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

11:30 am - 12:30 pm
Plans to Improve NIH-funded Clinical Trials and Other Research
Room 517 A

11:30 am - 12:30 pm
New! Cutting Edge Technologies: Emerging Applications in Single Cell Genomics/Proteomics
Room 517 C

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>Session</th>
<th>Room/Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>1:00 pm - 2:00 pm</td>
<td>Concurrent Orals: Genetic Models of Musculoskeletal Diseases</td>
<td>Room 517 A</td>
</tr>
<tr>
<td>2:00 pm - 2:15 pm</td>
<td>Networking Break</td>
<td>517 Foyer</td>
</tr>
<tr>
<td>2:15 pm - 3:30 pm</td>
<td>Concurrent Orals: Regulation of Precursor Differentiation</td>
<td>Room 517 D</td>
</tr>
<tr>
<td>2:15 pm - 3:30 pm</td>
<td>Concurrent Orals: Treatment Gap</td>
<td>Room 210 A-F</td>
</tr>
<tr>
<td>2:15 pm - 3:30 pm</td>
<td>Concurrent Orals: Energy Metabolism, Bone, Muscle and Fat I</td>
<td>Room 517 A</td>
</tr>
<tr>
<td>3:30 pm - 4:00 pm</td>
<td>Concurrent Orals: Musculoskeletal Aging</td>
<td>Room 517 B</td>
</tr>
<tr>
<td>3:45 pm - 5:00 pm</td>
<td>Networking Break</td>
<td>Room 517 Foyer</td>
</tr>
<tr>
<td>4:00 pm - 5:00 pm</td>
<td>Basic Science Session: Mechanobiology Mechanisms of Biomechanical Responses</td>
<td>Room 517 A</td>
</tr>
<tr>
<td>5:00 pm - 7:00 pm</td>
<td>ASBMR/ECTS Clinical Debate: Is Treatment for Osteoporosis Associated with Improved Mortality</td>
<td>Room 210 A-F</td>
</tr>
<tr>
<td>5:00 pm - 7:00 pm</td>
<td>Welcome Reception and Poster Session</td>
<td>ASBMR Discovery Hall - Exhibit Hall 220 B-E</td>
</tr>
<tr>
<td>7:15 pm - 8:30 pm</td>
<td>New Investigator Reception</td>
<td>ASBMR Discovery Hall - Exhibit Hall 220 B-E</td>
</tr>
<tr>
<td>7:15 pm - 9:45 pm</td>
<td>Early Stage Investigator Networking Happy Hour</td>
<td>Le Westin, Viger Room</td>
</tr>
<tr>
<td>7:15 pm - 10:00 pm</td>
<td>Muscle and Bone Working Group</td>
<td>Room 520 A</td>
</tr>
<tr>
<td>7:15 pm - 10:00 pm</td>
<td>Adult Bone and Mineral Working Group</td>
<td>Room 520 D</td>
</tr>
<tr>
<td>8:00 pm - 9:30 pm</td>
<td>Women in Bone and Mineral Research Evening Networking Reception</td>
<td>Le Westin Hotel, Palais Room</td>
</tr>
<tr>
<td>8:30 pm - 9:30 pm</td>
<td>Early Stage Investigator after Hours Happy Hour</td>
<td></td>
</tr>
</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
Palais des congrès de Montréal
Room 517 B

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 Baron1, Mary Bouxsein1, 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*1, Tchilalo Boukpessi2, Daniel J Buss3, Catherine Chauvain2, Monzur Murshed1, Marc D Mekeel1. 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. Mazur3, Tamara Alliston1. 1University of California San Francisco, United States, 2University of Utah, United States
Disclosures: Neha S. Dole, None

CONCURRENT ORALS: ADVERSE EFFECTS OF TREATMENT
1:00 pm - 2:00 pm
Palais des congrès de Montréal
Room 210 A-F

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*, 1, Bonnie H. Li1, Denison S. Ryan1, Erik J. Geiger2, Richard M. Dell1, Dennis M. Black2. 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, Xiu 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 Yallowitz1, Shawon Deb Nath1, Jung-Min Kim2, Kazuki Inoue3, Baohong Zhao1, Jae-Hyuck Shim2, Laurie Glimcher4, Matthew Greenblatt1. 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 Roche1, Tiphanie Picot1, Zhiguo He1, Carmen M Anaee1, Mireille Thomas1, Lydia Campos2, Laurence Vico1, Marie-Hélène Lafage-Proust1. 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 Rajapakse¹, Xi Jiang¹, Wei Tong², Nathaniel Dyment¹, Ling Qin¹. ¹University of Pennsylvania, United States, ²Xiehe Hospital, China
Disclosures: Robert Tower, None

CONCURRENT ORALS: GENETIC MODELS OF MUSCULOSKELETAL DISEASES
1:00 pm - 2:00 pm  Palais des congrès de Montréal
Room 517 A

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
Gretl Hendrickx*, Sandra Pohl², Alexandra Angermann³, Anke Jeschke³, Timur A Yorgan¹, Tim Rolvien¹, Michael Amling¹, Thomas Braulke³, Thorsten Schinke³. 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
Sung-Hee Seanna Yoon*, Marc Grynpas², Jane Mitchell¹. 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
Carole Le Henaff*, Florante Ricarte², Joshua Johnson¹, Zhiming He¹, Johanna Warshaw¹, Henry Kronenberg², Lawrence Kirschner³, Nicola Partridge¹. 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 Vollersen¹, Tim Rolvien¹, Felix Schmidt¹, Michael Amling¹, Thorsten Schinke¹, Timur Yorgan¹. Department of Osteology and Biomechanics, University Medical Center Hamburg-Eppendorf, Germany
Disclosures: Timur Yorgan, None
<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
</tr>
</thead>
</table>
| 2:00 pm - 2:15 pm | NETWORKING BREAK  
Palais des congrès de Montréal  
517 Foyer |
| 2:15 pm - 3:30 pm | CONCURRENT ORALS: REGULATION OF PRECURSOR DIFFERENTIATION  
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*1, Kavitha Raganathan2, Elizabeth Wang1, Zachary Tata1, Laura Mangiavini1, Mohd Parvez Khan1, Benjamin Levi2, Ernestina Schipani1.  
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*1, Hamilton Wang1, Kevin Lei1, Yannis Hara1, Bredan Lee1, David Scadden2, Dongsu Park1.  
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 TGFß 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, Joann Manson3, Jane Cauley4, Kristine Ensrud5, Andrea Lacroix6, Jean Wactawski-Wende1, Mriirl Datta8, Maryam Sattari9, John Schousboe10, 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 Bryanton2, Mashael Alhrbi2, William Leslie3. 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 Nadesan2, James White1, Phillip White1, Gurpreet Baht3.
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
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 Lorenz1, Eric Hilker1, Kristann Magee1, Jesse D Procknow1, Zhaohua Wang1, Charles A Harris2, Clarissa S Craft1, Erica L Scheller1. 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 Da1, Priyanka Kushwaha1, Zhu Li1, Thomas Clemens2, Ryan Riddle2. 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 Gao1, Aiping Lu1, Johnny Huard1. 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 Marques2, Sigurdur Sigurdsdottir1, Kristin Siggeirsdottir1, Alexandria Jensen1,4, Gunnar Sigurdsdsson1,5,6, Thor Aspelund1,7, Gudny Eiriksdottir1, Vilmundur Gudnason1,5, Thomas F Lang6, Tamara B Harris2. 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, 6Landsþjóðavefni University Hospital, Reykjavik, Iceland, 7Department 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 Amsterdam, 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 University, 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
Against the Motion
Steven Cummings, MD
San Francisco Coordinating Center, United States
Disclosures: Amgen, Consultant, Amgen, Grant/Research Support

WELCOME RECEPTION AND PLENARY POSTER SESSION
5:00 pm - 7:00 pm
Palais des congrès de Montréal
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
Palais des congrès de Montréal
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

Early Stage Investigators who wish to continue building connections with peers in a fun and informal setting are invited to attend this event. Participants are encouraged to participate in Networking Bingo and will get a chance to win drink tickets and be entered in a raffle drawing for a free ASBMR In-Training Membership.

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

---

**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 AL1, 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, Mijin 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, Seodaemun-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 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

Time/Event/Location

7:00 am - 5:00 pm ................................................................. 21
Registration Open
   Viger Hall - Level 2

8:00 am - 9:30 am ................................................................. 21
Louis V. Avioli Lecture and Presentation of Esteemed Awards
   Room 210 A-F

9:30 am - 9:45 am ................................................................. 21
Networking Break
   ASBMR Discovery Hall - Exhibit Hall 220 B-E

9:30 am - 4:30 pm ................................................................. 21
Discovery Hall Open
   ASBMR Discovery Hall - Exhibit Hall 220 B-E

9:30 am - 4:30 pm ................................................................. 21
Posters Open
   ASBMR Discovery Hall - Exhibit Hall 220 B-E

9:45 am - 11:00 am ................................................................. 21
Plenary Orals: Clinical Highlights
   Room 210 A-F

9:45 am - 11:00 am ................................................................. 23
Plenary Orals: Osteoblast and Osteocyte Biology
   Room 517 D

9:45 am - 11:00 am ................................................................. 24
Plenary Orals: Translational Highlights I
   Room 517 A

11:00 am - 12:00 pm .............................................................. 25
New! Challenge the Experts: Mineral Disorders (Calcium and Phosphate)
   Room 517 B

11:00 am - 12:00 pm .............................................................. 25
ASBMR-IOF-FFN Joint Session: Closing the Treatment Gap
   Room 517 C

11:00 am - 12:00 pm .............................................................. 26
Meet the Professor Sessions

11:00 am - 12:15 pm .............................................................. 27
Publications Workshop
   Room 510

12:00 pm - 12:30 pm .............................................................. 27
Networking Break
   ASBMR Discovery Hall - Exhibit Hall 220 B-E

12:30 pm - 2:30 pm .............................................................. 27
Poster Session I and Poster Tours
   ASBMR Discovery Hall - Exhibit Hall 220 B-E
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 Achievement 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
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*1,2, Denis Baird2, Jenny Gregory3, Richard Aspden3, Jonathan Tobias4, Lavinia Paternoster (Cox)2, 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*1, Lin Yan2, Lisa M Lix2, William D Leslie2. 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*1, Heather Hunt1, Eric Marty2, Rehan Saiyed2, Matthew Cohn2, Joseph Lane2, Robert Ritchie1, Bernd Gludovatz2, Eve Donnelly1. 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*1, Anders Oden2, Eric Orwoll3, Timothy Kwok4, Magnus Karlsson5, Bjorn Rosengren1, Eva Ribom1, Peggy Cawthon1, Kristine Ensrud8, Cyrus Cooper1, John Kanis9, Claes Orlsson2, Dan Mellstrom2, Helena Johansson5, Eugene Mecklesky7. 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 Cawthon*1, Katherine Peters1, Steven Cummings1, Eric Orwoll3, Andrew Hoffman3, Kristine Ensrud1, Jane Cauley1, William Evans4. 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 Cawthon, None
PLENARY ORALS: OSTEOSTBLAST 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*1, Sofia Movérare-Skrtic1, Petra Henning1, Thomas Funck-Brentano1, Maria Nethander1, Fernando Rivadeneira2, Antti Koskelä3, Juha Tuukkanen1, Jan Tuckermann4, Christine Perret1, Ulf Lerner1, 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, University 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 *1, 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 In vivo cell fates of CXCL12+ perisinusoidal bone marrow mesenchymal stromal stem cells
Yukiko Kuroda*, Koichi Matsuo. Laboratory of Cell and Tissue Biology, Keio University School of Medicine, Japan
Disclosures: Yukiko Kuroda, None

10:30 am  Osteocyte-Specific CXCL12 Expression Is Critical for Load-Induced Bone Formation in Adult Mice
1045 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
Somatic Activating Mutations in MAP2K1 Cause Melorheostosis
1048
Heeseog Kang*1, Smita Jha1, Zuoming Deng1, Nadja Fratzl-Zelman2, Wayne A. Cabral3, Aleksandra Ivovic4, Françoise Meylan4, Eric P. Hanson1, Eileen Lange1, James Katz1, Paul Roschger1, Klaus Klaushofer4, Edward W. Cowen10, Richard M. Siegel11, Timothy Bhattacharyya12, Joan C. Marini1. 1Section on Heritable Disorders of Bone and Extracellular Matrix, NICHD, NIH, United States, 2Clinical and Investigative Orthopedics Surgery Unit, NIAMS, NIH, United States, 3Clinical and Investigative Orthopedics Surgery Unit, NIAMS, NIH, United States, 4Ludwig Boltzmann Institute of Osteology, Austria, 5Molecular Genetics Section, NHGRI, NIH, United States, 6Immunoregulation Section, NIAMS, NIH, United States, 7Autoimmunity Branch, NIAMS, NIH, United States, 8Clinical Research, NIAMS, NIH, United States, 9Rheumatology Branch, NIAMS, NIH, United States, 10Dermatology Branch, NIAMS, NIH, United States, 11Office of Clinical Director, NIAMS, NIH, United States, 12Clinical Trials & Outcomes Branch, NIAMS, NIH, United States

Disclosures: Heeseog Kang, None

10:15 am
ASBMR 2018 Annual Meeting Most Outstanding Translational Abstract
1049
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 Pichelin3, Bertrand Cariou3. 1INSERM UMR1033 - University of Lyon - Department of Rheumatology, Hospices Civils de Lyon, France, 2INSERM UMR1033 - University of Lyon, France, 3INSERM UMR 1087/CNRS UMR 6291- Department of Endocrinology, University Hospital of Nantes, France

Disclosures: Cyrille Confavreux, None

10:30 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

10:45 am
Sympathetic Outflow Regulates Bone Metabolism in Humans: Evidence from Cellular, Epidemiological, and Direct Interventional Studies
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

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: 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
### Fall Risk Factors and Assessment
Nathalie van der Velde, MD, PhD  
University of Amsterdam, The Netherlands  
*Disclosures: None*

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

### Falls Prevention
David Reuben, MD  
UCLA Medical Center, United States  
*Disclosures: None*

---

#### 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

**Co-Chairs**  
Laure McCabe, PhD  
Michigan State University, United States  
*Disclosures: None*  
Roberto Pacifici, MD  
Emory University School of Medicine, United States  
*Disclosures: None*

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

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

### 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

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

4:30 pm
ASBMR 2018 Annual Meeting Young Investigator Award
1052
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

4:45 pm
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

5:00 pm
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 Chen¹, Gregory Vitone¹, Eugenia Giannopoulou¹, Ren Xu¹, Shiaoching Gong², 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

5:15 pm
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
5:30 pm  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 Onal¹, 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 Vittinghoff, Dennis Black¹, Mary Bouxsein², Li-Yung Lui³, Jane Cauley⁴, Anne De Papp⁵, Andreas Grauer⁶, Sundeep Khosla⁷, Bruce Mitlak⁸, Charles McCulloch⁹, Richard Eastell¹⁰. 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 Tsai*, 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 Rantalainen², Caryl Nowson¹, Dennis Taaffe³, Keith Hill⁴, Lucy Bussija⁵, Kerrie Sanders⁶. ¹Institute for Physical Activity and Nutrition, Deakin University, Australia, ²Gerontology Research Centre, University of Jyväskylä, Australia, 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  Skeletal Benefit/risk of Long-term Denosumab Therapy: A Virtual Twin Analysis of Fractures Prevented To Skeletal Safety Events Observed
Serge Ferrari*, E Michael Lewiecki², Peter W Butler³, David L Kendler⁴, Nicola Napoli⁵, Shuang Huang⁶, D Barry Crittenden⁷, Nicola Pannacciulli⁸, 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, ANGNOVOS, Consultant, UCB, MSD, Grant/Research Support

5:30 pm  The Calgary Vitamin D Study: Bone Microarchitecture Effects of Three-Year Supplementation With 400, 4000 or 10000 IU Daily
Lauren A Burt*, 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  Physiotherapy Rehabilitation for Osteoporotic Vertebral Fracture - A randomised controlled trial and economic evaluation (PROVE trial): ISRCTN 49117867
Karen Barker*, Meredith Newman, Nigel Stallard, Jose Leal, Catherine Minns Lowe, Muhammad Javid, Angela Noufaily, Anish Adhikari, David Smith, Varsha Gandhi, Cyrus Cooper, Sarah Lamb. ¹University of Oxford, United Kingdom, ²Oxford University Hospitals Foundation Trust, United Kingdom, ³University of Warwick, United Kingdom
Disclosures: Karen Barker, None

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  Impaired Dendritic Cell Function and Bacterial Load Increase in the Oral Microenvironment as Contributing Factors to the Induction of MRONJ
Ranya Elsayed*, Esteban Celis, Hussein Sultan, Christopher Cutler, Mahmoud Elashiry, Mohamed Meghil, Zoya Kurago, Mohamed Awad, Mohey Eldin El-Shikh, Mohammed Elsalanty, Riham El Sayed. 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  ASBMR 2018 Annual Meeting Young Investigator Award
Gnas inactivation alters adipose tissue properties during progression to heterotopic ossification
Niambi Brewer*, John T Fong, Deyu Zhang, Frederick S Kaplan, Robert J Pignolo, Eileen M Shore. 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
5:00 pm Prevention of Zoledronate-Induced MRONJ with Indocyanine Green (ICG) Labeled Bisphosphonates
Shuting Sun*, Akishige Hokugo, Frank H. (Hal) Ebetino, Keivan Sadrerafi, Philip Cherian, Charles E. McKenna, Ichiro Nishimura. 1Biovinc, United States, 2UCLA School of Dentistry, United States, 3Chemistry Department, University of Southern California, United States
Disclosures: Shuting Sun, BioVinc, Major Stock Shareholder

5:15 pm The Effect of Androgens on Renal Calcium and Phosphate Handling, Independent of Bone and in Circumstances of Low Dietary Calcium
Rougin Khalil*, Na Ri Kim, Ferran Jardi, Frank Claessens, Dirk Vanderschueren, Brigitte Decallonne. 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

5:30 pm 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

5:45 pm 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*, Michela Palmieri, Li Han, Xuchu Que, Sotirios Tsimikas, Joseph L Witztum, Stavros C Manolagas, Robert L Jilka. 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

**6:30pm 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

---

**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

---

**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**

<table>
<thead>
<tr>
<th>Time/Event/Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>6:00 am - 7:45 am</td>
</tr>
<tr>
<td>The PROMIS® of Improved Bone Health in Older Adults</td>
</tr>
<tr>
<td>Room 510</td>
</tr>
<tr>
<td>7:00 am - 5:00 pm</td>
</tr>
<tr>
<td>Registration Open</td>
</tr>
<tr>
<td>Viger Hall - Level 2</td>
</tr>
<tr>
<td>8:00 am - 9:15 am</td>
</tr>
<tr>
<td>Symposium: FGF Signaling in Bone Growth, Chondrodysplasia Syndromes, and Osteoarthritis: Basic Mechanisms and Therapeutic Approaches</td>
</tr>
<tr>
<td>Room 210 A-F</td>
</tr>
<tr>
<td>9:15 am - 9:45 am</td>
</tr>
<tr>
<td>Networking Break</td>
</tr>
<tr>
<td>ASBMR Discovery Hall - Exhibit Hall 220 B-E</td>
</tr>
<tr>
<td>9:30 am - 4:30 pm</td>
</tr>
<tr>
<td>Posters Open</td>
</tr>
<tr>
<td>ASBMR Discovery Hall - Exhibit Hall 220 B-E</td>
</tr>
<tr>
<td>9:45 am - 11:00 am</td>
</tr>
<tr>
<td>Plenary Orals: John H. Carstens Memorial Session: Osteoporosis Treatment</td>
</tr>
<tr>
<td>Room 210 A-F</td>
</tr>
<tr>
<td>11:00 am - 12:00 pm</td>
</tr>
<tr>
<td>Hands-On Workshop: Histomorphometry: An Interactive Introduction</td>
</tr>
<tr>
<td>Room 520 BE</td>
</tr>
<tr>
<td>11:00 am - 12:00 pm</td>
</tr>
<tr>
<td>New! Cutting Edge Technologies: Using 3-D Cell Culture for In vitro/Ex Vivo Approaches to Study Communication Among Bone/Bone Marrow Cells</td>
</tr>
<tr>
<td>Room 510</td>
</tr>
<tr>
<td>11:00 am - 12:00 pm</td>
</tr>
<tr>
<td>New! Challenge the Experts: Other Rare Bone Diseases</td>
</tr>
<tr>
<td>Room 517 B</td>
</tr>
<tr>
<td>11:00 am - 12:00 pm</td>
</tr>
<tr>
<td>Genomics for Clinicians</td>
</tr>
<tr>
<td>517 C</td>
</tr>
<tr>
<td>11:00 am - 12:00 pm</td>
</tr>
<tr>
<td>Meet the Professor Sessions</td>
</tr>
</tbody>
</table>
Networking Break

12:00 pm - 12:30 pm

ASBMR Discovery Hall - Exhibit Hall 220 B-E

Poster Session II and Poster Tours

12:30 pm - 2:30 pm

ASBMR Discovery Hall - Exhibit Hall 220 B-E

Late-Breaking Posters II

12:30 pm - 2:30 pm

Concurrent Orals: Pediatrics

2:30 pm - 4:00 pm

Room 210 A-F

Concurrent Orals: Osteoblasts

2:30 pm - 4:00 pm

Room 517 D

Concurrent Orals: Osteocytes and Bone Development

2:30 pm - 4:00 pm

Room 517 B

Concurrent Orals: Preclinical Models: Nutrition and Pharmacology

4:00 pm - 4:30 pm

Room 517 A

Networking Break

4:30 pm - 5:45 pm

ASBMR Discovery Hall - Exhibit Hall 220 B-E

Concurrent Orals: Regulation of Bone Formation and Mineralization

4:30 pm - 5:45 pm

Room 517 B

Concurrent Orals: Bone Imaging

4:30 pm - 5:45 pm

Room 517 D

Concurrent Orals: Epidemiology

4:30 pm - 5:45 pm

Room 517 C

Concurrent Orals: Energy Metabolism, Bone, Muscle and Fat II

6:00 pm - 7:00 pm

Room 517 A

ASBMR Town Hall Meeting

7:00 pm - 8:30 pm

Room 510

Diversity in Bone and Mineral Research Networking Reception

7:15 pm - 9:15 pm

Le Westin, Palais

Bone Turnover Markers Working Group

7:15 pm - 9:15 pm

Room 520 C

Working Group on Aging

7:15 pm - 9:30 pm

Room 520 F

Pediatric Bone and Mineral Working Group

7:15 pm - 9:30 pm

520 B-E
SUNDAY, SEPTEMBER 30, 2018

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.

**MIPS Improvement Activity:** This activity counts towards MIPS Improvement Activity requirements under the Medicare Access and CHIP Reauthorization Act of 2015 (MACRA). Clinicians should submit their improvement activities by attestation via the CMS Quality Payment Program website.

CME Outfitters, LLC, is accredited by the Accreditation Council for Pharmacy Education as a provider of continuing pharmacy education. 1.25 contact hours (0.125 CEUs) Universal Activity Number:

- Live: 0376-0000-18-019-L01-P
- 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.

NETWORKING BREAK
9:15 am - 9:45 am
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.

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

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*1, Eric Vittinghoff1, Richard Eastell2, Douglas Bauer1, Li-Yung Lui3, Lisa Palermo1, Charles Mcculloch1, Jane Cauley1, Sundeep Khosla1, Fernando Marin4, Anne De Papp5, Andreas Grauer6, Mary Bouxsein1. 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*1, Dan Curiac2, Klara Sjögren1, Per-Anders Jansson3. 1Centre for Bone and Arthritis Research, Institute of Medicine, the Sahlgrenska Academy at University of Gothenburg, Sweden, 2CTC, Gothia Forum, Sahlgrenska University Hospital, Sweden, 3Department 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

1072 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*1, Vladimir Harhaji2, Paul Dan Sirbu3, Moises Irizarry-Roman4, Gabor Bucs5, Istvan Sztanyi2, Neil Binkley6, Denise Orwig7, Joel Neutel8, Ken Homer9, Marianne Mancini10, Hiroko Masamune11, Geoff Barker12, Brian Lian13. 1Clinical Center Kragujevac, Clinic for Orthopedics and Traumatology, Serbia, 2Curebie, Curebie, Belgium, 3County Hospital for Emergency Sfintul Spiridon Iasi, Clinical Section of Orthopedics and Traumatology, Romania, 4Infinite Clinical Research, United States, 5PTE ÁK Traumatology and Clinical Surgery, Hungary, 6University of Wisconsin School of Medicine and Public Health, United States, 7Department of Epidemiology and Public Health, University of Maryland School of Medicine, United States, 8Integrum Clinical Research, United States, 9Viking 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*1, Hang Lee2, Natalie David2, Richard Eastell1, Tsai Joy2. 1Harvard Medical School. Massachusetts General Hospital, United States, 2Massachusetts General Hospital, United States

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*1, E. Michael Lewiecki2, Peter R. Ebeling3, Eric Hesse4, Nicola Napoli5, Daria B. Crittenden6, Maria Rojeski7, Wenjing Yang6, Cesar Libanati7, Serge Ferrari8. 1Columbia University, United States, 2New Mexico Clinical Research & Osteoporosis Center, United States, 3Monash University, Australia, 4University Medical Center Hamburg-Eppendorf, Germany, 5Campus Bio-Medico University of Rome, Italy, 6Amgen Inc., United States, 7UCB Pharma, Belgium, 8Geneva 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**  
**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*,1, Brian Hodous2, Timothy Labranche1, Michael Sheets1, Natasa Brooijmans1, Joseph Kim1, Brett Williams1, Sean Kim1, Lan Xu1, John Vassiliadis1, Julia Zhu1, Ruduan Wang1, Rachel Stewart1, Paul Fleming1, Chris Graul1, Elliot Greenblatt1, Keith Bouchard1, Vivek Kadambi1, Timothy Guzi1, Jeffrey Hunter1, 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.
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
Room 518 B

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

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
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

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

POSTER SESSION II AND POSTER TOURS
12:30 pm - 2:30 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.

