### FRIDAY, SEPTEMBER 16, 2016

#### DAY-AT-A-GLANCE

**Time/Event/Location** | **All locations in the Georgia World Congress Center unless otherwise noted**
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6:00 am - 8:00 am | ASBMR Clinical Breakfast: How Discoveries Lead to Treatment of Rare Bone Diseases  
*Room A302*

7:00 am - 7:00 pm | ASBMR Registration Open  
*Registration Hall - Main Entrance*

8:00 am - 9:30 am | Gerald D. Aurbach Lecture and the Presentation of the William F. Neuman and Lawrence G. Raisz Awards  
*Thomas B. Murphy Ballroom - Building B Level 5*

9:30 am - 10:00 am | Networking Break  
*Murphy Ballroom Foyer - Building B*

10:00 am - 11:30 am | Highlights of the ASBMR 2016 Annual Meeting  
*Thomas B. Murphy Ballroom - Building B Level 5*

10:00 am - 11:30 am | Grant Writing Workshop: What to Choose and How to Fund It  
*Room A302*

10:45 am - 11:45 am | Meet-The-Professor Sessions  
*Rooms A311-316*

11:30 am - 12:00 pm | Networking Break  
*Murphy Ballroom Foyer Building B and Sidney Marcus Foyer Building A*

12:00 pm - 1:15 pm | Symposium-EPO in Bone Physiology and Disease  
*Thomas B. Murphy Ballroom - Building B Level 5*

12:00 pm - 1:15 pm | Symposium-The Importance of Cortical Bone Through the Life Span  
*Sidney Marcus Auditorium - Building A*

1:15 pm - 1:45 pm | Networking Break  
*Murphy Ballroom Foyer Building B and Sidney Marcus Foyer Building A*

1:45 pm - 2:45 pm | Concurrent Orals: Mechanisms of Bone and Joint Disease  
*Room A404/405*

1:45 pm - 2:45 pm | Concurrent Orals: Osteoporosis Treatment I  
*Sidney Marcus Auditorium - Building A*

1:45 pm - 2:45 pm | Concurrent Orals: Rare Bone Disease (Translational)  
*Room A402/403*
1:45 pm - 2:45 pm
Concurrent Orals: Sclerostin Regulation and Function
Room A411/412

2:45 pm - 3:00 pm
Concurrent Orals: Aging
Room A404/405

3:00 pm - 4:00 pm
Concurrent Orals: Biomechanics and Bone Quality
Room A411/412

3:00 pm - 4:00 pm
Concurrent Orals: Chondrocyte Biology and Development
Room A402/403

3:00 pm - 4:00 pm
Concurrent Orals: Genetics and Genomics
Sidney Marcus Auditorium - Building A

4:00 pm - 4:30 pm
Networking Break
Murphy Ballroom Foyer Building B and Sidney Marcus Foyer Building A

4:30 pm - 5:30 pm
ASBMR/ECTS Clinical Debate-Microdamage Is Good for Bone
Thomas B. Murphy Ballroom - Building B Level 5

4:30 pm - 5:30 pm
Symposium-Matricellular Proteins
Sidney Marcus Auditorium - Building A

5:30 pm - 7:00 pm
Young Investigator and New Member Reception
ASBMR Discovery Hall - Expo Hall A1

5:30 pm - 7:00 pm
Welcome Reception & Plenary Poster Session
ASBMR Discovery Hall - Expo Hall A1

7:15 pm - 8:00 pm
Young Investigator and Diverse Member Networking Hour
Omni Atlanta Hotel at CNN Center, International Ballroom A

7:15 pm - 9:45 pm
Muscle and Bone Working Group
Room A302

7:15 pm - 9:00 pm
Nutrition and Bone Working Group
Room A303

7:15 pm - 9:45 pm
Rare Bone Disease Working Group
Room 311

7:15 pm - 9:45 pm
Working Group on Aging
Room A315

7:30 pm - 9:30 pm
Bone Turnover Markers Working Group
Room A305

8:00 pm - 9:30 pm
Women's Committee Networking Reception
Omni Atlanta Hotel at CNN Center, International Ballroom C
ASBMR CLINICAL BREAKFAST: HOW DISCOVERIES LEAD TO TREATMENT OF RARE BONE DISEASES

Supported by Educational Grants from Alexion Pharmaceuticals, Shire and Ultragenyx Pharmaceuticals, Inc.

6:00 am - 8:00 am  Georgia World Congress Center

Room A302

Chair
Eileen Shore, Ph.D.
University of Pennsylvania, USA
Disclosures: Eileen Shore, None

6:00 am  Breakfast

6:30 am  Hypoparathyroidism
Dolores Shoback, M.D.
VA Medical Center, USA
Disclosures: Dolores Shoback, None

7:00 am  Hypophosphatasia
Michael Whyte, M.D.
Shriners Hospital for Children, USA
Disclosures: Michael Whyte, None

7:30 am  XLH in Adults
Karl Insogna, M.D.
Yale University School of Medicine, USA
Disclosures: Karl Insogna, Ultragenyx 13

ASBMR REGISTRATION OPEN

7:00 am - 7:00 pm  Georgia World Congress Center

Registration Hall - Main Entrance

GERALD D. AURBACH LECTURE AND THE PRESENTATION OF THE WILLIAM F. NEUMAN AND LAWRENCE G. RAISZ AWARDS

8:00 am - 9:30 am  Georgia World Congress Center

Thomas B. Murphy Ballroom - Building B Level 5

8:00 am  Personalized Medicine: Using omics Profiling and Big Data to Understand and Manage Health and Disease
Michael Snyder, Ph.D.
Stanford University, USA
Disclosures: Michael Snyder, None

NETWORKING BREAK

9:30 am - 10:00 am  Georgia World Congress Center

Murphy Ballroom Foyer - Building B
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.

10:00 am  Basic Science Meeting Overview  
Roland Baron, DDS, PhD  
Harvard Medical School and School of Dental Medicine, USA  
Disclosures: Roland Baron, None

10:45 am  Clinical Science Meeting Overview  
John Bilezikian, M.D.  
Columbia University College of Physicians and Surgeons, USA  
Disclosures: John Bilezikian, Radius 14; Merck 14; Shire 14; Amgen 14

GRANT WRITING WORKSHOP: WHAT TO CHOOSE AND HOW TO FUND IT  
Sponsored by the ASBMR Membership Engagement and Education Committee  
10:00 am - 11:30 am  
Room A302

Join your fellow researchers and colleagues in this interactive session to discuss potential obstacles to grant writing and strategic ways to overcome them. The following topics will be covered in this unique, 90 minute session: New NIH Requirements, International Funding, and Choosing the Appropriate Grant Mechanism and/or Funding Agency. As an attendee, you’ll have the opportunity to participate in one or all of these discussions, as you choose. This is a can’t-miss opportunity for researchers at any career stage who want to gain valuable insight into getting their research funded.

Co-Chairs  
Melissa Kacena, Ph.D.  
Indiana University School of Medicine, USA  
Disclosures: Melissa Kacena, None

Stavroula Kousteni, Ph.D.  
Columbia University Medical Center, USA  
Disclosures: Stavroula Kousteni, None

MEET-THE-PROFESSOR SESSIONS  
10:45 am - 11:45 am  
Rooms A311-316

Meet the Professor: Using Medicare Claims Data to Study Fracture Epidemiology  
Room A311

Sarah Berry, M.D.  
Hebrew SeniorLife/Beth Israel Deaconess Medical Center, USA  
Disclosures: Sarah Berry, None

Nicole Wright, Ph.D., MPH  
University of Alabama at Birmingham, USA  
Disclosures: Nicole Wright, Amgen 13
Meet the Professor: Advances in Osteoarthritis Imaging and Treatment
Room A312
Nancy Lane, M.D.
University of California, Davis Medical Center, USA
Disclosures: Nancy Lane, None

Sharmila Majumdar, Ph.D.
University of California, San Francisco, USA
Disclosures: Sharmila Majumdar, None

Meet the Professor: Genome Editing: From Patients to Mice with CRISPER/Cas
Room A313
Bart Williams, Ph.D.
Van Andel Research Institute, USA
Disclosures: Bart Williams, None

Robert Kesterson, Ph.D.
Disclosures: Robert Kesterson, None

Meet the Professor: Updates on Nutritional Influences on the Musculoskeletal System
Room A314
Bess Dawson-Hughes, M.D.
Tufts University, USA
Disclosures: Bess Dawson-Hughes, None

Meet the Professor: Finding Somatic Mutations
Room A316
Matthew Warman, M.D.
Boston Children’s Hospital, USA
Disclosures: Matthew Warman, None

Meet the Professor: Utility and Limitations of TBS in Fracture Risk Assessment
Room A315
William Leslie, M.D., MSc, FRCPC
University of Manitoba, Canada
Disclosures: William Leslie, None

NETWORKING BREAK
11:30 am - 12:00 pm
Georgia World Congress Center
Murphy Ballroom Foyer Building B and Sidney Marcus Foyer Building A

SYMPOSIUM-EPO IN BONE PHYSIOLOGY AND DISEASE
Supported by an Educational Grant from Lilly
12:00 pm - 1:15 pm
Georgia World Congress Center
Thomas B. Murphy Ballroom - Building B Level 5

Co-Chairs
Russell Taichman, D.M.D.
University of Michigan, School of Dentistry, USA
Disclosures: Russell Taichman, None

Natalie Sims, Ph.D.
St. Vincent’s Institute of Medical Research, Australia
Disclosures: Natalie Sims, None

12:00 pm Overview of the Field
Carl Walkley, Ph.D.
St. Vincent’s Institute Medical Research, Australia
Disclosures: Carl Walkley, None
12:25 pm  EPO and Osteoclast Regulation  
Yankel Gabet, D.M.D., Ph.D.  
Sackler Faculty of Medicine, Tel Aviv University, Israel  
Disclosures: Yankel Gabet, None

12:50 pm  EPO and FGF23  
Kenneth White, Ph.D.  
Indiana University School of Medicine, USA  
Disclosures: Kenneth White, None

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**SYMPOSIUM-THE IMPORTANCE OF CORTICAL BONE THROUGH THE LIFE SPAN**

Supported by an Educational Grant from Merck & Co., Inc.

12:00 pm - 1:15 pm  
Georgia World Congress Center  
Sidney Marcus Auditorium - Building A

**Co-Chairs**

Shreyasee Amin, M.D., MPH  
Mayo Clinic, USA  
Disclosures: Shreyasee Amin, None

Angela M. Cheung, M.D., Ph.D.  
University Health Network-University of Toronto, Canada  
Disclosures: Angela M. Cheung, None

12:00 pm  QCT Evaluation of Hip Bone Fragility  
Klaus Engelke, Ph.D.  
University of Erlangen, Germany  
Disclosures: Klaus Engelke, None

12:25 pm  Assessment and Role of Peripheral Cortical Porosity  
Steven Boyd, Ph.D.  
University of Calgary, Canada  
Disclosures: Steven Boyd, None

12:50 pm  Practical Clinical Relevance/Role of Cortical Bone in Growth  
Mary Leonard, M.D.  
Stanford School of Medicine, USA  
Disclosures: Mary Leonard, None

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**NETWORKING BREAK**

1:15 pm - 1:45 pm  
Georgia World Congress Center  
Murphy Ballroom Foyer Building B and Sidney Marcus Foyer Building A

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**CONCURRENT ORALS: MECHANISMS OF BONE AND JOINT DISEASE**

1:45 pm - 2:45 pm  
Georgia World Congress Center  
Room A404/405

**Moderators:**

Roland Chapurlat, M.D., Ph.D.  
E. Herriot Hospital, France  
Disclosures: Roland Chapurlat, None
High serum levels of miRNA 550a-5p and low serum levels of miR-203a are risk factors for incident fractures in older postmenopausal women with Type 2 Diabetes

Ursula Heilmeier*1, Matthias Hackl2, Sylvia Weilner2, Susanna Skalicky2, Fabian Schroeder1, Iryna Lobach3, Soheyla Torabi4, Elisabeth Geiger5, Klemens Vierlinger5, Gudny Eiriksdottir6, Elias Gudmundsson6, Thor Aspelund7, Johannes Grillari8, Tamara Harris9, Thomas M. Link9, Vilmundur Gudnason6, Ann Schwartz4, 1University of California San Francisco, Department of Radiology & Biomedical Imaging, United states, 2TamiRNA GmbH, Austria, 3Austrian Institute of Technology (AIT), Department of Molecular Medicine, Austria, 4University of California San Francisco, Department of Epidemiology & Biostatistics, United states, 5Austrian Instittute of Technology (AIT), Department of Molecular Medicine, Austria, 6The Icelandic Heart Association, Iceland, 7The University of Iceland, Faculty of Medicine, Iceland, 8University of Natural Resources & Life Sciences, Department of Biotechnology, Austria, 9National Institute on Aging, Laboratory of Epidemiology & Population Science, United states

Disclosures: Ursula Heilmeier, None

Serum Activin A is Increased before iPTH and Associated with Bone Alterations in Chronic Kidney Disease Patients

Florence Lima*, Marie-Claude Monier-Faugere, Hanna W. Mawad, Hartmut H. Malluche. University of Kentucky, United states

Disclosures: Florence Lima, None

Autoimmune Hyperphosphatemic Tumoral Calcinosis

Mary Scott Ramnitz*1, Peter D. Burbelo3, Christopher Romero3, Shoji Ichikawa4, Emily Farrow4, Michael Econs5, Lori Guthrie5, Rachel Gafni7, Michael Collins7, 1Skeletal Clinical Studies Section, Craniofacial & Skeletal Diseases Branch (CSDB), National Institute of Dental & Craniofacial Research (NIDCR), National Institutes of Health (NIH), United states, 2Dental Clinical Research Core, National Institute of Dental & Craniofacial Research (NIDCR), National Institutes of Health (NIH), United states, 3Division of Pediatric Endocrinology & Diabetes, Icahn School of Medicine at Mount Sinai, United states, 4Department of Medicine, Indiana University School of Medicine, United states, 5Center for Pediatric Genomic Medicine, Children’s Mercy, United states, 6Department of Medicine & Department of Medical & Molecular Genetics, Indiana University School of Medicine, United states, 7Skeletal Clinical Studies Unit, Craniofacial & Skeletal Diseases Branch (CSDB), National Institute of Dental & Craniofacial Research (NIDCR), National Institutes of Health (NIH), United states

Disclosures: Mary Scott Ramnitz, None

Osteopontin Accumulation in the Osteocyte Lacuno-canalicular Network Contributes to the Defective Bone Mineralization of X-linked Hypophosphatemia

Tchilalo Boukpessi1, Betty Hoac2, Benjamin R Coyac3, Michael P Whyte4, Francis H Glorieux2, Thibaut Leger3, Camille Garcia5, Philippe Wicart5, Catherine Chaussain3, Marc D McKee*2, 1McGill University & University Paris Descartes, France, 2McGill University, Canada, 3University Paris Descartes, France, 4Shriners Hospital for Children, United states, 5Institut Jacques Monod, University Paris Diderot, CNRS, France, 6Paris Sud University, France

Disclosures: Marc D McKee, None

CONCURRENT ORALS: OSTEOPOROSIS TREATMENT I

Moderators:
Michael McClung, M.D.  
Oregon Osteoporosis Center, USA

Disclosures: Michael McClung, None
Effect of 10 Years of Denosumab Treatment on Bone Histology and Histomorphometry in the FREEDOM Extension Study


Columbia University, United states, Amgen Inc., United states, Medical University Graz, Austria, Hvidovre Hospital, Denmark, University of British Columbia, Canada, Center for Clinical & Basic Research, Estonia, Laval University & CHUL, Canada


Alendronate treatment is associated with reduced fracture risk and maintained safety in the oldest old

Kristian Axelsson, Dan Lundh, Mattias Lorentzon. Department of Orthopaedic Surgery, Skaraborg Hospital, Sweden.

