, Ehsaneh Taheri1, Farshad Sharifi1, Iraj Nabipour4. 1Endocrinology and Metabolism Research Center, Endocrinology and Metabolism Clinical Sciences Institute, Tehran University of Medical Sciences, Tehran, Iran, Islamic Republic of Iran, 2Chronic Diseases Research Center, Endocrinology and Metabolism Population Sciences Institute, Tehran University of Medical Sciences, Tehran, Iran, Islamic Republic of Iran, 3Osteoporosis Research Center, Endocrinology and Metabolism Clinical Sciences Institute, Tehran University of Medical Sciences, Tehran, Iran., Islamic Republic of Iran, 4Elderly Health Research Center, Endocrinology and Metabolism Population Sciences Institute, Tehran University of Medical Sciences, Tehran, Iran, Islamic Republic of Iran, 5The Persian Gulf Tropical Medicine Research Center, Bushehr University of Medical Sciences, Bushehr, Iran, Islamic Republic of Iran

Disclosures: Bagher Larijani, None
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Bone Research, West China School of Stomatological, Sichuan University, China www.nature.com/boneres/; http://www.hxkq.org

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International Federation of Musculoskeletal Research Societies
Booth #: 102
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Kubtec is demonstrating the PARAMETER© 3D Cabinet X-ray System with DIGIMUS® Software, the only system to offer tomosynthesis imaging and BMD/BMC measure applications. The Parameter 3D System shows your specimens in 1mm digital slices giving you unprecedented levels of anatomical detail, together with 2-D X-ray and HD optical image capability.

Medimaps Group SA
Booth #: 310
Medimaps Group offers seamless solutions for clinical routine and research. TBS iNsight allows clinicians from DXA images to quickly estimate TBS which is reflecting bone microarchitecture. TBS improves osteoporosis management in conjunction with BMD and clinical risk factors. In research, our TRIP platform evaluates bone fragility from different image modalities (e.g. DXA, X-ray, CT) at different skeletal sites.

Micro Photonics
Booth #: 416
Micro Photonics and partner Bruker MicroCT are leading the advancement in 3D high resolution micro-CT for bone, biomaterials, orthopedics, and other life science research with a focus on bone morphology and BMD. The SkyScan products offer the high resolution and versatility required for any demanding research laboratory.

MilliporeSigma
Booth #: 705
MilliporeSigma helps answer your toughest research questions with immunoassay quantification of protein biomarkers. Look closer at our highly validated assays: ELISAs; MILLIPLEX® MAP multiplex for Luminex®, high sensitivity SMC™ for SMCxPRO™. We offer instrumentation and custom assay development services to meet your research needs.

Mindways Software, Inc.
Booth #: 304
Mindways produces Quantitative CT (QCT) products for measurement of bone mineral density from CT scans. QCT Pro and CliniQCT are FDA-cleared, reimbursable, and compatible with FRAX, all for a fraction of the cost of DXA. For researchers, Mindways BIT adds investigational tools for analysis capability beyond bone density.

National Institute of Arthritis, Musculoskeletal and Skin Disease
Booth #: 804
The mission of the National Institute of Arthritis and Musculoskeletal and Skin Diseases is to support research into the causes, treatment, and prevention of arthritis and musculoskeletal and skin diseases; the training of basic and clinical scientists to carry out this research; and the dissemination of information on research progress in these diseases.
National Osteoporosis Foundation (NOF)
Booth #: 112
The National Osteoporosis Foundation (NOF) is the leading health organization dedicated to preventing osteoporosis and broken bones, promoting strong bones for life and reducing human suffering through programs of public and clinician awareness, education, advocacy and research. NOF is the nation’s only health organization solely dedicated to osteoporosis and bone health.

Northwestern Polytechnical University
Booth #: 916
Located in the historic city of Xi’an, cradle of Chinese civilization and terminus of the ancient Silk Road, Northwestern Polytechnical University (NPU) is the only multidisciplinary and research-oriented in China that is simultaneously developing education and research programs in the fields of aeronautics, astronautics, and marine technology engineering. It is now affiliated to the Ministry of Industry and Information Technology (MIIT).

Object Research Systems, Inc.
Booth #: 810
ORS is an ISO and IEC standards compliant software maker whose products are deployed by registered users in more than 80 countries. Our intuitive software platforms for scientific and biomedical imaging deliver high-impact visualization, advanced image segmentation, quantitative analysis, animation, and other powerful features with endless user extensibility in Python.

Orimed Pharma
Booth #: 709
Orimed Pharma is an up-and-coming, innovative Canadian pharmaceutical company actively involved in the fields of bone health and sexual dysfunction, among others. Through its own research and development, as well as through partnerships with international companies, Orimed provides innovative solutions to health care providers to better treat and serve patients.

OsteoMetrics, Inc.
Booth #: 515
Redefining Bone Histomorphometry since 1989. The system of choice, OsteoMeasure now available with live digital imaging, on-screen pen measurement, automated measurement, a complete set of Cortical Bone measurements and an expanded set of non-specific measurements. Comprehensive GLP validation package.