CONCURRENT ORALS: PEDIATRICS
2:30 pm - 4:00 pm
Palais des congrès de Montréal
Room 210 A-F

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*, Yujia Wang, Carol Cheng, Tsz Ping Lam, Bobby Kin-Wah Ng, Jack Chun-Yiu Cheng, Wayne Yuk-Wai Lee.  
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  
**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  
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*, Kelsey Björkman, Chantal Kawalilak, Seyedmahdi Hosseinibatabaee, Adrian Teare, James Johnston, Saija Kontulainen.  
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  
**Glycemic Control Influences Trabecular Microarchitecture in Youth with Type 1 Diabetes**

Deborah Mitchell*, Signe Caksa, Amy Yuan, Mary Bouxein, Madhusmita Misra.  
1Pediatric Endocrine Unit, Massachusetts General Hospital, United States,  
2Endocrine Unit, Massachusetts General Hospital, United States  
**Disclosures:** Deborah Mitchell, None

3:45 pm  
**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.**

1The Children’s Hospital of Philadelphia, United States,  
2University of Maryland, United States  
**Disclosures:** Jeffrey Roizen, None
CONCURRENT ORALS: OSTEOBLASTS

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

Moderator
Francesca Gori, PhD
Harvard School of Dental Medicine, United States

Moderator
Fayaz Safadi, PhD
Northeast Ohio Medical University, United States

2:30 pm
1086
YAP and TAZ deletion in mature osteoblasts reduce bone formation and increase marrow adipocyte accumulation
Mengrui Wu*, Joshua Chou², Dorothy Hu¹, Kenichi Nagano¹, Daniel Brooks¹, Mary Bouxsein¹, Francesca Gori¹, Roland Baron¹. 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 Yamana², Hiroaki Saito², Virginia Parkman², Jun Guo¹, Henry Kronenberg¹, Francesca Gori², Roland Baron². 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 Puppali², Nikita Bajwa², Subburaman Mohan¹. 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 IRE1α/XBP1s Signaling Regulates Bone Development and Bone Homeostasis
Hongjiao Ouyang*, Shankar Revu², Kai Liu², Yuqiao Zhou², Qi Han¹, Faisal Alshalawy³, Yuji Mishina¹, Alejandro Almarza², Donna Stolz², Konstantinos Verdelis², Randal Kaufman⁴. 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
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 Tgf1-mediated Repression of PAK3 Supports Osteocyte Spreading
Simona Bolamperti*, 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 Bolamperti, 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*, Qinnan Yan1, Dong Wang2, Yumei Lai2, Simin Lin1, 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

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*, Jeffry 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

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, Eisuke Tsuda, Tomohiro Shimizu, Hirotaka Hamano, Sigeto Hiratsuka, Akiko Okada, Ryo Fujita, Norio Amizuka, Tomoka Hasegawa, Nirmasa 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
NETWORKING BREAK
4:00 pm - 4:30 pm
Palais des congrès de Montréal
ASBMR Discovery Hall - Exhibit Hall 220 B-E

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*, Chantal De Bakker, Wei-Ju Tseng, Hongbo Zhao, Ashutosh Parajuli, Liyun Wang, X. Sherry Liu. 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*, Janaina Martins, Marie Demay. 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*, Jake (Jinkun) Chen, Guofang Shen, Qisheng Tu. 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, 5Shanghai 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, 3Department of Medicine, Michael G. DeGroote School of Medicine, St Joseph’s Healthcare - McMaster University, Canada, 4Mayo Clinic College of Medicine, United States, 5Research Institute of the McGill University Health Centre, Canada, 6Division of Bone Diseases, Geneva University Hospitals and Faculty of Medicine, Switzerland, 7McCaig Institute for Bone and Joint Health, Canada, 8INSERM UMR 1033, Université de Lyon, Hospices Civils de Lyon, Lyon, France, 9Departments of Medicine, McGill University and McGill University Health Centre, Canada, 10Boston University School of Public Health, United States, 11Geriatric Medicine, Centre for Bone and Arthritis Research, Institute of Medicine, University of Gothenburg, Sweden, 12Geriatric Medicine, Centre for Bone and Arthritis Research, Institute of Medicine, Sahlgrenska Academy, University of Gothenburg, Sweden, 13INSERM UMR 1033, Pavillon F, Hôpital E Herriot, France, 14Bioinformatics Core Facility, Sahlgrenska Academy, University of Gothenburg, Gothenburg, Sweden, 15Centre for Bone and Arthritis Research, Institute of Medicine, Sahlgrenska Academy, University of Gothenburg, Gothenburg, Sweden, 16INSERM UMR1033, University of Lyon, Hôpital Edouard Herriot, France, 17Department of Biomedical Engineering, Eindhoven University of Technology, Netherlands, 18Toronto General Hospital, Canada, 19Institute for Aging Research, Hebrew SeniorLife, United States, 20Dept of Orthopedic Surgery, Harvard Medical School, Center for Advanced Orthopedic Studies, BIDMC, United States

Disclosures: Elizabeth Samelson, None
Disclosures: Julio Carballido-Gamio, None

Roland Chapurlat*, Elisabeth Sornay-Rendu, Roger Zebaze, Minh Bui, Eric Lespessailles, Ego Seeman. 1INSERM UMR 1033, France, 2University of Melbourne, Australia, 3IPROS, France

Disclosures: Roland Chapurlat, None

Prevalent Vertebral Fracture Identified on Densitometric Images Predict Incident Fractures in Routine Clinical Practice

John Schousboe*, Lisa Lix, Suzanne Morin, Sheldon Derkatch, Mark Bryant, Mashael Alhrbi, William Leslie. 1Park Nicollet Clinic and HealthPartners Institute, United States, 2University of Manitoba, Canada, 3McGill University, Canada

Disclosures: John Schousboe, None

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
Genomic Prediction of Osteoporosis Using 426,000 Individuals from UK Biobank

Vincenzo Forgetta*, Julia 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

Excess intra-abdominal adipose tissue accumulation increases the risk of fragility fracture: A Mendelian randomization study with Genome-wide association meta-analysis on fracture

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

ASBMR 2018 Annual Meeting Young Investigator Award

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

ASBMR 2018 Annual Meeting Young Investigator Award

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

The Association between Objectively Measured Physical Activity and Bone Strength and Microarchitecture Among Older Men

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, 4University of California, Davis, United States, 5University 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 Guañabens, 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.
<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:20 pm</td>
<td>Clinical utility of bone turnover markers: update on NBHA initiatives</td>
</tr>
<tr>
<td></td>
<td>Stuart Silverman, MD., Cedars-Sinai Medical Center and UCLA School of Medicine, CA, USA.</td>
</tr>
<tr>
<td>9:00 pm</td>
<td>Closing Remarks</td>
</tr>
</tbody>
</table>

### 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
## Monday, October 1, 2018
### Day-At-A-Glance

<table>
<thead>
<tr>
<th>Time/Event/Location</th>
<th>Page</th>
</tr>
</thead>
</table>
| 6:00 am - 7:45 am  
Industry Supported Symposium: X-Linked Hypophosphatemia: Integrating New Evidence to Optimize Diagnosis and Treatment  
Room 510                                                       | 59   |
| 7:30 am - 2:00 pm  
Registration Open  
Viger Hall - Level 2                                      | 60   |
| 8:00 am - 9:30 am  
Concurrent Orals: Musculoskeletal Development  
Room 517 C                                           | 60   |
| 8:00 am - 9:30 am  
Concurrent Orals: Osteoclasts and Osteoblasts  
Room 517 B                                          | 61   |
| 8:00 am - 9:30 am  
Concurrent Orals: Greg Mundy Memorial Session - Bone Tumors and Metastasis  
Room 517 D                                        | 62   |
| 8:00 am - 9:30 am  
Concurrent Orals: Secondary Causes of Skeletal Fragility  
Room 517 A                                        | 63   |
| 9:30 am - 9:45 am  
Networking Break  
ASBMR Discovery Hall - Exhibit Hall 220 B-E                  | 64   |
| 9:30 am - 2:00 pm  
Posters Open  
ASBMR Discovery Hall - Exhibit Hall 220 B-E                  | 64   |
| 9:45 am - 11:00 am  
Networking Break  
ASBMR Discovery Hall - Exhibit Hall 220 B-E                  | 65   |
| 11:00 am - 11:15 am  
Plenary Oral: Mesenchymal Stem Cell Development and Pathogenesis  
Room 517 D                                             | 65   |
| 11:00 am - 11:15 am  
Plenary Oral: Rare Bone Diseases  
Room 517 A                                             | 66   |
| 11:15 am - 12:00 pm  
Networking Break  
ASBMR Discovery Hall - Exhibit Hall 220 B-E                  | 67   |
| 11:15 am - 12:00 pm  
Late-Breaking Concurrent Orals: Basic  
Room 517 C                                             | 67   |
| 11:15 am - 12:00 pm  
Late-Breaking Concurrent Orals: Clinical  
Room 517 A                                            | 68   |
11:15 am - 12:00 pm
---
**Late-Breaking Concurrent Orals: Clinical Rare Bone Diseases**
*Room 517 D*

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

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

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

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

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

3:15 pm - 4:00 pm
---
**Closing Reception**
*Foyer 510-511*
MONDAY, OCTOBER 1, 2018

INDUSTRY SUPPORTED SYMPOSIUM: X-LINKED HYPOPHOSPHATEMIA: INTEGRATING NEW EVIDENCE TO OPTIMIZE DIAGNOSIS AND TREATMENT
Sponsoring/Organizing Company: AKH, Inc., Advancing Knowledge in Healthcare
Supporting Company: Ultragenyx

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

6:00 am Breakfast and Registration

6:15 am Introduction and Overview
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

6:25 am Pathophysiology Key Clinical Manifestations
Anthony A. Portale, MD
Director, Pediatric Dialysis Program, UCSF Medical Center Mount Zion, UCSF Medical Center Parnassus

6:50 am Pediatric Diagnostic Evaluation and Management
Thomas O. Carpenter, MD
Professor of Pediatrics (Endocrinology) and of Orthopaedics and Rehabilitation; Director, Yale Center for X-Linked Hypophosphatemia

7:15 am Adult Diagnostic considerations and Management
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

7:25 am Case Study
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

7:35 am Conclusions and Q&A
Anthony A. Portale, MD
Director, Pediatric Dialysis Program, UCSF Medical Center Mount Zion, UCSF Medical Center Parnassus

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
A novel crosstalk between TGF-β/BMP and Wnt families through Smad4 in endochondral ossification

Sho Tsukamoto*1, Mai Kuratani1, Noriko Sekine2, Misato Okubo1, Yutaka Nakachi1, Shinya Tanaka2, Eijiro Jimi2, Hiromi Oda2, Takenobu Katagiri1. 1Division of Pathophysiology, Research Center for Genomic Medicine, Saitama Medical University, Japan, 2Department of Orthopedic Surgery, Saitama Medical University, Japan

Disclosures: Sho Tsukamoto, None

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 Park1, 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

Disclosures: Joonho Suh, None

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

Alpha-Ketoglutarate Ameliorated the Age-related Osteoporosis via Regulating Histone Methyations 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

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
8:00 am
TRAP as a Novel Regulator of Bone Formation in Osteoblasts at Sites of Bone Remodeling
Diana Metz-Estrella*, Tzong-Jen Sheu, J Edward Puzas. University of Rochester, United States
Disclosures: Diana Metz-Estrella, None

8:15 am
Osteoclast-derived autotaxin is a characteristic factor controlling bone degradation upon inflammation.
Olivier P*1, Sacha Flammier1, Fanny Bouguillault, François Duboeuf2, Gabor Tigyi2, Fabienne Coury1, Irma Machuca-Gayet1. 1INSERM U1033, France, 2University of Memphis, United States
Disclosures: Olivier P, None

8:30 am
Protease-activated receptor 1 (PAR1) deletion causes enhanced osteoclastogenesis in response to inflammatory signals through a Notch 2-dependent mechanism
Judy Kalinowski*, Sandra Jastrzebski1, Hicham Driess2, Archana Sanjay1, Sun-Kyeong Lee1, Ernesto Canalis1, Joseph Lorenzo3. 1UConn Health, United States, 2Emory University School of Medicine, United States
Disclosures: Judy Kalinowski, None

8:45 am
Examining the influence of senescent cells on PTH/PTHrP signaling in bone
Joseph Gardinier*, Chunbin Zhang. Henry Ford Hospital, United States
Disclosures: Joseph Gardinier, None

9:00 am
Argininosuccinate lyase deficiency as a model to study nitric oxide function in Bone
Zixue Jin*, Jordan Kho1, Brian Dawson1, Monica Grover2, Ming-Ming Jiang1, Yuqing Chen1, Brendan Lee1. 1Baylor College of Medicine, United States, 2Stanford University, United States
Disclosures: Zixue Jin, None

9:15 am
Activin type 1 receptor ALK4 regulates postnatal bone mass
Shek Man Chim*, David Maridas, Laura Gamer, Vicki Rosen. Harvard School of Dental Medicine, United States
Disclosures: Shek Man Chim, None

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
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
1137  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
1138  metastasis
Hyun Jin Sun1*, Kyung-Hun Lee1, Kyoung Jin Lee2, Serk In Park2, Young Joo Park1, Seock-Ah Lim1, Sun Wook Cho1. 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,
1139  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
1140  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
1141
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
1142  of Anastrozole
Ivana Sestak1*, Jack Cuzick1, Glen Blake2, Rajesh Patel1, Robert Coleman5, 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 Harsløf2, Lars Rolighed1, Tanja Sikjær1, 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 Mccluskey3, Helena Johansson1, Nicholas Harvey2, John Kanis3. 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.
DISCOVERY HALL OPEN

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

PLENARY ORALS: MESENCHYMAL STEM CELL DEVELOPMENT AND PATHOGENESIS

9:45 am - 11:00 am
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 Jiang1, 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 Teitelbaum1,4. 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
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
1152
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

10:00 am
1153
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*, Paul D. Miller, Thomas J. Weber, Munro Peacock, Karl L. Insogna, Rajiv Kumar, Frank Rauch, Diana Luca, Christina Theodore-Oklofa, Kathy Lampl, Javier San Martin, Thomas O. Carpenter. 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, 8Ultragenyx Pharmaceutical Inc., United States

Disclosures: Suzanne Jan De Beur, Ultragenyx Pharmaceutical Inc., Consultant, Ultragenyx Pharmaceutical Inc., Grant/Research Support, Shire plc, Grant/Research Support, Mereo BioPharma Group Ltd, Grant/Research Support

10:15 am
1154
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*, Erik Imel, Gary S. Gottesman, Meng Mao, Alison Skrinar, Javier San Martin, Thomas O. Carpenter. 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, 5Mayo Clinic College of Medicine, United States, 6McGill University, Canada, 7Ultragenyx Pharmaceutical Inc., United States

Disclosures: Michael P. Whyte, Ultragenyx Pharmaceutical Inc., Consultant, Ultragenyx Pharmaceutical Inc., Grant/Research Support

10:30 am
1155
Incidence of Malignancies in Fibrous Dysplasia: Data from a National Pathology Cohort

Marlous Rotman*, Neveen Hamdy, Bas Majoor, Michiel Van De Sande, Judith Bovee, Sander Dijkstra, Olaf Dekkers, Natasha Appelman-Dijkstra. LUMC, Netherlands

Disclosures: Marlous Rotman, None

11:00 am
1156
ASBMR 2018 Annual Meeting Young Investigator Award

Emilie Barruet*, Blanca M Morales, Tania Moody, Corey J Cain, Kelly Wentworth, Tea V Chan, Amy Ton, Tom Hm Ottenhoff, Marielle C. Haks, Judith Hellman, Mary Nakamura, Edward C Hsiao. 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 Bravenboer, Harald Jüppner. 1Endocrine Unit, Massachusetts General Hospital, United States, 2Department of Endocrinology, Universitair Ziekenhuis Brussel, Belgium
Disclosures: Monica Reyes, None

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

11:15 am - 12:00 pm  LATE-BREAKING CONCURRENT ORALS: BASIC  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  LB-1158  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  LB-1159  Marrow adiposity and vascular morphology are regulated by EBF1 in adult bone
Seham Alruwaili*, Steven Tommasini, Ben-Hua Sun, Jackie Fretz. 1Quinnipiac University, United States, 2Yale School of Medicine, United States
Disclosures: Seham Alruwaili, None

11:33 am  LB-1160  Conditional ablation of Prx1 expressing cells impairs endochondral ossification in postnatal bone repair
Lai Wang*, Alessandra Esposito, Joseph Temple, Tieshi Li, Jie Jiang, Xin Jin, Anna Spagnoli. 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  LB-1162  LRP5-deficiency in OsxCreERT2 mice recapitulates intervertebral disc degeneration from aging and mechanical compression
Jiannong Dai*, Matthew Silva, Nilsson Holguin. 1IUPUI, United States, 2Washington University in St. Louis, United States
Disclosures: Jiannong Dai, None
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 Fracture Risk: A Region-wide Longitudinal Cohort Study of 466,000 Children and up to 11 Years of Follow-up
Daniel Prieto-Alhambra*,2, Katherine Butler1, José Poveda1,4, Daniel Martinez-Laguna1,4, Carlen Reyes3,4, Jennifer Lane1, Jeroen De Bont3,4, M Kassim Javaid1, Cyrus Cooper1,5, Jennifer Logue6, Talita Duarte-Salles3,4, Dominic Furniss1. 1NDORMS, University of Oxford, United Kingdom, 2Stoke Mandeville Hospital, United Kingdom, 3Institut Universitari d’Investigació en Atenció Primària Jordi Gol (IDIAP Jordi Gol), Spain, 4CIBERFes, Universitat Autònoma de Barcelona and Instituto de Salud Carlos III, Spain, 5MRC Lifecourse Epidemiology Unit, University of Southampton, United Kingdom, 6University of Glasgow, United Kingdom
Disclosures: Daniel Prieto-Alhambra, UCB, 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. 1Department of Clinical Medicine, UiT The Arctic University of Norway, Tromsø, Norway, Department of Orthopaedic Surgery, University Hospital of North Norway, Tromsø, Norway, 2Department of Clinical Medicine, UiT The Arctic University of Norway, Tromsø, Norway, Department of Obstetrics and Gynecology, University Hospital of North Norway, Tromsø, Norway
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 D’aiello, Andrew Zullo, Kevin Mcconeghy, Tingting Zhang, Yoojin Lee, Jeffrey Curtis, Nicole Wright, Vincent Mor, Douglas Kiel. 1Hebrew SeniorLife, Institute for Aging Research, United States, 2Brown University School of Public Health, United States, 3University of Alabama at Birmingham, School of Public Health, United States
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. University of Auckland, New Zealand
Disclosures: Ian Reid, Novartis, Other Financial or Material Support

Georg Pfeifer1, Guenther G. Steger2, Daniel Egle3, Richard Greil4, Florian Fitzal5, Viktor Wette6, Marija Balic7, Ferdinand Haslbauer8, Elisabeth Melbinger-Zeinitzer9, Vesna Bjelic-Radisic10, Jonas Bergh11, Raimund Jakesz5, Christian Marth3, Paul Sevelda12, Brigite Mlineritsch13, Ruth Exner5, Christian F Singer1, Michael Gnant5. 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 Wolvesberg/ 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

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*1, Michael P. Whyte2, Craig Munns3, Anthony A. Portale4, Leanne Ward5, Ola Nilsson6, Jill H. Simmons7, Raja Padidela8, Noriyuki Namba9, Hae I. Cheong10, Meng Mao11, Chao-Yin Chen11, Alison Skrinar11, Javier San Martin11, Francis Glorieux12. 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
11:24 am  
**LB-1169**  
**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)**  
1. University of California, San Francisco, United States, 2. Yale School of Medicine, United States, 3. Centre d’Evaluation des Maladies Osseuses, Hôpital Cochin, France, 4. Indiana University School of Medicine, United States, 5. Université Paris-Sud, France, 6. Duke University Medical Center, United States, 7. Children's Hospital Los Angeles, University of Southern California Keck School of Medicine, United States, 8. Seoul National University Children’s Hospital, Republic of Korea, 9. Johns Hopkins University, United States, 10. Osaka City University Graduate School of Medicine, Japan, 11. Tokyo University Hospital, Japan, 12. University College London Hospitals, United Kingdom, 13. Okayama Saiseikai General Hospital, Japan, 14. University of California, San Francisco, United States, 15. Ultragenyx Pharmaceutical Inc., United States, 16. Yale 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*

11:33 am  
**LB-1170**  
**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.  
1. Indiana University School of Medicine, United States, 2. Indiana University School of Public Health, United States  
*Disclosures: Erik Imel, None*

11:42 am  
**LB-1171**  
**Digenic Inheritance of Heterozygous SLC34A3 and SLC34A1 Mutations in Hereditary Hypophosphatemic Rickets with Hypercalciuria**  
Rebecca Gordon*, Daniel Doyle, Joshua Zaritsky, Michael Levine.  
1. The Children’s Hospital of Philadelphia, United States, 2. Alfred I. duPont Hospital for Children, United States  
*Disclosures: Rebecca Gordon, None*

11:51 am  
**LB-1172**  
**LRP6 Mutation: A New Cause of Autosomal Dominant High Bone Mass**  
1. Center for Metabolic Bone Disease and Molecular Research, Shriners Hospitals for Children, United States, 2. Division of Bone and Mineral Diseases, Department of Internal Medicine, Washington University School of Medicine at Barnes-Jewish Hospital, United States, 3. Mallinckrodt 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  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  Cathepsin K (Ctsk) restrains the peristin (Postn)-mediated increase in cortical size induced by RANKL
Nicolas Bonnet*, Eleni Douni, Serge Ferrari. 1University Geneva Hospital (HUG), Switzerland, 2Biomedical Sciences Research Center “Alexander Fleming”, 2Department of Biotechnology, Agricultural University of Athens, Greece, 3University Geneva Hospital (HUG), Switzerland
Disclosures: Nicolas Bonnet, None

11:33 am  Multi-omics approach reveals novel pathogenic indicators of DISH
Matthew Veras*, Neil Tenn, Miljan Kuljanin, Gilles Lajoie, James Hammond, S. Jeffrey Dixon, Cheryl Seguin. 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  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 Arista, Victoria Head, Michaela Kneissel, Thomas Ulrich, Sabine Guth-Gundel. 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  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
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.
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
Plenary Posters

ADULT METABOLIC BONE DISORDERS

FRI-0001 Acute Kidney Injury in Primary Hyperparathyroidism
Cristiana Cipriani*, Jessica Pepe†, Federica Biamonte‡, Valeria Fassino‡, Luciano Colangelo‡, Valentina Piazzolla‡, Carolina Clementelli‡, Luciano Nieddu‡, Salvatore Minisola. †Sapienza University of Rome, Italy, ‡UNINT University, Italy
Disclosures: Cristina Cipriani, None

FRI-0002 Changes in Skeletal Microstructure Through Four Years of rhPTH(1-84) Therapy in Hypoparathyroidism
Natalie Cusano*, Mishaela Rubin‡, John Williams‡, Sanchita Agarwal‡, Gaia Tabacco‡, Yu-Kwang Donovan Tay‡, Rukshana Majeed‡, Beatriz Omeragic‡, John Bilezikian†. †Lenox Hill Hospital, United States, ‡Columbia 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. Vieira†, Fabiana R. Hernandez†, Andre L. Teixeira†, Ivone B. Oliveira†, Wagner V. Dominguez†, Luciene M. Dos Reis†, Fabio M. Montenegro†, Rosa M. Moyses†, Luizio B. Carvalho†, Vanda Jorgetti†. †Laboratório de Investigação Médica 16, Hospital das Clínicas da Faculdade de Medicina da Universidade de São Paulo, Brazil, ‡Hospital Samaritano Américas Serviços Médicos, Brazil, §Nephrology Division, Federal University of São Paulo, Brazil, ‡Disciplina de Cabeça e Pescoço, Hospital das Clínicas da Faculdade de Medicina da Universidade de São Paulo, Brazil, ‡Pos-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 Chu†, Yi-Jun Lin†, Lo-Wei Chen‡, Cheng-Yuan Hsiao‡, Wen-Chih Liu‡. §Department of Biology and Anatomy, National Defense Medical Center, Taiwan, ‡Department of Biology and Anatomy, National Defense Medical Center, United Republic of Tanzania, ‡Graduate 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. 1COLUMBIA 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. Lelliott1, John G. Logan1, David T. Lafont1, Victoria D. Leitch1, Natalie C. Butterfield1, Hayley J. Prothore1, Peter I. Croucher4, Paul A. Baldo1, Alina Gaultier-Lintia1, Gael Nicolas4, Nina Bon1, Sophie Source1, Jérôme Guicheux1, Laurent Beck1, Graham R. Williams1, J. H. Duncan Bassett1. 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 Nguyen1, Mark R Forwood1, Keith R Bambery1, Mark J Tobin1, Gordon K Smyth1, T John Martin4, Natalie A Sims1. 1St. Vincent’s Institute of Medical Research, Australia, 2Griffith University, Australia, 3Australian 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*1, Charles Schurman2, Claire Acevedo3, Eric Schaible4, Eric W Livingston5, Moshe Levi6, Ted Bateman7, Tamara Alliston78, Karen B King9, Virginia L Ferguson1. 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
F.L. Heyer*1, J.J.A. De Jong1, P.C. Willems1, J.J. Arts2, S.M.J. Van Kuijk1, J.A.P. Bons1, M. Poeze1, P.P. Geusens1, B. Van Rietbergen1, J.P. Van Den Bergh1. 1Maastricht University Medical Center, Netherlands, 2Eindhoven University of Technology, Netherlands
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*1, Lanny Griffin2, George Divine1, Mahalakshmi Honasoge1, Arti Bhan1, Shiri Levy3, Elizabeth Warner1, Sudhaker Rao1. 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*1, Vineel Kondiboyina1, Lauren Rain1, Arthur Kramer1, Naiman Khan2, Charles Hillman1. 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*1, Beatrix P Trani1, Maysa S Campos1, João Paulo B Ximemez2, Raquel A Silva1, José B Volpon1. 1School of Medicine of Ribeirão Preto, Brazil, 2School of Pharmaceutical Sciences 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 Zhu, X Edward Guo, Jack Cy Cheng, Tsz 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 Insitute, 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 Asteholm, 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 Wing3, J Brent Richards4, 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.
Sheila Bornstein*, Clifford Rosen, Victoria Demambro, Anyonya Guntur, Makoto Fujiwara. 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*1, Ioanna Mosialou1, Junfei Zhao2, Akihide Yoshimi3, Konstantinos Panitsas4, Richard A. Friedman5, Omar Abdel-Wahab1,4, 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 Karabacak1, Karin Gustafsson1, Ninib Baryawno1, Gabriel Courties1, Youmna Kfouri1, Elizabeth Scadden1, Matthias Nahrendorf2, Mehmet Toner2, David Scadden1. 1Massachusetts General Hospital, United States, 2Shriners Hospital for Children, United States
Disclosures: Nicolas Severe, None
ERRα in primary breast tumours promotes tumour cell dissemination to bone by regulating RANK
Geoffrey Vargas*1, Mathilde Boucher2, Casina Kan3, Claire Benetollo4, Martine Croset1, Martine Mazel5, Laure Cayrefourcq3, Sophie Vacher6, Francesco Pantano5, Keltouma Driouch7, Ivan Bieche8, William Jacot9, Jane Aubin8, Catherine Alix-Panabieres5, Philippe Clezardin1, Edith Bonnyel1. 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

S100A4 Released from Highly Bone-metastatic Breast Cancer Cells Plays a Critical Role in Osteolysis
Hyung Joon Kim2, Brian Y. Ryu2, Junho Chung2, Zang Hee Lee2, Hong-Hee Kim2. 1Hospital for Special Surgery, United States, 2Seoul National University, Republic of Korea
Disclosures: Haemin Kim, None

Granulocyte Colony Stimulating Factor impacts on osteoclasts 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

Serum levels of RANKL are increased in primary breast cancer patients in the presence of disseminated tumor cells in the bone marrow.
Tilman Rachner*1, Martina Rauner2, Andy Göbel3, Oliver Hoffmann2, Rainer Kimmig3, Sabine Kasimir-Bauer4, Ann-Kathrin Bittner5. 1Universitätsklinikum Dresden, Germany, 2University Hospital Dresden, Germany, 3University Hospital Essen, Germany
Disclosures: Lorenz Hofbauer, None

Suppression of Breast Cancer Bone metastasis by Osteocytic Connexin Hemichannels, a Potential Therapeutic Target
Manuel Riquelme*1, Sumin Gu1, Zhiqiang An2, Jean Jiang1. 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

HDAC inhibitors directly stimulate LIFR and induce pro-dormancy effects in breast cancer cells
Miranda Sowder*, Lauren Holtslander1, Vera Mayhew1, Samuel Dooyema1, Rachelle W. Johnson2. 1Vanderbilt University, United States, 2Vanderbilt University Medical Center, United States
Disclosures: Miranda Sowder, None

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 Taipaleemmäki. Molecular Skeletal Biology Laboratory, Department of Trauma, Hand and Reconstructive Surgery, University Medical Center Hamburg-Eppendorf, Germany
Disclosures: Eric Hesse, None

CHONDROCYTES

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*, 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

FRI-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

FRI-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

ENERGY METABOLISM, BONE, MUSCLE AND FAT

FRI-0255  Undercarboxylated Osteocalcin Downregulates Pancreatic Lipase Expression in CREB2-Dependent Manner in Pancreatic Acinar Cells
Danbi Park*, Ye-Won Kwon, Jeong-Hwa Baek, Kyunghwa Baek. 1Department of Pharmacology, College of Dentistry and Research Institute of Oral Science, Gwangju-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*, Beatrice Desvergne, Nicolas Bonnet. 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 Be1213
Makoto Fujiwara*, Anyona Guntur, Phuong Le, Victoria Demambro, Mark Horowitz, Clifford Rosen. 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*1, Vladimír Veksler2, Jérôme Piquereau3, Lydie Nadal-Desbarats1, Philippe Poulettau1, Molly Nelson Holte2, Malayannan Subramaniann2, 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

FRI-0260  Fatty acid oxidation is essential for osteoclast development and skeletal homeostasis
Priyanka Kushwaha*1, Conor Beil2, Michael J. Wolfgang1, Ryan C. Riddle1. 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 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

FRI-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

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*, Jouni 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 Burrage1, Mahim Jain2, Ingo Graele1, 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 Batkovskyte1, Zixue Jin1, Brian C Dawson1, Shan Chen1, Yuqing Chen1, Ming-Ming Jiang1, Elda M Munivez1, Vernon R Sutton1, Cole Kuzawa2, Rossella Venditti3, Maryann Weis2, Aurélie Clément4, Brenna Tremp5, Bernardo Blanco-Sánchez6, Monte Westerfield1, David Eyre4, 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
FRI-0299 PIN1 is a new therapeutic target of craniosynostosis
Hye-Rim Shin*, Han-Sol Bae, Bong-Su Kim, Heein Yoon, Young-Dan Cho, Woo-Jin Kim, Kang Young Choi, Yun-Sil Lee, Kyung-Mi Woo, Jeong-Hwa Baek, Hyun-Mo Ryoo. 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 Moody, Kim Taylor, Niambi Brewer, Fred Kaplan, Robert Pignolo, Eileen Shore, Edward Hsiao. 1UCSF, United States, 2UPenn, United States, 3Mayo Clinic, United States
Disclosures: Kelly Wentworth, Clementia Pharmaceuticals, Other Financial or Material Support

GENOMICS, TRANSCRIPTOMICS, PROTEOMICS AND METABOLOMICS OF MUSCULOSKELETAL DISEASE

FRI-0325 A high resolution Capture-C promoter ‘interactome’ implicates causal genes at BMD GWAS loci
Alessandra Chesi*, Yadav Wagley, Matthew E. Johnson, Sumei Lu, Michelle E. Leonard, Kenyaita M. Hodge, James A. Pippin, Elisabetta Manduchi, Andrew D. Wells, Struan F.A. Grant, Kurt D. Hankenson. 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. Center, John A. Eisman, Hung T. Nguyen, Tuan V. Nguyen. 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 Essalmani, John Creemers, Nabil G. Seidah, Mathieu Ferron. 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 Wu, Mathew E. Olson, Kevin Mcandrews, Jessica H. Nelson, Ashley L. Daniel, Noriyoshi Kurihara, Emily G. Atkinson, Venkat Srivivasan, Lifeng Xiao, Frank H. Ebertino, G. David Roodman, Robert K. Boeckman Jr, Teresita Bellido. 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*, Xiaqing 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*,1, Linda O’Bryan2, Arun TatiParthi3, Erica Clinkenbeard4, Pu Ni5, Martin Cramer2, Manoj Bhaskaran3, Robert Johnson2, Jonathan Wilson2, Rosamund Smith2, Kenneth White4.1 Marian 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*,1, Lulu Chen1, Weiwei Sun1, David Goltzman2, Dengshun Miao1.1 Nanjing 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*,1, Gang Xi1, Victoria Demambro2, Clifford Rosen2, David Clemmons1.1 University 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*,1, 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
MUSCULOSKELETAL AGING

FRI-0419 Short-term pharmacologic inhibition of RAGE suppresses bone turnover and muscle atrophy in aging
Hannah M. Davis*1,2, Mohammad W. Aref1,2, Alyson L. Essex1, Sinai Valdez1, Alexandra Aguilar-Perez1,2, Padmini Deoosthale1,2, Fletcher White1,4,5, Jolene Windle6, Matthew R. Allen1,2,3, 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 Anesthesiology, 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 2, Peggy Cawthon 3, Lisa Langsetmo 3, Kris Ensrud 3, Jane Cauley 4, Deborah Kado5. 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 Mace2, Perla Reyes-Fernandez1, James Fleet1. 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 Ma1, Wuxia Qiu2, Lifang Hu1, Aironq Qian1, 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 Iio1, Takashi Saika1, Yuuki Imar2. 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, Coralie 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, Departments of Orthopaedic Surgery and Cell and Developmental Biology, 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 Novak*, 1 Danko Grcevic, 2 Brya G Matthews, 1 Ivo Kalajzic. 1 UConn Health, United States, 2 University 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 Moini, 1 Zexi Wang, 2 Matthew Scott Heller, 2 Akshay Lakra, 2 Herbert John Cooper, 2 Roshan Pradip Shah, 2 Jeffrey Albert Geller, 2 X. Lucas Lu, 2 Edward Guo. 1 Bone Bioengineering Laboratory, Columbia University, United States, 2 Department of Orthopaedic Surgery, Columbia University Medical Center, United States, 3 Department 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 Judge, 2 Kirsten Leyland, 2 Hazel Inskip, 1 Cyrus Cooper. 1 MRC Lifecourse Epidemiology Unit, University of Southampton, United Kingdom, 2 University 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 Burkov, 1 Graham Treece, 1 Andrew Gee, 1 Thomas Turmezei, 1 Fjola Johannesdottir, 2 Sigurdur Sigurdsson, 2 Tamara Harris, 2 Helgi Jonsson, 2 Vilmundur Gudnason. 1 University of Cambridge, United Kingdom, 2 The Icelandic Heart Association, Iceland, 3 Public Health Sciences, University of Iceland, Iceland, 4 Laboratory of Epidemiology and Population Sciences, United States, 5 Faculty of Medicine, University of Iceland, Iceland  
*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 Soen, 1 Hisashi Yamanaka, 1 Toshiyuki Yoneda, 2 Sakae Tanaka, 2 Takaya Nitta, 2 Naoki Okubo, 2 Harry Gennant, 2 Desirée Van Der Heijde, 3 Tsutomu Takeuchi. 1 University of Occupational and Environmental Health, Japan, 2 Kindai University Nara Hospital, Japan, 3 Institute of Rheumatology Tokyo Women’s Medical University, Japan, 4 Osaka University Graduate School of Dentistry, Japan, 5 The University of Tokyo, Japan, 6 Daiichi Sankyo Co. Ltd, Japan, 7 University of California, United States, 8 Leiden University Medical Center, Netherlands, 9 Keio 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
Kathleen A Becker*, 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

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
Alessandra Chesi*, Yaday Wagley2, Matthew E. Johnson1, Sumei Lu1, Michelle E. Leonard1, Kenyaita M. Hodges1, James A. Pippin1, Elisabetta Manduchi1, Andrew D. Wells1, Kurt D. Hankenson2, Struan F.A. Grant1. 1The Children’s Hospital of Philadelphia, United States, 2University 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/Galpha-i-calcium oscillation-ERK signaling  
Ziqing Li1*, Tongjun Liu1, Alyssa Gilmore2, Néstor Más Gómez3, Claire H Mitchell1,3, Yiping 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 Physiology, 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 Pierce1*, Ke-Hong Ding, Jianrui Xu, Kanglun Yu, Anuj Sharma, Mark Hamrick, William Hill, Xing-Ming Shi, Carlos Isales, Meghan Megee-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

FRI-0551  Direct reprogramming of mouse fibroblasts into functional osteoblasts by defined factors  
Hui Zhu1*, Bogdan Conrad2, Fan Yang2, 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

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 Chen1*, 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 box1 protein (HMGB1) on osteocytes and osteoclasts regulate osteoclastogenesis  
Hannah M. Davis1,2, Sinai Valdez1, Leland J. Gomez1, Angela Bruzanitii1,2,3, 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**


1. Medical University of South Carolina Department of Biochemistry and Molecular Biology and Hollings Cancer Center, United States, 2. Ohio State University Department of Cancer Biology and Genetics and Comprehensive Cancer Center, United States, 3. Ohio State University College of Veterinary Medicine, United States, 4. 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**


1. University of Toronto Faculty of Medicine, Canada, 2. Arthritis and Tissue Degeneration Program, David Z. Rosensweig Genomics Research Center, Hospital for Special Surgery, United States, 3. Arthritis and Tissue Degeneration Program, Hospital for Special Surgery, United States, 4. Department 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*, Ruize Qu, Xiaomin Chen, Wenhan Wang, John Hayball, Krasimir Vasilev, Yunpeng Zhao.