Disclosures: Kristian Axelsson, None

The Effect of Bisphosphonates on All-Cause and Post-Fracture Mortality Risk in the Population-based Canadian Multicentre Osteoporosis Study (CaMOS)


Osteoporosis & Bone Biology, Garvan Institute of Medical Research, Australia, Maastricht University, Netherlands, Department of Medicine, McGill University, Canada, Department of Endocrinology, University of British Columbia, Canada, Department of Medicine, University of Toronto, Canada, Division of Endocrinology & Metabolism at Dalhousie University, Canada, Department of Medicine (Endocrinology & Metabolism) at Memorial University, Canada, McGill University Health Centre, Canada, Departments of Medicine & Physiology of McGill University, Canada, The University of Calgary, Canada, Department of Medicine at McMaster University, Canada, University of Maastricht, Netherlands

Disclosures: Dana Blucu, None

Calcium plus Vitamin D supplementation, fracture, and cardiovascular outcomes: A Bayesian meta-analysis

Steven Frost, Kevin Phan, Thach Tran, John Eisman, Tuan Nguyen.

University of Western Sydney, Australia, Garvan Institute of Medical Research, Australia

Disclosures: Tuan Nguyen, None

CONCURRENT ORALS: RARE BONE DISEASE (TRANSLATIONAL)
1:45 pm - 2:45 pm

1009 Multiorgan Disease in Clcn7G213R Osteopetrotic Mice
Antonio Maurizi, Mattia Capulli, Juliana Côrtes, Laura Di Rito, Nadia Rucci, Anna Teti.

University of L’Aquila, Italy, Associazione Italiana Studi e Ricerca su Osteoporosi e Malattie della Cartilagine e del Legno, Brazil

Disclosures: Antonio Maurizi, None

2:00 pm Bone with Uncleavable Type I Collagen C-propeptide has Abnormal Development of Multiple Cell Populations and Increased Bone Mineral Density with Age
Aileen M. Barnes, Joseph E. Persky, Stephane Blouin, M. Helen Rajpar, Basma Khoury, Klaus Klaushofer, Paul Roschger, Nadja Fratzl-Zelman, Kenneth M. Kozloff, Joan C. Marini.

NIH, United states, University of Michigan, United states, Ludwig Boltzmann Institute of Osteology, Austria, Ludwig Boltzmann Institute of Osteology, 1st Medical Department, Hanusch-Hospital, Austria

Disclosures: Aileen M. Barnes, None
2:15 pm  ASBMR 2016 Annual Meeting Young Investigator Award
1011 A Missense Mutation in the ZIP14 Gene Results in Abnormal Skull Growth in Patients with Hyperostosis Cranialis Interna
Gretl Hendrickx*,1, Vere M. Borra1, Eveline Boudin1, Jérôme J. Waterval2, Robert J. Cousins3, Johannes J. Manni4, Wim Van Hul1. 1Centre of Medical Genetics, University & University Hospital of Antwerp, Antwerp, Belgium, Belgium, 2Department of Otorhinolaryngology, Radboud University Medical Center, Nijmegen, Netherlands, 3Food Science & Human Nutrition Department & Center for Nutritional Sciences, College of Agricultural & Life Sciences, University of Florida, Gainesville, Florida, United States of America, United states, 4Department of Otorhinolaryngology & Head & Neck Surgery, Maastricht University Medical Center, Maastricht, Netherlands, Netherlands
Disclosures: Gretl Hendrickx, None

2:30 pm  ASBMR 2016 Annual Meeting Young Investigator Award
1012 Pin1 Inhibitor, Juglone, Could Attenuate Phenotypes of Craniosynostosis Syndrome in FGFRS252W/+ Mice Through the Reduction of Runx2 Activity
Hye-Rim SHIN*, Han-Sol BAE, Rabia Islam, Bong-Su KIM, Young-Dan CHO, Won-Joon YOON, Kyung-Mi WOO, Jeong-Hwa Baek, Hyun-Mo Ryoo. Seoul National University, Korea, republic of
Disclosures: Hye-Rim SHIN, None

CONCURRENT ORALS: SCLEROSTIN REGULATION AND FUNCTION
1:45 pm - 2:45 pm  Georgia World Congress Center
Room A411/412

Moderators:
Roy Morello, Ph.D.
University of Arkansas for Medical Sciences, USA
Disclosures: Roy Morello, None

1:45 pm  ASBMR 2016 Annual Meeting Young Investigator Award
1013 Osteocytic-Specific HIF-1α Activity Increases Bone Mass through Sirtuin 1-Dependent Decrease of Sclerostin
Steve Stegen*,1, Ingrid Stockmans1, Karen Moermans1, Peter Carmeliet2, Geert Carmeliet1. 1Clinical & Experimental Endocrinology, KU Leuven, Belgium, 2Angiogenesis & Vascular Metabolism, Vesalius Research Center, KU Leuven/VIB, Belgium
Disclosures: Steve Stegen, None

2:00 pm  ASBMR 2016 Annual Meeting Young Investigator Award
1014 Sclerostin: a Local Rather Than Systemic Regulator of Bone Mass
Rishikesh N. Kulkarni*,1, Aaron Schindeler2, Peter I. Croucher1, David Little3, Paul A. Baldock1. 1Garvan Institute of Medical Research, Australia, 2The Children’s Hospital at Westmead, Australia
Disclosures: Rishikesh N. Kulkarni, None

2:15 pm  ASBMR 2016 Annual Meeting Young Investigator Award
1015 Evidence for Autocrine Effects of Sclerostin on Osteocytes: Sclerostin Antibody Treatment Prevents Spaceflight-induced Osteocytic Osteolysis and Skeletal Bone Loss in Mice
Yoshihito Ishihara*,1, Sutada Lotinun1, Virginia L. Ferguson2, Ted A. Bateman3, Louis S. Stodieck3, Chris Paszty4, Mary L. Bouxsein5, Roland Baron6. 1Division of Bone & Mineral Research, Department of Oral Medicine, Infection & Immunity, Harvard School of Dental Medicine, United states, 2Department of Mechanical Engineering, University of Colorado Boulder, United states, 3Departments of Biomedical Engineering & Radiation Oncology, University of North Carolina, United states, 4Department of Metabolic Diseases, Amgen, Inc., United states, 5Center for Advanced Orthopedic Studies, Beth Israel Deaconess Medical Center & Harvard Medical School, Endocrine Unit, Massachusetts General Hospital, United states, 6Division of Bone & Mineral Research, Department of Oral Medicine, Infection & Immunity, Harvard School of Dental Medicine & Harvard Medical School, Endocrine Unit, Massachusetts General Hospital, United states
Disclosures: Yoshihito Ishihara, None
2:30 pm 1016 The Bone Anabolic Effects of Intermittent Administration of PTH are Independent of Sost/Sclerostin Downregulation
Jesus Delgado-Calle*, Rafael Pacheco-Costa, Xiaolin Tu, Kevin McAndrews, Lilian I Plotkin, Teresita Bellido. Department of Anatomy & Cell Biology, Indiana University School of Medicine, United states
Disclosures: Jesus Delgado-Calle, None

NETWORKING BREAK

2:45 pm - 3:00 pm

3:00 pm - 4:00 pm Georgia World Congress Center
Room A404/405

CONCURRENT ORALS: AGING

3:00 pm 1017 The effects of aging and sex steroid deficiency on the murine skeleton are independent and mechanistically distinct
Serra Semahat Ucer*1, Srividhya Iyer1, Ha-Neui Kim1, Li Han1, Jeff Thostenson2, Aaron Warren1, Julie Crawford1, Christine Rutlen1, Kelly Allison1, Robert Jilka1, Charles O’Brien1, Maria Almieda1, Stavros Manolagas1. 1Center for Osteoporosis & Metabolic Bone Diseases, Univ. Arkansas for Medical Sciences, & Central Arkansas Veterans Healthcare System, United states, 2Department of Biostatistics, University of Arkansas for Medical Sciences, United states
Disclosures: Serra Semahat Ucer, None

3:15 pm 1018 Role of β-catenin Signaling in Osteocytes on Bone and Muscle Properties Across Aging and between Sexes
Mark Begonia1, Julian Vallejo2, An-Lin Cheng3, Ganesh Thiagarajan1, Mark Johnson4, Nuria Lara*2. 1UMKC/School of Computing & Engineer, United states, 2UMKC/School of Dentistry, United states, 3UMKC/School of Nursing, United states, 4UMKC/ School of Dentistry, United states
Disclosures: Nuria Lara, None

3:30 pm 1019 Blocking the Senescence-Associated Secretory Phenotype (SASP) Reduces Osteoclastogenesis and Prevents Age-related Bone Loss
Ming Xu*, Megan Weivoda, Joshua Farr, Christine Hachfeld, Stephanie Youssef, Glenda Evans, Ming Ruan, David Monroe, Tamar Tchkonia, Sundeep Khosla, Merry Jo Oursler, James Kirkland. Mayo Clinic, United states
Disclosures: Ming Xu, None

3:45 pm 1020 ASBMR 2016 Annual Meeting Young Investigator Award
The Longevity-related SirT1 Enzyme Retards Inflamm-ageing In Vivo
Pradeep Kumar Sacitharan*, Tonia Vincent1, James R Edwards2. 1The Kennedy Institute of Rheumatology, University of Oxford, United Kingdom, 2The Botnar Research Centre, University of Oxford, United Kingdom
Disclosures: Pradeep Kumar Sacitharan, None
Moderators:  
Matthew Silva, Ph.D.  
Washington University in St. Louis School of Medicine, USA  
Disclosures: Matthew Silva. None

3:00 pm  ASBMR 2016 Annual Meeting Young Investigator Award

1021  Patient-specific Musculoskeletal Model of the Spine: Implication for Prediction of Incident Vertebral Fractures  
Hossein Mokhtarzadeh*1, Katelyn Burkhart2, Brett Allaire3, Darlene Lu4, Serkalem Demissie5, David Kopperdahl5, Tony M. Keaveny6, Elizabeth J. Samelson7, Douglas P. Kiel8, Dennis E. Anderson9, Mary L. Bouxsein9.  
1Department of Orthopedic Surgery, Harvard Medical School, MA, USA; Center for Advanced Orthopaedic Studies, Beth Israel Deaconess Medical Center, MA, USA, United states, 2Harvard-MIT Division of Health Sciences & Technology, MA, USA; Department of Orthopedic Surgery, Harvard Medical School, MA, USA; Center for Advanced Orthopaedic Studies, Beth Israel Deaconess Medical Center, MA, USA, United states, 3Center for Advanced Orthopaedic Studies, Beth Israel Deaconess Medical Center, MA, USA, United states, 4Boston University School of Public Health, MA, USA, United states, 5O.N. Diagnostics, Berkeley, CA, USA, United states, 6Departments of Mechanical Engineering & Bioengineering, University of California, Berkeley, CA, USA; O.N. Diagnostics, Berkeley, CA, USA, United states, 7Institute for Aging Research, Hebrew SeniorLife, Department of Medicine Beth Israel Deaconess Medical Center & Harvard Medical School, Boston, MA, USA., United states, 8Institute for Aging Research, Hebrew SeniorLife, Department of Medicine Beth Israel Deaconess Medical Center & Harvard Medical School, Boston, MA, USA, United states, 9Department of Orthopedic Surgery, Harvard Medical School, MA, USA; Center for Advanced Orthopaedic Studies, Beth Israel Deaconess Medical Center, MA, USA; Harvard-MIT Division of Health Sciences & Technology, MA, USA, United states  
Disclosures: Hossein Mokhtarzadeh, None

3:15 pm  ASBMR 2016 Annual Meeting Young Investigator Award

1022  Bone Microdamage in Osteoporotic Patients Treated with Bisphosphonates for One to Sixteen Years  
Stefanie Pagano*1, Connie Wood2, David Pienkowski1, Hartmut Malluche3,  
1Department of Biomedical Engineering, University of Kentucky, United states, 2Department of Statistics, University of Kentucky, United states, 3Division of Nephrology, Bone & Mineral Metabolism, University of Kentucky, United states  
Disclosures: Stefanie Pagano, None

3:30 pm  Effects of Type 2 Diabetes on Nanoscale and Whole-Bone Biomechanical Properties

1023  Claire Acevedo*1, Meghan Sylvia1, Eric Schaible2, Bernd Gludovatz2, Lionel N. Metz1, James L. Graham3, Robert O. Ritchie4, Tamara N. Alliston1, Peter J. Havel4, Aaron J. Fields4,  
1UCSF, United states, 2LBNL, United states, 3UC Davis, United states, 4LBNL, UC Berkeley, United states  
Disclosures: Claire Acevedo, None

3:45 pm  Effects of Romosozumab on Remodeling and Bone Strength at the Distal Radius in

1024  Ovariectomized Cynomolgus Monkeys  
Michael Ominsky*1, Steven Boyd2, Aurore Varela3, Jacquelin Jolette3, Nancy Doyle3, Susan Smith1, Kathrin Locher1, Sabina Buntich1, Rogely Boyce1,  
1Amgen Inc, United states, 2University of Calgary, Canada, 3Charles River Laboratories Montreal, Canada  
Disclosures: Michael Ominsky, Amgen Inc, 17
CONCURRENT ORALS: CHONDROCYTE BIOLOGY AND DEVELOPMENT

3:00 pm - 4:00 pm Georgia World Congress Center Room A402/403

Moderators:
Matthew Hilton, Ph.D.
Duke University School of Medicine, USA
Disclosures: Matthew Hilton, None

April Craft, Ph.D.
Boston Children’s Hospital, Harvard Medical School, USA
Disclosures: April Craft, Ph.D., None

3:00 pm ASBMR 2016 Annual Meeting Young Investigator Award
1025 Regulatory Mechanisms Underlying Ihh Transcription in Chondrocytes
Akira Yamakawa*1, Ung-il Chung2, Shinsuke Ohba2. 1Division of Clinical Biotechnology, Center for Disease Biology & Integrative Medicine, Faculty of Medicine, The University of Tokyo, Japan, 2Department of Bioengineering, School of Engineering, The University of Tokyo, Japan
Disclosures: Akira Yamakawa, None

3:15 pm ASBMR 2016 Annual Meeting Young Investigator Award
1026 Histone Deacetylase 3 Supports Endochondral Bone Formation by Controlling Cytokine Signaling and Matrix Remodeling
Lomeli Carpio*1, Elizabeth Bradley1, Meghan McGee-Lawrence2, Megan Weivoda1, Daniel Poston3, Amel Dudakovic1, Ming Xu1, Tamar Tchkonia1, James Kirkland1, Andre van Wijnen1, Merry Jo Oursler1, Jennifer Westendorf1. 1Mayo Clinic, United states, 2Augusta University, United states, 3Creighton University, United states
Disclosures: Lomeli Carpio, None

3:30 pm ASBMR 2016 Annual Meeting Young Investigator Award
1027 Analysis of cellular dynamics revealed stem cell niche formation in the postnatal epiphyseal growth plate
Phillip Newton*1, Simon Suter2, Xiaoyan Sun2, Lei Li2, Meng Xie2, Igor Adameyko2, Lars Sävendahl3, Maria Kasper2, Andrei Chagin2. 1Karolinska Institute & Karolinska University Hospital, Sweden, 2Karolinska Institute, Sweden, 3Karolinska University Hospital, Sweden
Disclosures: Phillip Newton, None