Perkinelmer
Booth#: 100

PharmaLegacy laboratories
Booth #: 205
PharmaLegacy Laboratories is a leading speciality pharmacology Contract Research Organization located in Shanghai Zhangjiang High-Tech Park, China. PharmaLegacy is equipped with a world-class facility, working to international pharmaceutical industrial standards. PharmaLegacy provides preclinical in vivo pharmacology efficacy services as well a therapeutic antibody discovery service program.
Pharmatest Services  
**Booth #: 217**  
Pharmatest is a CRO that offers preclinical efficacy services in the fields of skeletal diseases and oncology. Our services include in vitro bone cell assays (osteoclasts and osteoblasts) and in vivo models of bone safety, osteoporosis, osteoarthritis and cancer-induced bone disease. We also offer clinical bone turnover marker measurements.

Radius Health, Inc.  
**Booth #: 105**  
Radius is a science-driven fully integrated biopharmaceutical company that is committed to developing and commercializing innovative endocrine therapeutics in the areas of osteoporosis and oncology. For more information, please visit www.radiuspharm.com.

Rare Bone Disease Patient Network  
**Booth #: 215**  
The Rare Bone Disease Alliance(RBDA)/Rare Bone Disease Patient Network(RBDPN) is a coalition of patient advocacy organizations, scientific thought leaders and industry. The mission of the Alliance and Network is to advance understanding, education and research related to rare bone diseases and assist patients and caregivers.

Ratoc System Engineering Co., Ltd.  
**Booth #: 316**  
Our new product TRI/3D-BON-FCSCL measures bone strength, 3D morphometry and bone mineral density using DICOM files of clinical CT. This software enables to qualify the bone destruction, bone formation and bone resorption. Our software will best assist your osteoporosis study.

Research Diets, Inc.  
**Booth #: 308**  
Research Diets, Inc. formulates and produces purified OpenSource Diets® for laboratory animals. Custom diets shipped in 5-7 days. BioDAQ® Food and Liquid Intake Monitor for mice and rats mounts to home cage and records the time, duration, amount of each meal automatically. BioDAQ NHP monitors food intake of socially housed NHPs.

Scanco Medical  
**Booth #: 609**  
Scanco Medical (www.scanco.ch) is a global provider of microCT, VivaCT and XtremeCT (HR-pQCT) systems as well as scan/analysis services. Sophisticated, yet easy to use, analysis and visualization software as well as automatic specimen changers (specimen systems only) are standard on all systems. Optional hardware and software include mechanical testing stage, GPU reconstruction and FE analysis.

Shire  
**Booth #: 201**  
Shire is the leading global biotechnology company focused on serving people with rare diseases and other highly specialized conditions. We strive to develop best-in-class products across our core therapeutic areas including Hematology, Immunology, Neuroscience, Ophthalmics, Gastrointestinal / Internal Medicine / Endocrine, Hereditary Angioedema, Lysosomal Storage Disorders, and Oncology.
Soft Bones, Inc., The U.S. Hypophosphatasia Foundation  
**Booth #: 710**  
Soft Bones Inc., The U.S. Hypophosphatasia Foundation provides information and a community to educate, empower and connect patients living with hypophosphatasia (HPP), their families and caregivers. The Foundation also promotes research of this rare bone disease through awareness and fundraising efforts.

Stratec Medizintechnik GmbH  
**Booth #: 800**  
Stratec Medizintechnik and Novotec Medical offer systems for musculoskeletal diagnosis and therapy. The XCT pQCT systems allow diagnosis of bone and muscle characteristics. Leonardo Mechanography is used to measure muscular function under physiological conditions. Galileo vibration devices improve neuromuscular function and mobility in patients with chronic diseases and sarcopenia.

Therachon  
**Booth #: 203**  
Therachon is developing treatments for rare conditions with unmet medical needs. We are committed to fostering a community rigorous about science and passionate about transforming patient lives. Our lead pipeline candidate, TA-46, is a novel protein therapy in development for achondroplasia, the most common form of disproportionate short stature.

UCONN Cryohistology Imaging Core  
**Booth #: 213**  
This core provides a high-throughput workflow for a multi-probe analysis of cells and matrix within mineralized tissues, all from a single slide. The approach is useful for an affordable and timely return of a comprehensive skeletal phenotyping of transgenic mouse lines and interpretation of murine models skeletal injury and repair.

Ultragenyx Pharmaceutical  
**Booth #: 809**  
Ultragenyx is a biopharmaceutical company committed to bringing to market novel products for the treatment of rare and ultra-rare diseases, with a focus on serious, debilitating genetic diseases. The Company has rapidly built and advanced a diverse portfolio of product candidates with the potential to address diseases for which the unmet medical need is high, the biology for treatment is clear, and for which there are no approved therapies.

Vitamin D Workshop  
**Booth #: 714**  
Vitamin D Workshops are annual international conferences on the biology of Vitamin D. Features of the VDW include promoted talks, junior scientist awards, plenary posters and networking opportunities. Since 1973 there have been 21 VDWs, with the 22nd scheduled for Spring 2019. See HYPERLINK “http://www.vitamindworkshop.org” www.vitamindworkshop.org for venue, abstract and registration details.
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