1. Shandong University Qilu Hospital, China, 2. Shandong University, China, 3. University 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*, David Mbolad, Dana Begun, Jennifer Westendorf, Merry Jo Oursler, Meghan Mcgeee-Lawrence, Bradley Elizabeth.

1. Mayo Clinic, United States, 2. Augusta 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*, Ainnie Dar, Vardit Kram, Li Li, Tina Kilts, Marian Young.

1. Craniofacial and Skeletal Diseases Branch, National Institute of Dental and Craniofacial Research, National Institutes of Health, United States, 2. Collagen 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.

**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 Aobulikasimu1*, Zulipiya Aibibula1, Jinying Piao1, Shingo Sato2, Hiroki Ochi2, Kunikazu Tsuji1, Atsushi Okawa1, 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
Jennifer C. Coulombe1*, Zachary K. Mullen2, Ashton M. Weins2, Louis S. Stodieck3, Virginia L. Ferguson1. 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. Davis1*, 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. Allen1,2,4, 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, 3Department of Hematology/Oncology, Indiana University School of Medicine, United States, 4Roudebush 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 Hanley1, 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 Kimelman2, 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 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

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-Lopes4, Inês Lopes1, Jorge M Mendes4, Pedro Simões Coelho5, João Eurico Fonseca6, Jaime Cunha Branco7, 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 Ferrari5. 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, 3University 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
Beatrice Edwards*, William Leslie, Saeed Al-Azazi, Lin Yan, Lisa Lix, Piotr Czykowskij, Harminder Singh. 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)
Erik J. Geiger*, Dennis M. Black, 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: 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

E. Michael Lewiecki*, Benjamin Chastek, Kevin Sundquist, Setareh A. Williams, Deane Leader, Jr., Richard J. Weiss, Yamei Wang, Lorraine A. Fitzpatrick, Jeffrey R. Curtis. 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

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

FRI-0745

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

Daniel Prieto-Alhambra*, Martin Ernst, Katrine Hass Rubin, Daniel Martinez-Laguna, M Kassim Javaid, Cyrus Cooper, Cesar Libanati, Emese Toth, Bo Abrahamsen. 1Nuffield Department of Orthopaedics, Rheumatology, and Musculoskeletal Sciences (NDORMS), Oxford NIHR Biomedical Research Centre, University of Oxford, United Kingdom, 2OPEN, Institute of Clinical Research, University of Southern Denmark, Denmark, 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

FRI-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
FRI-0747  Type 2 Diabetes and HR-pQCT Parameters in Older Men
Ann Schwartz*,1, Neeta Parimi1, Andrew Burghardt1, Mary Bouxsein2, Elsa Strotmeyer2, Eric Vittinghoff1, Eric Orwell1, Gina Woods1, Dennis Black1, Nancy Lane2, Kristine Ensrud1, Nicola Napoli8. 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*,1, Alexandra Papaioannou1, Olga Gajic-Veljanoski1, Courtney Kennedy1, George Ioannidis1, Claudie Berger1, Wilma Hopman2, David Goltzman3, Robert Josse4, Christopher S Kovacs5, David A Hanley5, Jerilynn P Prior6, Suzanne N Morin7, Stephanie M Kaiser8, Angela M Cheung9, Lehana Thabane10, Jonathan D Adachi11, The Camos Research Group1, 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, 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*,1, Helena Johansson2, Nicholas Harvey3, Juliet Compston4, Cyrus Cooper1, John Kanis2. 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*,1, Jesse D. Ortegaard1, Jacqueline Vanderpuye-Orgle2, Andreas Grauer1, 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, 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
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 Gossier2, Nicholas Bishop1, Stephen Kennedy4, Aris Papageorgiou4, Robert Fraser1, Saurabh Gandhi1, Ann Prentice6, Hazel Inskip1, Keith Godfrey4, Inez Schoenmakers6, M Kassim Javid5, 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 Giles3, 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 Amariti*, Stephen Schneider, Karen Hansen, Yvette Schlussel, Sue Shapses. 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, Sundee 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 Chen. 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 Gamsjaeger, Stamiatia Rokidi, Keith Condon, Klaus Klauschofer, David Burr. 1Ludwig Boltzmann Institute of Osteology at the Hanusch Hospital of WGGK and AUA 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 Kang, Martha Villavicencio, Jason Hodges, Wassim Chemaitilly, Sue Kaste, James Gurney, Babette Zemel. 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 Nickolos, Mt Yin, J Galvão, Margareth Eira, Lm Reis, Luzia Furukawa, Vanda Jorgetti, Rm Moyses. 1Universidade de São Paulo, Brazil, 2Columbia University, United States, 3UNINOVE, Brazil, 4Instituto de Infectologia Emilio ribas, 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 Geusens3, Cristiano Zerbini4, Astrid Fahrleitner-Pammer5, Ruediger Moericke6, Enrique Casado7, Jan Stepan8, Salvatore Minisola9, Eric Lespessailles10, Pedro López-Romero11, 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 Präventive 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

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 Kung2, Ian Wong5. 1The University of Hong Kong, Hong Kong, 2Hebrew SeniorLife, Harvard Medical School, United States, 3University of 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, Radius, 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 Geusens*,1, Stefan Goemaere2, Nico Pannacciulli3, Nancy Lane4, Eric Lespessailles5, Osvaldo D. Messina6, Roland Chapurlat7, Xiang Yin1, Rachel B. Wagman8, 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 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
**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 Greenspan1, Fitzpatrick Lorraine2, Bruce Mitlak2, Yamei Wang2, Nicholas C. Harvey2, Chad Deal3, Felicia Cosman3, Mike Mcclung4, 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 Lorentzon1, Helena Johansson2,3, Nicholas C Harvey4, Anders Odén2, Kerrie Sanders5, Fredrik Borgström5, Axel Svedbom6, Eugene Mccloskey7, John Kanis8, 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, Mölndal, 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*1, Richard Eastell1, Michael Mcclung2, Nico Pannacciulli2, Christine Wang2, Susan Yue2, 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, Consilient Healthcare, Consultant, Synexus, 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, Synexus, 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 Muschitz¹, Judith Haschka¹, Georg Langs², Markus Holzer³, Andreas Baierl³, Christoph Pümpel¹, Zora Messner¹, Roland Kocijan⁴, Xavier Feichtinger⁴, Rainer Mittermayr⁴, Jakob E. Schanda¹, Thomas Hausner¹, Robert Wakolbinger¹, Jochen Schmidsfeld³, Christian Fialka³, Wolfgang Schima³, 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 Park¹, 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 Wang¹, Zhenqiang He², Duan Hao³, 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 Adams¹, 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 Delale¹, Stephane Milano¹, Victoria Demambro², David R Clemmons³, Clifford J Rosen², Thierry Abribat¹. ¹Alize pharma 3, France, ²Maine Medical Center, United States, ³NPT Inc, United States
Disclosures: Thomas Delale, None
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*, Stephanie Milano1, David R Clemmons2, Clifford J Rosen1, Thierry Abribat3. 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 Henaff*, 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 Dhote1, Savannah Roy1, Daniel Cohen1, Suleiman Sudah1, 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

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 Kawamata4, Takenori Satō1, Akira Kawata1, Chihiro Miyamoto1, Yojiro Maehata1, Hirokuma Watabe2, Nobuyuki Tani-Ishii3, Nobushi Hamada1, Shun-Suke Takahashi1, Shinji Deguchi1, Ryoei 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 Yaqub1, 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, 3Department of anesthesiology, Netherlands
Disclosures: Esmée Botman, None
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. Carpenter¹, Wolfgang Höglér², Erik Imel³, Anthony A. Portale³, Annemieke Boot⁴, Agnès Linglart⁵, Raja Padidela⁶, William Van’T Hoff⁷, Gary S. Gottesman⁸, Meng Mao⁹, Alison Skrinar¹⁰, 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

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 Shiu², Nandini Nair³, John Williams¹, Robert Recker¹, Joan Lappe⁴, David Dempster⁴, Hua Zhou⁴, Mafø Kamanda-Kosse³, 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, ⁴Creighton University, United States, ⁵Helen Hayes Hospital, United States

Disclosures: Adi Cohen, None

Age-related Changes and the Effect of Bisphosphonates on Bone Turnover and Disease Progression in Fibrous Dysplasia of Bone

Pablo Florenzano*¹², Kristen S Pan¹², 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

Trabecular Bone Score in Osteogenesis Imperfecta. Is it useful?

Helena Florez*¹, Africa Muxi ², Eva Gonzalez ³, Ana Monegal ¹, Núria Guàñabens 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

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 Modaff³, Richard Pauli⁴, David Rodriguez-Buriticá¹, Kerry Schulze¹, Elena Serna², 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 Burolsumab (KRN23), a Fully Human Anti-FGF23 Monoclonal Antibody, on Osteomalacia in Adults with X-Linked Hypophosphatemia (XLH)
Karl L. Insogna*, Frank Rauch1, Peter Kamenický2, Nobuaki Ito3, Takuo Kubota1, Akie Nakamura4, Lin Zhang5, Matt Mealliffe6, Javier San Martin7, Anthony A. Portale1. 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

**Disclosures:** Karl L. Insogna, Ultragenyx Pharmaceutical Inc., Grant/Research Support, Ultragenyx Pharmaceutical Inc., Other Financial or Material Support, Ultragenyx Pharmaceutical Inc., Consultant

**FRI-1026** An overview of the etiology, clinical manifestations, management strategies and complications of hypoparathyroidism from the Canadian National Hypoparathyroidism Registry
Rafik El Werfalli*, Yasser Hakami1, Manoela Braga1, Adam Millar2, Zubin Punthakee3, Farhan Tariq1, J.E.M. Young1, Aliya Khan1. 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*, Leyre Riancho-Zarrabeitia2, Maite Garcia-Unzueta3, Carmen Valero1, Jair Tenorio1, Marta Garcia-Hoyos3, Pablo Lapunzina1, Jose A. Riancho1, 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 Calcinosi: 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*, 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*, Shinnosuke Tsuji2, Sho Tsukamoto1, Mai Kuratani1, Satoshi Ohte3, Kyosumi Takaishi2, Yoshihiro Kawaguchi3, Jun Hasegawa4. 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*1,2, Rachel Surowiec3, Rebecca Falzon2, Lauren Battle2, Chris Stephan2, Michelle S. Caird2, 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*, 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 Trajanoskа*, Felix Dayz, 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 Trajanoskа, 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*, Natalia Fernandez2, François Herrmann3, René Rizzoli1, Gabriel Gold1, Patrick 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*, Marianna Bucovsky1, John Williams1, Danielle Brunjes1, Arindam Roychoudhury3, Ivelisse Colon1, David Ferris2, Susan Olender4, 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*1, 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*1,2, Itamar O. Vieira1, Fabiana R. Hernandes, Andre L. Teixeira1, Ivone B. Oliveira1, Wagner V. Dominguez1, Luciene M. Dos Reis1, Fabio M. Montenegro2, Rosa M. Moyaes1,2, Aluizio B. Carvalho3, Vanda Jorgetti2,3, Laboratório de Investigação Médica 16, Hospital das Clinicas da Faculdade de Medicina da Universidade de São Paulo, Brazil, 1Hospital Samaritanos, São Paulo, Brazil, 2Laboratório de Investigação Médica, UNINOVA, Brazil, 3Disciplina de Cabeça e Pescoço, Hospital das Clinicas da Faculdade de Medicina da Universidade de São Paulo, Brazil, 4Pos-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, Toshitsugu 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*1, Tzu-Hui Chu, Yi-Jun Lin1, Lo-Wei Chen2, Cheng-Yuan Hsiao1, Wen-Chih Liu3. 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 Micromindentation in Patients with Primary Hyperparathyroidism and Hypoparathyroidism
Jessica Starr*1, Gaia Tabacco2, Rukshana Majeed1, Beatriz Omeragic1, Maximo Gomez1, Leonardo Bandeira1, Mishaela Rubin1. 1Columbia University, United States, 2University Campus Bio-Medico, Italy, 3Instituto FBandeira de Endocrinologia, United States

Disclosures: Jessica Starr, None
SAT-0008 American Society for Bone and Mineral Research
Parathyroid Gland Localization in Primary Hyperparathyroidism: Evaluation of a Novel Imaging Protocol and Direct Head-to-Head Comparison of Parathyroid 4D-CT and Septamibi SPECT/CT
Randy Yeh*, Yu-Kwang Donovan Tay, Gaia Tabacco, Laurent Derce, 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, 2Columbia University, United States, 3Michigan Bone & Mineral Clinic, PC, 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*, Alexander Dash, Andre Samuel, Eric Marty, Harold Moore, Brandon Carlson, John Carrino, Donald Mcmahon, Alexander Hughes, Han Jo Kim, Matthew Cunningham, Frank Schwab, Richard Bockman, Emily Stein. 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*, Donovan Tay Yu-Kwang, Mishaela Rubin, John Williams, Beatriz Omeragic, Rukshana Majeed, Maximo Gomez Almonte, Natalie Cusano, John Bilezikian. 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*, Gaia Tabacco, Natalie Cusano, John Williams, Beatriz Omeragic, Rukshana Majeed, Maximo Gomez Almonte, John Bilezikian, Mishaela Rubin. 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*, Thierry Hauet, Pascal Roblot, Francoise Debiais. 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*, Andy Bierhals. 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*, Tiffany Hu, Lori C. Guthrie, Beth A. Brillante, Michaele Smith, Robert James, Michael T. Collins. 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*, Christopher J. Lelliott, John G. Logan, David T. Lafont, Victoria D. Leitch, Natalie C. Butterfield, Hayley J. Protheroe, Peter L. Croucher, Paul A. Baldock, Alina Gaultier-Lintia, Gael Nicolas, Nina Bon, Sophie Sourice, Jérôme Guicheux, Laurent Beck, Graham R. Williams, J. H. Duncan Bassett. 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
SAT-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 Nguyen¹, Mark R Forwood¹, Keith R Bambery³, Mark J Tobin³, Gordon K Smyth³, 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

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 Taylor², Eve Donnelly², Ani Ural¹. 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 Schurman², Claire Acevedo¹, Eric Schaible⁴, Eric W Livingston⁵, Moshe Levi⁶, Ted Bateman⁶, Tamara Alliston⁷, Karen B King⁸, Virginia L Ferguson¹. 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
F.L. Heyer*, J.J.A. De Jong¹, P.C. Willems¹, J.J. Arts², S.M.J. Van Kuijk¹, J.A.P. Bons¹, M. Poeze¹, P.P. Geusens¹, B. Van Rietbergen², J.P. Van Den Bergh¹. ¹Maastricht University Medical Center, Netherlands, ²Eindhoven University of Technology, Netherlands
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 Griffin², George Divine¹, Mahalakshmi Honasoge¹, Arti Bhan¹, Shiri Levy¹, Elizabeth Warner¹, Sudhaker Rao¹. 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 Kondiboyina¹, Lauren Raine¹, Arthur Kramer¹, Naiman Khan², Charles Hillman³. ¹Northeastern University, United States, ²University of Illinois at Urbana-Champaign, United States
Disclosures: Sandra Shefelbine, None
SAT-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*1, Beatriz P Trani1, Maysa S Campos1, João Paulo B Ximenez2, Raquel
A Silva1, José B Volpon1. 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

SAT-0062  Second-generation HR-pQCT reveals minor size differences between right and left
sides, but no major differences in density or microarchitecture
Sanchita Agarwal*1, Bin Zhou2, Y Eric Yu2, Kyle K Nishiyama1, Fernando R Rosete2, 
Mariana Bucovsky1, Elizabeth Shane3, X Edward Guo2. 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

SAT-0063  Persistent activation of calcium-sensing receptor increases microcrack and decreases
bone strength.
Itsuto Endo1,2, Bingzi Dong2, Yukio Ohnishi1, Yukari Ooguro1, Kiyo Kurahashi1, 
Masahiro Hiasa2, Jumpei Teramachi2, Hirofumi Tenshin2, Seiji Fukumoto2, Masahiro
Abe1, Toshio Matsumoto2. 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 Qingdao University, China, 4Department of Orthodontics and Dentofacial Orthopedic, Tokushima University, Japan, 5Department of Tissue Regulation, Tokushima University, Japan, 6Fujii Memorial Institute of Medical Sciences, Tokushima University, Japan
Disclosures: Itsuto Endo, None

SAT-0064  Is cortical porosity associated with degraded material quality?
Aurelien Gourrier*1, Delphine Farlay2, Héléne Follet2, Georges Boivin2, 1LIPHY CNRS 
Université Grenoble Alpes, France, 2INSERM UMR 1033 Université de Lyon, France
Disclosures: Aurelien Gourrier, None

SAT-0065  Chondroitin Sulfate and Biglycan Play Pivotal Roles in Bone Toughness via Retaining
Bound Water in Bone Matrix
Rui Hua*1, Jie Bai1, Xiaodu Wang2, Jean X. Jiang1. 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

SAT-0066  Quantitative Computed Tomography (QCT) Analysis of Bone Quality: Consideration
of Hierarchical Levels of Variation for Predicting Fracture Risk.
Randee Hunter*1, Karen Briley2, James Ellis2, Amanda Agnew1. 1Skeletal Biology Research 
Laboratory, United States, 2Wright Center of Innovation in Biomedical Imaging, United 
States
Disclosures: Randee Hunter, None

SAT-0067  Compressive Bone Strength Index (BSIc) Explains 85% Variance in Experimentally-
Derived Distal Radius Failure Load
James Johnston*1, Matthew Mcdonald1, Saija Kontulainen2. 1Department of Mechanical 
Engineering, University of Saskatchewan, Canada, 2College of Kinesiology, University of 
Saskatchewan, Canada
Disclosures: James Johnston, None

SAT-0068  Differences in bone quality between fresh bone and PMMA-embedded bone
Hiromi Kimura-Suda*1, Teppei Ito1, Masahiko Takahata2, Tomohiro Shimizu2, Fumiya
Nakamura1, Masahiko Ota1. 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*1, 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*1, 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*1, 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

### 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*1, Xiao-Fang Wang1, Ji Wang1, Zhendong Zhang1, Fiona Wp Yu1, Vivian Wy Hung1, Wayne Yw Lee1, Ali Ghasem-Zadeh2, Roger Zebaze2, Tracy Y Zhu1, X Edward Guo1, Jack Cy Cheng1, Tsz Ping Lam1, Ego Seeman2. 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*1, Ko Chiba2, Yusaku Isole2, Narihiro Okazaki2, Naoko Murakami1, Michio Kitajima1, Kiyonori Miura1, Makoto Osaki2, Hideaki Masuzaki1. 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

### 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 Dumuid1, Susan Clifford1, Grace Gell1, Timothy Olds1, Melissa Wake1. 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 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 Kliethermes, Tamara A Scerpella. SUNY Upstate Medical University, Binghamton University, United States, 2University 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, 2Institute of Endocrinology, Chaim Sheba Medical Center, Tel-Hashomer, Israel, 3Pediatric 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 Lionikaitė, 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, 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

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. 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

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. 1Texas A&M University College of Dentistry, United States, 2The 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 Sun1, Sarah Amra1, Yan Cui1, Zhenhan Deng1, Haizi Cheng1, Charles Huard1, Bing Wang2, Walter Lowe1, Johnny Huard1. 1University of Texas Health Science Center at Houston, United States, 2University of Pittsburgh, United States
Disclosures: Xueqin Gao, None

SAT-0143  Annexin A5 prevents force-mediated bone ridge overgrowth at the enthesis
Hisashi Ideno*, Yoshinori Arai2, Koichiro Komatsu1, Kazuhiisa Nakashima1, Satoshi Wada 1, Teruhiyo Yamashita1, Ernst Pöschl 3, Bent Brachvogel5, Yoichi Ezura7, Akira Nifuji 1. 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 Mbalaviele, 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 Nocciolino12, Nicolas Pilot3, Leonardo Pissani3, Gustavo Roberto Cointy1, Maria Rosa Ulla4, Joern Rittweger5, Alex Ireland6, Jose Luis Ferretti2, Ricardo Francisco Capozza1. 1Center for P-Ca Metabolism Studies (CEMFoC), Natl Univ of Rosario, Argentina, 2Musculoskeletal Biomechanical Studies Unit (UDEBOM), University Institute Gran Rosario (IURG), Argentina, 3Musculoskeletal Biomechanical Studies Unit (UDEBOM), University Institute Gran Rosario (IURG), Argentina, 4CEOM- Centro de endocrinología Osteolog_a 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
SAT-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*, 1, Ioanna Mosialou1, Junfei Zhao 2, Akihide Yoshimi 3, Konstantinos Panitsas 4, Richard A. Friedman 5, Omar Abdel-Wahab 6, Raúl Rabadán 7, Stavroula Kousteni 1. 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, 6Weil 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

SAT-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

SAT-0172  Single-cell proteomics reveal bone marrow stromal cell drivers of blood regeneration
Nicolas Severe*, 1, Murat Karabacak 2, Karin Gustafsson 3, Ninib Baryawno 4, Gabriel Courties 1, Yoomna Kfoury 1, Elizabeth Scadden 1, Matthias Nahrendorf 5, Methmet Toner 5, David Scadden 1. 1Massachusetts General Hospital, United States, 2Shriners Hospital for Children, United States
Disclosures: Nicolas Severe, None

SAT-0173  Osteocalcin and osteopontin mediate osteogenic differentiation of mesenchymal stem/stromal cells by controlling the maturation level of mineral species
Marta Carvalho*, 1, Joaquim Cabral 2, Cláudia Lobato Da Silva 2, Deepak Vashishth 1. 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

SAT-0174  Osterix-cre expression by itself enhances adipogenic differentiation of stromal cells and affects hematopoiesis
Katrin Huck*, 1, Carla Sens-Albert 2, Inaam Nakchbandi 2, 1Max-Planck Institute for Medical Research, Germany, 2University of Heidelberg, Germany
Disclosures: Katrin Huck, None

BONE TUMORS AND METASTASIS

SAT-0187  ERRa in primary breast tumours promotes tumour cell dissemination to bone by regulating RANK
Geoffrey Vargas*, 1, Mathilde Bouchet 2, Casina Kan 3, Claire Benetollo 4, Martine Croset 1, Martine Mazel 1, Laure Cayrefourcq 1, Sophie Vacher 4, Francesco Pantano 2, Keltouma Driouch 1, Ivan Bieche 1, William Jacot 5, Jane Aubin 5, Catherine Alix-panabieres 2, Philippe Clezardin 1, Edith Bonneyle 1, 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 Kim2, Hyung Joon Kim3, Brian Y. Ryu2, Junho Chung2, Zang Hee Lee2, Hong-Hee Kim2. 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 osteoclasts 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 Rauner2, Andy Göbel1, Oliver Hoffmann3, Lorenz Hofbauer2, Rainer Kimmig1, Sabine Kasimir-Bauer1, Ann-Kathrin Bittner3. 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 Gu1, Zhiqiang An2, Jean Jiang1. 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 Holtslander1, Vera Mayhew1, Samuel Dooyema1, 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 2, Sree H Pulugulla1, Quanhong Sun1, Philip E Auron2, Phil G Campbell2, Deborah L Galson3. 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
Disclosures: Juraj Adamik, None

SAT-0195

Metastatic Lesion Types Predict Vertebral Bone Matrix Quality and Strength
Stacyann Bailey*, David Hackney2, Marc Stadelmann3, Philippe Zysset3, Ron Alkalay2, Deepak Vashishth1. 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

CHONDOCYTES

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 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

SAT-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

SAT-0231  Direct transdifferentiation of ligament cells into articular chondrocytes that is regulated by Indian hedgehog (IHH) signaling and phosphate levels
Jun Wang*, 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
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, Kyeunghwa Baek1. 1Department of Pharmacology, College of Dentistry and Research Institute of Oral Science, Ganganung-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

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 Beilh3
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 Piquereau2, Lydie Nadal-Desbarats1, Philippe Poulletaut1, Molly Nelson Holte1, Malayannan Subramaniam1, Sabine Bensamoun1, John Hawse1. 1Univ. Paris-Sud, France, 2Univ. de Technologie de Compiegne, France, 3Univ. 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 Beil1, 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 Vary2, 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 Wee1,2, 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 Greendale1, Weijuan Han1, Meihua Huang1, Barbara Sternfeld2, Kristine Ruppert1, Carrie Karvonen-Gutierrez1, 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, 4School 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 Southmayd, 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 Rue1, 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 Marcil. 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 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*

SAT-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, Baylor College of Medicine, United States, Kennedy Krieger Institute, United States, University of Texas Health Science Center at Houston, United States, TIGEM (Telethon Institute of Genetics and Medicine), Italy, University of Washington, United States, University of Oregon, United States  
*Disclosures: Ronit Marom, None*