3:45 pm ASBMR 2016 Annual Meeting Young Investigator Award
1028 Conditional Deletion of the Phd2 Gene in Chondrocytes Produces Defects in Articular Cartilage Development and an Osteoarthritis-like Phenotype in Mice
Shaohong Cheng*, Patrick Agahjanian, Sheila Pourteymoor, Catrina Alarcon, Subburaman Mohan. VA Loma Linda Healthcare System, United states
Disclosures: Shaohong Cheng, None
CONCURRENT ORALS: GENETICS AND GENOMICS
3:00 pm - 4:00 pm Georgia World Congress Center
Sidney Marcus Auditorium - Building A

Moderators:
John Eisman, MBBS, Ph.D.
Garvan Institute of Medical Research, Australia
Disclosures: John Eisman, None

David Karasik, Ph.D.
Hebrew SeniorLife; Bar Ilan University, USA
Disclosures: David Karasik, None

3:00 pm

1029 Novel Genetic Variants are Associated with Increased Vertebral Volumetric BMD, Reduced Vertebral Fracture Risk, and Increased Expression of SCL1A3 and EPHB2
Carrie Nielson*1, Ching-Ti Liu2, Albert Smith3, Cheryl Ackert-Bicknell4, Sjur Reppe5, Johanna Jakobsdottir1, Christina Wassel6, Thomas Register7, Ling Oei8, Nerea Alonso Lopez9, Edwin Oei8, Neeta Parimi10, Elizabeth Samelson11, Mike Nalls12, Joseph Zmuda13, Thomas Lang14, Mary Bouxsein11, Jeanne Latourelle15, Melina Claussnitzer11, Kristin Siggeirsdottir1, Priya Srikanth1, Erik Lorentzen16, Liesbeth Vandenput16, Carl Langefeld17, Laura Raffield1, Greg Terry1, Amanda Cox2, Matthew Allison15, Michael Criqui17, Donald Bowden1, M. Arfan Ikram1, Dan Mellström16, Magnus Karlsson16, Jeffrey Carr9, Matthew Budoff10, Caroline Phillips11, L. Adrienne Cupples15, Wen-Chi Chou22, Richard Myers23, Stuart Ralston2, Kaare Gautvik5, Peggy Cawthon16, Steve Cummings10, David Karasik11, Fernando Rivadeneira18, Vilmundur Gudnason3, Eric Orwoll1, Tamara Harris19, Claes Ohlsson16, Douglas Kiel16, Yi-Hsiang Hsu11. 1Oregon Health & Science University, United states, 2Boston University School of Public Health, United states, 3Icelandic Heart Association, Iceland, 4University of Rochester Medical Center, United states, 5Lovisenberg Diakonale Hospital, Norway, 6University of Vermont College of Medicine, United states, 7Wake Forest School of Medicine, United states, 8Erasmus MC, University Medical Center, Netherlands, 9University of Edinburgh, United Kingdom, 10California Pacific Medical Center Research Institute, United states, 11Harvard Medical School, United states, 12National Institutes of Health, United states, 13University of Pittsburgh, United states, 14University of California, San Francisco, United states, 15Boston University School of Medicine, United states, 16University of Gothenburg, Sweden, 17University of California, San Diego, United states, 18Lund University, Sweden, 19Vanderbilt, United states, 20Los Angeles Biomedical Research Institute, United states, 21National Institute on Aging, United states, 22BROAD Institute of MIT & Harvard, United states, 23Boston University School of Medicine, United states
Disclosures: Carrie Nielson, None

3:15 pm

1030 Menopausal Bone Loss Is Mainly Cortical, not Trabecular, and Does not Attenuate the Heritable Component of Variance in this Microarchitecture: a Prospective Study of Twins
Åshild Bjørnerem1, Xiao-Fang Wang2, Minh Bui3, Ali Ghasem-Zadeh4, Roger Zebaze4, John L Hopper3, Ego Seeman2. 1Department of Health & Care Sciences, UiT – The Arctic University of Norway, Tromsø, Norway, Norway, 2Departments of Endocrinology & Medicine, School of Population & Global Health, University of Melbourne, Australia, 3Centre for Epidemiology & Biostatistics, School of Population & Global Health, University of Melbourne, Australia
Disclosures: Ego Seeman, None

3:30 pm

A Genome-wide Association Study in Adult Caucasians Identifies Novel Loci and Functional Coding Variants Associated with Bone Microarchitecture Assessed by HR-pQCT
Yi-Hsiang Hsu1, Elizabeth J Atkinson2, Frederick Kinyua Kamanu3, Roby Joehanes4, Kerry Broe1, L. Adrienne Cupples5, Ching-Ti Liu6, Serkalem Demissie1, David Karasik3, Steve K. Boyd1, Mary L Bouxsein1, Shreyasee Amin1, Sundeep Khosla2, Douglas P. Kiel1. 1Harvard Medical School & HSL Institute for Aging Research, United states, 2Mayo Clinic, United states, 3Hebrew SeniorLife Institute for Aging Research, United states, 4Hebrew SeniorLife Institute for Aging Research & Harvard Medical School, United states, 5Depart. Biostat., Sch. Public Health, Boston Univ., United states, 6Depart. Biostat., Sch. Public Health, Boston Univ, United states, 7University of Calgary, Canada, 8Beth Israel Deaconess Medical Center & Harvard Medical School, United states
Disclosures: Yi-Hsiang Hsu, None
3:45 pm  
**Prediction of Fragility Fracture Risk by Genetic Profiling**

Thao P. Ho-Le*, Jacqueline R. Center, John A. Eisman, Hung T. Nguyen, Tuan V. Nguyen
1Centre for Health Technologies, University of Technology, Sydney, Australia, 2Bone Biology Division, Garvan Institute of Medical Research; St Vincent Clinical School, UNSW Australia, Australia, 3Bone Biology Division, Garvan Institute of Medical Research; St Vincent Clinical School, UNSW Australia; Notre Dame University School of Medicine, Australia, Australia, 4Centre for Health Technologies, University of Technology, Australia, 5Centre for Health Technologies, University of Technology, Sydney; Bone Biology Division, Garvan Institute of Medical Research; School of Public Health & Community Medicine, UNSW Australia, Australia

*Disclosures: Thao P. Ho-Le, None*

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**NETWORKING BREAK**

4:00 pm - 4:30 pm  
Murphy Ballroom Foyer Building B and Sidney Marcus Foyer Building A

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**ASBMR/ECTS CLINICAL DEBATE**

**MICRODAMAGE IS GOOD FOR BONE**

Supported by an Educational Grant from Lilly

**4:30 pm - 5:30 pm**  
Georgia World Congress Center  
Thomas B. Murphy Ballroom - Building B Level 5

**Co-Chairs**

Claus-C Glueer, Ph.D.
Christian Albrechts Universitaet zu Kiel, Germany

*Disclosures: Claus-C Glueer, None*

David Burr, Ph.D.
Indiana University, USA

*Disclosures: David Burr, None*

**For the Motion (ASBMR)**

Mitchell Schaffler, Ph.D.
City College of New York, USA

*Disclosures: Mitchell Schaffler, None*

**Against the Motion (ECTS)**

Ralph Mueller, Ph.D.
ETH Zurich, Switzerland

*Disclosures: Ralph Mueller, None*

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**SYMPOSIUM-MATRICELLULAR PROTEINS**

4:30 pm - 5:30 pm  
Georgia World Congress Center  
Sidney Marcus Auditorium - Building A

**Co-Chairs**

Kurt Hankenson, D.V.M., Ph.D.
Michigan State University, USA

*Disclosures: Kurt Hankenson, None*

Anna Teti, Ph.D.
University of L’Aquila, Italy

*Disclosures: Anna Teti, None*

4:30 pm  
**Fibrillins and TGFbeta in the Bone and Bone Marrow Microenvironments**

Francesco Ramirez, Ph.D.
Icahn School of Medicine at Mount Sinai, USA

*Disclosures: Francesco Ramirez, None*
5:00 pm Small Leucine-Rich Proteoglycans in Bone Pathophysiology
Marian Young, Ph.D.
National Institutes of Health, USA
Disclosures: Marian Young, None

YOUNG INVESTIGATOR AND NEW MEMBER RECEPTION
Sponsored by the ASBMR Membership Engagement and Education Committee and Young Investigator Subcommittee

5:30 pm - 7:00 pm Georgia World Congress Center
ASBMR Discovery Hall - Expo Hall A1

The ASBMR Membership Engagement and Education Committee and Young Investigator Subcommittee members will be in attendance for this meet and greet networking event. The reception has been organized to promote interactions among young investigators and ASBMR leadership so that they may begin building a network of career-long contacts. The reception will be held concurrently with the Welcome Reception and the Plenary Poster Session within the Young Investigator Lounge in the ASBMR Networking Center located in the Discovery Hall.

WELCOME RECEPTION & PLENARY POSTER SESSION
5:30 pm - 7:00 pm Georgia World Congress Center
ASBMR Discovery Hall - Expo Hall A1

FR0001 Serum 25-Hydroxyvitamin D Values and Risk of All-Cause Mortality: A Population-Based, Retrospective, Cohort Study
Daniel Dudenkov*, Kristin Mara, Tanya Petterson, Julie Maxson, Tom Thacher. Mayo Clinic, United states
Disclosures: Daniel Dudenkov, None

FR0006 ASBMR 2016 Annual Meeting Young Investigator Award
Measles Virus Nucleocapsid Protein Expressing Osteoclasts Increase Expression of SPHK1/SIP/S1PR3 to Enhance Osteoblast Differentiation in Paget's Disease
Yuki Nagata*1, Yasuhiisa Ohata1, Jolene Windle2, David Roodman3, Noriyoshi Kurihara1. 1Medicine / Hematology-Oncology, Indiana University, United states, 2Human & Molecular Genetics, Virginia Commonwealth University, United states, 3Medicine / Hematology-Oncology, Indiana University; Roudebush VA Medical Center, United states
Disclosures: Yuki Nagata, None

FR0007 2016 ASBMR Fund for Research and Education Young Investigator Award
MVNP Modulation of NFAM1 Signaling Enhances Osteoclast Formation and Bone Resorption Activity in Paget's Disease of Bone
Yuvaraj Sambandam*1, Kumaran Sundaram1, Takamitsu Saigusa2, Sudhaker Rao3, William Ries4, Sakamuri Reddy1. 1Darby Children’s Research Institute, Medical University of South Carolina, United states, 2Division of Nephrology, Medical University of South Carolina, United states, 3Henry Ford Hospital, United states, 4College of Dental Medicine, Medical University of South Carolina, United states
Disclosures: Yuvaraj Sambandam, None

FR0011 Long-Term rhPTH(1-84) Administration Persistently Affects Bone Remodeling Dynamics and Structure in Hypoparathyroidism
Mishaela Rubin*, Natalie Cusano, Hua Zhou, Wen-Wei Fan, Diane Cozadd, Aline Costa, David Dempster, John Bilezikian. Columbia University, United states
Disclosures: Mishaela Rubin, Shire Pharma, 13
FR0012 PTH(1-34) for the primary prevention of post-surgical hypocalcemia: an interventional prospective randomized trial (THYPOS trial)
Andrea Palermo*, Nicola Napoli1, Gaia Tabacco2, Giuseppe Mangiameli3, Filippo Longo3, Daria Maggi3, Silvia Briganti2, angelo Lauria Pantano2, Anda Naciu2, Silvia Angeletti1, Fabio Vescini1, Paolo Pozzilli1, Pier Filippo Crucitti1, Silvia Manfrini2.
1University Campus Bio-Medico, Italy, 2Department of endocrinology, University Campus Bio-Medico, Italy, 3Department of Surgery, university Campus Bio-Medico, Italy, laboratory, University Campus Bio-Medico, Italy, 5Department of Endocrinology, Ospedaliero-Universitaria Santa Maria della Misericordia di Udine, Italy
Disclosures: Andrea Palermo, None

FR0014 AFM & AFM-IR Studies of Collagen Microstructure and Chemical Composition for Estrogen Depleted and Drug Treated Cortical Bone and Lumbar Vertebral
1Macromolecular Science & Engineering, 2Chemistry, 3Biomedical Engineering. University of Michigan, United states, 4Chemistry. Univ of Michigan, United states, 5Electrical Engineering. Univ of Michigan, United states, 6Macromolecular Science & Engineering. University of Michigan, United states, 7Biomedical Engineering. Univ of Michigan, United states
Disclosures: Mark M Banaszak Holl, None

FR0015 Age and Gender Differences in Loading Induced Strain and Biomechanical Properties of C57Bl/6 Mice
Mark L. Begonia, Hammad Mumtaz, Mark Dallas, An-Lin Cheng, Ganesh Thiagarajan*, Mark L. Johnson. University of Missouri-Kansas City, United states
Disclosures: Ganesh Thiagarajan, None

FR0016 Alendronate treatment improves vertebral structural properties and maintains vertebral trabecular bone material properties in hound dogs
Daniel J Brooks1, Julia N Moulton1, Caroline DiNapoli1, Tessabella Magliochetti2, Stephanie McCarthy1, Robert M Urban3, Deborah J Hall3, Thomas M Turner3, Mary L Bouxsein*4. 1Center for Advanced Orthopaedic Studies, Beth Israel Deaconess Medical Center, United states, 2Center for Advanced Orthopedic Studies, Beth Israel Deaconess Medical Center, United states, 3Rush University Medical Center, United states, 4Center for Advanced Orthopedic Studies, Beth Israel Deaconess Medical Center & Department of Orthopedic Surgery, Harvard Medical School, United states
Disclosures: Mary L Bouxsein, Merck, 13

FR0017 Feasibility of Quantitative In Vivo Assessment of Mineral and Matrix Properties by Solid-State Phosphorus-31 and Proton Magnetic Resonance
Xia Zhao*, Hee Kwon Song1, Cheng Li1, Alan C Seifert2, Felix W Wehrli1. 1University of Pennsylvania, United states, 2Icahn School of Medicine at Mount Sinai, United states
Disclosures: Xia Zhao, None

FR0018 Glycated Osteocalcin Contributes to Loss of Bone Toughness
Stacyann Morgan*, Caren Gundberg2, Gerard Karsenty3, Deepak Vashishth1. 1Rensselaer Polytechnic Institute, United states, 2Yale University, United states, 3Columbia University, United states
Disclosures: Stacyann Morgan, None

FR0019 Mapping of Trabecular Anisotropy Improves QCT-based Finite Element Estimation of Hip Strength in Pooled Stance and Side-Fall Load Configurations
Jarunan Panyasantisuk*, Enrico Dall’Ara2, Dieter Pahr3, Philippe Zysset1. 1Institute for Surgical Technology & Biomechanics, University of Bern, Switzerland, 2Department of oncology & metabolism & INSIGNEO Institute for in silico medicine, University of Sheffield, United Kingdom, 3Institute of Lightweight Design & Structural Biomechanics, Vienna University of Technology, Austria
Disclosures: Jarunan Panyasantisuk, None

FR0020 Matrix-bound water concentration is lower in mice with brittle bones caused by osteogenesis imperfecta and separately ATF4 deficiency
Mathilde Granke*, Sasidhar Uppugunti1, Amy Creecy1, Julie Schnur2, Ben Greene3, Mark Does2, Jeffry Nyman1. 1Vanderbilt university Medical Center, United states, 2Vanderbilt University, United states, 3Genzyme, United states
Disclosures: Mathilde Granke, None
FR0021 Role of Advanced Glycation End-Products and Cortical Porosity in Type 2 Diabetes
Lamya Karim*, Miranda Van Vliet, Kelsey Velie, Ayesha Abdeen, Douglas Ayres, Mary Bouxsein, Harvard Medical School, United States, Beth Israel Deaconess Medical Center, United States
Disclosures: Lamya Karim, None