SAT-0299  
**PIN1 is a new therapeutic target of craniosynostosis**  
Hye-Rim Shin*, Han-Sol Bae, Bong-Su Kim, Heein Yoon, Young-Dan Cho, Woo-Jin Kim, Kang Young Choi, Yun-Sil Lee, Kyung-Mi Woo, Jeong-Hwa Baek, Hyun-Mo Ryoo, Seoul National University, Republic of Korea, Kyungpook 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 Moody, Kim Taylor, Niambi Brewer, Fred Kaplan, Robert Pignolo, Eileen Shore, Edward Hsiao, UCSF, United States, UPenn, United States, Mayo 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 Yorgan, Gretl Hendrickx, Ellen Steenackers, Michaela Kneissel, Ina Kramer, Geert Mortier, Thorsten Schinke, Wim Van Hul, Centre of Medical Genetics, University and University Hospital of Antwerp, Belgium, Department of Osteology and Biomechanics, University Medical Center Hamburg, Germany, Musculoskeletal Disease Area, Novartis Institutes for BioMedical Research, Basel, Switzerland, Musculoskeletal 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-Ayats, Anna Monistrol-Mula, Natália Garcia-Giralt, Adolfo Diez-Pérez, Xavier Nogués, Leonardo Mellibovsky, Daniel Grinberg, Susana Balcells, Department of Genetics, Microbiology and Statistics, Faculty of Biology, University of Barcelona, IBUB, IRSJD, CIBERER, Spain, Musculoskeletal Disease Area, Novartis Institutes for BioMedical Research, Hospital of the 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 Gerousí1, Mónica Cozar1, Natàlia Garcia-Giralte4, Xavier Nogués4, 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
Disclosures: Neus Roca-Ayats, None

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 Wagle1, 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 Thieke, Ming Ruan, Louise Mccready, Matthew Drake, Merry Jo Oursler, Sundeep Khosla. Mayo Clinic, United States
Disclosures: Megan Weivoda, None
SAT-0330  Integrative analysis of genetic and clinical risk factors affecting bone loss in Korean population
Ji Hyun Lee*, Jooyong Park, Jung Hee Kim, Hyung Jin Choi, Eu Jeong Ku, A Ram Hong, Ji-Yeob Choi, Nam H. Cho, Chan Soo Shin. 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*, Rachid Essalmani, John Creemers, Nabil G. Seidah, Mathieu Ferron. 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*, Gerald Wu, Mathew E. Olson, Kevin Mcaandrews, Jessica H. Nelson, Ashley L. Daniel, Noriyoshi Kurihara, Emily G. Atkinson, Venkat Srinivasan, Lifeng Xiao, Frank H. Ebetino, G. David Roodman Jr, Teresita Bellido. 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

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*, Linda O’Bryan, Arun Tatiparthi, Erica Clinkenbeard, Pu Ni, Martin Cramer, Manoj Bhaskaran, Robert Johnson, Jonathan Wilson, Rosamund Smith, Kenneth White. 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*, Lulu Chen, Weiwei Sun, David Goltzman, Dengshun Miao. 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*, Gang Xi, Victoria Demambro, Clifford Rosen, David Clemmons. 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*1,2, Intawat Nookaew1, Nukhet Aykin-Burns1, Kim Krager1, Li Han1,2, Robert Jilka1,2, 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

SAT-0355  The impact of dietary phosphate on acute renal phosphate and calcium excretion in healthy subjects.
Tom Mazzetti*1, Mandy E. Turner2, Laura Couture3, Jenny Munroe4, Rachel M. Holden 5. 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*1, Jessica Pepe1, Cristina Cipriani1, Vittoria Danese1, Veronica Cecchetti1, Valeria Fassino1, Federica Biamonte1, Luciano Colangelo1, Frank Blocki2, Salvatore Minisola1. 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 Jiang1, Zech Xu1, Jian Shen1, Stefan Janssen1, Gail Ackermann1, John Adams2, Steven Pauwels1, Dirk Venderschueren1, Rob Knight1, Eric Orwoll1, Deborah Kado1. 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 Guo3, 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 Bellido1,3. 1Department of Anatomy & Cell Biology, Indiana University School of Medicine, United 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*, Chandrasekhar 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 Hlaing*, Yoshihito Ishihara2, Ziyi Wang1, Naoya Odagaki1, Hiroshi Kamioka1. 1Department of Orthodontics, Okayama University Graduate School of Medicine, Dentistry, and Pharmaceutical Sciences, Japan, 2Department of Orthodontics, Okayama University Hospital, Japan
Disclosures: Ei Ei 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 Liu, Whitney Bullock, Russell Main. Department of Technology, China, Purdue 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. Aref, Alyson L. Essex, Sinai Valdez, Alexandra Aguilar-Perez, Padmini Deosthale, Fletcher White, Jolene Windle, Matthew R. Allen, Lilian I. Plotkin. Department of Anatomy & Cell Biology, Indiana University School of Medicine, United States, Indiana Center for Musculoskeletal Health, 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, Peggy Cawthon, Lisa Langsetmo, Kris Ensrud, Jane Cauley. University of California, San Diego, United States, California Pacific Medical Center Research Institute, United States, University of Minnesota, United States, University of Pittsburgh Graduate School of Public Health, 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, Nanyang Technological University, Republic of Korea
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. Department of Orthopaedic Surgery, Hallym 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 Chen, Hyomin Choe, Ozan Akkus, Edward M. Greenfield. Case Western Reserve University, United States, University of North Carolina at Chapel Hill, United States
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 Pinelli, Chitra Dahia. Hospital for Special Surgery, 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*, 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*

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 Liu2, Tj Martin1, Beate Lanske3, 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*

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 Mourkoti3, Eileen M. Shore4. 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*

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, 3Orthopaedic Research Laboratories and Howard Hughes Medical Institute, Boston Children’s Hospital and Harvard Medical School, United States  
*Disclosures: Lijun Wang, None*

SAT-0470  
**PDGFRβ signaling regulates osteogenesis of αSMA labeled periosteal cells.**  
Xi Wang*, Sanja Novak1, Danko Grecvic2, 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, Willian Zambuzzi1, Johannes Van Leeuwen1, Maikel Peppelenbosch2, Bram Van Der Erden1. 1Internal Medicine, Erasmus MC, Netherlands, 2Gastroenterology, Erasmus MC, Netherlands, 3Chemistry and Biochemistry, Institute of Bioscience, UNESP, Brazil
Disclosures: Marta Baroncelli, None

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 Elmansi1*, Khaleed Hussein1, Brian Volkman2, Galina Kondrikova1, Wendy Bollag3, Sadanand Fulzele4, Xingming Shi1, Meghan Mcgee-Lawrence1, Mark Hamrick1, Carlos Isales5, William Hill1, Sudharsan Periyasamy-Thandavan6. 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 Samsonraj1*, Christopher Paradise1, Amel Dudakovic1, Buer Sen2, Asha Nair3, 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 Everseenko. 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 Hu1*, Eric Y. Yu1, Ariana Moini1, Zexi Wang1, Matthew Scott Heller2, Akshay Lakra3, 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
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  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 Turmezeti, Fjola Johannesdottir, Sigurdur Sigurdsson, Tamara Harris, Helgi Jonsson, Vilmundur Gudnason. 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  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, 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  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  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 Kontulainen, 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  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 Muruges1, 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 Chandrarakumar1, Eva Szabo1, Justin Chee1, Angela M Cheung3, Jonathan D Adachi3. 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 Liaw5, Clifford J Rosen1. 1Maine Medical Center Research Institute, United States, 2Beth Israel Deaconess Medical Center, Harvard Medical School, United States, 3University of Pittsburgh, United States, 4Maine 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. Hankenson1, 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, Mairoby 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*,1, Tongjun Liu2, Alyssa Gilmore2, Néstor Más Gómez3, Claire H Mitchell1,2, Yi-Ping Li3, Merry J Oursler3, 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 Physiology, 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

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 Riddle1, Marie-Claude Faugere2, Clifford Rosen1, Charles Farber1, 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
SAT-0551 Direct reprogramming of mouse fibroblasts into functional osteoblasts by defined factors
Hui Zhu*,1, Bogdan Conrad2, Fan Yang3, 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 Shido*,1, 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. Davis*,1,2, Sinai Valdez1, Leland J. Gomez1, Angela Bruzzaniti1,2,3, Lilian I. Plotkin 1,2,4. 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, 4Brigham 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 Park1, Keunsoo Kang1, Jiyoung Ahn1, Ye-Ji Lee1, Sehwan Mun1, Seyeon Bae1, Kaichi Kaneko1, 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, 3Department of Microbiology, Dankook University, Republic of Korea, 4Arthritis 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 Molsstad1, Dana Begun1, Jennifer Westendorf4, 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*, Ainnie Dar1, Vardit Kram1, Li Li1, Tina Kilts1, 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*1, Chun Wang1, Biancamaria Ricci1, Jianqiu Xiao1, Dustin Kress1, Guillermo Blanco1, Yousef Abu-Amer2, Roberto Civitelli1, Gabriel Mbalevie1. 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*1, Soomin Lim2, Hong-In Shin3, Eui Kyun Park2. 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/SIP1 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 Murata2, Ryuma Haraguchi2, Sohei Kitazawa2. 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
**OSTEOCYTES**

**SAT-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 Okawa1, 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

**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  
Jennifer C. Coulombe*1, Zachary K. Mullen2, Ashton M. Weins2, Louis S. Stodieck3, Virginia L. Ferguson1. 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

**SAT-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 Ivan3, 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, 3Indian Center for Musculoskeletal Health, United States, 4Department of Hematology/Oncology, Indiana University School of Medicine, United States, 4Roudebush 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  
Shijing Qiu*, George Divine, Mahalakshi Honasoge, Arti Bhan, Shiri Levy, Elizabeth Warner, Sudhaker D Rao. 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 Azab†, Yuhei Uda‡, Chao Shi‡, Paola Divieti Pajevic†. 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 Lundh†, Mattias Lorentzon‡. 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 Burt†, Leigh Gabel‡, David Hanley‡, Steven Boyd‡. 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 Kirby‡, Douglas Kimelman‡, Mohammad Jafari Jozani§, J Michael Davidson†, William Leslie‡. 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 Shevroja‡, Lisa M. Lix†, Didier Hans‡. 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*1, Mónica Eusébio2, Ana Catarina Rodrigues1, Joana Caetano-Lopes4, Inês Lopes2, Jorge M Mendes6, Pedro Simões Coelho7, João Eurico Fonseca7, 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

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*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, 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*1, Mariana Diniz2, Milena Leite3, Caroline Silva4, Jessica Eleuterio2, Maria Marta Soares5, Bruno Muzzi6, Barbara Silva7. 1Alberto Cavalcanti Hospital, Brazil, 2Santa Casa de Belo Horizonte, Brazil, 3Mario Pena Hospital, Brazil, 4CEMA, Brazil, 5Felicio Rocho Hospital, Brazil, 6Mater Dei Hospital, Densimater, 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*1,2, Donna Davenport2, John W Hinchey2, Jan M Bruder12. 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*1, Enisa Shevroja2, Franck Michelet1, Doris Tran1, Christophe Lelong1, Didier Hans2. 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*1, Cindy Yu1, Sharon Chou12, Meryl Leboff12. 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 Brown¹, Xiaoquang 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 Boyd³. 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 Wang², Rodrigo J. Valderrábano¹, Yi-Wen Tsai², Jennifer S. Lee¹. 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-Azazi², Lin Yan², Lisa Lix², Piotr Czakowski², Harminder Singh³. 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. Williams2, Deane Leader, Jr.4, Richard J. Weiss5, Yamei Wang6, Lorraine A. Fitzpatrick7, Jeffrey R. Curtis8.

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**

John Morris*,1, John Kemp2, Scott Youlten1, John Logan1, Ryan Chai3, Nicholas Vulpescu1, Vincenzo Forgetto2, Aaron Kleinman2, Sindhu Mohanty2, Marcelo Sergio2, Carolina Medina-Gomez3, Katerina Trajanoska4, Julian Quinn4, Elena Ghiroardello4, Natalie Butterfield4, Katharine Curry4, Victoria Leitch4, Penny Sparkes5, Laetitia Laurent5, Anne-Tounisia Adoum6, Niall Mannan7, Davide Komla-EBri4, Andrea Pollard4, Hannah Dewhurst4, Stephen Kaptoge4, Paul Baldock7, Cyrus Cooper8, Jonathan Reeve1, Evangelia Niziani10, Evangelos Evangelou7, Claes Ohlsson8, David Karasik10, Fernando Rivadeneira6, Cheryl Ackert-Bicknell7, Douglas Kiel1, Jonathan Tobias1, Celia Gregson1, Nicholas Harvey1, David Adams1, Christopher Lelliott1, David Hinds7, Yi-Hsiang Hsu14, Matthew Maurano6, Peter Croucher1, Graham Williams4, Duncan Bassett4, David Evans2, Brent Richards1.

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*
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

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-Laguna³, MKassim Javaid⁴, Cyrus Cooper⁵, Cesar Libanati⁶, Emese Toth⁷, Bo Abrahamsen⁶. ¹Nuffield Department of Orthopaedics, Rheumatology, and Musculoskeletal Sciences (NDORMS), Oxford NIHR Biomedical Research Centre, University of Oxford, United Kingdom, ²OPEN, Institute of Clinical Research, University of Southern Denmark, Denmark, 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

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

Type 2 Diabetes and HR-pQCT Parameters in Older Men

Ann Schwartz*, Neeta Parimi¹, Andrew Burghardt¹, Mary Bouxsein¹, Elsa Strotmeyer¹, Eric Vittinghoff¹, Eric Orwoll², Gina Woods¹, Dennis Black¹, Nancy Lane⁶, Kristine Ensrud⁶, Nicola Napoli¹. 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, ⁷Universita Campus Bio-Medico di Roma, Italy, ⁸University of Minnesota and Minneapolis VA Health System, United States

Disclosures: Ann Schwartz, None

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

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-Gutierrez², Sioban Harlow³, Joan Lo³, Sherri Burnett-Bowie², Arun Karlamangla³, Gail Greendale¹. ¹University of Pittsburgh, United States, ²Massachusetts General Hospital, United States, ³University of Michigan, United States, ⁴Kaiser Permanente Northern California Division of Research, United States, ⁵University of California, United States

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 Chapus1, Francoise Debiais2, Nadia Mhensen Cetre2, Rose Marie Javier3, Sylvie Loiseau Peres4, Christian Roux10, Karine Briol10. 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 Hautepieyre Strasbourg, Rheumatology department, France, 9CHR Orléans, 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 Dhaliwal2, Anshita Aggarwal1, Rimesh Pal1, Priyanka Singh1, Niranjan Khandelwal3, 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, State 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 Frazaok 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 Frazaok 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, Tae-Hwa Go1, Dae Ryong 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
SAT-0757 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

SAT-0758 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 Eiríksdóttir, Vilmundur Gudnason, Eric Vittinghoff, Thomas Lang, Tamara Harris, Clifford Rosen, Kaipin Xu, Xiaojuan Li, Ann Schwartz.
1Department of Medicine, UCSD, United States, 2Department of Epidemiology and Biostatistics, UCSF, United States, 3Department of Epidemiology and Biostatistics, UCSI, United States, 4American Heart Association, Iceland, 5National Institute on Aging, United States, 6Medical Center Research Institute, United States, 7Program of Advanced Musculoskeletal Imaging, Cleveland Clinic, United States

Disclosures: Gina Woods, None

SAT-0759 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

SAT-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
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 Børhan, None

SAT-0805 Inappropriate Use of Cost-effectiveness Thresholds as Intervention Thresholds – Potential for Overtreatment of Low Risk Individuals
Eugene Mcloskey*, Helena Johansson, Nicholas Harvey, Juliet Compton, Cyrus Cooper, John Kanis. 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 Mcloskey, None

SAT-0806 Bending the Curve with Patient Identification and Treatment in Osteoporosis
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, Mereos, 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

140 American Society for Bone and Mineral Research
SAT-0807 HIP Mobile: A community-based Monitoring, Rehabilitation and Learning e-system for patients following a Hip Fracture
Ahmed Abou-Sharkh*, Nancy E. Mayo, Michelle Wall, Anthony Albers, Stephane Bergeron, Sonia Jean, Pierre Berube, Edward J. Harvey, Suzanne N. Morin. Research Institute of McGill University Health Centre, 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
Kaleen Hayes*, Joann Ban, Grace Athanasiadis, Andrea Burden, Suzanne Cadarette. University of Toronto, Canada, ETH Zurich, Switzerland
Disclosures: Kaleen 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 Schweitzer, Paul Van Haard, Joop Van Den Bergh, Piet Geusens. Reinier de Graaf Gasthuis, Netherlands, Maastricht University Medical Center, VieCuri Medical Centre Noord-Limburg, Netherlands, Maastricht 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 Burt, Erin M Davison, Marianne S Rose, Sharon Gaudet, Michelle Kan, Steven K Boyd, David A Hanley. McCaig Institute for Bone and Joint Health, Cumming School of Medicine, University of Calgary, Canada, Research 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 Parsons, Kate Maslin, Stefania D’Angelo, Rebecca Moon, Sarah Crozier, Fatma Gossiel, Nicholas Bishop, Stephen Kennedy, Aris Papageorgiou, Robert Fraser, Saurabh Gandhi, Ann Prentice, Hazel Inskip, Keith Godfrey, Inez Schoenmakers, M Kassim Javaid, Richard Eastell, Cyrus Cooper, Nicholas Harvey. MRC Lifecourse Epidemiology Unit, University of Southampton, Southampton, United Kingdom, Academic Unit of Bone Metabolism, University of Sheffield, Sheffield, United Kingdom, Academic Unit of Child Health, Sheffield Children’s Hospital, University of Sheffield, Sheffield, United Kingdom, Nuffield Department of Women’s & Reproductive Health, John Radcliffe Hospital, University of Oxford, Oxford, United Kingdom, Department of Obstetrics and Gynaecology, Sheffield Hospitals NHS Trust, University of Sheffield, Sheffield, United Kingdom, MRC Human Nutrition Research, Elsie Widdowson Laboratory, Cambridge, United Kingdom, National Institute for Health Research (NIHR) Oxford Biomedical Research Centre, University of Oxford, United Kingdom
Disclosures: Elizabeth Curtis, None
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

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

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

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

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

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, Ginu Unnikrishnan, Mary Bouxsein, Jaques Reifman. 1USARIEM, United States, 2MGH, United States, 3BHSAI, United States
Disclosures: Katelyn Guerriere, None

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

Association of trabecular bone score and bone density with actigraphy-measured physical activity in NHANES 2005-2006
Rajesh Jain*, Meltem Zeytingol, 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 Vitamnin D and Omega-3 Trial (VITAL)
Meryl Leboff,1,2, Catherine Donlon,1, Nancy Cook,2,3,4, Sharon Chou,1,2, Julie Buring,2,3,4, Joann Manson,2,3,4. 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*, Stephen Schneider, Karen Hansen, Yvette Schlussel, Sue Shapses. 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, Sundee Khosla, Robert Pignolo. Mayo Clinic, United States
Disclosures: Abhishek Chandra, None

SAT-0861 Identification and Characterization of IncRNA-DBD in Diabetic Bone Metabolism
Zhekai Hu*, Qisheng Tu, Jake Chen. 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: Zhekei Hu, None

SAT-0862 Estrogen depletion alters regulation of mineralization at actively forming osteonal surfaces in a monkey animal model
Eleftherios P. Paschalis*, Sonja Gamsjaeger, Stamatia Rokidi, Keith Condon, Klaus Klausheforer, David Burr. 1Ludwig Boltzmann Institute of Osteology at the Hanusch Hospital of WGKK and AUA Trauma Centre Meidling, 1st Medical Department, Hansch 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, André 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, Yuichi Ono, Manabu Akagawa, Yusuke Yuasa, Chiaki Sato, Yoichi Shimada. Akita University graduate school of medicine, Japan
Disclosures: Itsuki Nagahata, None

ASBMR 2018 Annual Meeting 143
OSTEOPOROSIS - SECONDARY OSTEOPOROSIS

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 Villavicencio3, Jason Hodges3, Wassim Chemaitilly4, Sue Kaste5, James Gurney6, Babette Zemel’, 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 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

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 Moyaes1, 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*, 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, Soncja Jazbinsek2, Katarina Remec1, 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*, Masayuki Miyagi¹, Sho Inoue¹, Shuichiro Tajima¹, Kosuke Murata¹, Ayumu Kawakubo¹, Yui Uekusa¹, Yuji Yokozeki¹, Hisako Fujimaki¹, Daisuke Ishi¹, Koji Ishikawa², Seiji Ohzori¹, 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*, Martin Jannot¹, Myriam Normand¹, Pawel Szulec², 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*, Carlos Ferreira¹, Galina Nesterova², Mary Scott Roberts¹, Sri Harsha Tellia¹, Luis Fernandez De Castro¹, Sydney M. Brown¹, Adom Whitaker², Renata C. Pereira¹, Dorothy Bulas³, Rachel I. Gafni³, Isidro B. Salusky², William A. Gahl¹, Michael T. Collins¹. 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*, Fernando Marin², Piet Geusens³, Cristiano Zerbini³, Astrid Fahrleitner-Pammer⁴, Ruediger Moericke⁵, Enrique Casado⁶, Jan Stepan⁷, Salvatore Minisola⁸, Eric Lespessailles⁹, 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 Präventive 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*, Chor-Wing Sing¹, Angel Wong¹, Douglas Kiel², Elaine Cheung³, Joanne Lam⁴, Tommy Cheung⁵, Esther Chan⁶, Annie Kung⁷, Ian Wong⁸. 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*, David Dempster2, Donald Mcmahon2, 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*, 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*, Stefan Goemaere2, Nico Pannacciulli3, Nancy Lane4, Eric Lespessailles5, Osvaldo D. Messina5, Roland Chapurlat6, Xiang Yin7, Rachel B. Wagman7, 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
Susan Greenspan*, Fitzpatrick Lorraine2, Bruce Mitlak2, Yamei Wang2, Nicholas C. Harvey2, Chad Deal4, Felicia Cosman1, Mike McClung5. 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, 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*, Helena Johansson2,3, Nicholas C Harvey4, Anders Odén2, Kerrie Sanders1, Fredrik Borgström1, Axel Svedbom1, Eugene McCloskey2, 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
Disclosures: Mattias Lorentzon, None
SAT-0909  A Pooled Analysis of Fall Incidence from Placebo-controlled Trials of Denosumab
Eugene Mcloskey1, Richard Eastell1, Michael Mcclung2, Nico Pannacciulli1, Christine Wang2, Susan Yue1, Steven R. Cummings2. 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, UCSB, 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, UCSB, 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

SAT-0910  Teriparatide accelerates proximal humerus fracture consolidation – the TERAFRAP study
Christian Muschitz*, Judith Haschka1, Georg Langs2, Markus Holzer2, Andreas Baierl1, Christoph Pümpel1, Zora Messner1, Roland Kocijan1, Xaver Feichtinger1, Rainer Mittermayer4, Jakob E. Schanda4, Thomas Hausner4, Robert Wakolbinger1, Jochen Schmidsfeld5, Christian Fialka4, Wolfgang Schima6, Heinrich Resch1. 1St. Vincent Hospital – Medical Department II – FINFORCE; 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, Donauauechingenstraße 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

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
Disclosures: Young Chang Park, None

SAT-0913  Persistence with Buffered Solution of Alendronate 70mg: Prospective Observational Study
Andrea Giusti*, Dennis M Black2, Antonella Barone3, Josef Hruska5, Gerolamo Bianchi1. 1La Colletta Hospital, Italy, 2University of California San Francisco, United States, 3Galliera Hospital, Italy, 4EffRx Pharmaceuticals, Switzerland
Disclosures: Andrea Giusti, Labatec, Speakers’ Bureau, Merck & Co, Consultant, EffRx Pharmaceuticals, Grant/Research Support, Internis Pharma, Speakers’ Bureau, Chiesi, Consultant, Abiogen, Consultant

SAT-0914  Effect of Prevalent Vertebral Fractures on Incidental Vertebral Fractures and Low Back Pain During Bisphosphonate Treatment for Osteoporosis
Yuji Kasukawa*, Naohisa Miyakoshi1, Toshihito Ebina2, 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
**SAT-0915** 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
Disclosures: Masayuki Miyagi, None

**SAT-0916** Effects of Intravenous Ibandronate among Patients with Insufficient Changes to Bone Resorption Markers after Oral Bisphosphonate Monotherapy
Naohisa Miyakoshi*, Yuji Kasukawa, Michio Hongo, Akira Horikawa, Yoichi Shimada. 1Department of Orthopedic Surgery, Akita University Graduate School of Medicine, Japan, 2Igarashi Memorial Hospital, Japan
Disclosures: Naohisa Miyakoshi, None

**SAT-0917** The Impact of Prior Bisphosphonate Treatment on Weekly Teriparatide for Severe Osteoporosis
Kosuke Murata*, Tomohisa Koyama, Sho Inoue, 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
Disclosures: Kosuke Murata, None

**SAT-0918** Denosumab was superior to teriparatide to improve bone mineral density in patients with rheumatoid arthritis; 18 months of follow-up
Tokutaro Okawa*, Motomi Okawa, Shuhei Ueno, Eri Narita, Tatsuya Koike. 1Okawa Orthopaedic Surgery Hospital, Japan, 2Search Institute for Bone and Arthritis Disease, Shiraamaha Foundation for Health and Welfare, Japan
Disclosures: Tokutaro Okawa, None

**SAT-0919** Comparative Analysis of new adjacent and remote fracture after vertebroplasty: survivorship analysis of 205 patients
Ye Soo Park*, Jaeong Kim, Jin-Sung Park, Woong Hwan Choi. 1Hanyang University Guri Hospital, Republic of Korea, 2Korea University Ansan Hospital, Republic of Korea, 3Hanyang University Hospital, Republic of Korea
Disclosures: Ye Soo Park, None

**SAT-0920** 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

**SAT-0921** Effectiveness of Monthly Intravenous Ibandronate Injections in a Real-World Setting: Subgroup Analysis of a Post-Marketing Observational Study
Yasuhiro Takeuchi*, Junko Hashimoto, Hiroyuki Kakihaya, Yosuke Nishida, Michiko Kumagai, Chiemi Yamagiwa. 1Endocrine Center, Toranomon Hospital, Japan, 2Chugai Pharmaceutical Co. Ltd., Japan
Disclosures: Yasuhiro Takeuchi, Chugai, Daiichi-Sankyo, Teijin Pharma, Grant/Research Support, Chugai, Daiichi-Sankyo, Teijin Pharma, Asahikasei Pharma, Speakers’ Bureau

**SAT-0922** 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
Disclosures: Victoria Ho-Yee Wong, None

**PARACRINE REGULATORS**

**SAT-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
SAT-0963  Plasminogen is Critical for Bone Fracture Repair by Promoting the Functions of Mesenchymal Progenitors
Luqiang Wang*, Zhenqiang He*, Duan Hao*, Richard Mitteer, Yanqing Gong, Ling Qin. 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

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

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 Adams*, Olivia Hart, Renata Rydzik, Dana Godfrey, Michael Zuszkic, Cheryl Ackert-Bicknell. 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 Delale*, Stephane Milano, Victoria Demambro, David R Clemmons, Clifford J Rosen, Thierry Abribat. 1Alize 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 Delale*, Stephane Milano, David R Clemmons, Clifford J Rosen, Thierry Abribat. 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 Grynpas*, Zeeshan Sheikh, Robert Young. 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 Henaff*, Florante Ricarte, Zhiming He, Joshua Johnson, Johanna Warshaw, Nicola Partridge. 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 Acetylacetonate 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
Disclosures: Kouki Hidaka, None

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
Disclosures: Simon Law, None

SAT-0982
Pharmacokinetic Models for Bisphosphonate-Conjugated Drugs
Jayesh Shah*, Frank H. Ebetino2, Lianping Xing1, Robert Boeckman1, Shuting Sun2, Parish Sedghizadeh3, Michael T Yin1, Suzanne Lentzsch1, Graham Russell2, Serge Cremers1. 1Columbia University Medical Center, United States, 2Biovinc, United States, 3University of Rochester, United States, 4University of Southern California, United States, 5University of Oxford, United Kingdom
Disclosures: Jayesh Shah, None

SAT-0983
Calcilytic, the calcium-sensing receptor antagonist, enhances bone remodeling and increases bone mineral density without increasing urinary calcium excretion
Bingzi Dong*, Itsuo Endo1, Yukiyo Ohnishi1, 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
Disclosures: Kanae Nakaoka, None
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 Mirisis, Ioannis Margaritis, Ioannis Sarris, Pericles Papadopoulos, Dimosthenis Tsiouras, 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
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 Högler, Erik Imel, Anthony A. Portale, Annemieke Boot, Agnès Linglart, Raja Padidela, William Van’T Hoff, Gary S. Gottesman, Meng Mao, Alison Skinar, Javier San Martin, Michael P. Whyte. 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
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 Cohen*1, Stephanie Shiau2, Nandini Nair1, John Williams3, Robert Recker4, Joan Lappe1, David Dempster1, Hua Zhou1, Mafo Kamanda-Kosseh1, Mariana Bucovsky1, Julie Stubb1, 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 Pan1,2, Sydney M Brown1, Lori C Guthrie1, 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
Disclosures: Pablo Florenzano, None

SAT-1023  Trabecular Bone Score in Osteogenesis Imperfecta. Is it useful?
Helena Florez*1, Africa Muxi 2, Eva Gonzalez 3, Ana Morenjal 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 Hashmi3, Jacqueline Hecht1, Janet Legare4, Mary Ellen Little2, John Mcgready1, Peggy Modaff1, Richard Pauli1, David Rodriguez-Buritica1, Korry Schulze1, Elena Serna1, Cory Smid4, Aderemi 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 Hypophosphatemia (XLH)
Karl L. Insogna*1, Frank Rauch2, Peter Kamenický3, Nobuaki Ito4, Takuo Kubota5, Akio Nakamura6, Lin Zhang7, Matt Mealifile7, Javier San Martin1, 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 Hypophosphatemia
Laura Lopez-Delgado*1, Leyre Riancho-Zarrabetia2, Maite Garcia-Unzueta1, Carmen Valero1,3, Jair Tenorio1, Marta Garcia-Hoyos1, Pablo Lapunzina4, Jose A. Riancho1,3. 1Hospital UM Valdecilla, Spain, 2Hospital Sierrañana, Spain, 3Univ Cantabria, IDIVAL, Spain, 4Institute of Medical and Molecular Genetics, Spain
Disclosures: Laura Lopez-Delgado, None
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, Neveen Hamdy. LUMC, Netherlands
Disclosures: Ashna Ramautar, None