FR0022 The Relationship Between Femoral Neck aBMD and the Underlying Morphological and Compositional Traits that are Coordinately Regulated to Establish Mechanical Homeostasis
Andrew Kozinski, Erin Bigelow, Stephen Schlecht, Robert Goulet, Sioban Harlow, Carrie Karvonen-Gutierrez, Jane Cauley, Karl Jepsen, University of Michigan, United States, University of Pittsburgh, United States
Disclosures: Karl Jepsen, None

FR0023 Bisphosphonate Pre-Treatments Enhance Trabecular Bone Architecture during Unloading and Reambulation Despite Lower Resorption and Formation
Jeremy Black, Jessica Brezicha, Corinne Metzger, Scott Lenfest, Jennifer Kosniewski, Susan Bloomfield, Matt Allen, Harry Hogan, TAMU Department of Mechanical Engineering, United States, TAMU Department of Biomedical Engineering, United States, TAMU Department of Health & Kinesiology, United States, Department of Anatomy & Cell Biology, Indiana University School of Medicine, United States, TAMU Department of Mechanical Engineering/Department of Biomedical Engineering, United States
Disclosures: Jeremy Black, None

FR0025 Withdrawn

FR0031 Novel Associations Between Reduced Serum Sclerostin and Adaptive Bone Changes Following Exercise Training
Melissa Ramcharan, Rachel Izard, Bonnie Nolan, Lauren Smith, Stephen Schlecht, William Fraser, Julie Greeves, Karl Jepsen, University of Michigan, United States, HQ Army & Training Division, United Kingdom, TAMU Department of Health and Kinesiology, United States, Department of Anatomy & Cell Biology, Indiana University School of Medicine, United States, TAMU Department of Mechanical Engineering/Department of Biomedical Engineering, United States
Disclosures: Melissa Ramcharan, None

FR0032 Associations of Behavioral Characteristics of Young Adults and Bone Health: Iowa Bone Development Study (IBDS)
Elena Letuchy, Julie Eichenberger, Linda Snetselaar, Kathleen Janz, Trudy Burns, Punam Saha, James Torner, Steven Levy, University of Iowa, United States
Disclosures: Julie Eichenberger, None

FR0034 Poor Glycemic Control is Associated with Greater Urinary Calcium Excretion in Adolescents with Type 1 Diabetes
David Weber, Kimberly O’Brien, Mary Leonard, Noya Rackovsky, George Schwartz, University of Rochester, United States, Cornell University, United States, Stanford University, United States, University of Rochester, United States
Disclosures: David Weber, None

FR0038 The Muscle-Dependent Link Between IGF-I and Cortical Bone is Suppressed in Children with Insulin Resistance
Joseph Kindler, Norman Pollock, Emma Laing, Carlos Isales, Mark Hamrick, Ke-Hong Ding, Dorothy Hausman, George McCabe, Berdine Martin, Kathleen Hill Gallant, Stuart Warden, Connie Weaver, Munro Peacock, Richard Lewis, The University of Georgia, United States, Augusta University, United States, Purdue University, United States, Indiana University, United States
Disclosures: Joseph Kindler, None

FR0039 Intestinal microbiome present in Crohn disease impairs the skeletal health and linear growth
Anu Maharjan, Young Huh, Maureen Bower, Hong Yuan, Young Truong, Ian Carroll, Francisco Sylvester, University of North Carolina, United States
Disclosures: Anu Maharjan, None
FR0040 Aging bone marrow microenvironments impart age-associated changes to hematopoietic stem and progenitor cells
Corey Hoffman, Frank Akwaa, Rachel Rubinova, John Ashton, Mark LaMere, Brandon Zaffuto, Michael Becker, Benjamin Frisch*, Laura Calvi. University of Rochester School of Medicine & Dentistry, United states
Disclosures: Benjamin Frisch, None

FR0041 Erythropoietin signaling regulates bone homeostasis
Luis Fernandez De Castro Diaz1, Soumyadeep Dey2, Pamela Robey1, Constance Noguchi2, Sukanya Suresh*1. 1Skeletal Biology Section, Craniofacial & Skeletal Diseases Branch, National Institute of Dental & Craniofacial Research, NIH, United states, 2Molecular Medicine Branch, National Institute of Diabetes & Digestive & Kidney Diseases, United states
Disclosures: Sukanya Suresh, None

FR0042 Macrophage Progenitor RIP140 Knockdown Regulates Osteoclast Differentiation and Results in Osteopenia
Bomi Lee*1, Urszula T. Iwaniec2, Russell T. Turner2, Li-Na Wei1, Anne Gingery3. 1University of Minnesota, United states, 2Oregon State University, United states, 3Mayo Clinic, United states
Disclosures: Bomi Lee, None

FR0043 Fat, Inflammation, and Aging
Raysa Rosario*, Hongfang Yu, Mark Hamrick, Carlos Isales, Babak Baban, Xing-Ming Shi. Georgia Regents University, United states
Disclosures: Raysa Rosario, None

FR0044 HDL is essential for normal bone formation in mice
Harry Blair*, Elena Kalyvioti1, Nicholaos Papachristou2, Irina Tourkova3, Spyros Syggelos4, K.E. Kypteos5, Dionysois Papachristou5. 1Veteran’s Affairs Medical Center & Departments of Pathology & Cell Biology, University of Pittsburgh, United states, 2Department of Anatomy-Histology-Embryology, & the Unit of Bone & Soft Tissue Studies, University of Patras Medical School, Greece, 3Pittsburgh VA Medical Center, & Departments of Pathology & Cell Biology, University of Pittsburgh, United states, 4Dept. Of Pharmacology, School of Medicine, University of Patras, Greece, 5Dept. Of Pharmacology, School of Medicine, University of Patras., Greece
Disclosures: Harry Blair, None

FR0045 Bioactive PTHrP(12-48) modulates the bone marrow microenvironment independent of PTH1 receptor, is internalized into cells, and suppresses osteoclast differentiation and lifespan
Charity Washam*, Diarra Williams, Archana Kamalakar, Nisreen Akel, Frances Swain, Dana Gaddy, Larry Suva. Texas A&M University, United states
Disclosures: Charity Washam, None

FR0046 Leukemia inhibitory factor receptor (LIFR) signals via Stat3 to mediate tumor dormancy in bone
Rachelle Johnson*, Rebecca Miao, Amato Giaccia. Stanford University, United states
Disclosures: Rachelle Johnson, None

FR0047 Oncogenic and Osteolytic Function of Histone Demethylase NO66 in Prostate Cancer induced Bone Metastasis
Krishna Sinha*, Rozita Bagheri-Yarmand2, Nora Navone2, Xinhai Wan2, Christopher Logothetis2, robert Gagel2, Johnny Huard1. 1UT Health Science Center at Houston, United states, 2MD Anderson Cancer Center, United states
Disclosures: Krishna Sinha, None

FR0048 PKC-Zeta downregulation associates with metabolic plasticity in breast cancer cells during bone metastasis
Manish Tandon*, Jitesh Pratap. Rush University Medical Center, United states
Disclosures: Manish Tandon, None
**FR0051** Novel ERα positive breast cancer model with estrogen independent growth in the bone microenvironment

Biancamaria Ricci*1, Aude-Hélène Capietto2, Szeman Ruby Chan3, Debora V Novak4, Robert D Schreiber5, Roberta Faccio6. 1Department of Orthopaedic Surgery - Washington University School of Medicine, United states, 2Department of Orthopaedic Surgery - Washington University School of Medicine, United states, 3Department of Pathology & Immunology - Washington University School of Medicine, United states, 4Department of Pathology & Immunology - Washington University School of Medicine, United states

Disclosures: Biancamaria Ricci, None

**FR0052** Effects of cabozantinib alone and in combination with bortezomib in the 5TGM1 murine multiple myeloma model

Mari I Suominen*1, Katja M Fagerlund1, Esa Alhoniemi2, Jukka P Rissanen1, Jussi M Halleen1, Dana T Aftab3. 1Pharmatest Services Ltd., Finland, 2Avolitus Oy, Finland, 3Exelixis Inc., United states

Disclosures: Mari I Suominen, Pharmatest Services Ltd, 17

**FR0053** A Novel Protective Role of GPNMB/Osteoactivin in Post-traumatic Osteoarthritis

Asaad Al Adlaan*1, Nazar Hussein1, Fatima Jaber1, Tariq Haqqi2, Fayez Safadi2. 1Kent State University, United states, 2Northeast Ohio Medical University, United states

Disclosures: Asaad Al Adlaan, None

**FR0054** A Novel Protective Role of GPNMB/Osteoactivin in Post-traumatic Osteoarthritis

Asaad Al Adlaan*1, Nazar Hussein1, Fatima Jaber1, Tariq Haqqi2, Fayez Safadi2. 1Kent State University, United states, 2Northeast Ohio Medical University, United states

Disclosures: Asaad Al Adlaan, None

**FR0055** Articular Cartilage Preservation in Mice Lacking Cathepsin K

Fabiana Soki*1, Ryu Yoshida1, David N. Paglia1, Maureen Pickarski2, Marc Hansen1, Le Duong3, Hicham Drissi1. 1Uconn Health Center, United states, 2Merck & Co., Inc., United states

Disclosures: Fabiana Soki, None

**FR0056** Inhibition of Epigenetic Factor Dnmt3b within Articular Chondrocytes Coordinates Cellular Metabolic Response during the Development of Osteoarthritis

Jie Shen*1, Cuicui Wang1, Daofeng Li2, Jason Myers3, John Ashton3, Audrey McAlinden1, Ting Wang2, Regis O’Keeffe1. 1Department of Orthopaedic Surgery, School of Medicine, Washington University in St. Louis, United states, 2Department of Genetics, School of Medicine, Washington University in St. Louis, United states, 3University of Rochester Medical Center, United states

Disclosures: Jie Shen, None

**FR0057** Repair of Focal Cartilage Defects in the Rat using Human Embryonic Stem Cell-Derived Articular Cartilage Tissues

April Craft*1, Subhash Juneja2, Heather Whetstone3, Christian Veillette2, Gordon Keller4. 1Boston Children’s Hospital, Harvard Medical School, United states, 2Arthritis Program, Toronto Western Hospital, Canada, 3Hospital for Sick Children, Canada, 4McEwen Centre for Regenerative Medicine, University Health Network, Canada

Disclosures: April Craft, None

**FR0058** Inhibition of Epigenetic Factor Dnmt3b within Articular Chondrocytes Coordinates Cellular Metabolic Response during the Development of Osteoarthritis

Jie Shen*1, Cuicui Wang1, Daofeng Li2, Jason Myers3, John Ashton3, Audrey McAlinden1, Ting Wang2, Regis O’Keeffe1. 1Department of Orthopaedic Surgery, School of Medicine, Washington University in St. Louis, United states, 2Department of Genetics, School of Medicine, Washington University in St. Louis, United states, 3University of Rochester Medical Center, United states

Disclosures: Jie Shen, None

**FR0059** Bone-Derived Lipocalin 2 is an Anorexigenic Hormone

Steven Shikhel*, Stavroula Kousteni. Columbia University, United states

Disclosures: Steven Shikhel, None

**FR0060** Osteoblastic Hdac3 Expression Regulates Systemic Energy Metabolism

Jessica Pierce*1, Kanglun Yu1, Ahmed Elsherbini1, Elizabeth Bradley2, Jennifer Westendorf2, Meghan McGee-Lawrence3. 1Augusta University, United states, 2Mayo Clinic, United states, 3Medical College of Georgia, Augusta University, United states

Disclosures: Jessica Pierce, None
FR0067  FSH Regulates Body Fat and Whole Body Metabolism
Yaoting Ji1, Peng Liu1, Elizabeth Rendina-Ruedy2, Victoria Demambro2, Tony Yuen*1, Ping Lu3, Bin Zhou3, Ling-Ling Zhu1, Samuel Robinson2, Eric Yu3, Christoph Buettner1, Maria New1, Marc Feldmann3, Biaizhuang3, Jay Cao3, Edward Guo3, Jamine Iqbal1, Li Sun1, Clifford Rosen4, Mone Zaidi4, Icahn School of Medicine, United states, 2Maine Medical Center Research Institute, United states, 3Columbia University, United states, 4Kennedy Institute of Rheumatology, United Kingdom, 5Wuhan University, China, 6USDA Department of Agriculture, United states, 7Greater Los Angeles VA Medical Center, United states
Disclosures: Tony Yuen, None

FR0071  Adipocyte- and Osteoblast-Specific Function of Protein Phosphatase 5 (PP5) in Modulation of PPARγ and Runx2 Activities and Regulation of Bone Mass and Energy Metabolism
Lance A. Stechschulte*1, Piotr J. Czernik2, Edwin R. Sanchez1, Renny Franceschi3, Beata Lecka-Czernik1, 1University of Toledo Health Science Campus, United states, 2MicroTomografix Ltd, United states, 3Periodontics & Oral Medicine University of Michigan School of Dentistry, United states
Disclosures: Lance A. Stechschulte, None

FR0073  Cyclophilin D Knock-out Mice Show Enhanced Resistance to Osteoporosis and to Metabolic Changes Observed in Aging Bone
Laura Shum*, Roman Eliseev. University of Rochester, United states
Disclosures: Laura Shum, None

FR0075  Fkhp10 is essential for normal bone quality and joint homeostasis in postnatal mice
Joohyun Lim*1, Caressa Lietman1, Hamilton Wang3, Ingo Grafe3, Elsa Munivez1, Merry Ruan1, Keren Machol1, Brian Dawson1, Terry Bertin1, Yuqing Chen1, Hao Ding3, Dongsu Park1, Xiaohong Bi1, Catherine Ambroso3, Nadja Fratzl-Zelman4, Paul Roschger1, Klaus Klausuffer4, Ingo Schmidt5, Peter Fratzl5, Jyoti Rai5, Mary Ann Weis6, David Eyre6, Deborah Krakow7, Brendan Lee1. 1Department of Molecular & Human Genetics, Baylor College of Medicine, United states, 2Department of Nanomedicine & Biomedical Engineering, University of Texas Health Science Center at Houston, United states, 3Department of Orthopaedic Surgery, University of Texas Health Science Center at Houston, United states, 4Ludwig Boltzmann Institute of Osteology, Hanusch Hospital of WGGK & AUVa Trauma Centre Meiding 1st Med. Dept. Hanusch Hospital, Austria, 5Department of Biomaterials, Max Planck Institute of Colloids & Interfaces, Research Campus Golm, Germany, 6Department of Orthopaedics & Sports Medicine, University of Washington, United states, 7Department of Orthopaedic Surgery, David Geffen School of Medicine at UCLA, United states
Disclosures: Joohyun Lim, None

FR0076  Anti-Notch2 Antibodies Reverse the Severe Osteopenia of Hajdu Cheney Syndrome Mutants
Ernesto Canalis*, Archana Sanjay, Jungeun Yu, David Bridgewater, Stefano Zanotti. UConn Health, United states
Disclosures: Ernesto Canalis, None