SAT-1030  Joint Replacement Procedures in Individuals with Skeletal Dysplasias
Kate Citron*, Sobiah Khan, Erin Carter, Mathias Bosstrom, 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 Dhillon, 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 Gulecilik, Murat Bastepel. 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 García Fontana2, Juan Miguel Villa Suarez1, Francisco Andújar-Vera3, José María Gómez Vida4, Tomás De Haro3, Beatriz García-Fontana García-Fontana3. 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, 5Endocrinology 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*. Uniformed 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 *1, 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*1, Eréne C Niemi2, Frank Rauch1, Mary Nakamura2, 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 Katagiri1, Shimnosuke Tsuji2, Sho Tsukamoto1, Mai Kuratani1, Satoshi Ohte1, Kiyosumi Takaishi2,3, 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, Rachel Surowiec*, 2, Rebecca Falzon*, Lauren Battle*, Chris Stephan*, Michelle S. Caird*, Kenneth M. Kozlowski*. 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 Balsbaugh2, Ernst Reichenberger1, I-Ping Chen1. 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 Klauschofer*, Peter Fratzl*, Eleftheros 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*, Taeykeong Yoo, Jung Hee Kim, Hyung Jin Choi, Kyung Sil Chae, A Ram Hong, Sang Wan Kim, Murim Choi, Chan Soo Shin. 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*, Lauren Hurd, John A. Wixted, Jonathan A.R. Gordon, Katrina A. Conard, Micheal B. Bober, Jane B. Lian. 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*, Lene Langagergaard Rodbro, Lars Rolighed, Tanja Sikjaer, Lars Rejnmark. 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*, Seong Moon, Michael Whitaker, Thurmon Lockhart. 1Mayo Clinic, AZ, United States, 2Arizona State University, United States
Disclosures: Krupa Doshi, None

SAT-1120  Genetic Basis of Falling Risk Susceptibility
Katerina Trajanoska*, Felix Day, Carolina Medina-Gomez, Andre G. Uitterlinden, John Perry, Fernando Rivadeneira. 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*, Natalia Fernandez, François Herrmann, René Rizzoli, Gabriel Gold, Patrik Vuilleumier, Andrea Trombetti. 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

SAT-1122  Effect of Vitamin D3 supplementation on muscle strength in HIV+ postmenopausal women
Michael Yin*, Mariana Bucovsky, John Williams, Danielle Brunjes, Arindam Roychoudhury, Ivelisse Colon, David Ferris, Susan Olender, P.Christian Schulz, Anjali Sharma, Cosmina Zeana, Barry Zingman. 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*, Sara Vogrin, Saliu Balogun, David Scott, Graeme Jones, Alan Hayes, Steven Phu, Gustavo Duque, Tania Winzenberg. 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*, Wing P. Chan, Ying Chin Lin, Ing-Jy Tseng. 1Department of Radiology, Wan Fang Hospital, Taipei Medical University, Taiwan, 2Shuang Ho Hospital, Taipei Medical University, 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 Logan, E.L Yong, Jane A. Cauley. 1Department of Obstetrics & Gynaecology, National University of Singapore, Singapore, 2Department of Epidemiology, Graduate School of Public Health, University of Pittsburgh, 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 Morin2. 1Laboratoire de recherche en imagerie et orthopédie, École de technologie supérieure, 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 Voumard1, Ghislain Maquer1, Jasmin Wandel1, 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 Bernoulli3. 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 Schwartz1, 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 Lee1, 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

MECHANOBIOLOGY

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 Hebert1, 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
**MUSCULOSKELETAL PROGENITOR CELLS AND LINEAGE DETERMINATION**

**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

**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

Ilidi Troka*,1 Gabriele Griffanti2, Showan N. Nazhat2, Geoffrey N. Hendy1. 1Division of Experimental Medicine, McGill University, Canada, 2Department of Mining and Materials Engineering, McGill University, Canada

Disclosures: Ilidi Troka, None

**LB SAT - 1193** Adiponectin Receptor Agonist AdipoRon Increases Mitochondrial Fusion and Biogenesis in Diabetic Bone Cells

Xiaoxuan Wang*,1,2, Xingwen Wu1, Qisheng Tu1, Jake Chen1,3. 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. Krauss1, Pei Ying Ng2, Linda Cox1, Emily Goering1, Nathan J. Pavlos2, Deborah J. Veis1. 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 Bedrose2, Dingfeng Li2, 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 Kovacs4, David A Hanley5, Stephanie M Kaiser6, Robert G Josse7, 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*, 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 Geel1, Jonathan Adachi1, Claudie Berger1, Joop Van Den Bergh1, John Eisman1, Piet Geusens2, David Goltzman2, David Hanley5, Robert Josse7, Stephanie Kaiser6, Christopher Kovacs8, Lisa Langsetmo5, Jerilynn Prior11, 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*, Yunkyoung 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, Xiaoling 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*, Stelios Kasikis, Charis Chourpiliadis, Dimitra Bantouna, Panagiota Kouloutsidou, Juan Carlos Jaume, Rodis D Paparodis. 1Agia 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*, Mishaela Rubin, Fan Mu, Elyse Swallow, Jing Zhao, Jessie Wang, Alan Krasner, Nicole Sherry, James Signorovitch, Markus Ketteler, John Bilezikian. 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*, Jennifer Hill, Robert Wermers, Tricia Veglahn, Hatem Amer, Matthew Hathcock. 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*, Nandini Nair, Stephanie Shiau, Robert R. Recker, David W. Dempster, Hua Zhou, Binsheng Zhao, Xiaotao Guo, Mafo Kamanda-Kosseh, Mariana Bucovksy, Julie Stubby, Elizabeth Shane. 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*, Matthew Cohn, Rehan Saiyed, Omer Or, Eric Marty, Gülce Askın, Joseph Lane. 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*, Carlos Salmon, Carlo Rondinoni, Marcello Nogueira-Barbosa, Francisco De Paula. 1Ribeirao Preto 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 Romão2, 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. Hunt1, Nicholas A. Miller1, Kimberly J. Hemmerling1, Maho Koga1, Kelsie A. Lopez1, Kendall F. Moseley2, Eve Donnelly1,3. 1Department of Materials Science and Engineering, Cornell University, United States, 2Division of Endocrinology, Johns Hopkins University School of Medicine, United States, 3Research Division, Hospital for Special Surgery, United States
Disclosures: Heather B. Hunt, None

SUN-0027  The Effect of TransCon PTH on Bone Markers in a Phase 1 Trial
David B. Karpf1, Susanne Pihl2, Aimee Shu1, Eva Mortensen1, Jonathan A. Leff1. 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, Chamith 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*, Andra Mihaela Naciui1, Roberto Cesareo2, Claudio Pedone3, Gianluigi Gaspa2, Assunta Santonati2, Daniela Bosco4, Daria Maggi1, Nicola Napoli1, Paolo Pozzilli1, Silvia Manfrini1, 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
Disclosures: Mishaela Rubin, None
SUN-0034  A Unique Longitudinal Cohort of Hypoparathyroidism Treated for 8 Continuous Years with rhPTH (1-84)
Donovan Tay1, Gaia Tabacco1, Natalie Cusano2, John Williams1, Beatriz Omeragic1, Ruksana Majeed1, Maximo Gomez Almonte1, John Bilezikian1, Mishaela Rubin1.
1Columbia University Medical Center, United States, 2Lenox Hill Hospital Department of Medicine, United States
Disclosures: Donovan Tay, None

SUN-0035  Survival in primary hyperparathyroidism over five decades (1965-2010)
Robert Wermers1, Marcio Griebeler2, Euijung Ryu1, Prabin Thapa1, Matthew Hathcock1, Ann Kearns1. 1Mayo Clinic, United States, 2Cleveland Clinic, United States
Disclosures: Robert Wermers, None

BIOMECHANICS AND BONE QUALITY

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-0074  The effects of age and sex on viscoelastic bone properties in mice
Ingo Grafe*, Ian Tomkinson2, Heather Haeberle2, Yi-Chien Lee1, Xiaohong Bi1, Brendan Lee1, Catherine G. Ambrose2. 1Department of Molecular and Human Genetics, Baylor College of Medicine, United States, 2Department of Orthopaedic Surgery, UTHSC-Houston, United States
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 Sawyer1, Roumen Stamenkov2, Thomas Robertson3, Catherine Stapledon3, Gerald Atkins3, Peter Clifton4, Lucian Solomon5, Morris Howard1, Paul Anderson1. 1University of South Australia, Australia, 2Royal Adelaide Hospital, Australia, 3University of Adelaide, Australia
Disclosures: Deepti Sharma, None

SUN-0076  Ultra-low dose MDCT allows accurate assessment of vertebral fracture risk: a finite element study
D. Anitha*, Kai Mei2, Felix Kopp2, Peter Noel2, Thomas Baum2, Karupppasamy Subburaj1. 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
Disclosures: Michael-John Beltejar, None

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. Moravits1, Roberto J. Fajardo1, Karl J. Jepsen1, Todd L. Bredbenner1. 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 Wee, 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, Department of Medicine, 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*, Van Hoang, Matthew Burow, Bruce Bunnell, Paula Witt-Enderby.
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, Erin Bigelow, Stephen Schlecht, Todd Bredbenner, Karl Jepsen.
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
Disclosures: Daniella Patton, None

SUN-0089  Comparative effect of deproteinized bovine bone, bioglass and synthetic hydroxyapatite on bone repairation
Andrea Mattiuzzi, Miguel Angel Pellegrini, Macarena Gonzales-Chaves, Ricardo Orzuza, Susana N Zeni, Gretel G Pellegrini. 1CONICET-Universidad de Buenos Aires. Instituto de Inmunología, Genética y Metabolismo (INIGEM). Facultad de Farmacia y Bioquimica-Hospital de Clinicas “José de San Martin”, 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*, Kyla Kent, Jin Long, Jessica Whalen, Ariana Strickland, Andrew Burghardt, Mary B. Leonard. 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, Giacomina Brunetti, Maria Felicia Faienza, Lorenzo Sanesi, Monica Celi, Laura Piacente, Gabriele D’Amato, Giorgio Mori, Silvia Colucci, Maria Grano. 1Department of Emergency and Organ Transplantation, University of Bari, Italy, 2Department of Basic Medical Sciences, Neuroscience and Sense Organs, 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, Melissa Fiscaletti, Chris Cowell, Nicholas Wood, Yvonne Zurynski, John Coakley, Philip Britton, Hasantha Gunasekera, Andrew Biggin, Craig Munns. 1Children’s hospital at Westmead, Australia, 2Australian Pediatric Surveillance Unit, Australia
Disclosures: Paul Tannous, None
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 Kawailak2, Kelsey Bjorkman2, Jd Johnston2.
1University of Saskatchewan, UofS, Canada, 2UofS, Canada
Disclosures: Saija Kontulainen, None

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 Ohata1,3, Taichi Kitaoka1, Keiichi Ozono1.
1Department of Pediatrics, Osaka University Graduate School of Medicine, Japan, 2The Japan Environment and Children’s Study, Osaka unit center, Japan, 3The 1st. Department of Oral and Maxillofacial Surgery, Osaka University Graduate School of Dentistry, Japan
Disclosures: Takuo Kubota, None

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

Multimodality Study of Glucocorticoid Induced Osteoporosis in Pediatric Crohn’s Disease
Jin Long*, Dale Lee2, Rita Herskovitz2, Babette Zemel3, Mary Leonard3. 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

Prx1-derived muscle interstitial cells contribute to bone repair and cause fibrosis in musculoskeletal trauma
Anais Julien*, Anuya Kanagalingam1, Oriane Duchamp De Lageneste 1, Jerome Megret2, Frédéric Relax1, 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-Crêteil University, France
Disclosures: Anais Julien, None

The bone anabolic effects of irisin are through preferential stimulation of aerobic glycolysis
Sung Kil Lim*, College of Medicine, Yonsei University, Republic of Korea
Disclosures: Sung Kil Lim, None
SUN-0152 Risedronate could rescue podocyte injury in Pit-1 overexpressing transgenic rats
Atsushi Masuda*, Takeshi Takayanagi, Yohei Asada, Shogo Nakayama, Eisuke Tomatsu, Yasumasa Yoshino, Sahoko Sekiguchi-Ueda, Megumi Shibata, Eishin Yaoto, Atsushi Suzuki. 1Department of Endocrinology and Metabolism, Fujita Health University, Japan, 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*, Zhiying Wang, Liangqiao Bian, Janalee Isaacson, Robert Recker, Marco Brotto, College of Nursing and Health Innovation, the University of Texas-Arlington, Arlington, TX, United States, 2Shimadzu Center for Advanced Analytical Chemistry, the University of Texas at Arlington, Arlington, TX, United States, 3School of Nursing & Human Physiology, Gonzaga University, Spokane, WA, United States, 4School of Medicine Osteoporosis Research Center, Creighton University, Omaha, NE, United States, 5School of Nursing, Creighton University, Omaha, NE, United States, 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*, Magali Millecamps, Seiji Ohtori, Laura S. Stone, The 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
Disclosures: Elizabeth Terhune, None

SUN-0156 Oncostatin M is a key effector of heterotopic ossification following spinal cord injuries
Hsu-Wen Tseng*, Kylie Alexander, Irina Salga, Beulah Jose, François Genet, Frédéric Torossian, Bernadette Guertault, Adrienne Anginot, Whitney Fleming, Susan Millard, Allison Pettit, Natalie Sims, Jean-Jacques Lataillade, Marie-Caroline Le Bousse-Kerdiles, Jean Pierre Levesque. 1Mater Research Institute-The University of Queensland, Brisbane, Queensland, Australia, 2Service de Médecine Physique et de Réadaptation, Raymond Poincaré Hospital, Garches, France, 3END:ICAP U1179 INSERM, UFR des Sciences de la Santé-Simone Veil, Université Versailles Saint Quentin en Yvelines, Montigny le Bretonneux, France, 4Inserm UMR-S-MD1197, Paris 11 University, Paul Brousse Hospital, Villejuif, France., 5St. Vincent’s Institute of Medical Research and Department of Medicine, St. Vincent’s Hospital, The University of Melbourne, Fitzroy, Victoria, Australia, 6Centre 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 Hospital, Endocrinology and Nephrology Unit, Faculty and Department of Medicine, Université Laval, Canada
Disclosures: Yue Pei Wang, None

BONE MARROW MICROENVIRONMENT AND NICHES

SUN-0175 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 Lee⁵, Sungji 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 Stabyle⁴, Jessica Hook², Shadaab Abid¹, Li Li¹, Megan Mead¹, Abraham Behrmann¹, Jessica Moreland², Dwight Towner¹, Raksha Jain¹. ¹Department of Internal Medicine, UT Southwestern Medical Center, United States, ²Department of Pediatrics, UT Southwestern Medical Center, United States
Disclosures: John Stabyle, 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 Tencerova⁴,2, Morten Frost¹, Florence Figeac¹, Anders Kristian Haakonsson¹, Jens-Jacob Lauterlein¹, Tina Kamilla Nielsen¹, Dalia Ayesh Hafez Ali¹, Kurt Højlund¹,2, 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 Du *¹, Weina Zhou²,³, Hongbin Jiang¹, Qisheng Tu², 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, 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 Brunetti*¹, Rita Rizzi², Giuseppina Storlino³, Sara Bortolotti³, Graziana Colaianni⁴, Lorenzo Sanesi², Luciana Lippo³, Maria Grano³, 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 Zangari*, 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

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 Jouan*, Joanna Sanna1,2, Augustin Latourte1,2,3, Pascal Richette1,2,3, Hang-Korning Eal,2,3, Martine Cohen-Solal1,2, Eric Hay1,2,3. 1Paris Diderot University, Paris, France, 2Inserm 1132, Paris, France, 3Hopital 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 Stegen*, Kjell Laperre1, Guy Eelen2, Gianmarco Rinaldi1, Sophie Torrekens1, Sarah-Maria Fendt1, Peter Carmeliet1, 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 Tian*, 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 *, 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*¹,², En Luo², Junxiang Lian¹,², Qisheng Tu¹, Zoe(Xiaofang) Zhu¹³, Jake(Jinkun) Chen¹⁴. 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, ⁴Department 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-Ogura², Woongchul Shin², Michito Shimozuru¹, Mohamed Abdallah Mohamed Moustafa¹, Toshio Tsubota¹. ¹Laboratory of Wildlife Biology and Medicine, Department of Environmental Veterinary Science, Graduate School of Veterinary Medicine, Hokkaido University, Japan, ²Department of Biomedical Sciences, Graduate School of Veterinary Medicine, Hokkaido University, Japan
Disclosures: Alireza Nasoori, None

ASBMR 2018 Annual Meeting 173
SUN-0275  
**Uc-dpMGP is associated with body composition and BMD in type 2 diabetes mellitus**
Natascha Schweighofer*, Christoph Haudum1, Michaela Goschnik2, Ewald Kolesnik1, Ines Mursie1, Albrecht Schmidt1, Thomas R Pieber1, Barbara Obermayer-Pietsch1. 1Div. Endocrinology and Diabetology, Medical University Graz, Austria, 2Endocrinology Lab 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, Xingwen 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 Holderman1, Michael Czech1, 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. Woods1, Sigurdur Sigurdsson1, Susan K Ewing1, Phuong T. Le1, Trisha F. Hue4, Eric Vittinghoff4, Kaipin Xu4, Vilmundur Gudnason1, Gunnar Sigurdsson1, Deborah M. Kado6, Gudny Eiriksdottir1, Tamara Harris6, Xiaojuan Li6, Clifford J Rosen1, Ann V. Schwartz4. 1Academic Medical Center dept of Endocrinology and Center for Clinical and Translational Research, Maine Medical Center Research Institute, Netherlands, 2Dept. Medicine, University of California San Diego and VA San Diego Healthcare System, United States, 3Icelandic Heart Association, Iceland, 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, 6Program of Advanced Musculoskeletal Imaging (PAMI), Cleveland Clinic, United States, 7Icelandic Heart Association Faculty of Medicine, University of Iceland, Iceland, 8National Institute on Aging, National Institutes of Health (NIA, NIH), United States, 9Dept of Medicine and Department of Family 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 Sowe1, Aarti Gautam1, Nabarun Chakraborty6, Rasha Hammamieh1, 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 Gannon4, Abigail E Salinero4, Kristen L Zuloaga4, David E Komatsu5. 4Stony Brook University, Department of Biomedical Engineering, United States, 5Stony Brook University, Department of Orthopaedics, United States, 6Albany 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 Maynard, Gina Calabrese, Charles Farber, Cheryl Ackert-Bicknell. 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 He, Haibo Liu, Guangchuan Yu, Bradford Tremblay, Ben Zhang, Cole Haynes, Jaehyuck Shim. 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 Hsu, Mariel Young, Douglas P. Kiel, David Karasik. 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 Günther, Mazyar Yazdani, Einar Lindalen, Haldor Valland, Vigdis T. Gautvik, Ole K. Olstad, Marit Holden, Tor P. Utheim, Sjur Reppe. 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 Ordonas, 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-3B/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*, Helen Farman¹, Petra Henning¹, Vikte Lionikaitė¹, Sofia Movéare-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*, Anna E. Rapp², Ann-Kristin Picke¹, 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*, Catrina Godwin¹, Subburaman Mohan¹, 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 Guntur², Vicki Rosen¹, Beate Lanske¹, Mary Bouxsein², Clifford Rosen². ¹Harvard School of Dental Medicine, United States, ²Maine Medical Center Research Institute, United States, ³Center for Advanced Orthopaedic Studies, Beth 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*, Hina Hashmi¹, Daniel Brooks², Kenichi Nagano¹, Deborah Barlow³, Karen Houseknecht¹, Roland Baron³, Mary Bouxsein², 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 Patel1, 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*, Yuka Kinoshita2, Nobuaki Ito2, Shun Sawatubhashi2, Hidetaka Kosako1, Masahiro Abe1, Munehide Matsushia1, 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*, 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*, Matthew Quittner1, Nicola Riders1, 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-Ferlengze, 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 Prenni, 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*, Marcia Urban-Maldonado, Herb Sun, Mitchell Schaffler, Sylvia Saucicani, Mia Thí, Albert Einstein College of Medicine, United States, New York 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*, Jeyanty Sankaran, Negin Misaghian-Xanthos, Buer Sen, Zhihui Xie, Martin A Styer, Xiaopeng Zong, Maya Styner, Division of Endocrinology and Metabolism, Department of Medicine, UNC-Chapel Hill, United States, Departments of Computer Science and Psychiatry, UNC, United States, Biomedical 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 Wright, Gabriel Pagnotti, Gunes Uzer, Clinton Rubin, Uma Sankar, Katherine Powell, Joseph Wallace, Khalid Mohammad, Theresa Guise, William Thompson, Indiana University, United States, Boise State University, United States, Stony Brook University, United States
Disclosures: Xin Yi, None

MUSCULOSKELETAL AGING

SUN-0426 Defining the Role of BMP Signaling in the Development of Degenerative Disc Disease
Avionna Baldwin*, Roman Eliseev, Addisu Mesfin, Noriaki Yokogawa, Alex Hollenberg, University of Rochester School of Medicine and Dentistry, United States, Kanazawa University, Japan
Disclosures: Avionna Baldwin, None

SUN-0427 Age-related changes in bone strength of male radii depend on outer bone size
University of Michigan, United States, Denver University, United States, Stony Brook 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 Metzger, Alexandra Marich, Emily Sturgell, Matthew Allen, Alyssa Flack, Larry Suva, Susan Bloomfield, Texas A&M University, United States, Indiana 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*, Li Han, Sridhyya Iyer, Jianhui Chang, Aaron Warren, Julie Crawford, Daohong Zhou, Stavros Manolagas, Maria Almeida, University of Arkansas for Medical Sciences, United States, Central 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 Tsurumoto1, Makoto Osaki1.
1Department of Orthopaedic Surgery, Nagasaki University Hospital, Japan, 2Department of Macroscopic Anatomy, Nagasaki University Graduate School of Biomedical Sciences, Japan
Disclosures: Narihiro Okazaki, None

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
Jasmin Kristianto*, 1, Michael Johnson2, Abigail Radcliff2, Robert D Blank1. 1Medical 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*, 1, Paul Childress1, Riley Gorden1, Alexander Brinker1, Elliott Beckner1, Rachel Mannfeld1, Faisal Khan1, Matthew Allen1, 2, Nabaran Chakraborty1, Aarti Gautam1, Rasha Hammamieh1, Melissa Kacena1, 2. 1Indiana University School of Medicine, United States, 2Richard L. Roudebush VA Medical Center, United States, 3Geneva Foundation, US Army Center for Environmental Health Research, United States, 4US Army Center for Environmental Health Research, United States
Disclosures: Kevin Maupin, 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, Shugun Wei1, Hope Weiler1. 1McGill University, Canada, 2Hôpital Sainte-Justine (Montréal), Canada
Disclosures: Maryam Razaghi, None

SUN-0454 Effect of extracellular high phosphate on myogenesis of C2C12 myoblasts
Eisuke Tomatsu*, Hidehito Inagaki2, Tsukasa Kawakami1, Yohei Asada1, Shogo Nakayama1, Izumi Hiratsuka1, Yasumasa Yoshino1, Sahoko Sekiguchi-Ueda1, Megumi Shibata1, Takeshi Takayamagi1, Yoshihisa Sugimura1, Hiroki Kurahashi1, Atsushi Suzuki1. 1Department of Endocrinology and Metabolism, Fujita Health University, Japan, 2Division of Molecular Genetics, Institute for Comprehensive Medical Science, Fujita Health University, Japan
Disclosures: Eisuke Tomatsu, None

SUN-0455 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*, Fatma Mohamed1, Yi Tang1, 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*, Jelica Gluhak-Heinrich1, Marie A Harris1, Jian Feng2, Yong Cui1, Ivo Kalajzic3. 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*, Thomas Barrett1, Ahmed Elmans1, Khaleed Hussein2, Tanner Moble1, Wendy Bollag4, Sadanand Fulzele4, Xingming Shi2, Meghan Mcgee-Lawrence2, Mark Hamrick2, Carlos Isales8, 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, 4Department 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 Finstead1, 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*1, Chuanju Liu2, Lei Zhang1, Hu Zhao3, Xiaohua Liu1, Yan Jing1, Jian Q. Feng2.
1Postdoctoral Fellow, United States, 2Professor, United States, 3Assistant Professor, United States
Disclosures: Chi Ma, None

SUN-0485 Characterizing Osteogenic Deficiency in Neurofibromatosis Type 1 at Single-Cell Resolution
Nandina Paria*1, Jinyan Chan2, Jingua Gu2, Carol Wise1, Jonathan Rios1. 1Texas Scottish Rite Hospital for Children, United States, 2Baylor Research Institute, United States
Disclosures: Nandina Paria, None

SUN-0486 β-catenin preserves stem state of MSC through activation of EZH2
Buer Sen*1, Zhuhui Xie1, Jeyant S Sankaran1, Amel Dudakovic2, Gunes Uzer3, Maya Styner3, Mark B Meyer4, Andre J Van Wijnen5, Janet Rubin1. 1University of North Carolina, United States, 2Mayo Clinic, United States, 3Boise State University, United States, 
4University of Wisconsin, United States
Disclosures: Buer Sen, None

SUN-0487 Extracellular lipid availability determines skeletal progenitor cell fate
Nick Van Gastel*1,2,3, Steve Stegen1,2, Guy Eelen5,6, Sandra Schoors1,2, Aurelie Carlier2,6,7, Veerle Daniels4, Maarten Depypere8,9, Pieter-Jan Stiers1,2, Riet Van Looveren1, Sophie Torrekens1, Patrizia Agostinis10, Frederik Maes11, Johen Swinnen11, Liesbet Geris2,6,7, Hans Van Oosterwyck2,6, Peter Carmeliet2,6, David Scadden3,11, Geert Carmeliet1,2. 1Department of chronic diseases, metabolism and ageing, KU Leuven, Belgium, 2Prometheus, Division of Skeletal Tissue Engineering, KU Leuven, Belgium, 3Department of Stem Cell and Regenerative Biology, Harvard University, Cambridge, MA, United States, 4Department of Oncology, KU Leuven, Belgium, 5Center for Cancer Biology, VIB, Belgium, 6Department of Mechanical Engineering, KU Leuven, Belgium, 7Biomechanics Research Unit, GIGA In Silico Medicine, University of Liege, Belgium, Nethrlands, 8Medical Imaging Research Center, KU Leuven, Belgium, 9Department of Electrical Engineering, KU Leuven, Belgium, 10Department of Cellular and Molecular Medicine, KU Leuven, Belgium, 11Center 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*1, Xiao Wang2, Manman Gao3, Changjun Li2, Hui Xie1, Lingling Xian3, Mei Wan3, Qianming Chen1, Xu Cao2. 1State Key Laboratory of Oral Diseases, West China Hospital of Stomatlogy, Sichuan University, China, 2Department of Orthopedic Surgery, School of Medicine, Johns Hopkins University, United States, 3Department of Sports Medicine, Xiangya Hospital, Central South University, China, 4Division of Hematology, Department of Medicine, The Johns Hopkins University School of Medicine, United States, 5Department 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*1, Lauren Solomon2, Dawn Bryce1, Frank Beier1. 1Department of Physiology and Pharmacology, The University of Western Ontario, Canada, 2Department 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*1, N P Thomas1, N Jeffery1, L R Ranganath1, A Boyde2. 1University of Liverpool, United Kingdom, 2Queen Mary University of London, United Kingdom
Disclosures: J A Gallagher, None
**SUN-0515** Porous Tantalum Rods Implantation for Osteonecrosis of Femoral Head: Longitudinal Follow-up of 40 hips
Mincong He*, 1 Qiushi Wei2, Wei He2, Yi-Xian Qin3. 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, Arnava Hakimiyan, Susan Chubinskaya, Anna Spagnoli. Department of Pediatrics, Rush University medical Center, United States
Disclosures: Jie Jiang, None

**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 Davis1, Justin Lewicke2. 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
Disclosures: Julia Kuliwaba, None

**SUN-0519** Subchondral tibial bone texture is related with knee replacement surgery
Thomas Janvier*, Guillaume O dri2, Rachid Jennane1, Hechmi Toumi1, Eric Lespessailles3. 1University of Orléans, I3MTO Laboratory, France, 2Hospital Lariboisière, Orthopedics, France, 3Hospital of Orléans, Rhumatology, 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 Jarraya2, Michelle Yau1, Elise Morgan4, Brett Allaire5, Mary Bouxsein5, Marian Hannan5, Douglas Kiel5, Thomas Travisin5, Pradeep Suri6, Ali Guermazi7. 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 Santana2, Alexander Dash1, Yi Liu1, Alana Serota1, David Mayman1, Kaitlin Carroll1, Michael Pitta1, Timothy Wright1, Emily Stein1. 1Hospital for Special Surgery, United States, 2Cornell University, United States
Disclosures: Blossom Samuels, None

**SUN-0522** CaMKK2-AMPK-p38MAPK Axis Regulates the Onset of Post-Traumatic Osteoarthritis
Uma Sankar*, Elsa Mevel1, Yong Li1, Ushashi Dadwal1, William Thompson1, Diane Wagner1, Stephen Trippel1, Matthew Allen2, David Burr1. 1Indiana University School of Medicine, United States, 2Indiana University Purdue University of Indianapolis, United States
Disclosures: Uma Sankar, None
**Targeting the IGF-1 Signaling Pathway for the Prevention of Post-Traumatic Osteoarthritis (PTOA)**

Endocrine Unit, University of California, San Francisco and San Francisco VA Health Care System, United States. 
Department of Bioengineering and Therapeutic Sciences, University of California, San Francisco, United States

Disclosures: Yongmei Wang, None

**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**

**Pro-Osteoporotic mir-320a Induces Oxidative Stress and Impairs Osteoblast Function**

Natalia Garcia-Giralt, Laura De-Ugarte, Susana Balcells, Xavier Nougues, Daniel Grinberg, Adolfo Diez-Perez. 
IMIM (Hospital del Mar Medical Research Institute), CIBERFES, Spain. 
Universitat de Barcelona, CIBERER, Spain

Disclosures: Natalia Garcia-Giralt, None

**Role of Methylsufonylmethane (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

**FGF23 Counters 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

Disclosures: Christopher Bertucci, None

**Developmental contribution of growth plate-derived hedgehog signal-responsive cells in growing bone**

Ryuma Haraguchi, Riko Kitazawa, Yuuki Imai, Sohei Kitazawa. 
Department of Molecular Pathology, Ehime University Graduate School of Medicine, Japan. 
Department of Diagnostic Pathology, Ehime University Hospital, Japan. 
Proteo-Science Center, Ehime University, Japan

Disclosures: Ryuma Haraguchi, None

**The role of Fam20C on the bone and tooth formation**

Katsutoshi Hirose, Yu Usami, Kaori Oya, Sunao Sato, Toshihisa Komori, Satoru Toyosawa. 
Osaka University Graduate School of Dentistry, Japan. 
Nagasaki University Graduate School of Biomedical Sciences, Japan

Disclosures: Katsutoshi Hirose, None

**Adenosine Receptors A2A and A3 are crucial in Pulsed-Electromagnetic-Field Induced Pre-Osteoblast Cell Differentiation**

Cleveland Clinic, United States. 
Washington University in St. Louis, United States. 
Orthofix, United States

Disclosures: Niladri S. Kar, None

**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

Disclosures: Farzaneh Khani, None
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-Nakamura, Norihisa Uehara, Akiko Kukita, Toshio Kukita. 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 Ga11 leads to differential fracture healing responses.
Kathy Kyungeun Lee*, Jane Mitchell, Marc Grynpas. 1University of Toronto, Canada, 2Lumenfeld-Tanenbaum Research Institute, Canada
Disclosures: Kathy Kyungeun Lee, None

SUN-0567 Analysis of osteoblast-specific histone-modifying enzymes Mof reveals novel epigenetic basis of osteoblast differentiation
Xiangzhi Li*, Jianmei Chen, Di Liu, Minqi Li, Yang Yang, Shuang Gao, Meng Wang, Shiguo Yan. 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 Stomatology Shandong University, China, 3Department of Bone Metabolism, School of Stomatology Shandong University, China, 4Department of Periodontology, School of Stomatology 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, Fouad Moussa, Fayeza Safadi. 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 Zan, Roman Thaler, Farzaneh Khani, Merel O. Mol, Esther Liu, Guodong Li, Peter Kloen, Marianna Kruthof-De Julio, Simon M. Cool, David R. Deyle, Amel Dudakovic, Andre J. Van Wijnen. 1Mayo Clinic, United States, 2University of Amsterdam, Netherlands, 3Tongji University, China, 4University of Bern, Switzerland, 5Agency for Science, Technology and Research, A(*)STAR, Singapore
Disclosures: Christopher R. Paradise, None

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 Yang1,2, Jian Zhang1,2, Dandan Dong1,2, Shenghang Wang1,2, Peng Shang2,3. 1School of Life Sciences, Northwestern Polytechnical University, China, 2Key Laboratory for Space Bioscience and Biotechnology, Institute of Special Environment Biophysics, Northwestern Polytechnical University, China, 3Research & Development Institute in Shenzhen, China
Disclosures: Jiancheng Yang, None

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
Disclosures: Roman Thaler, None

SUN-0574 Notch activation augments bone morphogenetic protein mediated human osteoblast differentiation
Yadav Wagley*, Matthew Johnson, Sumei Lu, Andrew Wells, Alessandra Chesi, Struan F.A. Grant, Kurt Hankenson. 1Department of Orthopaedic Surgery, University of Michigan Medical School, United States, 2Center for Spatial and Functional Genetics and Division of Human Genetics, The Children’s Hospital of Philadelphia, United States, 3Department of Pathology and Laboratory Medicine, University of Pennsylvania Perelman School of Medicine, United States, 4Department of Pediatrics, Perelman School of Medicine, University of Pennsylvania, United States
Disclosures: Yadav Wagley, None

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 Picotto, Leslie Morse, Megan Summers, Ricardo Battaglino. 1UC Denver, United States, 2U de Cordoba, Argentina, 3Craig Hospital, United States
Disclosures: Weimin Liu, None

SUN-0617 Biodegradable Polymeric Nanoparticles Encapsulated with Small Molecular Weight L-Plastin Peptides Reduces Resorption Activity of Osteoclasts
Sunipa Majumdar*, Aniket Wadajkar, Anthony Kim, Meenakshi Chellaiah. 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
Disclosures: Sunipa Majumdar, None

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 Fuji*, Lionel Iavshikiv, 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 Fuji, None
SUN-0620 Osteoporosis and dementia common pathways and targets: Investigating the effect of acetylcholine esterase inhibitors on bone. A Mouse Model.
Charles Inderjeeth*, Dian Teguh, Warren Raymond, Jennifer Tickner, Jiake Xu. 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
Carina Kampleitner, Montserrat Espanol, Maria-Pau Ginebra, Michelle Epstein, Oskar Hoffmann. 1Dept. Pharmacology and Toxicology, University of Vienna, Austria, 2Universitat Politècnica de Catalunya, Spain, 3Dept. Dermatology, Medical University of Vienna, Austria
Disclosures: Oskar Hoffmann, None

SUN-0622 Estrogen-Related Receptor Gamma Negatively Regulates Osteoclastogenesis and Protects Against Inflammatory Bone Loss
Hyun-Ju Kim, Hye-Jin Yoon, Woo Youl Kang, Sook Jin Seong, Young-Ran Yoon. 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, Keisuke Kimura, Masahiko Ishida, Kazuhiro Shima, Saika Ogawa, Jiawei Qi, Wei-Ren Shen, Fumitoshi Ohori, Takahiro Noguchi, Aseel Marahleh, Hideki Kitaura. 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
Disclosures: Akiko Kishikawa, None

SUN-0624 Local Regulator Dell Inhibits Bone-resorption via Suppression of Wnt5a-Ror2 Signaling Axis
Tomoki Maekawa, Yasuhiro Kobayashi, Hisanori Domon, Hikaru Tamura, Takumi Hiyoshi, Takeyasu Maeda, Yutaka Terao, George Hajishengallis. 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, Hiroshi Kajiyama, Jun Hirose, Takumi Matsumoto, Koji Okabe, Takeshi Miyamoto, Sakae Tanaka. 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, Ce Shi, Yuji Mishina. 1Department of Biologic and Materials Sciences, University of Michigan, School of Dentistry, United States, 2Department of Oral Pathology, School and Hospital of Stomatology, Jilin University, China
Disclosures: Maiko Omi, None

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, 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: 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 Dento-facial Orthopedics, Department of Translational Medicine, Tohoku University Graduate School of Dentistry, Japan
Disclosures: Wei-Ren Shen, None

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*, Hirohito Hirata, Asana Kamohara, Juan Iovanna, Toshio 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

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

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

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

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

SUN-0634  LRP1 suppresses bone resorption in mice by inhibiting the RANKL-stimulated NFκB and p38 pathways during osteoclastogenesis
Di Lu*, Jianhuang Li, Huadi Liu, Gabrielle Foxa, Bart Williams, Tao Yang. Van Andel Research Institute, United States
Disclosures: Di Lu, None

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, Xueyang Wang1, Corey Dussold1, Lixin Qi1, Wenhan Chang1, Myles Wolf1, Aline Martin1, Valentin David1. 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, 2Division of Endocrinology and Metabolism, UCSF, San Francisco, CA, United States, 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. Gregor2, William R. Thompson1, Lilian I. Pltokin2, 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, 3School of Health and Rehabilitation Sciences, Dept. of Physical Therapy, United States  
Disclosures: Jessica H. Nelson, None

**SUN-0666** Connexin 43 Hemichannels Protect Bone Loss during Estrogen Deficiency  
Rui Hua*, Liang Ma1, Hongyun Cheng1, Roberto Fajardo2, Joseph Pearson1, Teja Guda1, Daniel Shrophshire1, Sumin Gu1, Jean X. Jiang1. 1Department of Biochemistry, UT Health San Antonio, United States, 2Department of Orthopaedics, UT Health San Antonio, United States, 3Department of Biomechanical Engineering, University of Texas at San Antonio, United States  
Disclosures: Rui Hua, None

**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
**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 Czerwinskï*, Maja Warzecha2, Malgorzata Berwecka2, Anna Kumorek3, Jaroslaw Amarowicz2, Didier Hans4. 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 Czerwinskï, 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 Popp, Chun Xu1, Amy Yuan2, Ginu Unnikrishnan1, Jaques Reifman1, Mary Bouxsein1. 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*1,2, 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 Almohaya*, Naveen Sami2, Renaud Winzenrieth3, David Kendler4. 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 Cheng1, 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
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 Kubota*, Kazutaka Nomura*, Yusuke Horiguchi*, Ko Chiba*, Masafumi Machida*. 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 Srisukh*, Jintanan Jangsiripornpakorn*, Nantaporn Siwarasanond, Sirimon Reutrakul 1,2, Sunee Saetung*, Suchawadee Musikarat, Chanika Sritara*, Piyanitr Sritara*, Boonsong Ongphiphadhanakul*. 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 Disclosures: Hataikarn Nimitphong, None

SUN-0711  Optimal Bone Mineral Density Testing Intervals in Korean Women Seung Shin Park*, Jung Hee Kim*, Hyung Jin Choi*, Eu Jeong Ku, Seo Young Lee*, A Ram Hong*, Nam H. Cho*, Chan Soo Shin*. 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 Xu3, 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 Dash*, Mariana Bucovsky2, Sanchita Agarwal3, 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 Cheng*, Glen Blake2, Keenan Brown3, 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
SUN-0716  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

SUN-0717  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 Melton³, Elizabeth Delzell¹, Akhila Balasubramanian, Jeffrey Curtis. 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

SUN-0718  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

SUN-0760  Multiple missed opportunities to reduce key fragility fractures: can we afford to continue to ignore the facts?
Emese Toth*, Jonas Banefelt¹, Kristina Akesson¹, Anna Spangeus¹, Gustaf Oertser², 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

SUN-0761  Women and Men with Diabetic Complications have a Greater Risk for Hip Fracture
Shreyasee Amin*, Elizabeth Atkinson, Sundeep Khosla. Mayo Clinic, United States
Disclosures: Shreyasee Amin, None

SUN-0762  Temporal Trends in Prevalence and Incidence of Diagnosed Osteoporosis in Quebec, Canada
Claudia Beaudoin*, Philippe Gamache¹, Suzanne N. Morin¹, Jacques P. Brown¹, Louis Bessette¹, Sonia Jean¹. ¹Institut national de santé publique du Québec, Canada, ²McGill University, Canada, ³CHU de Québec Research Center, Canada
Disclosures: Claudia Beaudoin, None

SUN-0763  Social deprivation is associated with poor health outcomes following hospital admission for hip fracture in England
Arti Gauvri Bhimjiyani*, Jenny Neuburger¹, Yoav Ben-Shlomo², 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

SUN-0764  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 Bruin*, Caroline E Wyers¹, Patrick C Souverein¹, Tjeerd P Van Staa²,³, Piet Pm Geusens⁴, Joop Pw Van Den Bergh¹, Frank De Vries⁵, ⁶, Johanna H Driessen¹, ². 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 Dort², Piet Geusens³, Frank De Vries⁴, ⁵, Emiel Wouters⁶, Joop Van Den Bergh⁷, ⁸, 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, 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, ⁴Department of Clinical Pharmacy and Toxicology, Maastricht University Medical Centre+ (MUMC+), the Netherlands, ⁵CAPHRI Care and Public Health Research Institute, Netherlands, ⁶Department of Respiratory Diseases, Maastricht University Medical Centre+ (MUMC+), the Netherlands, ⁷Department of Internal Medicine, VieCuri Medical Centre, Venlo, Netherlands, ⁸Department 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 Luo², Andrew Goertzen³, Kimberly Hannam¹, Ahmed Elhakeem¹, Emma M Clark¹, William D Leslie⁴, Jon H Tobias¹. 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. Tran², Jacqueline R. Center²,³, John A. Eisman²,³,⁴, Tuan V. Nguyen²,⁴,⁵, ⁶. ¹School of Biomedical Engineering, University of Technology, Sydney, Australia, ²Bone Biology Division, Garvan Institute of Medical Research, Australia, ³St Vincent Clinical School, UNSW Australia, Australia, ⁴School of Medicine, Notre Dame University, Australia, ⁵Bone Biology Division, lia, Australia, ⁶School 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*1, Roberto Fajardo2, Todd Bredbenner1, Khang Dang1, Rose Huynh1, Sean Catlett1, Mitchell Hymowitz1, 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*, 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 Kotowicz3, Julie A Pasco1. 1Deakin University, Australia, 2Department of Internal Medicine, Hospital del Mar-MIMIM, 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. Meyer1,2, Anne Johanne Søgaard3, Grethe S. Tell3, Nina Emaus2, Kristin Holvik4, Siri Forsmo5, Clara G. Gjesdal1, Berit Schei6,7, Peter Vestergaard2, Tone K. Omsland1. 1Department of Community Medicine and Global Health, Institute of Health and Society, University of Oslo, Norway, 2Department of Public Health and Nursing, NTNU, Norwegian University of Science and Technology, 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 Kamimura2, Shigeharu Uchiyama2, Hiroyuki Kato4. 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, Okaya 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 1, Roberto González-Mendoza1, Noé Albino González-Gallegos4, Pilar De La Peña-Rodriguez2, Hugo Gutiérrez-Hermosillo5, Pedro García-Hernández2, Claudia Flores-Moreno7, Jorge Alberto Morales-Torres1, Juan López-Taylor1. 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 Sustain Osteoporosis Treatment After Fragility Vertebral Fractures When Introduced Early in Inpatients Than Delayed in Outpatients: A Controlled Study
Thierry Chevalley*, Herve Spechbach2, Isabelle Fabreguet1, Emilie Saule1, Magaly Hars1, Jerome Stremmanna1, Serge Ferrari1, Rene Rizzoli1. 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  
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  
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  
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)
Hyeommok Kim*, Sun Hee Beom, Tae Ho Kim. Seoul Medical Center, Republic of Korea
Disclosures: Hyeommok Kim, None

SUN-0839 Prevalence of Vitamin D Deficiency in Postmenopausal Fracture Patient
Ji Wan Kim*, Jun Sung Lee, Kwang Hwan Jung, Jai Hyung Park, Hyun Chul Shon, Jae Suk Chang. Asan Medical Center, Republic of Korea, 2Haenundae 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 L A Morales Torres*, Hugo Gutierrez, Gilberto Aguilar-Orozco, Jaime Romero-Ibarra, Enrique Diaz De Leon, Francisco Torres-Naranjo. Hospital Aranda de la Parra, Mexico, 2Morales 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 Guerriere, Laura Lutz, Leila Walker, Jonathan Scott, Heath Gasier, James Mcclung, Erin Gaffney-Stomberg. Oak 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 Wu, Edwin Oei, Fernando Rivadeneira, Andre Uitterlinden, John Ioannidis, Michael Snyder, Chirag Patel. Erasmus MC, Dept. Internal Medicine, Netherlands, 2Stanford School of Medicine, United States, 3Erasmus MC Dept. Radiology, Netherlands, 4Stanford School of Medicine, Netherlands, 4Harvard 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 Weiler, Suzanne Morin, Kai Kang. School 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 periostin
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

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, Mihye Jung1, Yoon Young Cho1, Sungwhan Suh1, Beom-Jun Kim1, Seongbin Hong1, Seung Hun Lee3, Jung-Min Koh2, Kee-Ho Song4.
1Department of Endocrinology and Metabolism, Inha University Hospital, Inha University School of Medicine, Republic of Korea, 2Division of Endocrinology and Metabolism, Department of Medicine, Samsung Medical Center, Sungkyunkwan University School of Medicine, Republic of Korea, 3Division of Endocrinology and Metabolism, Department of Medicine, Gyeongsang National University Hospital, Gyeongsang National University School of Medicine, Republic of Korea, 4Division of Endocrinology and Metabolism, Department of Medicine, Dong-A University Medical Center, Dong-A University College of Medicine, Republic of Korea, 5Division of Endocrinology and Metabolism, Asan Medical Center, University of Ulsan College of Medicine, Republic of Korea, 6Division of Endocrinology and Metabolism, Department of Medicine, Konkuk University Medical Center, Konkuk University School of Medicine, Republic of Korea
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, Keumyoung Kim1, In Joo Kim1, Kyoung Min Kim1, Kyoungjune Pak1, Seong-Jang Kim1. 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 Leboff1,2,3, Catherine Donlon1, Nancy Cook2,3,4, 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, 3Geriatric Medicine Clinic, 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*1, Steven Shea2, Sheila Markwardt3, Orfeu Buxton1, Katie Stone2, Thuy-Tien Dam4, NancyLane2, Susan Redline5, Jane Cauley4, Douglas Bauer6, Eric Orwoll7.
1University of Colorado, Division of Endocrinology, Metabolism and Diabetes, United States, 2Oregon Institute of Occupational Health Sciences, Oregon Health and Science University, United States, 3OHUH-PSU School of Public Health, United States, 4Department of Biobehavioral Health, Pennsylvania State University, United States, 5California Pacific Medical Center Research Institute and San Francisco Coordinating Center, United States, 6Columbia University, United States, 7Center for Musculoskeletal Health, University of California, Davis Medical Center, United States, 8Department of Medicine, Brigham and Women’s Hospital and Beth Israel Deaconess Medical Center, Harvard Medical School, United States, 9Department of Epidemiology, Graduate School of Public Health, University of Pittsburgh, United States, 10University of California Medical Center, United States, 11Division of Endocrinology Bone and Mineral Unit, Oregon Health and Science University, United States
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*1, Adi Cohen1, Stephanie Shiau1, Mafo Kamanda-Kosseh1, Mariana Bucovsky1, X Edward Guo1, Elizabeth Shane1. 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*1, Iulian Pascariu2, Veronica Mocanu3, Mihail Romeo Galesanu4. 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*1, 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
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*1, Fernando Marin2, David Kendler1, Piet Geusens4, Luis Russo4, Jorge Malouf5, Peter Lakatos5, Salvatore Minisola5, Pedro Lopez-Romero2, Astrid Fahrleitner-Pammer6. 1Krankenhaus Nordwest GHMB, Germany, 2Lilly Research Center Europe, Spain, 3University of British Columbia, Canada, 4Maastricht University Medical Center, Netherlands, 5Centre 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 Karabelas1, Abdulhafez Selim3. 1Mouwasat Hospitals, Saudi Arabia, 2Independent Investigator, United States, 3PCOM, 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 Li1, Fang Niu1, Romain Neugebauer1, Bruce Ettinger1, Susan Ott4, Joan Lo1, Annette Adams2. 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 Jobke1, Eva Maria Wölffel1, Tobias Barth1, Christoph Riedel1, Maya Hellmich1, Mathias Werner1, Björn Busse1. 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 Hirano2, Nobunori Takahashi3, Naoki Ishiguro3, Toshihisa Kojima3. 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 Lee1, Young Kyu Kim1. 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 Kim2. 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 Lee1, Jin-Hwan Kim2. 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 Grimsrud2, Susan Ott1, 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*, Nico Pannacciuoli, Piet Geusens1, Jonathan Adachi1, Eric Lespessailles1, Jorge Malouf-Sierra2, Bente Langdahl1, Peter W. Butler2, Xiang Yin2, Willem F. Lems2. 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 Kanaseki, Yoichi Kishikawa, Sathoshi Ikeda, Masato Nagashima, Tsuyoshi Miyajima, Hiromi Oda. 1Saitama medical university, Japan, 2Katsu orthopedic hospital, Japan, 3Kishikawa orthopedic surgery, Japan, 4Ken-ai memorial hospital, Japan, 5Katsuki 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 Wijdeven, Sonja Gevers, Willem F Lems, Marielle H Emmelot-Vonk, Joop Pw Van Den Bergh, 1VieCuri 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, 5Apotheek 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 Graciela. 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. Watts¹, Robin K. Dore², Sanford Baim³, Gary Hattersley⁴, Greg Williams⁵, Yamei Wang⁶, Tamara D. Rozental⁷, Meryl S. Leboff⁸. 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 Tang², Xinlong Ma³, Qun Cheng⁴, Hua Lin⁵, Xiaolan Jin⁶, Zhenlin Zhang⁷, Wei Yu¹, Tsuyoshi Kobayashi⁸, Satomi Uehara⁹, Toshio Matsumoto¹⁰, Weibo Xia¹¹. 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*, Jie 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 Ho¹, Rachelle W Johnson², T John Martin¹, Natalie A Sims¹. 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 Ruan¹, Glenda Evans¹, Christine Hachfeld¹, Jean Vacher², Bart Williams³, Sundee Khosla¹, Jennifer Westendorf³, Merry Jo Oursler¹. 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 Leguizamon*1, Glaucia Coletto-Nunes 2, Daniela Morilha Néo-Justino3, Vanessa Karine Schneider4, Andressa Vilas Boas Nogueira5, Rafael Scaf 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 Ahn3, Le Duong4, Brenda Pennypacker5, Meagan Cauble6, Sriram Vaidyanathan7, Kenneth Kozloff8, Bradford Orr9, Mark Banaszak Holl10, 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 Cappellino1, Ryanne Chitjian2, Anne Savitt3, Sardar Mz Uddin4, Suresh Anaganti5, Srinivas Pentyala1, 1Stony Brook University, Department of Orthopaedics, United States, 2Stony Brook University, Department of Biomedical Engineering, United States, 3AJS 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 Hasegawa2, Norio Amizuka3, 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 Callon4, Mark Zhu5, Donna Tuari6, Dorit Naot7, David Musson8, Darren Svirskis9, Manisha Sharma10, Jillian Cornish11, 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 Clinicas, 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 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 Coddén, Ulrika Islander, Willem M De Vos, Patrice Canit, Hubert Plovier, Claes Ohlsson, Klará 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 (Walloon 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 Cy/+ 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-Dijkstra1, Bas C.J. Majoör2, P.D. Sander Dijkstra1, Socrates E. Papapoulos1, Neveen A.T. Hamdy1. 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 Clínicas 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 Guererro. National Institutes of Health, United States
Disclosures: Alison Boyce, None

SUN-1042 Bone Mineral Status in Adults X-Linked Hypophosphatemia Rickets
Rosa Arboiro Pinel1, Manuel Díaz Curiel1, Natalia Bravo Martin2, Manuel Quesada Gómez2, Miguel Torralbo Garcia1. 1Bone Mineral Department. Fundación Jiménez Diaz. Quironsalud, Spain, 2Internal Medicine Department. Fundación Jiménez Diaz. 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 1
Beatriz Oliveri*, Diana Gonzalez2, Felisa Quiroga2, Claudio Silva2, Paula Rozenfeld4, Camilo Lis2, Omar Riemersma1, Martin Kot2. 1Conicet UBA Hospital de Clinicas, Argentina, 2Mautalen Salud e Investigacion, Argentina, 3Diasgnostico 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 Richard2, Sheila Unger2, Didier Hans3, Belinda Campos-Xavier1, Luisa Bonafé2, Aline Bregou1. 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*,1, Yasuo Imanishi2, Yasuhiro Takeuchi3, Yutaka Takahashi4, Yumie Rhee5, Chan Soo Shin6, Hironori Kanda7, Seiji Fukumoto8, *University of Tokyo Hospital Division of Nephrology and Endocrinology, Japan, 1Osaka City University Graduate School of Medicine, Department of Metabolism, Endocrinology and Molecular Medicine, Japan, 2Toranomon Hospital Endocrine Center, Japan, 3Division of Diabetes and Endocrinology, Department of Internal Medicine, Kobe University Graduate School of Medicine, Japan, 4Department of Internal Medicine, Yonsei University College of Medicine, Democratic People’s Republic of Korea, 5Department of Internal Medicine, Seoul National University Hospital, Democratic People’s Republic of Korea, 6Kyowa Hakko Kirin Co., Ltd., Japan, 7Department 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 pseudoafacture.  
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*,1, Hiroshi Kito1, Kenichi Mishima1, Naoki Ishiguro2, Nobuhiko Haga3, Taichi Kitaoka4, Takuo Kubota5, Keiichi Ozono6. 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*,1, Shinji Takeyari1, Taichi Kitaoka1, Hirofumi Nakayama1,2, Varoon Bizaou1, Yukako Nakano1, Kenichi Yamamoto1,2, Kei Miyata1, Keiko Yamamoto1,2, Takuo Kubota1, Katsusuke Yamamoto1, Toshimi Michigami1, Takehisa Yamamoto1, Keiichi Ozono1. 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 Kutty, Rose Kreikemeier, Ling Li, Mary Craft, David Danford.
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 Gassignaling induces osteoblast differentiation in soft tissues of POH patients and during normal cranial bone development by activating Hedgehog signal
Yingzi Yang*, Ruoshi Xu, Xuedong Zhou, Eileen Shore, Fred Kaplan. 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 States
Disclosures: Yingzi Yang, None

SUN-1056 Hypoparathyroidism, real life experience in 55 patients
Maria Belen Zanchetta*, Damian Robbiani, Fernando Silveira, Jose Ruben Zanchetta. 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
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 Cystinosis
Giulia Battafarano*, Michela Rossi, Laura Rita Rega, Gianna Di Giovumberardino, Anna Pastore, Matteo D’Agostini, Ottavia Porzio, Francesco Emma, Anna Taranta, Andrea Del Fattore. 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.
1Laboratory for arthritis and bone biology, Fatima Research Institute, Department of Internal medicine, Daegu Fatima Hospital, Republic of Korea, 2Laboratory for arthritis and bone biology, Fatima Research Institute, Daegu Fatima Hospital, Republic of Korea, 3Department of Internal medicine, Kyungpook National University Hospital, Republic of Korea
Disclosures: Gun-Woo Kim, None

SUN-1094 Antioxidant and anti-inflammatory dampsen 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 Riebes, Huib Van Essen, Marelise Eekhoff, Gerard Pals, Dimitra Michal. 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*, Yasuhiwa Ohata, Jolene J. Windle, G. David Roodman, Noriyoshi Kurihara. 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
Ichiro Okabe*, Jitendra Kanaujiya, Nelson Monteiro, Ernst Reichenberger, I-Ping Chen. University of Connecticut Health, United States
Disclosures: Ichiro 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 Convente, Nicole Fleming, Yueqi Zhang, Amisha Kalra, Cody M Elkins, Eileen M Shore, Daniel S Perrien. 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 Battafarano, Eda Marian, Paola Sabrina Buonomodo, Ippolita Rana, Alessandro Jenkner, Rita De Vito, Simone Pelle, Matteo D’Agostini, Andrea Bartuli, Andrea Del Fattore. 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, 6Clinical 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 Netelenbos3, 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 Movement Sciences, The Netherlands, 3Department of Clinical Genetics, VU University Medical Center, Amsterdam, Netherlands, 4Department of Interned, Endocrinologie Section, VU University Medical Center, Netherlands, 4Department 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 Surowiec1,2, Lauren Battle2, Stephen Schlecht3, Michelle Caird2, 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 Ng2,3, 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, 2Department of Orthopaedics and Traumatology, The Chinese University of Hong Kong, Hong Kong, 3Joint Scoliosis Research Center of the Chinese University of Hong Kong and Nanjing University, 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 Winzenberg2, Karen Wills3, David Scott2,3, Michele Callisaya1, Flavia Cicuttini2, 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
Francisco Torres-Naranjo*,1, Roberto González-Mendoza2, Alejandro Gaytán-González3, Hugo Gutíerrez-Hermosillo4, Noé Albino González-Gallegos5, Claudia Flores-Moreno6, Pilar De La Peña-Rodríguez2, Pedro Alberto García-Hernández6, Juan López-Taylor7.