FR0077  CRISPR/Cas9-generated Mouse Model of Autosomal-dominant Hypocalcemia Harboring the Activating G Protein Alpha 11 Mutation Arg60Cys and Use of Calcilytics and a Gaq/Ga11-specific Inhibitor
Kelly Lauter Roszko*, Ruiye Bi1, Sarah Howles2, Hans Brauner-Osborne3, Xiaofeng Xiong3, Fadi Hannan4, M Andrew Nesbit5, Rajesh Thakker6, Kristian Stromgaard3. Thomas Gardella1, Michael Mannstadt1, 1Endocrine Unit, Massachusetts General Hospital, United states, 2University of Oxford, United Kingdom, 3Department of Drug Design & Pharmacology, University of Copenhagen, Denmark, 4University of Liverpool, United Kingdom, 5Ulster University, United Kingdom, 6Nuffield Department of Clinical Medicine, University of Oxford, United Kingdom
Disclosures: Kelly Lauter Roszko, None
FR0078 Generation and Phenotypic Characterization of a Lrp4 R1170Q Knock-In Mouse Model
Eveline Boudin*1, Igor Fijalkowski1, Stephan Sonntag2, Gretl Hendrickx1, Timur A Yorgan3, Thorsten Schinke2, Geert Mortier1, Wim Van Hul1. 1Centre of Medical Genetics, University & University Hospital of Antwerp, Belgium, Belgium, 2PolyGene AG, Rümlang, Switzerland, Switzerland, 3Department of Osteology & Biomechanics, University Medical Center Hamburg, Germany, Germany

Disclosures: Eveline Boudin, None

FR0080 Increased Trabecular Bone, Altered Glucose Homeostasis and Improved Biomechanics in an Osteocalcin Null Rat Model Created by CRISPR/Cas9 Technology
Laura Lambert*1, Anil Challa1, Aidi Niu1, Lihua Zhou1, Janusz Tucholski1, Maria Johnson1, Tim Nagy1, Alan Eberhardt1, Patrick Estep1, Robert Kesterson1, Jayleen Grams2. 1UAB, United states, 2UAB/Birmingham VA Medical Center, United states

Disclosures: Laura Lambert, None

FR0081 Multi-Trait Mapping Reveals Novel Loci Controlling Relationships between Calcium Absorption, Bone Density, and Serum 1,25 Dihydroxyvitamin D in BXD Mice
James Fleet*, Krittikan Chanpaisaeng, Perla Reyes-Fernandez, Rebecca Replogle. Department of Nutrition Science, Purdue University, United states

Disclosures: James Fleet, None

FR0083 The Effects of Soluble Activin Receptor Type IIB (ActRIIB-mFc) Treatment on Muscle and Bone Properties of Two Distinct Osteogenesis Imperfecta Mouse Models
Youngjae Jeong*1, Marybeth Brown2, Ferris Pfeiffer3, Mark Dallas4, Yixia Xie5, R. Scott Pearsall6, Sarah Dallas7, Charlotte Phillips7. 1Department of Biochemistry, University of Missouri, United states, 2Department of Biomedical Sciences & Physical Therapy Program, University of Missouri, United states, 3Department of Bioengineering, University of Missouri, United states, 4Department of Oral & Craniofacial Biology, University of Missouri at Kansas City, United states, 5Department of Oral & Craniofacial Sciences, University of Missouri at Kansas City, United states, 6Acceleron Pharma Inc., United states, 7Departments of Biochemistry & Child Health, University of Missouri, United states

Disclosures: Youngjae Jeong, None

FR0084 Osteoprotegerin is Critical for the Formation of Heterotopic Ossification
Song Xue*1, Roberto Fajardo2, Kevin McHugh1. 1University of Florida, United states, 2University of Texas Helath Science Center San Antonio, United states

Disclosures: Song Xue, None

FR0085 Epigenomic Signature of Bisphosphonate use
Roby Joehanes*, Yi-Hsiang Hsu, David Karasik, Douglas Kiel. Institutes for Aging Research; Hebrew SeniorLife; Harvard Medical School, United states

Disclosures: Roby Joehanes, None

FR0086 Comprehensive genome characterization of alcohol-induced osteonecrosis of femoral head
Dewei Zhao*, Yan Ding. The Affiliated Zhongshan Hospital of Dalian University, China

Disclosures: Dewei Zhao, None

FR0090 Several novel susceptibility loci identified in trans-ethnic genome-wide association for trabecular volumetric bone mineral density
Xiaoying Fu*, Hong-Wen Deng. Center for Bioinformatics & Genomics, Tulane University, New Orleans, LA, USA Department of Biostatistics & Bioinformatics, School of Public Health & Tropical Medicine, Tulane University, New Orleans, LA, United states

Disclosures: Xiaoying Fu, None

FR0092 ASBMR 2016 Annual Meeting Young Investigator Award
Genetic Ablation of Fg23 Does not Modulate Experimental Heart Hypertrophy Induced by Pressure Overload
Svetlana Slavic*, Kristopher Ford, Ute Zeitz, Reinhold Erben, Olena Andrukhova. University of Veterinary Medicine, Vienna, Austria

Disclosures: Svetlana Slavic, None
TNFα triggers renal FGF23 expression and elevates systemic FGF23 levels in mouse models of chronic kidney disease
Daniela Egli-Spichtig, Pedro Imenez Silva, Bob Glaudemans, Gehring Nicole, Carla Bettoni, Martin Zhang, Desiree Schoenenberger, Michal Rajski, David Hoogewijis, Felix Knauf, Isabelle Frey-Wagner, Gerhard Rogler, Farzana Perwad, Foeller Michael, Florian Lang, Roland H. Wenger, Ian Frew, Carsten A. Wagner. 1Institute of Physiology, University of Zurich; Division of Pediatric Nephrology, University of California San Francisco, United states, 2Institute of Physiology, University of Zurich, Switzerland, 3University of Zurich, Switzerland, 4Intstitute of Physiology, University of Zurich, Switzerland, 5Division of Pediatric Nephrology, University of California San Francisco, United states, 6Universitaetsklinikum Erlangen, Nephrologie und Hypertensiologie, Germany, 7Division of Gastroenterology & Hepatology, University Hospital Zurich, Switzerland, 8Ernaehrungsphysiologie, Martin-Luther-University Halle-Wittenberg, Germany, 9Institute of Physiology, University of Tuebingen, Germany
Disclosures: Daniela Egli-Spichtig, None

Lrp6 is a Novel Target of the PTH-activated αNAC Transcriptional Coregulator
Martin Pellicelli, Hadla Hariri, Julie Miller, René St-Arnaud. Shriners Hospitals for Children - Canada, Canada
Disclosures: Martin Pellicelli, None

The Deacetylase, Sirtuin 1, is Necessary for Parathyroid Hormone’s Actions on Murine Bone
Nicola Partridge, Teruyo Nakatani, Jennifer Westendorf, David Sinclair, Yurong Fei. 1New York University, United states, 2Mayo Clinic, United states, 3Harvard Medical School, United states, 4North Shore LIJ Health System, United states
Disclosures: Nicola Partridge, None

A role for TIEG and estrogen-regulated miRNAs in mediating SOST expression in bone
Malayannan Subramaniam, Kevin Pitel, Elizabeth Bruinsma, John Hawse. Mayo Clinic, United states
Disclosures: Malayannan Subramaniam, None

Mechanoresponsive miR-138-5p targets MACF1 to inhibit bone formation
Airong Qian, Zhihao Chen, Fan Zhao, Chao Liang, Lifang Hu, Chong Yin, Peng Shang, Ge Zhang. 1Key Laboratory for Space Biosciences & Biotechnology, Institute of Special Environmental Biophysics, School of Life Sciences, Northwestern Polytechnical University, China, 2Institute for Advancing Translational Medicine in Bone & Joint Diseases, School of Chinese Medicine, Hong Kong Baptist University, China, 3Institute for Advancing Translational Medicine in Bone & Joint Diseases, School of Chinese Medicine, Hong Kong Baptist University, China
Disclosures: Airong Qian, None

Osteoblast-Derived Paracrine Factors Regulate Angiogenesis in Response to Mechanical Stimulation
Chao Liu, Xin Cui, Thomas Ackermann, Vittoria Flamini, Weiqiang Chen, Alesha Castillo. New York University, United states
Disclosures: Chao Liu, None

Osteocyte distribution does not influence locations of mechanically induced bone formation in cancellous bone
Erin Cresswell, Thu Nguyen, Michael Horsfield, Thomas Metzger, Glen Niebur, Christopher Hernandez. 1Cornell University, United states, 2University of Notre Dame, United states
Disclosures: Erin Cresswell, None

Radiation-induced bone loss is attenuated by mechanical loading
Peter Govey, Yue Zhang, Henry Donahue. 1Penn State, United states, 2Virginia Commonwealth University, United states
Disclosures: Henry Donahue, None
FR0115 A Metabolite of Contracted Muscle, β-aminoisobutyric Acid, BAIBA, Inhibits Trabecular Bone Loss by Hindlimb Unloading Potentially through Maintenance of Osteocyte Viability
Yukiko Kitase*, Jianxun Yi, Julian Vallejo, Harika Vemula, William Guthiel, Marco Brotto, Lynda Bonewald. University of Missouri-Kansas City, Department of Oral & Craniofacial Sciences, School of Dentistry, United States, University of Missouri-Kansas City, School of Pharmacy, United States, University of Texas at Arlington, United States
Disclosures: Yukiko Kitase, None

FR0116 Osteocytic gene expression is not rapidly altered following muscle paralysis
Dylan Mogk, Leah Worton, Dewayne Threet, Brandon Ausk, Edith Gardiner, Steven Bain, Ted Gross*. University of Washington, United States
Disclosures: Ted Gross, None

FR0117 Transgenic Expression of FNDC5 Impacts Skeletal Turnover by Targeting Osteoblasts, Osteoclasts and Adipocytes
clifford rosen, christiane wrann, bruce spiegelman, mary bouxsein, roland baron, kneichi nagano, phuong le, michaela reagan, lynda bonewald, maine medical center research institute, United States, dana farber cancer institute, United States, harvard medical school, United States, harvard dental school, United States, university of missouri kansas city, United States
Disclosures: clifford rosen, None

FR0118 Hindlimb Immobilisation, but Not Castration, Induces Reduction of Undercarboxylated Osteocalcin Associated with Muscle Atrophy in Rats
Xuzhu Lin, Erik Hanson, Andrew Betik, Tara Brennan-Speranza, Alan Hayes, Itamar Levinger, Institute of Sport, Exercise & Active Living (ISEAL), Victoria University, Australia, Department of Physiology & Bosch Institute for Medical Research, University of Sydney, Australia, Exercise & Active Living (ISEAL), Victoria University, Australia
Disclosures: Xuzhu Lin, None

FR0123 Treatment of Aged Mice With PDGF-bb and Bortezomib (a Proteasome Inhibitor) Enhances Fracture Repair
Hengwei Zhang, Mengmeng Wang, Brendan Boyce, Lianping Xing. University of Rochester, United States
Disclosures: Hengwei Zhang, None

FR0125 Patterns of estrogen use and kyphosis in older women 15 years later
Gina Woods, Mei-Hua Huang, Howard Fink, Corinne McDaniels-Davidson, Peggy Cawthon, Deborah Kado. University of California, San Diego, United States, University of California, Los Angeles, United States, VA Healthcare System, United States, California Pacific Medical Center Research Institute, United States
Disclosures: J Christopher Gallagher, None

FR0129 Intracellular Actin Polymerization Controls MSC Differentiation
Buer Sen, Gunes Uzer, Zhihui Xie, Cody McGrath, Amel Dudakovic, Maya Stynner, Andre Van Wijnen, Janet Rubin. UNC School of Medicine, United States, Mayo Clinic, United States
Disclosures: Janet Rubin, None

FR0130 Chondrocyte (CC) to Osteoblast (OB) Transdifferentiation Represents a Major Mechanism for Promotion of Trabecular (Tb) Bone Formation (BF) in Mice
Patrick Aghajanian, Shaohong Cheng, Chandrasekhar Kesavan, Weirong Xing, Jon Wergedal, Subburaman Mohan. VA Loma Linda Healthcare System, United States
Disclosures: Patrick Aghajanian, None

FR0133 Mature Chondrocytes Are Able to Develop into Bone Marrow Osteo/Mesenchymal Progenitor Cells and Canonical Wnt Signaling Is Required for These Progenitor Cells to Commit to Osteogenic Fate in Endochondral Bones
Xin Zhou, Ailing Hunag, Klaus von der Mark, Benoit de Crombrugghe. UT MD Anderson Cancer Center, United States, University Erlangen-Nuremberg, Germany
Disclosures: Xin Zhou, None
FR0134 Notch Activation Enhances Mesenchymal Stem Cell Sheet Osteogenic Potential by Inhibition of Cellular Senescence
Bo Tian*, Sheila Rogers, Dollie Smith, Todd Jaebion, Massimo Max Morandi, John Marymont, Yufeng Dong. LSU Health Sciences Center, United states
Disclosures: Bo Tian, None

FR0135 Transcriptional Control of CaSR by P300 in MSCs is mediated by HIF-1α
Fengjie Zhang1, Wing Pui Tsang1, Qiling He2, Chao Wan*1. 1School of Biomedical Sciences, The Chinese University of Hong Kong, Hong kong; 2Department of Microbiology, University of Alabama at Birmingham, United states
Disclosures: Chao Wan, None

FR0137 Alterations in hip Shape may Explain the Increased Risk of hip Osteoarthritis in Individuals with High Bone Mass
Celia Gregson*, Anjali Patel1, Denis Baird1, Sarah Hardcastle1, Ben Faber1, George Davey Smith2, Jenny Gregory3, Richard Aspden4, Jon Tobias1. 1Musculoskeletal Research Unit, School of Clinical Sciences, University of Bristol, Bristol, UK, United Kingdom; 2MRC Integrative Epidemiology Unit, University of Bristol, Bristol, UK, United Kingdom; 3Arthritis & Musculoskeletal Medicine, Institute of Medical Sciences, University of Aberdeen, UK, United Kingdom
Disclosures: Celia Gregson, None

FR0138 Genome-wide association study of knee bone marrow lesions and association with previously reported bone mineral density loci
Michelle S. Yau*, Braxton D. Mitchell, Rebecca D. Jackson, Marc C. Hochberg, Douglas P. Kiel, David T. Felson. 1Hebrew SeniorLife, BIDMC/Harvard, United states; 2University of Maryland School of Medicine, United states; 3The Ohio State University, United states; 4Boston University School of Medicine, United states
Disclosures: Michelle S. Yau, None

FR0139 Odanacatib Prevents Cartilage Damage and Osteophyte Development in the Anterior Cruciate Ligament Transection Rabbit Model of Osteoarthritis
Ya Zhuo*, Maureen Pickarski, Gregg Wesolowski, Jacques Yves Gauthier. 1Merck & Co.Inc, United states; 2Merck & Co. Inc., United states; 3Formerly Merck & Co., Inc., United states; 4Formerly Merck & Co., Inc., Canada
Disclosures: Ya Zhuo, Merck. Co. Inc., 17

FR0140 Proteasome Inhibition Is a Potential Treatment for Osteoarthritis by Attenuating Inflammation and Improving Lymphatic Function
Xi Lin, Wensheng Wang, Wen Sun, Michael Zuscik, Lianping Xing. University of Rochester Medical Center, United states
Disclosures: Xi Lin, None

FR0142 ASBMR 2016 Annual Meeting Young Investigator Award
Superficial cells disappear during early stages of osteoarthritis via accelerated differentiation into chondrocytes
Lei Li*, Thibault Boudelique, Phillip Newton, Elena Kozhemyakina, Andrew Lassar, Matthew Warman, Björn Barenius, Igor Adamyko, Andrei Chagin. 1Department of Physiology & Pharmacology, Karolinska Institutet, Sweden; 2Department Physiology & Pharmacology, Karolinska Institute, Sweden; 3Harvard Medical School, Boston, Massachusetts, United states; 4Orthopaedic Research Labs, Boston Children’s Hospital, Boston, Massachusetts, United states; 5Södersjukhuset, Stockholm, Sweden
Disclosures: Lei Li, None