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*,1, Sang Mo Hong2, Ye Soo Park3. 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*,1, Brett Allaire2, Ilean Isaza1, Marian Hannan1,2,3, Mary Bouxsein2, Douglas Kiel1,2,3, Thomas Travison1,2,3. 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*,1, Maria Nethander1,2, Magnus Karlsson1, Björn Rosengren1, Eva Ribom1, Dan Mellström1, 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, 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
SUN-1137  Regucalcin Signaling Is Involved in Advanced Glycation End Products-induce 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 Hackf, 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 Sanesi2, Giacomina Brunetti2, Monica Celi3, Nunzio Cirulli2, Giovanni Passeri1, Janne Reseland4, Ernestina Schipani4, Maria Felicia Faienza2, Umberto Tarantino1, Silvia Colucci1, 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 Willie1, Svetlana Komarova1.
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*1, Gita Shafiee2, Afshin Ostovar1, Ramin Heshmat1, Farshad Sharifi2, Iraj Nabipour2. 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*1, 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 Mei1, Yushan Song1, Carly Bachus1, Chunxiang Sun1, Hooshmand Sheshbaradaran2, Michael Glogauer1, 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*1,2, Qisheng Tu1, Jake Chen1,3. 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 Stechschulte1, Amit Chougule1, Patrick Griffin2, Beata Lecka-Czernik1. 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*,1, Jean-Paul Roux1, Quentin Chuze1, Francois Duboeuf1, Roland Chapurlat1,2, Helene Follet1, Jean-Baptiste Pialat2. 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*,2, Tien Vo2, Lisa Langsetmo2, Brent Taylor2, Allyson Kats2, Susan Diem2, Pawel Szulc3, Joshua Lewis3, Kristine Ensrud2. 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*, Petar Milovanovic, Felix N. Schmidt, Matthias Krause, Klaus Püschel, Robert O. Ritchie, Michael Amling, Björn Busse. 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*, Axel Lennart Löwe, Cinzia Del Giovane, Martin Feller, Patricia Kearney, Jacobjin Gussekloo, Simon P. Mooijaart, Rudi Gj Westendorp, David J Stott, Daniel Aeberli, Doug Bauer, Didier Hans, Nicolas Rodondi. 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 General Internal Medicine, Charité, Berlin, Germany, 6Department of Epidemiology and Public Health University College Cork, Ireland, 7Department of Gerontology and Geriatrics Leiden University Medical Center, Netherlands, 8Department of Public Health and Center for Healthy Aging, University of Copenhagen, Denmark, 9Institute of Cardiovascular and Medical Sciences, University of Glasgow, United Kingdom, 10Department of Rheumatology and Clinical Immunology/Allergology, Bern University Hospital, Switzerland, 11Departments 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*, Michael Noss, Jonathan Lee, Hongfan Jin, Carrie Schneider, Christine Thai. Pfenex 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*, Alessandra Casagrande, Paul Mahrous, Muriel Tania Go, Hasan Husni, Mirette Hanna, Sara Bedrose, Dingfeng Li, Yu-Chien Cheng, Sanford Baim. 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 Morkos*, Alessandra Casagrande, Paul Mahrous, Muriel Tania Go, Hasan Husni, Mirette Hanna, Dingfeng Li, Sara Bedrose, Mishita Goel, Yu-Chien Cheng, Sanford Baim. 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 P1NP to Oral Bisphosphonates in Clinical Practice and Clinical Trial Settings
Antonia Ugur*, Fatma Gossiel, Kim Naylor, Jennifer Walsh, Nicola Peel, Eugene Mccloskey, Richard Eastell. 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*, Chiang-Hua Chang, Jonathan Skinner, A. James O'Malley, Jeremy Smith, Gouri Chakraborti, Clifford J. Rosen, Nancy E. Morden. 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*, David Alster, Evelien Gielen, David Cassiman, Franz Jakob, Lothar Seefried. 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
Julianna Barsony*. Georgetown University Medical Center, United States
Disclosures: Julianna 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, Claudia Gonzaga-Jauregui, Harikiran Nistala, Johanna Jimenez, Silvia Smaldone, Saathyaki Rajamani, Johnathon Walls, Chia-Jen Siao, Andrew Murphy, Sarah Hatsell, Aris N Economides. 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, Soledad Librizzi, Mercedes Aramendi Ramos, Carlos Jiménez, Federico Hawkins, Guillermo Martinez Diaz-Guevara. 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*, 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 Glenister4, Davneet Judge5, Nawal Bent-Ennakhil5, Katie Gibson6, John Germak6, Kristina Chen7, Claudio Marelli8, Jens Bollerslev9. 1Department of Gastroenterology and Endocrinology, University of Göttingen, Germany, 2Mayo Clinic Division of Endocrinology, Diabetes, Metabolism, and Nutrition, United States, 3Nordic hypoPARA Organisation, Norway, 4Hyppopara 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 Högler2, Hugo Gomes Da Silva3, Anna Petryk1, Shona Fang4, Agnes Linglart4, Keiichi Ozono5, 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-Gaspa1, Helena Florez1, Arantxa Conesa4, 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. Mcnab, 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, Other Financial or Material Support

MON-0045 The Design and Results of a Phase 1 TransCon PTH Trial in Healthy Volunteers
David B. Karpf*, Susanne Pihl, Eva Mortensen, Kenneth 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, Philipe Gamache, Lynne Moore, Fabrice Mac-Way. 1Chu de Quebec-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 Quebec-Université Laval Research center, Enfant-Jésus Hospital, Traumatology Axis, Canada, 5Chu de Quebec-Université Laval, Hotel-Dieu de Quebec Hospital, Canada
Disclosures: Aboubacar Sidibé, None

MON-0049 TBK1 expression and activity in OCL lineage cells generates a paetic-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 A Auron, David W. Dempster, Jolene J. Windle, Kostas Vredelis, 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 Haverstraw, 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 Tabacco¹, Randy Yeh², Donovan Tay Yu-Kwang³, Laurent Derecle⁴, Jennifer Kuo⁵, Leonardo Bandeira⁶, Catherine Mcmanus⁶, James Lee⁶, John Bilezikian¹. 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

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 KNishiyaama, 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*¹, Eric W. Livingston², Alicia M. Ortega¹, Ted A. Bateman², Eric A. Vance¹, Louis S. Stodieck³, Virginia L. Ferguson¹. 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 Uppuganti², Alyssa Merkle³, Deanna Bradley¹, Daniel Fernandes¹, Jeffry Nyman¹. 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 Mei², Felix Kopp², Peter Noel³, Thomas Baum³, Subburaj Karupppasamy³. 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 Ruiz², Jérôme Noailly², Jordi Moreton¹, Silvana Di Gregorio², Ludovic Humbert¹, Luis Del Rio¹. 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*, W. Brent Lievers, A. Keith Pilkey. 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*, Corinne Metzger, Scott Lenfest, Jessica Brezicha, Amelia Looper, Nicholas Igbinedije, Peter Phan, Susan Bloomfield, Harry Hogan. 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*, Jason D. Guss, Erik A. Taylor, C. Hazel Higgins, Eve Donnelly, M. Kyla Shea, Sarah L. Booth, Rodrigo C. Bicahlo. 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 Ciarlini, Rita Cássia Menegati Dornelles. UNESP, Brazil
Disclosures: Melise Jacon Peres Ueno, None

MON-100  Composition of Hyperelastic Bone Composite Scaffolds Affects De Novo Bone formation
Soyeon Jeong*, Adam Jakus, Chawon Yun, Ryan J. Lubbe, Adam Driscoll, Meraaj S. Haleem, Kevin Y. Chang, Wellington K. Hsu, Ramille Shah, Stuart R. Stock, Erin L. Hsu. 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*, Xiangguo Che, Na-Rae Park, Yu-Min Hong, Clara Park, Yu-Ra Choi, Je-Yong Choi. 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., Republic of 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*, Jung-Suk Han, Toru Deguchi, Frank Beck, Do-Gyoon Kim. 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 Loundagin#1, 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 Powell*, 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 Roux*, 1, Stephanie Boutroy1, Mary L Bouxsein2, Roland Chapurlat1, Julien Wegrzyn1, 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 Sim*, 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. Boyce*, 1,2, Andrea Estrada2,3, Marianne Floor2, Mirini Kim2, Lindsay Weigley2, Elizabeth Carlson1, Cristina Dollar1, Austin Gillies2, Mary Scott Roberts2, Rachel I. Gafni1, 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, Canada, 2Children’s hospital at Westmead, 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 Gregorys, David Deylet, Peter Tebben3. 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 Vracovská, Kamila Pecenkova, Zlata Fejfarkova, Richard Pikner, Hana Brozikova. 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 Wientroub, Leonid Zeitlin. 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*, Avni Shah, Anita Ying, Steven Waguespack. 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 Nakano, Mitsuyoshi Suzuki, Akifumi Tokita, Ayaka Kaneko, Eri Maeda-Murohara, Masashi Nagao, Toshiaki Shimizu, Kazuo Kaneko, Masahiko Nozawa, Muneaki Ishijima. 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, Utam 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 Plotkin, Hannah Davis, Emily Atkinson, Matthew Allen, Leland Gomez, Padmini Deosthale, Carmen Herrera, Julian Dilley, Angela Bruzzaniti, Teresa Zimmers, Ziyue Liu, Rafael Pacheco, Joseph Rupert. 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
MON-0160  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-Ibacache3, María Angélica Torres-Quintana4, Kornelius Kupczik5, Lilian Plotkin6. 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, Roudedhush Veterans Administration Medical Center, and Indiana Center for Musculoskeletal Health, United States
Disclosures: Sonja Buvinic, None

MON-0161  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

MON-0162  Elucidation of mechanisms governing the activity of SOXC-inflammatory cytokine molecular axis in synovial fibroblasts
Kyle Jones*, Veronique Lefebvre, Pallavi Bhattacharam. Cleveland Clinic, United States
Disclosures: Kyle Jones, None

MON-0163  CARNITINE PALMITOYL TRANSFERASE-1A VARIANT 2: A NEW METABOLIC TARGET IN OSTEOPOOROSIS RELATED SARCOPENIA?
Umberto Tarantino*, Monica Celi, Chiara Greggi, Elena Gasbarra, Sabina Pucci. University of Rome Tor Vergata, Italy
Disclosures: Umberto Tarantino, None

MON-0164  Fibroblast Growth Factor 9 (FGF9) Acts as an Inhibitory Osteokine in Mouse C2C12 and Human Skeletal Muscle Cells
Jian Huang*1, Kun Wang2, Lora Shiflett2, Leticia Brotto1, Lynda Bonewald3, Sarah Dallas2, Marco Brotto1. 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

MON-0165  Muscle-Derived IGF-1 Affects Bone Elongation in a Gender-Specific Manner
Gisele Martins*, Vitor Torres1, Bianca Neofiti-Papi1, Joao Silvestre1, William Silva1, Antonio Musaro2, Anselmo Moriscot1, Cecilia Gouveia1. 1Institute of Biomedical Sciences, University of São Paulo, Brazil, 2Sapienza Universita di Roma, Italy
Disclosures: Gisele Martins, None

MON-0166  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 Klein1. 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, 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, Youyi Xilu 127, 710072, 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, Ruoshi 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-Calle1, Noriyoshi Kurihara1, Jessica H. Nelson1, Emily G. Atkinson2, Carlos Galmarini3, G. David Roodman4, Teresita Bellido5. 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 Kähkönen1, 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 Lee1, Eun Jeong Lee1, Bo Yeon Seo1, Sun Wook Cho2, Serif 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 Mei1, 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 Omokehinde1, 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
Disclosures: Tolu Omokehinde, None

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 Westhrin1, Vlado Kovic1, Albert Bondt2, Stephanie Holst2, Zeijian Zhang3, Tobias Slordahl4, Anders Sundan5, Anders Waage5, Manfred Wuhrer5, 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 Agressive 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.**  
Hirofumi Tenshin*, Jumpei Teramachi, Masahiro Hiasa, Asuka Oda, Mohannad Ashtar, Kotaro Tanimoto, Iwasa Masami, Ariunzaya Bat-Erdene, Takeshi Harada, Shigen Nakamura, Hirokazu Miki, Itsuo Endo, Eiji Tanaka, Toshiro Matsumoto, Masahiro Abe. 1Department 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**  
Jumpei Teramachi*, Hirofumi Tenshin, Masahiro Hiasa, Asuka Oda, Ariunzaya Bat-Erdene, Takeshi Harada, Shigen Nakamura, Hirokazu Miki, Itsuo Endo, Toshiro Matsumoto, Masahiro Abe. 1Tokushima University, Japan, 2Tokushima University Hospital, Japan  
**Disclosures:** Jumpei Teramachi, None

MON-0225  **In Situ Imaging of Collagen Degradation May Assess Myeloma Bone Disease Activity**  
Donghoon Yoon*, Ikjae Shin, Juchan Lim, Carol Morris, Lucas Bennink, S. Michael Yu, Gareth Morgan, Maurizio Zangari. 1University of Arkansas for Medical Sciences, United States, 2University of Utah Department of Bioengineering, United States  
**Disclosures:** Donghoon Yoon, None

---

CHONDROCYTES

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. 1Biochemistry 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 IL36α 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 Murshed1,2,4. 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 thoseDerived 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-1α-Mediated Chondrocyte Differentiation
Aruni Wilsonsanthoshkumar*1, 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 Andreasen*1,2, Ann Kristin Hansen1,2, Ken Sikaris3, Clifford J Rosen4, Åshild 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 Andreasen, None

MON-0284  The consequences of postnatal androgenization in bone markers, micro and macro-architecture 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, Diaa ElEdin S Daghma1, Fathi Hassan1, Stefanie Kern1, Markus Rupp2, Christian Heiss2, Thaqif El Khassawna1. 1Institute for Experimental Trauma Surgery, Faculty of Medicine, Justus Liebig University of Giessen, Germany, 2Department of Trauma, Hand, and Reconstractive 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 Broatto1, Marco Broatto1, 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 Kurashimo3, Yoshitaka Horiuchi1, Kohei Tsutami1, 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 Carreau2, 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 Bellizzi, 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*, Juliana 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, 3Faculty of Dentistry and Department of Medicine, McGill University, Canada, 4Shriners 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*, Adam Knox1, Randall Roper1, Elizabeth Fisher2, Victor Tybulewicz3, 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*, Carmen P. Wong2, Richard L. Gallo2, Amanda R. Gamboa2, Dawn A. Olson2, Malcolm B. Lowry3, Mary L. Fantacoe3, Claudia S. Maier3, Jan F. Stevens3, Russell T. Turner3, Urszula T. Iwaniec2, Adrian F. Gombart2. 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 Neurology, Oregon State University, United States, 5Linus Pauling Institute, Department of Pharmaceutical Sciences, Oregon State University, United States, 6School 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*, 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*1, Jacques P Brown1,2, Rachel Laframboise1, Maxime Vallée1, Frédéric Fournier1, Suzanne N Morin1, Edith Gagnon1, Arnaud Droit1, Laetitia Michou1,2,3. 1CHU de Québec-Université Laval Research Centre, Canada, 2Department of medicine, Université Laval, Canada, 3Department of Genetics, CHU de Québec-Université Laval, Canada, 4Department of Medicine, McGill University, Canada, 5Department of medicine, CHU de Quebec-Université Laval, Canada
Disclosures: Marie-Eve Boisvert, None

MON-0339 Is serum free DNA methylation a bone biomarker?
Alvaro Del Real*1, Carolina Sañudo1, Carmen García Ibarbia1, Carmen Valero1, Mario F. Fraga2, Agustín F. Fernandez1, Flor M. Perez-Campo1, María Isabel Perez-Nuñez1, Esther Laguna1, Jose A. Riancho1. 1Department of Internal Medicine, Hospital Universitario Marqués de Valdecilla-IDIVAL, University of Cantabria, Spain, 2Nanomaterials & Nanotechnology Research Center (CINN-CSIC), University of Oviedo, Spain, 3Cancer Epigenetics Laboratory, Institute of Oncology of Asturias (IUOPA), HUCA, University of Oviedo, Spain, 4Department of molecular biology, University of Cantabria-IDIVAL, Santander, Spain, 5Department of Traumatology/Hospital U M Valdecilla, University of Cantabria, 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*1, Maxime Vallée1, Frédéric Fournier1, Arnaud Droit1, Edith Gagnon1, Jacques P. Brown1,2, Laetitia Michou1,2,3. 1CHU de Québec-Université Laval Research Centre, Quebec, Canada, 2Department of Medicine, Division of Rheumatology, Université Laval, Quebec, Canada, 3Department 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*1, Laura Lutz1, Anna Nakayama1, Philip Fremont-Smith2, Darrell Ricke2, Martha Petrovick2, James Meclung1. 1US Army Research Institute of Environmental Medicine, United States, 2MIT 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.
Alex Casella*1, Jingman Zhou1, Lauren O’Lear1, Caela Long1, Zahra Tara1, Ilana Caplan2, Meizan Lai2, Michael Levine2, Jeffrey Roizen2. 1University of Maryland, United States, 2The Children’s Hospital of Philadelphia, United States
Disclosures: Alex Casella, None

HORMONAL REGULATORS

MON-0376 Inhibition of FGF23 signaling corrects LPS-induced hypoferremia through the erythropoiesis-inflammation axis
Rafiou Agoro*1, Anna Montagna1, Moosa Mohammadi1, Despina Sitara1. 1New York University, United States, 2New York University School of Medicine, United States
Disclosures: Rafiou Agoro, None

MON-0377 Hypoxia enhances EPO-mediated FGF23 expression in hematopoietic cells
Erica Clinkenbeard*1, Maegan Capitano1, Megan Noonan1, Pu Ni1, Mark Hanudel2, Kenneth White1. 1Indiana University School of Medicine, United States, 2David 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 Tocados1, María Encarnacion Rodriguez Ortiz1, Yolanda Almadén1, 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 (IIS), National Institute of Biomedical Engineer (INEB), University of Porto, Portugal, 4Department of Nephrology, São João Hospital Center, Institute of Investigation and Innovation in Health (IIS), 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*1, 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*, Nicolea Valentia 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-kB Activation, but not GATA4 Expression or Transcriptional Activity
Ha-Neui Kim*1,2, 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*1, Brittany A. Ryan1, K. Berit Sellars1, René St-Arnaud2, Christopher S. Kovacs1. 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*, Yuasu Imanishi, Masayo Yamagata, Ikue Kobayashi, Noriyuki Hayashi, Masaya Ohara, Yuki Nagata, Katsuhiro Mori, Masanori Emoto, Toshimi Michigami, Masaaki Inaba. Osaka City University Graduate School of Medicine, Japan, Osaka Ohtani University, Japan, Osaka 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*, Erica L. Clinkenbeard, Pu Ni, Mircea Ivan, Matthew Prideaux, Gerald J. Atkins, William R. Thompson, Mark R. Hanadel, Kenneth E. White. Indiana University School of Medicine, United States, The University of Adelaide, Australia, David 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*, Lilian I Plotkin, Teresita Bellido. Department of Anatomy & Cell Biology, Indiana University School of Medicine, United States, Department of Anatomy & Cell Biology, Indiana University School of Medicine, Roudebush 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*, Rachel Fried, Amira Hussein Ali, James Watt, Paola Divieti Pajevic, Elise Morgan, Louis Gerstenfeld. Boston University School of Public Health, United States, Boston University School of Medicine, United States, Boston 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*, Kerry Jones, Shima Assar, Stefania D’Angelo, Ann Prentice, Nick Bishop, Stephen Kennedy, Aris Papageorghiou, Robert Fraser, Saurabh Gandhi, Elisabeth Curtis, Sarah Crozier, Rebecca Moon, Keith Godfrey, Hazel Inskip, Kassim Javaid, Cyrus Cooper, Sarah Crozier, Rebecca Moon, Keith Godfrey, Hazel Inskip, Kassim Javaid, Cyrus Cooper, Sarah Crozier, Rebecca Moon, Keith Godfrey, Hazel Inskip, Kassim Javaid, Cyrus Cooper
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*, Han Xie, Alexandra Clifford, Jinhua Gray, Nathanael Gray, Kei Sakamoto, Michael Mannstadt, Marc Wein. MGH Endocrine Unit, United States, Dana 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*, 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*, Richard T. Jaspers2, Astrid D. Bakker1, Gang Wu1, Johanna F.M. Verstappen1, Mohammad Haroon2, Joannes A.M. Korfage4, 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 Laforge-Proust, Laurence Vico. INSERM, U1059, University of Lyon, UJL 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 You1. 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-Solal6. 1InsERM UMR1132, Hôpital Lariboisière; Univ Paris Diderot, Sorbonne Paris Cité, Paris France, France, 2InsERM-S1124, Université Paris Descartes, Sorbonne Paris Cité, Paris France, France, 3Sorbonne Universités UPMC Univ Paris 06, CNRS, Collège de France, Laboratoire Chimie de la Matière 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 Center, 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 Dwyer3, Jeevitha Srgihathan4, Joan Murphy5, Amy Finch6, Joanne Kotsopoulos1, Marcus Bernardini1, Michelle Jacobson2, Gabrielle E.V. Ene1, Irene Ho1, Suzanne Cohen2, Paula Harvey1, Barry Rosen1, Steven Narod6. 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⁎, Jian Shen1, Katie Stone2, Deborah Kado1. 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 Mohamad1, Alexandra Aguilar-Perez3, Artur Plett1, Hui Lin Chua1, Paul Childress1, Marta Alvarez1, Joydeep Ghosh1, Irushi Abeyesekera1, Evan Himes1, Chi Zhang1, Jung Min Hong2, Louis Pelus1, Christie Orschell1, Angela Bruzzaniti2, Melissa Kacena1. 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. Atkinson3, Yu Peng1, Ali Ghasem-Zadeh1, Sundee Khosla1, Ego Seeman1,2, 3Depts. Medicine and Endocrinology, Austin Health, University of Melbourne, Australia, 3Straxcorp Pty Ltd, Australia, 4Mayo 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*1, Céline Gaucher2, Nina Bon1, Sophie Sourse1, Jérôme Guicheux1, Sarah Beck-Cormier1, 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 α2δ1 Results in Impaired Skeletal Density, Mass, and Strength
Madison Kelly*1, Karan Sharma1, Xin Yi2, Christian Wright2, Megan Noonan2, Taylor Gorrell1, Aaron Gregg1, Brandon Chenoweth1, Uma Sankar1, Julia Hum1, Alexander Robling1, Mary Farach-Carson1, William Thompson1. 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*1, Jon Wergedal2, 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 Diego, 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 Morozova2, Iskandar Tamimi1, Jun Song2, Faleh Tamimi2. 1Objects Research Systems Inc., Canada, 2McGill University, Canada, 2Trikon 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 Beutler1. 1Texas Scottish Rite Hospital for Children, United States, 2University of Texas Southwestern Medical Center, United States
Disclosures: Jonathan Rios, None

MUSCULOSKELETAL DEVELOPMENT

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*, 1Dept. of Orthopaedic Surgery, NYU Langone Orthopedic Hospital, United States, 2Dept. 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 Grecic*, 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
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*, Lin Lan*, 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, 2Department of Neuroscience, Karolinska Institutet, Stockholm SE-171 77, 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 Xu1, Carolyn Meyers1, Leslie Chang1, Leiitiia Zhang1, Yiyun Wang1, Kristen Broderick1, Bruno Peault1, Aaron James1. 1Johns Hopkins University, United States, 2University of California, Los Angeles, United States
Disclosures: Leslie Chang, None

MON-0500  Specific Knockout of Gsa 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
Disclosures: Mingxin Xu, None

OSTEOARTHRITIS AND OTHER JOINT DISORDERS

MON-0525  Quantitative analysis of juxta-articular osteoporosis by HR-pQCT in patients with rheumatoid arthritis
Ko Chiba1, Kounsuke Watanabe1, Oki Nozomi2, Naoki Iwamoto1, Narihiro Okazaki1, Atsushi Kawakami2, Makoto Osaki1. 1Department of Orthopedic Surgery, Nagasaki University Graduate School of Biomedical Sciences, Japan, 2Department of Radiological Sciences, Nagasaki University Graduate School of Biomedical Sciences, Japan
Disclosures: Ko Chiba, None

MON-0526  The Therapeutic Effect of GPNMB in a Traumatically-Induced Osteoarthritic Model
Bryson Cook*, Asaad Aladlaan1, Matthew Desanto2, Fayez Safadi1,3. 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 Mohindroo2, Salma Khan3, Mohan Subburaman1. 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 Hakobyan1, Tania Panellini1, Camila Carballo1, David Mcilwain1, Tak W. Mak1, Suchitra Acharya1, Dan Li1, Jackie Szymonifka1, Scott Rodeo1, Xiangqian Song1, Sébastien Monette2, Alok Srivastava2, Jane Salmon1, Carl Blobel1. 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  
Taro Mawatari*, Kazuki Kitade1, Shinya Kawahara1, Satoshi Ikemura2, Gen Matsu1, Takahiro Iguchi1, Hiroaki Mitsuysasu1, Reima Sueda1. 1Hamanomachi Hospital, Japan, 2Kyushu University, Japan  
Disclosures: Taro Mawatari, None

MON-0532 Chronic Antibiotic Use Pre-Injury Reduces Severity of Post-Traumatic Osteoarthritis on ACL rupture STR/ort Mice Models  
Melanie Mendez*, Deepa Murugesh2, Jillian Mccool1, Edward Kuhn2, Allison Hsia2, 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, 4Lawrence Livermore National Laboratory, University of California-Merced, 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 Lillis2, Christopher Farnsworth3, Javier Rangel-Moren1, John Ket1, Douglas Adams3, Jennifer Anolik1, Cheryl Ackert-Bicknell1, Robert Mooney1, Michael Zuscik1. 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 Alliston3, Walter Lowe2, William Rodkey1, Marc J Philippon1, 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 Szabo3, Justin Chee4, Angela M Cheung1, Jonathan D Adachi3. 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

OSTEOBLASTS

MON-0577 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
MON-0580 CALM1 and GARS: novel biomarkers to diagnose Pseudarthrosis
Thaqif El Khassawna*1, Stefanie Kern1, Deeksha Malhan1, Markus Rupp2, Christian Heiss2.
1Institute for Experimental Trauma Surgery, Faculty of Medicine, Justus Liebig University of Giessen, Germany, 2Department of Trauma, Hand, and Reconstructive Surgery, University Hospital of Giessen and Marburg, Germany
Disclosures: Thaqif El Khassawna, None

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 Li2, 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*, Valerie 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
Disclosures: Lifang Hu, None

MON-0584 How Acid Transport Supports Formation of Dense Bone Mineral
Quitterie C Larroutrue*1, Harry C Blair2, Irina L Tourkova1, Jing H Bian3, Li Liu1, Donna Beer Stolz2, Deborah J Nelson4, Paul H Schlesinger6. 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
Disclosures: Quitterie C Larroutrue, None

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
A Comparison Between Osteoactivin and Bone Morphogenetic Protein-2 in Rat Spinal Fusion Model
Jeremey Robinson*1, Scott Medermott1, Kevin Budge2, Nazar Hussein3, Fatima Jaber3, Omar Azem4, Matt Desanto5, Adhan Raslan6, Maleck Saleh6, Bradley Inkrott6, Fayez Safadi6.
1Department of Orthopedic Surgery, SUMMA Health, United States, 2School of Biomedical Sciences, Kent State University, United States, 3Musculoskeletal Research Group, Northeast Ohio Medical University, United States, 4Musculoskeletal Research Group, NEOMED, United States, 5Musculoskeletal Research, NEOMED, United States
Disclosures: Jeremey Robinson, None

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

Potential usefulness of osteogenic exosomes as a therapeutic agent for bone engineering
Takaki Sugihara*1, Yoshinori Sumitai2, Myumi Iwatake2, Naomi Sakashita2, Izumi Asahina1.
1Department of Regenerative Oral Surgery, Unit of Translational Medicine, Graduate School of Biomedical Science, Nagasaki University, Nagasaki, Japan, 2Basic and Translational Research Center for Hard Tissue Disease, Nagasaki University Graduate School of Biomedical Sciences, Nagasaki, Japan
Disclosures: Takaki Sugihara, None

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

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, Aironq Qian. Northwestern Polytechnical University, China
Disclosures: Ye Tian, None

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
Disclosures: Yadav Wagley, None

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

Effect of Cannabinoid Receptor Ligands on Osteogenic Differentiation
Chawon Yun*1, Adam Driscoll1, Ryan Lubbe1, Soyeon Jeong1, Kevin Chang1, Meraaj Harleem1, Richard Pahapill1, Mark Oyer1, Stuart Stock2, Wellington Hsu3, Erin Hsu3.
1Northwestern University Department of Orthopaedic Surgery, Chicago, IL, United States, 2Northwestern University Cell and Molecular Biology, United States, 3Northwestern University Feinberg School of Medicine Department of Orthopaedic Surgery, United States
Disclosures: Chawon Yun, None

OSTEOCLASTS

WITHDRAWN

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

242 American Society for Bone and Mineral Research
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*1, Kim Harrison1, Arash Panahifar2, Amir Ashique1, Terra Arnason1, Janna Andronowski2, Kurtis Sweekla1, David Cooper1. 1University of Saskatchewan, Canada, 2Canadian Light Source, Canada, 3University 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*1, Xianghe Xu1, Makoto Shiraki2, 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 Ohoi, 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 PVQEIQG604-609 Motifs play important roles in Porphyromonas gingivalis-mediated regulation of osteoclastogenesis
Yuyu Li*, Shenyuan Chen1, Zhenqu Shi2, Xu Feng1, Ping Zhang1. 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
Disclosures: Yuyu Li, None

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. 1The Chinese University of Hong Kong, Hong Kong, 2Guangdong Medical University, China
Disclosures: Wayne Yuk Wai Lee, None
MON-0647  Protease Activated Receptor 2 (PAR2): A Novel Regulator of Osteoclastogenesis
Sarah McGrath*1, Leif Hultin2, John C Lockhart3, Carl S. Goodyear1. 1Institute of Infection, Immunity, and Inflammation, University of Glasgow, United Kingdom, 2Respiratory, Inflammation and Autoimmunity, Innovative Medicines and Early Development, AstraZeneca, Sweden, 3Institute of Biomedical & Environmental Health Research, University of the West of Scotland, Paisley, United Kingdom
Disclosures: Sarah McGrath, None

MON-0648  Targeted Deletion of TAF12 in Osteoclasts Decreases Osteoclast Activity in Vivo
Kazuaki Miyagawa*1, Yasuhsa 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

MON-0649  Effects of advanced glycation end products on bone cells
Hyoung-Moo Park*1, Ho- Yeon Chung2, In-Jin Cho2, You Cheol Hwang2, In-Kyung Jeong2, Kyu Jeung Ahn2. 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*1, Beom-Jun Kim2, 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*1, Masanori Koide2, Shunsuke Uehara3, Atsushi Arai2, Toshihide Mizoguchi2, Teruhide Yamashita2, Midori Nakamura4, Yasuhiro Kobayashi2, Naoyuki Takahashi2, Seiichiro Kumakura2, Chie Fukuda2, Eisuke Tsuda2. 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*1, 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*1, Kazuki Inoue1, Noritaka Saeki1, Yuichiro Sawada2, Jiwon Lee3, 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
Disclosures: Yuta Yanagihara, None
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*1, Ronald Man Yeung Wong1, Simon Kwoon Ho Chow2, Meng Chen Li1, Jack Chun Yiu Cheng1, Wing-Hoi Cheung1. 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
Disclosures: Man Huen Victoria Choy, None