FR0143 Changes in Membrane Potential Regulates RANKL Intracellular Transport via Voltage-gated Calcium Channels in Osteoblasts
Takuya Notomi*, Miyuki Kuno, Akiko Hiyama, Yoichi Ezura, Kiyoshi Ohura, Masaki Noda. 1Osaka Dental University, Japan; 2Osaka City University, Japan; 3Tokyo Medical & Dental University, Japan
Disclosures: Takuya Notomi, None
FR0144  ASBMR 2016 Annual Meeting Young Investigator Award
Osteoblasts Inhibit Osteoclast Formation by Targeting Prdm1 via the Mechanism Underlying Matrix Vesicle-Mediated Transfer of miR-125b
Yasumasa Irie*, Tomoko Minamizaki*, Faisal Ahmed, Yuko Nakao, Hirotaka Yoshioka, Kotaro Tanimoto, Katsuyuki Kozai, Yuji Yoshioka*. 1Department of Calcified Tissue Biology, Department of Pediatric dentistry, Hiroshima University Institute of Biomedical & Health Sciences, Hiroshima, JAPAN., Japan, 2Department of Calcified Tissue Biology, Hiroshima University Institute of Biomedical & Health Sciences, Hiroshima, JAPAN., Japan, 3Department of Calcified Tissue Biology & Department of Orthodontics & Craniofacial Developmental Biology, Hiroshima University Institute of Biomedical & Health Sciences, Hiroshima, JAPAN., Japan, 4Orthodontics & Craniofacial Developmental Biology, Hiroshima University Institute of Biomedical & Health Sciences, Hiroshima, JAPAN., Japan, 5Pediatric dentistry, Hiroshima University Institute of Biomedical & Health Sciences, Hiroshima, JAPAN., Japan
Disclosures: Yasumasa Irie, None

FR0145  Truncation of the Cx43 C-terminal domain disrupts multiple signaling pathways and recapitulates the skeletal phenotype of full length Cx43 conditional deletion in the osteoblast lineage
Megan C. Moorer*, Carla Hebert, Ryan E. Tomlinson, Shuo Liu, Max Chason, Joseph P Stains. 1University of Maryland, Baltimore, Graduate School, United states, 2University of Maryland, Baltimore, United states, 3Johns Hopkins University, United states, 4University of Maryland, United states
Disclosures: Megan C. Moorer, None

FR0147  CRISPR/Cas9 Editing of IFITM5 Introduces BRIL p.Ser40Leu Substitution, Connecting Types V and VI OI, and Suppresses PEDF-mediated Induction of PPARγ
Heeseog Kang*, Joan C. Marini, Susan Crawford. 1NIH, United states, 2Northwestern University, United states
Disclosures: Heeseog Kang, None

FR0148  Deletion of Axin1 in Osteoblast Progenitor Cells Leads to Delayed Endochondral Bone Formation through Inhibition of Osteoclast Formation
Bing Shu*, Yongjian Zhao, Chunchun Xue, Rong Xie, Yongjun Wang, Di Chen. 1Longhua Hospital, Shanghai University of Traditional Chinese Medicine; Spine Research Institute, Shanghai University of Traditional Chinese Medicine, China, 2Rush University Medical Center, United states, 3School of Rehabilitation Science, Shanghai University of Traditional Chinese Medicine; Spine Research Institute, Shanghai University of Traditional Chinese Medicine, China
Disclosures: Bing Shu, None

FR0149  Engineering a hyper-anabolic, super-secreting osteoblast
Sara Young, Yu Shao, Paul Childress, Ronald Wek, Joseph Bidwell*. Indiana University School of Medicine, United states
Disclosures: Joseph Bidwell, Eli Lilly, 13

FR0150  Glutaminase acts in osteoblasts to regulate bone formation
Yilin Yu, Everett Knudsen, Fанxin Long, Courtney Karner*. 1Duke University School of Medicine, United states, 2Washington University School of Medicine, United states
Disclosures: Courtney Karner, None

FR0151  Kindlin-2 Plays A Pivotal Role in Skeletal Development and Homeostasis through Its Expression in Osteoblastic Cells and Osteocytes
Huiling Cao, Guozhi Xiao. Department of Biology & Shenzhen Key Laboratory of Cell Microenvironment, Southern University of Science & Technology, China
Disclosures: Huiling Cao, None
Legumain is a Novel Regulator of Bone Formation and Deregulated in Postmenopausal Osteoporosis
Abbas Jafari*1, Diyako Qanie2, Thomas L. Andersen3, Li Chen2, Nicholas Ditzel4, Sundeej Khosla5, Harald T. Johansen6, Per Kjersgaard-Andersen7, Jean-Marie Delaisse8, Basem M. Abdallah9, Daniel Hesselson10, Rigmor Solberg6, Moustapha Kassem2.

1Department of Cellular & Molecular Medicine, University of Copenhagen, Denmark, 2Endocrine Research Laboratory (KMEB), Odense University Hospital & University of Southern Denmark, Denmark, 3Department of Clinical Cell Biology (KCB) Institute of Regional Health Science University of Southern Denmark, Denmark, 4Endocrine Research Laboratory (KMEB), Odense University Hospital & University of Southern Denmark., Denamrk, 5Endocrine Research Unit, Mayo Clinic College of Medicine., United states, 6Department of Pharmaceutical Biosciences, School of Pharmacy, University of Oslo, Norway, 7Department of Orthopaedic Surgery, Vejle/Lillebaelt Hospital, Denmark, 8Department of Clinical Cell Biology, Vejle/ Lillebaelt Hospital, Institute of Regional Health Research, University of Southern Denmark, Denmark, 9Department of Endocrinology & Metabolism, Endocrine Research Laboratory (KMEB), Odense University Hospital & University of Southern Denmark, Denmark, 10St Vincent’s Clinical School, UNSW, Australia

Disclosures: Abbas Jafari, None

TUT7/ZCCHC6 is a novel regulator of matrix mineralization and osterix activity in osteoblasts
Gregory Sondag*1, Mohammad Khan1, Mohammad Ansari2, Nazar Hussein3, Sara Haynie1, Fayeza Safadi1, Tariq Haqqi1. 1Northeast Ohio Medical University, United states, 2Northeast Ohio Medical, United states, 3Kent State University, United states

Disclosures: Gregory Sondag, None

Pyk2-Deletion Potentiates Osteoblast Differentiation and Mineralization By Estrogen and Raloxifene
Sumana Posritong*1, Pierre P. Eleniste1, Evan R. Himes2, Melissa A. Kacena2, Angela Bruzzaniti1. 1Indiana University School of Dentistry, United states, 2Indiana University School of Medicine, United states

Disclosures: Sumana Posritong, None

A novel Osteoblast Differentiation inhibiting lncRNA, AK138929
Chong Yin*1, Yan Zhang1, Kun Yan1, Zhiihao Chen1, Dijie Li1, Fan Zhao1, Lifang Hu1, Yonghua Wang2, Ge Zhang1, Peng Shang1, Airong Qian1. 1School of Life Sciences, Northwestern Polytechnical University, China, 2School of Life Sciences, Northwest A&F University, China, 3School of Chinese Medicine, Hong Kong Baptist University, Hong kong

Disclosures: Chong Yin, None

Epigenetic Regulation of Osteoblast Differentiation by Vitamin C Involving Prolyl Hydroxylase Domain-containing Protein 2 (PHD2)
Richard Lindsey*1, Shaohong Cheng2, Sheila Pourteymoor2, Catrina Alarcon2, Subburaman Mohan1. 1VA Loma Linda Healthcare System; Loma Linda University, United states, 2VA Loma Linda Healthcare System, United states

Disclosures: Richard Lindsey, None

miR-1254 inhibits expression of sclerostin in human osteoblastic cell lines
Osman M Azuraidi*, Peter Wilson, Kasia Goljanek-Whysall., Jane P Dillon, Nick Rhodes, James A Gallagher. University of Liverpool, United Kingdom

Disclosures: Osman M Azuraidi, None

Modulation of the histone H3K27 methyltransferase EZH2 stimulates WNT, PTH and BMP2-related paracrine signaling to promote osteogenesis
Christopher Paradise*, Amel Dudakovic, Martina Gluscevic, Farah Ahmed, Eric Lewallen, Roman Thaler, Andre van Wijnen. Mayo Clinic, United states

Disclosures: Christopher Paradise, None
FR0160  Protein Kinase D1 Plays an Important Role in Osteogenesis
Wendy Bollag*1, Vivek Choudhary 1, Qing Zhong1, Jianrui Xu 1, Lakiea Bailey 1, Maribeth Johnson 1, Yun Su1, Mohammed Elsalanty 1, Meghan McGee-Lawrence1, Xingming Shi1, Carlos Isales1.  1Medical College of Georgia at Augusta University, United states, 2Augusta University, United states
Disclosures:  Wendy Bollag, None

FR0165  ICOS-Ligand Triggering Impairs Osteoclast Differentiation and Function
CASIMIRO L GIGLIOTTI 1, ELENA BOGGIO 1, NAUSICAA CLEMENTE 1, Chiara Dianzani 2, Annalisa Chiocchetti 2, Renzo Boldorini 1, Michela Bosetti 2, Giancarlo Isola 4, Patrizia D’Amelio 5, Umberto Dianzani 1.  1Interdisciplinary Research Center of Autoimmune Diseases (IRCAD) & Department of Health Sciences, University of Piemonte Orientale (UPO), Italy, 2Department of Drug Science & Technology, University of Torino, Italy, 3Department of Medicine Celular y Molecular, Centro de Investigaciones Biologicas, Consejo Superior de Investigaciones Cientificas, Spain, 4Dept of Medical Science University of Torino, Italy
Disclosures:  Patrizia D’Amelio, None

FR0166  Osteoclast Vitamin D Receptor Increases Bone Resorption and Regulates Osteoblast Activity in vivo
Na-Rae Park1, Da-In Yeo2, Gyeong-Hwa Kim2, Xiangguo Che1, Yu-ra Choi2, Clara Yongjoo Park2, Shigeaki Kato3, Je-Yong Choi1.  1Department of Biochemistry & Cell Biology, Kyungpook National University School of Medicine, Daegu, South Korea, Korea, republic of, 2Department of Biochemistry & Cell Biology, BK21 PLUS KNU Biomedical Convergence Program, Kyungpook National University , School of Medicine, Daegu, South Korea, Korea, republic of, 3Soma Central Hospital, Fukushima, Japan, Japan
Disclosures:  Na-Rae Park, None

FR0167  ASBMR 2016 Felix Bronner Young Investigator Award
Osteoclast-Secreted Slit3 as a Novel Regulator Linking Bone Resorption and Formation
Beom-Jun Kim1, Young-Sun Lee2, Sun-Young Lee2, Seung Hun Lee1, Jung-Eun Kim3, Eun-Ju Chang4, Seung-Whan Kim5, Sung Ho Ryu6, Sun-Kyeong Lee7, Joseph A Lorenzo8, Seong Hee Ahn9, Hyeonmok Kim1, Jung-Min Koh1.  1Division of Endocrinology & Metabolism, Asan Medical Center, University of Ulsan College of Medicine, Korea, republic of, 2Asan Institute for Life Sciences, Korea, republic of, 3Department of Molecular Medicine, Cell & Matrix Research Institute, Kyungpook National University School of Medicine, Korea, republic of, 4Department of Anatomy & Cell Biology, Cellular Dysfunction Research Center & BMIT, University of Ulsan College of Medicine, Korea, republic of, 5Department of Pharmacology, University of Ulsan College of Medicine, Korea, republic of, 6Department of Life Science & Division of Molecular & Life Sciences, Pohang University of Science & Technology, Korea, republic of, 7UConn Center on Aging, University of Connecticut Health Center, United states, 8Division of Endocrinology, Department of Medicine, University of Connecticut Health Center, United states, 9Department of Internal Medicine, Inha University School of Medicine, Korea, republic of
Disclosures:  Beom-Jun Kim, None

FR0170  Osteoclasts as an intracellular growth niche for Staphylococcus aureus
Jennifer Krauss*, Emily Goering2, Deborah Novack1.  1Washington University School of Medicine, United states, 2Washington University, United states
Disclosures:  Jennifer Krauss, None

FR0172  The Lipid Phosphatase Inpp4b Modulates Bone Homeostasis Through the PKCβ/GSK-3β Signaling Pathway
Lina Saad*, Monica Pata, Jean Vacher.  IRCM, Canada
Disclosures:  Lina Saad, None

FR0173  Towards a gene regulatory network in the feedback inhibition of osteoclasts by CD8 T cells
Elena Shashkova*, Anna Chine-Smith1, Jahnavi Trivedi1, Chloe Ferris1, Zachary Buchwald2, Jesse Gibbs3, Deborah Novack3, Rajeev Aurora1.  1Saint Louis University, United states, 2Emory University School of Medicine, United states, 3Washington University School of Medicine, United states
Disclosures:  Elena Shashkova, None
FR0174 Novel critical role for EZH2-increased H3K27 trimethylation and C/EBPβ-LAP to LIP switch at the MafB promoter during the early phase of osteoclastogenesis
Juraj Adamik*, Peng Zhang, Quanhong Sun, Deborah L. Galson. University of Pittsburgh, United states
Disclosures: Juraj Adamik, None

FR0175 Comparative roles of c-Fos and C/EBPα in osteoclast differentiation through regulation by the RANK cytoplasmic IVVY538-538 motif in a RBP-J downregulation manner
Joel Jules*, Wei Chen, Yi-Ping Li. University of Alabama at Birmingham, United states
Disclosures: Joel Jules, None

FR0176 Notch2 Expression is Required for Spleen B Cell Allocation and Osteoclastogenesis
Archana Sanjay*, Bhavita Walia, Jungeun Yu, Stefano Zanotti, Ernesto Canalis. UConn Health, United states
Disclosures: Archana Sanjay, None

FR0177 Similarities between IL8 and RANKL Stimulation of Osteoclast Formation Suggests a Highly Conserved Signaling Cascade that Facilitates Bone Resorption in Breast Cancer
Diarra Williams*1, Archana Kamalakar Kamalakar1, Nisreen Akel1, Frances Swain2, Dana Gaddy1, Larry Suva1, 1Texas A&M University, United states, 2Texas A&M University, United Kingdom
Disclosures: Diarra Williams, None

FR0178 Deletion of Mitofusin-2 in Osteocytes Causes a Profound Skeletal Phenotype Characterized by Reduced Bone Turnover
Meiling Zhu*, Ben-hua Sun, Christine Simpson, Steven Tommasini, Karl Insogna. Yale University School of Medicine, United states
Disclosures: Meiling Zhu, None

FR0179 Deletion of YAP and TAZ in Osteoblasts and Osteocytes Suppresses Bone Formation and Reduces Bone Mass
Jinhu Xiong*, Marilina Piemontese, Yu Liu, Yuko Fujiwara, Priscilla Baltz, Charles O'Brien. University of Arkansas for Medical Sciences, United states
Disclosures: Jinhu Xiong, None

FR0180 HDAC5 is required for loading-induced sclerostin down-regulation
Marc Wein*1, Elizabeth Williams1, Maureen O'Meara1, Belinda Beqo1, Leah Worton2, Edith Gardiner2, Paola Divieti-Pajevic3, Ted Gross2, Henry Kronenberg1, 1Massachusetts General Hospital, United states, 2University of Washington, United states, 3Boston University, United states
Disclosures: Marc Wein, None

FR0181 Increased Wnt/β-catenin Signaling and Decreased Osteoclastogenic Potential of Osteocytic Cells Lacking Cx37
Rafael Pacheco-Costa*, Iraj Hassan, Lilian Plotkin. Indiana University School of Medicine, United states
Disclosures: Rafael Pacheco-Costa, None

FR0182 Osteocyte-Driven Perilacunar Remodeling is Impaired in Glucocorticoid Induced Osteonecrosis
Tristan Fowler*1, Claire Acvedo1, Courtney Mazur1, Faith Hall- Glenn1, Aaron Fields1, Hrishkesh Bale2, Robert Ritchie2, Jeffrey Lotz1, Thomas Vail1, Tamara Alliston2, 1University of California San Francisco, United states, 2Lawrence Berkeley National Laboratory, United states
Disclosures: Tristan Fowler, None

FR0183 Osteocytes Utilize Lacunar Acidification to Remove Calcium from Their Perilacunar Matrix During Lactation
Katharina Jahn*1, Shilpa Kelkar2, Hong Zhao2, Yixia Xie2, LeAnn M Tiede-Lewis2, Vladimir Dusevich2, Sarah L Dallas2, Lynda F Bonewald2, 1University Medical Center Hamburg-Eppendorf, Germany, 2University of Missouri-Kansas City, United states
Disclosures: Katharina Jahn, None
Acute in vivo osteocyte responses to mechanical load in mice bearing a genetic intracellular calcium sensor: recruitment of responding cells depends on both strain magnitude and loading frequency
Karl J Lewis*, Joyce Louie¹, Samuel Stephen¹, Zeynep Seref-Ferlengze², David C Spray², Mia M Thi², Robert J Majeksa¹, Sheldon Weinbaum¹, Mitchell B Schaffler¹. ¹Dept. of Biomedical Engineering, City College of New York, United states, ²Dept. of Neuroscience, Albert Einstein College of Medicine, United states
Disclosures: Karl J Lewis, None

Vitamin D regulates perilacunar remodeling and osteocyte survival in human and murine bone
Tim Rolvien*, Björn Busse², Klaus Püschel³, Matthias Krause³, Marie B. Demay³, Michael Amling². ¹Department of Osteology & Biomechanics, University Medical Center Hamburg-Eppendorf, Hamburg, Germany, Germany, ²Department of Osteology & Biomechanics, University Medical Center Hamburg-Eppendorf, Germany, ³Department of Legal Medicine, University Medical Center Hamburg-Eppendorf, Hamburg, Germany, Germany, ⁴Department of Trauma & Reconstructive Surgery, Asklepios Clinic St. Georg, Hamburg, Germany, Germany, ⁵Endocrine Unit, Massachusetts General Hospital, Harvard Medical School, Boston, Massachusetts 02114, United states
Disclosures: Tim Rolvien, None

Trabecular bone score (TBS) reference values from all combination of lumbar vertebrae in dual-energy absorptiometry (DXA) from NHANES 2005-2008 multiethnic Survey
Bo Fan*, John Shepherd. University of California San Francisco, United states
Disclosures: Bo Fan, None

ASBMR 2016 Annual Meeting Young Investigator Award
Accuracy of MRI-Based Measures of Bone Strength Compared to Direct Mechanical Testing
Elizabeth A. Kobe*, Olivia M. Teter, Michelle Slinger, Karyll Davis, Abigail Hong, Chamith S. Rajapakse, Felix W. Wehrli. University of Pennsylvania Perelman School of Medicine (Radiology), United states
Disclosures: Elizabeth A. Kobe, None

ASBMR 2016 Annual Meeting Young Investigator Award
Assessment of bone strength and cortical porosity in a group of premenopausal women with celiac disease after 3-years on gluten-free diet
María Belen Zanchetta¹, Vanesa Carla Longobardi*¹, Fernando Silveira², Florencia Costa³, Cesar Bogado³, Julio Cesar Bai¹, Jose R Zanchetta¹, ¹MD, Argentina, ²PH, Argentina, ³PHD, Argentina
Disclosures: Vanesa Carla Longobardi, None

Weight Change in Men in Late Life and Bone Microarchitecture at the Distal Tibia
Kristine Ensrud*, Tien Vo, Lisa Langsetmo, Andrew Burghardt, John Schousboe, Jane Cauley, Sharmila Majumdar, Brent Taylor, Andrew Hoffman, Eric Orwoll. ¹University of Minnesota / VA Health Care System, United states, ²University of Minnesota, United states, ³University of California, United states, ⁴University of Pittsburgh, United states, ⁵Stanford University, United states, ⁶Oregon Health & Science University, United states
Disclosures: Kristine Ensrud, None

Accelerated Bone Loss at the Hip: Association with Increased Risk of Subsequent Mortality in Older Men
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FR0220 Genome-Wide Association Study of DNA Methylation Identifies a Novel Locus Associated with Bone Mineral Density
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Disclosures: John Morris, None

FR0223 Biochemical Markers of Inflammation Associated with Increased Mortality in Hip Fracture Patients
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FR0224 Fracture Risk After Bariatric Surgery: Roux-en-Y Gastric Bypass Versus Adjustable Gastric Banding
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FR0225 Fracture Risk Assessment In Long term care: FRAIL
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Disclosures: Sarah Berry, Amgen, 13

FR0227 Vertebral Fractures have Similar Impact as hip Fractures on the Progression of Frailty
Olga Gajic-Veljanoski*, 1, Jonathan D. Adachi 2, Courtney Kennedy 3, George Ioannidis 4, Claudia Berger 3, Andy Kin On Wong 5, Kenneth Rockwood 7, Susan Kirkland 7, Parminder Raina 8, Lehana Thabane 8, Alexandra Papaioannou 8, The CaMos Research Group 5. 1McMaster University & Hamilton Health Sciences/St. Peter’s Hospital – GERAS Centre, Canada, 2McMaster University & St. Joseph’s Healthcare Hamilton, Canada, 3Hamilton McMaster University/McMaster University & Health Sciences/St. Peter’s Hospital - GERAS Centre, Canada, 4McMaster University & Hamilton Health Sciences/St. Peter’s Hospital – GERAS Centre, Canada, 5Camos – McGill University, Canada, 6University Health Network, Canada, 7Dalhousie University, Canada, 8McMaster University, Canada
Disclosures: Olga Gajic-Veljanoski, None

FR0228 Estrogen-Containing Contraceptives are Associated with Reduced Risk of Stress Fracture in Female Soldiers
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Disclosures: Kristin L. Popp, None
FR0229 Pubertal timing predicts adult non-vertebral fracture risk in men – the BEST cohort
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Disclosures: Claes Ohlsson, None

FR0230 2016 ASBMR Fund for Research and Education Young Investigator Award
The Effects of Cross-sex Hormonal Treatment in Transgender Persons on their Bone Mineral Density: a 1 year Prospective Observational Study
Chantal Wiepjes*, Mariska Vlot, Maartje Klaver, Paul Lips, Renate de Jongh, Annemieke Heijboer, Martin den Heijer. VU Medisch Centrum, Netherlands
Disclosures: Chantal Wiepjes, None

FR0231 CHANGE IN BONE STRUCTURE WITH AGE AS ASSESSED BY PERIPHERAL QUANTITATIVE COMPUTED TOMOGRAPHY AND RELATIONSHIPS WITH MUSCLE IN OLDER MEN AND WOMEN
Elaine Dennison*, Kate Ward, Karen Jameson, Mark Edwards, Cyrus Cooper. MRC Lifecourse Epidemiology Unit, United Kingdom
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FR0232 Gender differences in proximal femur shape: findings from a population based study in adolescents
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FR0233 High Risk of Second Fracture within 1, 2, 5 years after Prior Fracture among Women 65 years or Older
Akhila Balasubramanian1, Jie Zhang2, Lang Chen3, Deborah Wenkert1, Shanette G Daigle2, Andreas Grauer1, Jeffrey R Curtis*2. 1Amgen, United states, 2University of Alabama at Birmingham, United states
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FR0234 Imminent Risk of Clinical Vertebral Fracture After Fracture (Reykjavik Study)
Helena Johansson*1, Kristín Siggeirsdóttir2, Nicholas C Harvey3, Anders Öden1, Vilmundur Gudnason1, Eugene McCluskey1, Gunnar Sigurdsson1, John Kanis1. 1Centre for Metabolic Bone Diseases, University of Sheffield, United Kingdom, 2Icelandic Heart Association, Kopavogur, Iceland, 3MRC Lifecourse Epidemiology Unit, University of Southampton, United Kingdom
Disclosures: Helena Johansson, None

FR0235 Kidney Function and Fracture Risk among Older Male Veterans
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Disclosures: Cathleen Colon-Emeric, None

FR0236 Lower TBS Score is a Risk Factor for Atypical Femur Fractures but not Independent of Duration of Antiresorptive Therapy
Andy Kin On Wong*1, K. Shawn Davison2, William D. Leslie3, Jonathan D. Adachi4, Jacques P. Brown1, Robert G. Josse2, Aliya Khan4, Angela M. Cheung1. 1University Health Network, Canada, 2University of Victoria, Canada, 3University of Manitoba, Canada, 4McMaster University, Canada, 5Laval University, Canada, 6St. Michael’s Hospital, Canada
Disclosures: Andy Kin On Wong, None
FR0237 Prediction of two-year risk of fracture among older US women
Annette Adams*, Eric Johnson, Hui Zhou, Robert Platt, Deborah Wenkert, Steven Jacobsen, Akhila Balasubramanian. 1Kaiser Permanente Southern California, United states, 2The Center for Health Research, United states, 3McGill University Health Center Research Institute, Canada, 4Amgen Inc, United states
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FR0240 Impact of Frailty on Health Care Services Use among Non-institutionalized Quebec Seniors with Non-hip Fracture: a Population-based Study using Administrative Databases
Vanessa Fillion1, Marie-Josée Sirois2, Suzanne N Morin2, Philippe Gamaiche1, Sonia Jean*2. 1Laval University, Canada, 2McGill University, Canada, 1INSPQ, Canada
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FR0245 The Activating Patients at Risk for OsteoPOroSis (APROPOS) Study: a Randomized Trial within the GLOW Cohort
Maria Danila*, Ryan Outman, Elizabeth Rahn, Amy Mudano, David Redden, Peng Li, Fred Anderson, Jeffrey Curtis, Susan Greenspan, Andrea LaCroix, Michael Miller, Jeri Nieves, Stuart Silverman, Amy Warriner, Nelson Watts, Nicole Wright, Kenneth Saag. 1The University of Alabama at Birmingham, United states, 2University of Massachusetts Medical School, United states, 3University of Pittsburgh, United states, 4University of California San Diego, United states, 5University of Oklahoma, United states, 6Helen Hayes Hospital, United states, 7Cedars Sinai Hospital, United states, 8Mercy Health, United states
Disclosures: Maria Danila, None

FR0247 Calcium and Vitamin D Supplementation Leads to Greater Improvements in Trabecular Bone Microarchitecture in Young Adults undergoing Initial Military Training
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FR0250 Effects of Low-fat Dairy Foods on Bone and Body Composition, Lipid Profile and Pro-inflammatory Markers in Overweight/Obese Women During the Weight Loss Regimen
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Disclosures: Ashley Carter, None

FR0251 High Impact Mechanical Loading Increases Bone Material Strength – Results from a 3-Month Intervention Study
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FR0252 High Intensity Progressive Resistance Training for Postmenopausal Women with Low to Very Low Bone Mass: The LIFTMOR Trial
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Disclosures: Steven Watson, None

FR0258 LGG and VSL#3 Probiotics Prevent Ovariectomy Induced Bone Loss and Induce Bone Anabolism in Normal Mice by Decreasing Gut Permeability and Inducing Wnt10b Production
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FR0259  The Gut Microbiome Influences Bone Strength and Regulates Differences in Bone Biomechanical Phenotype Among Inbred Mouse Strains
Jason Guss*1, Michael Horsfield1, Fernanda Fontenele1, Taylor Sandoval1, Marysol Luna1, Fnu Apoorva1, Svetlana Lima1, Rodrigo Bicalho1, Marjolein van der Meulen1, Ankur Singh1, Ruth Ley1, Steven Goldring2, Christopher Hernandez1. 1Cornell University, United states, 2Hospital for Special Surgery, United states
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FR0260  Delayed bone healing in type 1 diabetic rats is ameliorated by insulin treatment
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Disclosures: Ariane Zamarioli, None

FR0261  Different Effects of Absence of Complement Component 3 and Anaphylatoxin Receptors on Tissue-Level Properties of Bone
Danielle MacKay*1, Thomas Kean1, Kristina Bernardi2, Heather Haeberle3, Catherine Ambrose4, Feng Lin5, James Dennis1. 1Baylor College of Medicine, United states, 2Seattle Children's Hospital, United states, 3University of Texas, United states, 4University of Texas Health Science Center at Houston, United states, 5Cleveland Clinic Lerner Research Institute, United states
Disclosures: Danielle MacKay, None

FR0262  S-Allylmercapro-N-Acetylcysteine Modulates Stromal Bone Marrow Cells and Bone Structure in Adult Healthy and Diabetic Mice
Naphtali Savion*, Reem Abu-Kheit, Shlomo Kotev-Emeth, Yankel Gabet. Sackler Faculty of Medicine, Tel Aviv University, Israel
Disclosures: Naphtali Savion, None

FR0263  Bone Loss After Roux-en-Y Gastric Bypass in Mice is Independent of Weight Loss
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Disclosures: Elaine Yu, None

FR0266  Irreversible Deterioration of Cortical and Trabecular Microstructure Associated with Breastfeeding
Ashild Bjornerem*1, Ali Ghasem-Zadeh2, Xiaofang Wang2, Minh Bu3, Susan P Walker2, Roger Zebaze2, Ego Seeman2. 1UiT The Arctic University of Norway, Australia, 2University of Melbourne, Australia
Disclosures: Ashild Bjornerem, None

FR0268  A unique peptide containing the heparin binding domain of IGFBP-2 increases bone mass in ovariectomized (OVX) rats
Gang Xi*1, Christine Wai1, Thierry Abribat2, Thomas Delale2, Victoria DeMambro3, Clifford Rosen1, David Clemmons1. 1University of North Carolina at Chapel Hill, United states, 2Alize Pharma III, France, 3Maine Medical Center Research Institute, United states
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FR0272  Biopsy-based bone remodeling characteristics of premenopausal women with idiopathic osteoporosis on selective serotonin reuptake inhibitors (SSRIs)
Adi Cohen*1, Mafo Kamanda-Kosch1, Donald McMahon1, David Dempster2, Hua Zhou2, Joan Lappe3, Robert Recker3, Julie Stubby3, Mariana Bucovsky1, Elizabeth Shane1. 1Columbia University, United states, 2Helen Hayes Hospital, United states, 3Creighton University, United states
Disclosures: Adi Cohen, None
FR0275  Bone Loss Countermeasures for Long Duration Spaceflight
Elisabeth Spector*1, Toshio Matsumoto2, Jeffrey Jones3, Jay Shapiro4, Thomas Lang5, Linda Shackelford6, Scott M. Smith6, Harlan Evans7, Robert Ploutz-Snyder7, Jean Sibonga7,9, Joyce Keyak8, Toshi Nakamura9, Kenjiro Kohri10, Hiroshi Ohshima11, Gilbert Moralez11, Adrian LeBlanc12, Wyle Science, Technology & Engineering Group, United states, 2U of Tokushima Graduate School of Medicine, Japan, 3Baylor College of Medicine, United states, 4Kennedy Krieger Institute, United states, 5UCSF, United states, 6NASA Johnson Space Center, United states, 7Universities Space Research Association, United states, 8U of California at Irvine, United states, 9U of Occupational & Environmental Health, Japan, 10Nagoya City U, Japan, 11JAXA, Japan, 12U of N Texas Health Science Center, United states, 13Baylor College of Medicine & Universities Space Research Association, United states
Disclosures: Elisabeth Spector, None