MON-0673  Osteocyte regulates osteoclasts formation through Neuropilin1
Ehab Azab*1, Kevin Chandler2, Yuhei Uda1, Amira Hussein2, Raghad Shuwaikan1, Ningyuan Sun1, Mark McComb2, Paola Divieti Pajevic1. 1Molecular and Cell Biology, Boston University, United States, 2Department of Biochemistry, Boston University, United States
Disclosures: Ehab Azab, None

MON-0674  MLO-Y4 osteocyte response to simulated microgravity in a 3D scaffolding
Roxanne Fournier*, Rene Harrison. University of Toronto, Scarborough, Canada
Disclosures: Roxanne Fournier, None

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*1, S Anand Narayanan2, Anne Michal Anderson1, David C Zawieja2, Susan A Bloomfield1, Texas A&M University, United States, 2Texas A&M University Health Science Center, United States
Disclosures: Corinne E Metzger, None

MON-0677  Osteocytes Maintain Mechanosensing Following Long-Term Dosing with Sclerostin Antibody
Andrea Morrell1, Samuel Robinson1, Jingyi Wang2, Gill Holdsworth3, Hua Zhu Ke1, X. Edward Guo1. 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-Secreted Osteocyte Protective Factors in Aged C57BL/6 Mice
Leann Tiede-Lewis*1, Yukiko Kitase2, Kaitlyn Tom1, Mark Dallas1, Hong Zhao2, Yixia Xie1, Michael Wacker1, Marco Brotto1, Lynda Bonewald2, Sarah Dallas1. 1University of Missouri, Kansas City, United States, 2Indiana University, United States, 3University of Texas, Arlington, United States
Disclosures: Leann Tiede-Lewis, None

MON-0679  The Role of Osteocyte Estrogen Receptor β in Bone Turnover and Skeletal Mechanotransduction Differs in Male and Female Mice.
Xiaoyu Xu*1, Haisheng Yang2, Rachel Embry3, Whitney Bullock4, Teresita Bellido4, Russell Main5. 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
Disclosures: Xiaoyu Xu, None

OSTEOPOROSIS - ASSESSMENT

MON-0719  IMMINENT RISK OF NEW VERTEBRAL FRACTURE IN PATIENTS WITH RECENT CLINICAL VERTEBRAL FRACTURE
Enrique Casado*1, Silvia García-Cirera1, Marta Arévalo1, Luís Del Río2, Joan Carles Oliva3, Jordi Gratacós1. 1Rheumatology Dpt. University Hospital Parc Taulí (UAB), Spain, 2CETIR Centre Medip, Spain, 3Statistics Dpt. University Hospital Parc Taulí (UAB), Spain
Disclosures: Enrique Casado, None
MON-0720  High bone marrow fat in osteopenic older adults may cause overestimation of DXA-measured BMD: A quantitative MRI study
Wing P. Chan¹, Shiou-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
Disclosures: Wing P. Chan, None

MON-0721  Trabecular Bone Score in Conditions of Extremely High BMD. Does it have any utility?
Manju Chandran¹*, Ann Kerwen Kwee², Matthew Bingfeng Chuah³. ¹Osteoporosis and Bone Metabolism Unit, Singapore General Hospital, Singapore, ²Department of Family Medicine, Eulji University School of Medicine, Republic of Korea, ³Department of Family Medicine, Konkuk University School of Medicine, Republic of Korea
Disclosures: Manju Chandran, None

MON-0722  The association between muscle mass deficits estimated from bioelectrical impedance analysis and osteoporosis in elderly people
Hee-Jeong Choi¹*, Han-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
Disclosures: Hee-Jeong Choi, None

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 Molina¹*, Mario Feuchter¹, Luis Ernesto Bejarano¹, Diana Wiluzanski², Carla Altieri², Edison Edgardo Romero Galvan³, Jose Luis Mansur², Yves Martelli², Ludovic Humbert¹. ¹Centro de Investigacion Artritis & Osteoporosis, Mexico, ²CENTROSEO, Uruguay, ³Centro de Endocrinologia y Osteoporosis, Argentina, ⁴Galgo Medical, Spain
Disclosures: Fidencio Cons Molina, None

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
Lukas Maximilian Huber¹*, Timo Damm¹, Stefan Reinhold², Wolfram Timm³, Jan Borggreve⁴, Julian Ramin Andresen¹, Claus-Christian Glüer¹, Reimer Andresen⁵. 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: Lukas 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 Jiang¹*, Dale Robinson¹, Peter Lee¹, Christopher Yates², John Wark¹. ¹The University of Melbourne, Australia, ²The Royal Melbourne Hospital, Australia
Disclosures: Hongyuan Jiang, None
MON-0728 Bone Marrow Fat and its Associations with Bone Quality in the Proximal Femur
Roland Krug1, Julio Carballido-Gamio2. 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 Lentle1, Jacques P Brown2, Linda Probyn3, Ian Hammond4, Jeffrey Hu1, Ben Fine5, Kevin Lian3, Arvind Shergill3, Jacques Trollip1, Claudie Berger1, William D Leslie6, Jerilynn C Prior1, David A Hanley7, Jonathan D Adachi8, Robert G Josse1, Angela M Cheung9, K Shawn Davison6, Stephanie M Kaiser10, Tanveer Towheed11, Christopher S Kovacs12, Andy Ko Wong1, David Goltzman13. 1University of British Columbia, Canada, 2Université Laval, Canada, 3University of Toronto, Canada, 4University of Ottawa, Canada, 5Research Institute of the McGill University Health Centre, Canada, 6University of Manitoba, Canada, 7University of Calgary, Canada, 8McMaster University, Canada, 9A Priori Medical Sciences Inc, Canada, 10Dalhousie University, Canada, 11Queen’s University, Canada, 12Memorial University, Canada, 13McGill 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 Miyamura1, Kosuke Ebina1, Kohji Kuriyama2, Kunihiro Oka1, Hiroyuki Tanaka1, Tsuyoshi Murase1. 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 Dosunmu1, Keenan Brown2, Orhan Oz2. 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 Shin1, Hyun Sik Gong2. 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 Rathore2, Gary Hunter3, Debra Bemben4, Zhaojing Chen5, Kenneth Saag6. 1Department of Physical Therapy, University of Alabama at Birmingham, United States, 2Department of Physical Therapy, Temple University, United States, 3Department of Physical Therapy, University of Oklahoma, 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*, Johanna Driessen1,2,3, Piet Geusens4, Elisabeth Romme5, Frank Smeenk6, Emiel Wouters6, Joop Van Den Bergh7. 1NUTRIM School of Nutrition and Translational Research in Metabolism, Maastricht University Medical Centre+ (MUMC+), Netherlands, 2CAPHRI 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, 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+), 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*, Kai Li, Yong Zhang, Ling Wang, Li Xu, Yangyang Duanmu, Cliff J Rosen, Glen M Blake. 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*, Heidi Fischer, David L. Kopperdahl, David C. Lee, Tony M. Keaveny. 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 Blinc*, Thach Tran, Tineke Van Geel, Jonathan Adachi, Claudine Berger, Joop Van Den Bergh, John Eisman, Piet Geusens, David Goltzman, David Hanley, Robert Josse, Stephanie Kaiser, Christopher Kovacs, Lisa Langsetmo, Jerilynn Prior, Tuan Nguyen, Jacqueline Center. 1Bone Biology Group, Garvan Institute of Medical Research, Australia, 2Maastricht 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 Blinc, 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*, Mayke Van Dort, Piet Geusens, Elisabeth Romme, Frank Smeenk, Bram Rahel, 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, NUTRIM School of Nutrition and Translational Research in Metabolism, Maastricht University Medical Centre+ (MUMC+), Netherlands, Department of Internal Medicine, Rheumatology, Maastricht University Medical Centre+ (MUMC+), the Netherlands, Netherlands, Department of Respiratory Medicine, Catharina Hospital, Eindhoven, the Netherlands, Netherlands, Department of Cardiology, VieCuri Medical Centre, Venlo, the Netherlands, Netherlands, Department of Respiratory Diseases, Maastricht University Medical Centre+ (MUMC+), the Netherlands, Netherlands, Department 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*, Allyson Kats, Cynthia Boyd, Susan Diem, John Schousboe, Brent Taylor, Douglas Bauer, Katie Stone, Lisa Langsetmo. University of Minnesota, United States, Johns Hopkins University, United States, HealthPartners Institute / University of Minnesota, United States, University of California - San Francisco, United States  
Disclosures: Kristine Ensrud, None

MON-0787  
High Prevalence of Vertebral Fractures in Healthy Community-Dwelling Oldest Old: Longeuous Study  
Fernanda Gazoni*, Jane Erika Frazão Okazaki, Daniela Regina Brandão Tavares, Lais Abreu Bastos, Flavia Kurebayashi, Fania Cristina Santos. Doctorate Student at São Paulo Federal University, Brazil, Associated Physician at São Paulo Federal University, Brazil, Affiliated physician at São Paulo Federal University, Brazil, Pos-graduate student at São Paulo Federal University, Brazil, Professor at São Paulo Federal University, Brazil  
Disclosures: Fernanda Gazoni, None

MON-0788  
Impact Microindentation in Impaired Fasting Glucose and Diabetes  
Kara Holloway-Kew*, Pamela Rufus, Adolfo Diez-Perez, Lelia De Abreu, Mark Kotowicz, Muhammad Sajjad, Julie Pasco. Deakin University, Australia, Autonomous 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 Gudnason1, Kerrie Sanders5, Gunnar Sigurdsson1, Kristín Siggeirsdottir4, Lorraine Fitzpatrick1, Mattias Lorentzson5, Fredrik Borgström6, Eugene Mc Floodsky7. 1Institute for Health and Aging, Australian Catholic University, Melbourne, Australia, Sweden, 2Institute for Health and Aging, Catholic University of Australia, Melbourne, Australia, Austria, 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. Cheung1. 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, 3Sir Charles Gairdner Hospital, Australia, 4Medical 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 Anastassiades1, 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 Boyd3, Jerilynn C Prior4, Andy Ko Wong1, Angela M Cheung2, Alexandra Papaioannou2, 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 Rosen, Jeffrey N Katz, Bernard A Rosner, Catherine M Gordon, Gary C Curhan. 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-Moncusí*, Natalia García-Giralt, Adolf Díez-Perez, Ignasi Tusquets, Sonia Servitja, Joan Albanell, Daniel Prieto-Alhambra, Xavier Nogues. 1IMIM (Hospital del Mar Research Institute), Centro de Investigación Biomédica en Red de Frailidad y Envejecimiento 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 Rathbun*, Jay Magaziner, Michelle Shardell, Thomas Beck, Laura Yerges-Armstrong, Denise Orwig, Gregory Hicks, Shabnam Salimi, Alice Ryan, Marc Hochberg. 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*, Johanna Hm Driessen†, Lisanne Vranken‡, Irmja Ja De Bruin§, Piet P Geusens¶, Robert Y Van Der Velde‖, Heinrich M Janzing‖, Sjoerd Kaaresarmerkδ, Jacqueline Centerθ, Dana Blucε, John A Eisman, Joop Pw Van Den Bergh. 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*, Xavier Griffin, David Stephens, Tim Jones, Sonya Stephenson, Michael Stone, Clare Cockill, Alison Smith, Iona Price, Celia Gregson, Frances Dockery, Rachel Bradley, Neil Gittos, Daniel Prieto-Alhambra, Cyrus Cooper, Catherine Gallagher, Naomi Vasilakis. 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 Gittus3, Ian Harvey4, Richard Holland3, Alison Heawood4, Niamh Redmond4, Amanda Howe4, Tanya Marshall6, Tim Peters2, David Torgerson4, Terence O’Neill7, Eugene McCloskey2, Cyrus Cooper2, John Kanis12. 1Quantify Research, Sweden, 2MRC Lifecourse Epidemiology Unit, University of Southampton, United Kingdom, 3University of East Anglia, School of Medicine, United Kingdom, 4University Hospitals 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 Munce2, Susan B. Jaglal3, Sonya Allin1, Arlene Silverstein4, Sandra Kim3. 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 Jagal4, Jonathan D. Adachi1, Lora Giangregorio2. 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 Marsh3, 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 Jacques1, Eastell Richard1, Thomas Hill2. 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 Lizarraga, Montserrat Bellver, Renaud Winzenrieth, Aminneh Amani, Franchek Drobnic. 1Galgo Medical, Spain, 2CETIR Centre Medic, 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, Toshitsugu 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, Teresita 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
OSTEOPOROSIS - PATHOPHYSIOLOGY

MON-0871  Kynurenine Regulates Osteogenesis in Aging Through miRNAs 29b-1-5p and 141-3p
Khaled Hussein*1, Ahmed Elmansifi, Sudharsan Periyasamy-Thandavan2, Galina Kondrikova1, Wendy Bollag1, Sadanand Fulzele4, Xingming Shi4, Meghan Megee-Lawrence1, Mark Hamrick1, Carlos Isales1, William Hill2. 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*1, Robert Formosa2, Herma C Van Der Linde1, Juriaan R Metz3, Gert Flik4, Deepak Kumar Khajuria1, David Karasik5, M Carola Zillikens6, Rob Willemsen8, Andre G Uitterlinden4, Tjakko J Van Ham3, Fernando Rivadeneira6, Annemieke Jnh Verkerk9, Angela Xuereb-Anastasi1. 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 131502, 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 Kirn-Safraen, 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 Tower1, Abhishek Chandra2, Yejia Zhang1, Xiaowei Liu1, Joel Boerekel1, Xiaodong Guo1, Jaimo Ahn1, Ling Qin1. 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
OSTEOPOROSIS - SECONDARY OSTEOPOROSIS

**MON-0895** Bone mass of bariatric patients may recalibrate to new body weight
Andrew Froehle*, Richard Sherwood, Richard Laughlin, Dana Duren. 1Wright State University, United States, 2University of Missouri, United States, 3University of Cincinnati, 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*, Klavs Würgler Hansen, Eva Ebbehoj, Torquil Watt, Lars Rejnumark. 1Aarhus University Hospital, Denmark, 2Regionshospitala Silkeborg, Denmark, 3Rigshospitalet, 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*, Stacey Lobos, Narina Simonian, Thomas Schnitzer, W Brent Edwards. 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*, Angela Cheung, Robert Inman. 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

OSTEOPOROSIS – TREATMENT

**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*, Sebastian Radmer, Julian Ramin Andresen, Mathias Wollny, Urs Nissen, Hans-Christof Schober. 1Institute of Diagnostic and Interventional Radiology/Neuroradiology, Westkuestenklinikum Heide, Academic Teaching Hospital of the Universities of Kiel, Luebeck and Hamburg, Heide, Germany, 2Centre of Orthopaedics, Germany, 3Sigmund Freud University, Medical School, Austria, 4Medimbursement, Germany, 5Department of Neurosurgery and Spine Surgery, Westkuestenklinikum Heide, Academic Teaching Hospital of the Universities of Kiel, Luebeck and Hamburg, Heide, Germany, 6Department of Internal Medicine 1, Municipal Hospital Suedstadt Rostock, Academic Teaching Hospital of the University of Rostock, 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 Brooks, Kenichi Nagano, Dorothy Hu, Mary Bouxsein, Roland Baron, Gary Hattersley, Beate Lanske. 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
Abigail Coffman*, Robert J. Majeska, Jelena Basta-Pljakic, Mark W. Lundy, Frank H. Ebetino, Mitchell B. Schaffer. 1City College of New York, United States, 2Indiana University School of Medicine, United States, 3University 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, Yusuke Oshita, Msayuki Miyagi, Gen Inoue, Takeshi Eguro, Kazuaki Handa, Tomoaki Toyone, Katsunori Inagaki. 1Department of Orthopaedic Surgery, Showa University School of Medicine, Japan, 2Department of Orthopaedic SurgeryShowa University Northern Yokohama Hospital, Japan, 3Department of Orthopedic Surgery, Kitasato University, School of Medicine, Japan, 4Department 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. 1Division of Research, Kaiser Permanente Northern California, United States, 2Pharmacy Outcomes Research Group, Kaiser Permanente California, United States, 3Department of Research & Evaluation, Kaiser Permanente Southern California, United States, 4Department 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. 1McMaster University, Canada, 2Lakehead 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, Yong-Chan Ha. 1Kyung Hee University Hospital, Republic of Korea, 2Grace Women’s Hospital, Republic of Korea, 3Chung-Ang University, Republic of Korea
Disclosures: Deog-Yoon Kim, None
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

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

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, 3Michigan 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

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, MRCSEd, MRCSGlas, MSc, FRCS, United Kingdom, 8PhD, United Kingdom, 9MBBS, MRCS, FRCS, United Kingdom

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

Anti-sclerostin Antibodies for the Treatment of Osteoporosis: A Systematic Review and Meta-analysis
Xerxes Pundole*, Maria Lopez-Olivo, Maria Suarez-Almazor, Huiyang Lu. Department of General Internal Medicine, Section of Rheumatology and Clinical Immunology, The University of Texas MD Anderson Cancer Center, United States

Disclosures:
MON-0953: Rose Kreikemeier, None
MON-0954: Chapsthe Lelong, Medimaps, Other Financial or Material Support
MON-0955: E. Michael Lewiecki, None
MON-0956: Shaocheng Ma, None
MON-0957: Akinori Sakai, None
MON-0958: 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, Satoshi Ikeda, Yasuo Imanishi, Hiroshi Tsurukami, Satoru Nakajo, Naohisa Miyakoshi. 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 Orthopaedics 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, Dorene O’Hara. 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, John Seymour, Peter Ebeling. 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, Sara Bortolotti, Giuseppina Storlino, Adriana Di Benedetto, Maria Felicia Faienza, Carl Ware, Silvia Colucci, Maria Grano. 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 Castillo. New York University, United States
Disclosures: Chao Liu, None
PRECLINICAL MODELS: NUTRITION AND PHARMACOLOGY

MON-1004  Intra-articular Parathyroid Hormone (1-34) Improved Knee function in Aging-related Osteoarthritis without Affecting Subchondral Bone
Chung-Hwan Chen1, Ling-Hua Chang1, Sung-Yen Lin1, Lin Kang2, Yi-Shan Lin1, Shun-Cheng Wu1, Je-Ken Chang1, Mei-Ling Ho1, Shih-Tse Chen1. 1Kaohsiung Medical University, Taiwan, 2National Cheng Kung University, Taiwan, 3National 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. 1Queen’s University Department of Biomedical and Molecular Sciences, Canada, 2Queen’s University Department of Medicine, Canada
Disclosures: Corey Forster, None

MON-1007  Treatment with LpPLA2 inhibitor reduces osteopenic 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 Mcgeelawrence, William Hill, Xing-Ming Shi, Mohammed Elsalanty, Sadanand Fulzele, Beom-Jun Kim, Mark Hamrick, Carlos Isales. 1Medical College of Georgia, United States, 2Charlie Norwood VA Medical Center, United States, 3School of Dental Medicine, United States, 4University 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, Rheinaltt M. Jones, Roberto Pacifici. Emory University, United States
Disclosures: Abdul Malik Tyagi, None

MON-1012  Influence of a 17β-hydroxy steroid 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, Oliver Zierau, Günter Vollmer. 1Technische Universität Dresden, Molecular Cell Physiology and Endocrinology, Institute for Zoology, Dresden, Germany, 2Institute for Pharmaceutical Chemistry, Philippus University Marburg, 35032 Marburg, Germany, 3Pharmaceutical 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*1, Julius Haruna1, Pritpal Malhi1, Simon Authier1, Yannick Trude2, Raluca Kubaszky1, Michel Assaad2. 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*1, 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 Chaurand2, 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.  
M Seijo*1, C Vénica 2, ML Pita Martin De Portela 3, C Bergamini 2, I Wolf 2, Mc Perotti 2, Sn Zeni1. 1Laboratorio de Enfermedades Metabólicas Óseas, Instituto de Inmunología, Genética y Metabolismo (INIGEM). 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, 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. Kim4, Jiani Chen6, Klaas J. Wierenga6, Elizabeth A Fanning6, Luis Escobar7, Kirsty Mcwalter4, Heather Mclaughlin6, Rebecca Willaert3, Amber Begtrup4, Dieter P. Reinhardt4, Outi Mäkitie1, Philippe M Campeau5. 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, Neveen Hamdy. LUMC, Netherlands
Disclosures: Marlous Rotman, None

---

MON-1060 **High prevalence of enthesopathies in patients with X-Linked Hypophosphatemia**
Axelle Salcion*, Louis Lassalle, Valérie Merzoug, Alessia Usardi, Anya Rothenbuhler, Peter Kamenicky, Christian Roux, Agnès Linglart, Karine Briot. 1French Reference Center for Genetic Bone Diseases, Cochin Hospital, AssistancePublique-Hôpitaux de Paris, Paris, France, 2Department of Radiology, Cochin Hospital, AssistancePublique-Hôpitaux de Paris, Paris, France, 3Department of Endocrinology, Kremlin Bicêtre Hospital Assistance, France, 4Department of Endocrinology, Kremlin Bicêtre Hospital Assistance, France, 5Department of Pediatric Endocrinology, French Reference Center for Genetic Bone Diseases, Cochin Hospital, AssistancePublique-Hôpitaux de Paris, Paris, France, 6Department of Pediatric Endocrinology, Reference Center for Rare Disorders of Calcium and Phosphate, France
Disclosures: Axelle Salcion, None

---

MON-1061 **Homozygous Calcium-sensing Receptor Polymorphism R544Q Presents as Hypocalcemic Hypoparathyroidism**
Lucie Canaff*, Branca M. Cavaco, Alexis Nolin-Lapalme, Margarida Vieira, Tiago Silva, Ana Saramago, Rita Domingues, Valeriano Leite, Geoffrey N. Hendy. 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 Carter, Robert Sandhaus, Cathleen Raggio. 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, Md, Thomas O. Carpenter, Md, Allen E. Bale, Md, Cemre Robinson, Md. 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 Rossing, Anne Pernille Hermann, Charlotte Ejersted, Morten Frost. 1Dept.of Cinical Genetics, Odense University Hospital, Denmark, 2Center of Genomic Medicin, Copenhagen University Hospital, Denmark, 3Dept. of Endocrinology M, Odense University Hospital, Denmark, 4Department 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 Baujat1, Richard Keen2, Carmen De Cunto2, Maja Di Rocco3, Matthew A. Brown4, Mona M. Al Mukaddam4, Donna R. Grogan5, Robert J. Pignolo4, 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 Clarke1, Jane Matsumoto2, 1Division of Endocrinology, Diabetes, Metabolism, and Nutrition, Mayo Clinic, United States, 2Department of Radiology, Mayo Clinic, United States  
**Disclosures:** Anupam Kotwal, None

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. Gottesman2, William H. Mclister3, Steven Mumm1, Michael P. Whyte2, 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  
**Disclosures:** Elizabeth L. Lin, None

MON-1069  
**Early Diagnosis of Gaucher Disease with Focus in Bone Affection (BIG Project) Argentinian Experience**  
Beatriz Oliveri*, Diana Gonzalez2, Paula Rozenfeld3, Camilo Lis4, Omar Riemersma4, Martin Kot4, 1Laboratorio de Osteoporosis y Enfermedades Metabólicas Óseas. Instituto de inmunologia, 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  
**Disclosures:** Natalie Reznikov, None

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 nonsurgical hypoparathyroidism**  
Line Underbjerg*, Tanja Sikjaer1, Lars Rejnmark2, 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 Suzuki¹, Yukio Nakamura¹, Tatsuya Kobayashi², Hiroyuki Kato¹. ¹Shinshu University School of Medicine, Japan, ²Endocrine Unit, Massachusetts General Hospital and Harvard Medical Schoo, 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*¹, Telma Palomo², Francis Glorieux², Frank Rauch². 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*¹, Nina S. Ma², Gary S. Gottesman¹, Pamela S. Smith¹, Vinith N. Bijanki¹, Steven Mumma², Per Magnusson¹. 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*¹, Abel Abraham¹, Jessica Jiron¹, Jonathan Messer¹, Joshua Yarrow², Donald Kimmel¹, Jose Aguirre¹. ¹University of Florida, United States, ²Malcom Randall V AMC; 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*¹, Atsuhiro Nagasaki¹, Michael Chavez², Daniel Leigh¹, Tammy Vo¹, Alyssa Coulter¹, Vivek Thumbigere-Math³, Demetrios Braddock⁴, Martha Somerman¹, Brian Foster². 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*¹, Laura Scott¹, Robert Desborough², Ioannis Tomazos³, Richard Eastell¹. 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*¹, Andrea B Burke¹, Howard Wang¹, Pablo Florenzano¹, Jeffrey Tsi², Kristen Pan³, Bhattacharyya Nisan², Alison M Boyce¹, Rachel I Gafni¹, Alfredo Molinolo¹, Pamela G Robey², Michael Collins². 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 Mummi, 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 Falck, 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 Cicuttini3, 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 Meier3, 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, Internal Medicine Department, CHUV, Switzerland, 5Epidemiology and Psychopathology Research Unit, Psychiatric Department, CHUV, Switzerland, 6Internal 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 Park1, Seong Hee Ahn3, Hyeonmok Kim4, Yoon Young Cho5, Sungwhan Suh2, Beom-Jun Kim1, Kee-Ho Song1, Seung Hun Lee5, Jung-Min Koh5. 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, 3An 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 Murphy3, Joanne Kotsopoulos1, Gabrielle E. V. Ene1, Marcus Q. Bernardini1, Queenie Wong1, Diana Yau1, Paula Harvey3, Steven Narod1, 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, Caroline E Wyers2, Robert Y Van Der Velde3, Irma Ja De Bruin2, Heinrich MJ Janzing4, Sjoerd Kaarsemaker5, Piet Pm Geusens3, 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
Gene expression changes are associated with severe bone loss and delayed fracture healing in paraplegic rats
Mariana Butezloff*, Kelly Astolphi1, Vitor Correlo2, Rui Reis2, João Paulo Ximenez1, João Paulo Issa1, Raquel Assed Silva1, Antonio Carlos Shimano1, José Batista Volpon1, Ariane Zamarioli1. ¹University of Sao Paulo, Brazil, ²University of Minho, Portugal

Disclosures: Mariana Butezloff, None

Age and Gender Effects on Architectural, Biomechanical and Muscle Performance in C57BL/6 Mice
Hammad Mumtaz*, Julian Vallejo, Mark Dallas, Nuria Lara-Castillo, Joanna Scott, Michael Wacker, Mark Johnson, Thiagalarajan Ganesh. University of Missouri Kansas City, United States

Disclosures: Hammad Mumtaz, None

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

Late adulthood skeletal muscle weakness and atrophy in osteoporotic OPG null mice
Dounia Hamoudi*, Laetitia Marcadet1, Louis-Benedict Landry2, Antoine Boulanger-Piette1, Françoise Morin1, Anteneh Agraw4, Jérôme Frenette1. ¹PhD student, Canada, ²Trainee, Canada, ³Professional Research, Canada, ⁴PhD, Canada, ⁵Professor, Canada

Disclosures: Dounia Hamoudi, None

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 Abbes1, Federica Scotto Di Carlo1, Teresa Esposito1, Michael P Whyte5, 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

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

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**

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 Rosen. 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 Matthias*, Lauren Shumate, Antonius Plagge, Harald Jüppner, Qing He, Murat Bastepe. 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. Lee, Joy Y. Wu, Andrew R Hoffman, Marcia L. Stefanick. 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 Calabrese, Larry Mesner, Kevin Nguyen, Mary Bouxsein, Daniel Brooks, Mark Horowitz, Clifford Rosen, Steve Tommasini, Petr Simecek, Gary Churchill, Cheryl Ackert-Bicknell, Daniel Pomp, Charles Farber. 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, 8Center for Musculoskeletal Research and Department of Orthopaedics & Rehabilitation, University of 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 Public 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

Christian S. Wright*, Xin Yi, Madison M. Kelly, Karan Sharma, William R. Thompson. 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*1, Noreen Mumtaz2, Marijke Schreuders-Koedam1, Marion Koopmans1, Barry Rockx2, Johannes Van Leeuwen1. 1Erasmus MC, Internal Medicine, Netherlands, 2Erasmus 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*1, Aydin Jalali1, Andy Chen1, Bai-Yan Li2, Ping Zhang3, Hiroki Yokota1. 1Indiana University, United States, 2Harbin Medical University, United States, 3Tianjin Medical University, China

Disclosures: Yao Fan, None

Including Iodine based IV-Contrast Enhanced CT-Images into Screening Techniques for Osteoporosis

Wolffram Timm*, J. Keenan Brown2, Reimer Andresen1. 1Mindways Software, Inc., Kiel, Germany, 2Mindways Software, Inc., Austin, TX, United States, 3Institute of Diagnostic and Interventional Radiology/Neuroradiology, Westkuestenklinikum Heide, Academic Teaching Hospital of the Universities of Kiel, Luebeck and Hamburg, Heide, Germany

Disclosures: Wolftram Timm, Mindways Software, Inc., Other Financial or Material Support

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*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
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 Zhang, Eric Huang, Robert Nissenson. 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 Galitzer, Ariel Rothner, Phillip Schwartz, Eric Lang, Roger Garceau, Jonathan C.Y. Tang, William D. Fraser, Yoseph Caraco. 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 Djeckic-Ivankovic, Rachel Chepesiuk, Lora Giangregorio, Isabel Braganca Rodrigues, Rowena Ridout, Sidney Feldman, Sandra Kim, Heather Mcdonald-Blumer, Wendy E Ward, Nancy Santesso, William D Leslie, Suzanne N Morin. 1Osteoporosis Canada, Canada, 2Research Institute of the McGill University Health Center, Canada, 3University of Toronto, Canada, 4McMaster University, 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 Mckenna, M Carola Zillikens. 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 Wei, Rongguo Ren, Zhiheng Zhao, Yuanyuan Sun, Ningrong Chen, Dexuan Kong, Dong Wang. 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, Zhaleh Shadman1, Afshin Ostovar3, Ramin Heshmat2, Ehsaneh Taheri1, Farshad Sharifi4, 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