FR0284  Effect of Teriparatide or Risedronate in BMD and Fracture Recovery in Elderly Patients with a Recent Pertrochanteric Hip Fracture: Final Results of a 78-week Randomized Clinical Trial
Jorge Malouf*1, Umberto Tarantino2, Per Aspenberg3, Søren Overgaard4, Costantino Corradi5, Jan Stepan6, Lars Borris7, Pedro García-Hernández8, Eric Lespessailles9, Frede Frihagen10, Kyriakos Papavasiliou11, Helmut Petto12, José Ramón Caiero13, Fernando Marín14, Internal Medicine; Hospital San Pablo, Spain, 2Orthopaedic Surgery; University Tor Vergata, Italy, 3Department of Clinical & Experimental Medicine, Linköping University, Sweden, 4Orthopaedic Surgery, University of Southern Denmark, Denmark, 5Orthopaedic Institute Gaetano Pini, Italy, 6Institute of Rheumatology, Charles University, Prague, Czech republic, 7Orthopaedic Surgery, University Hospital, Denmark, 8Osteoporosis Center, University Hospital, Mexico, 9IPROS Unit, Hôpital Porte Madeleine, France, 10Orthopaedic Surgery, University Hospital, Norway, 11Orthopaedic Surgery, Aristotle University, Greece, 12Eli Lilly Austria GmbH, Austria, 13Orthopaedic Surgery, University Hospital, Spain, 14Eli Lilly Research Centre Ltd, Erl Wood Manor, United Kingdom
Disclosures: Jorge Malouf, None

FR0286  Relative Efficacy of Prompt Follow-up Therapy in Postmenopausal Women Completing the Denosumab and Teriparatide Administration (DATA) Study
Benjamin Leder*, Linda Jiang, Joy Tsai. Massachusetts General Hospital, United states
Disclosures: Benjamin Leder, Amgen, 13; Amgen, 14; Lilly, 13; Merck, 14; Lilly, 14

FR0288  The Risk of Subsequent Osteoporotic Fractures Is Decreased in Patients Experiencing Fracture While on Denosumab: Results From the FREEDOM and FREEDOM Extension Studies
DL Kendler*, A Chines, ML Brandi, S Papapoulos, EM Lewiecki, J-Y Reginster, C Roux, M Munoz Torres, A Wang, HG Bone. University of British Columbia, Canada, 2Amgen Inc., United states, 3University of Florence, Italy, 4Leiden University Medical Center, Netherlands, 5New Mexico Clinical Research & Osteoporosis Center, United states, 6University of Liège, Belgium, 7Paris Descartes University, France, 8Hospital Universitario San Cecilio, Spain, 9Michigan Bone & Mineral Clinic, United states
Disclosures: DL Kendler, Amgen, Eli Lilly, AstaZeneca, Astalis, 13; Amgen, Eli Lilly, 15; Amgen, Eli Lilly, 14

FR0289  Denosumab Treatment for 10 Years in Postmenopausal Women with Osteoporosis was Associated with Substantially Lower Fracture Incidence Relative to Their Baseline FRAX-predicted Probability
E Siris*, N Pannacciulli, Pd Miller, Em Lewiecki, R Chapurlat, E Jódar Gimeno, Ns Daizadeh, Rb Wagman, Ja Kanis, Columbia University Medical Center, United states, 2Amgen Inc., United states, 3Colorado Center for Bone Research, United states, 4New Mexico Clinical Research & Osteoporosis Center, United states, 5Hôpital Edouard Herriot, France, 6Hospital Universitario Quirónsalud Madrid, Spain, 7University of Sheffield, United Kingdom
Disclosures: E Siris, Amgen, Merck, Radius, 14
FR0291 Effect of Risedronate on Bone Loss due to Anastrozole Given to Prevent Breast Cancer: 5-year Results from the IBIS-II Prevention Trial
Ivana Sestak*, Jack Cuzick¹, Glen Blake², Raj Patel³, Robert Coleman⁴, Richard Eastell⁵.
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Disclosures: Ivana Sestak, None

FR0294 Fracture risk after discontinuation of denosumab
Akeem Yusuf*, Haifeng Guo¹, Akhila Balasubramanian², Nicola Pannacciulli², Rachel Wagman³, J. Michael Sprafka². ¹Chronic Disease Research Group, United states, ²Amgen Inc., United states
Disclosures: Akeem Yusuf, None

FR0296 Pathogenesis of Atypical Femur Fractures: Analysis at Midpoint of Recruitment
Pooja Kulkarni*, Mahalakshmi Honasoge¹, Elizabeth Warner¹, Arti Bhan¹, Shiri Levy¹, Heather Remtema¹, George Divine², Sudhaker Rao¹. ¹Henry Ford Division of Endocrinology, Diabetes & Bone & Mineral Disorders, United states, ²Henry Ford Public Health Services, United states
Disclosures: Pooja Kulkarni, None

FR0297 Surgically Treated Osteonecrosis and Osteomyelitis of the jaw and Oral Cavity in Patients Highly Adherent to Alendronate Treatment. User-only National Cohort Study
Bo Abrahamsen*¹, Pia A Eiken², Daniel Prieto-Alhambra³, Richard Eastell⁴, ¹Holbæk Hospital & University of Southern Denmark, Denmark, ²Hillerød Hospital, Denmark, ³NIHR Musculoskeletal Biomedical Research Unit, University of Oxford, United Kingdom, ⁴Metabolic Bone Centre, Northern General Hospital, United Kingdom
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FR0299 Differential Effects of Odanacatib Therapy on Markers of Bone Resorption and Formation in Postmenopausal Women with Osteoporosis: A Subgroup Study of the 5-Year Data from the Extension of the Phase 3 Long-Term Odanacatib Fracture Trial (LOFT)
Le T. Duong*, Maureen Pickarski¹, Seth Clark¹, Hilde Giezek², Dosinda Cohn¹, Rachid Massaad¹, S. Aubrey Stoch¹, ¹Merck & Co., Inc., United states, ²MSD Europe Inc., Belgium
Disclosures: Le T. Duong, Merck & Co (employment), 17

FR0304 Soluble Interleukin-6 receptor released by osteocytes promotes bone formation and maintains trabecular bone mass by trans-signaling
Melissa Murat, Emma C Walker, Patricia Ho, Brett Tonkin, Narelle McGregor, T J Martin, Natalie A Sims*. St. Vincent’s Institute of Medical Research, Australia
Disclosures: Natalie A Sims, None

FR0306 1,25(OH)2D3 Prevents Bone Aging by Inhibiting Oxidative Stress And Inactivating p16-Rb And p53-p21 Signaling
Renlei Yang*, Lulu Chen¹, Wei Zhang¹, David Goltzman², Dengshun Miao¹. ¹Nanjing Medical University, China, ²McGill University, Canada
Disclosures: Renlei Yang, None

FR0307 A Maternal Low Protein Diet During Pregnancy and Weaning Negatively Impacts Offspring Bone Mineral Density
Ke-Hong Ding*, Kunglun Yu¹, Qing Zhong¹, William Hill¹, Xingming Shi¹, Jianrui Xu¹, Wendy Bollag¹, Monte Hunter¹, Meghan McGee-Lawrence¹, Mona El Refaey², Maribeth Johnson¹, Mohammed Elsalanty¹, Ying Han¹, Mark Hamrick¹, Carlos Isales¹. ¹Medical College of Georgia, United states, ²Ohio University, United states, ³Stomatology Hospital of Xi’an Jiaotong University, China
Disclosures: Ke-Hong Ding, None
FR0308 
Free Fatty Acid Receptor 4 (GPR120) Stimulates Bone Formation and Suppresses Bone Resorption in the Presence of Elevated n-3 Fatty Acid Levels
Seong Hee Ahn1, Sook-Young Park2, Ji-Eun Baek2, Su-Youn Lee2, Wook-Young Baek2, Sun-Young Lee2, Young-Sun Lee2, Hyun Ju Yoo3, Hyeomok Kim3, Seung Hun Lee4, Dong-Soon Im4, Sun-Kyeong Lee6, Beom-Jun Kim4, Jung-Min Koh4. 1Department of Endocrinology & Metabolism, Inha University Hospital, Inha University School of Medicine, Korea, republic of, 2Asan Institute for Life Sciences, Korea, republic of, 3Biomedical Research Center, Asan Medical Center, University of Ulsan College of Medicine, Korea, republic of, 4Division of Endocrinology & Metabolism, Asan Medical Center, University of Ulsan College of Medicine, Korea, republic of, 5Molecular Inflammation Research Center for Aging Intervention (MRCA) & College of Pharmacy, Pusan National University, Korea, republic of, 6UConn Center on Aging, University of Connecticut Health Center, Korea, republic of
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FR0310 
Competitive equilibrium-based displacement of bisphosphonates for the prevention of BRONJ
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Disclosures: Akishige Hokugo, None

FR0311 
Maxillary Periodontitis and Osteonecrosis of the Jaw-Like Lesions in Rice Rats (Oryzomys palustris) Fed a Standard Diet and Treated with Zoledronic Acid
J.Ignacio Aguirre1, Jonathan Messer1, Jessica Jiron1, Hung-Yuan Chen1, Evelyn Castillo1, Jorge Mendieta Calle1, Catherine Van Poznak1, Donald Kimmel1. 1Department of Physiological Sciences, University of California, United states, 2University of Texas Health Science Center at San Antonio, United states, 3University of Texas Health Science Center at San Antonio, United states
Disclosures: J.Ignacio Aguirre, None

FR0312 
Bone-Targeted Bortezomib Prevents OVX- and Myeloma-Induced Bone Loss with Less Systemic Adverse Effects more Effectively than Bortezomib
Hua Wang1, L Xiao1, Hengwei Zhang1, Wen Sun1, Frank Hal Ebetino1, Robert K. Boeckman, Jr1, Babatunde Oyajobi1, Brendan Boyce1, Lianping Xing1. 1University of Rochester Medical Center, United states
Disclosures: Hua Wang, None

FR0313 
Co-deletion of Lrp5 and Lrp6 in bone severely diminishes bone gain from sclerostin antibody administration
Kyung-Eun Lim1, Bart Williams2, Chris Paszty3, Matthew Warman4, Alexander Robling1. 1Indiana University School of Medicine, United states, 2Van Andel Research Institute, United states, 3Amgen, Inc., United states, 4Boston Children’s Hospital, United states
Disclosures: Kyung-Eun Lim, None

FR0314 
Forces Associated with SpaceX Launch do not Impact Bone Healing but Unloading Inhibits Bone Regeneration
Paul Childress1, Cynthia-May S. Gong2, Evan Himes1, Sungshin Choi2, Yasaman Shirazi-Fard2, Todd McKinley1, Tien-min Chu2, Nabarun Chakraborty2, Rasha Hammamieh4, Melissa Kacena1. 1Department of Orthopaedic Surgery, Indiana University School of Medicine, United states, 2WYLE Labs, United states, 3Department of Biomedical & Applied Sciences, Indiana University School of Dentistry, United states, 4US Army Center for Environmental Health Research, United states
Disclosures: Paul Childress, None

FR0315 
Single Bisphosphonate Dosing Enhances Effects of Sclerostin Antibody On Stiffness of the Vertebral Body During Growth in an Osteogenesis Imperfecta Mouse Model
Diana Olvera1, Basma Khoury1, Joan C. Marini2, Michelle S. Caird1, Kenneth M. Kozloff1. 1Orthopaedic Research Laboratories, Department of Orthopaedic Surgery, University of Michigan, United states, 2Bone & Extracellular Matrix Branch, National Institute of Child Health & Human Development, NIH, United states
Disclosures: Diana Olvera, None
**FR0316 Alleviating Osteonecrosis of the Femoral Head by Suppressing the ER Stress**
Daquan Liu¹, Xine Li¹, Jie Li¹, Shuang Yang², Hiroki Yokota², Ping Zhang*².
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**FR0319 In Vivo Hypobaric Hypoxia, Hypodynamia and Bone Healing in Mice**
Marjorie DURAND*, Xavier Holy. Institut de Recherche Biomédicale des Armées, France

**Disclosures:** Marjorie DURAND, None

**FR0320 Role of matrix-bound Bisphosphonates in the development of osteonecrosis of the jaw**
Ranya Elsayed¹, R. Nicole Howie², Sudha Ananth¹, Pheba Abraham¹, Mohamed Awad¹, Zachary Patterson¹, Mohammed Elsalanty*³. ¹Augusta University, United states, ²Medical University of South Carolina, United states, ³Dental College of Georgia, Augusta University, United states

**Disclosures:** Mohammed Elsalanty, None

**FR0323 Dental Findings from the National Institutes of Health Fibrous Dysplasia/McCune-Albright Syndrome Cohort**
Andrea Burke*, Alison Boyce, Michael Collins. NIDCR, United states

**Disclosures:** Andrea Burke, None

**FR0324 Increased Risk of Breast Cancer in Polyostotic Fibrous Dysplasia and McCune-Albright Syndrome**
Bas Majoor*, Olaf Dekkers, Sander Dijkstra, Judith Bovee, Vincent Smit, Neven Hamdy, Natasha Appelman-Dijkstra. Leiden University Medical Center, Netherlands

**Disclosures:** Bas Majoor, None

**FR0325 Inhibition of Activin A Stops the Regrowth of Surgically Resected Heterotopic Bone in a Mouse Model of Fibro dysplasia Ossificans Progressiva and Indicates a New Potential Path to Therapy**
Lily Huang, Liqin Xie, Nanditha Das, Xialing Wen, Lili Wang, Andrew Murphy, Vincent Idone, Aris Economides, Sarah Hatsell*². Regeneron Pharmaceuticals, United states

**Disclosures:** Sarah Hatsell, None

**FR0326 Ambulatory Performance in Adolescents and Adults with Hypophosphatasia Treated with Asfotase Alfa: Data from a Phase II, Randomized, Dose-ranging, Open-label, Multi-center Study**
Priya S. Kishnani*¹, Cheryl Rockman-Greenberg², Katherine L. Madson³, Marisa Gayron⁴, Uchenna Iloeje⁵, Michael P. Whyte⁵. ¹Duke University Medical Center, United states, ²University of Manitoba, Canada, ³Shriners Hospital for Children, United states, ⁴Alexion Pharmaceuticals, United states, ⁵Shriners Hospital for Children & Washington University School of Medicine, United states

**Disclosures:** Priya S. Kishnani, Alexion Pharmaceuticals, Inc, 17; Alexion Pharmaceuticals, Inc, 13

**FR0327 Skeletal, growth, and functional improvements in infants and young children with life-threatening hypophosphatasia treated with asfotase alfa for 5 years**
Jill H. Simmons*, Nick Bishop², Richard Lutz³, Hui Zhang³, Kenji P. Fujita⁴, Michael P. Whyte⁵. ¹Vanderbilt University School of Medicine, United states, ²University of Sheffield, United Kingdom, ³University of Nebraska Medical Center, United states, ⁴Alexion Pharmaceuticals, Inc, United states, ⁵Shriners Hospital for Children & Washington University School of Medicine, United states

**Disclosures:** Jill H. Simmons, Alexion Pharmaceuticals, Inc, 104

**FR0328 Subtrochanteric, diaphyseal femoral fractures in Hypophosphatasia**
Franca Genest*, Lothar Seefried. Wuerzburg University, Germany

**Disclosures:** Franca Genest, None

**FR0329 Utilization of an algorithm to identify individuals at risk for hypophosphatasia (HPP) within an electronic health record (EHR) database**
Joseph Biskupiak*, Amy Sainski¹, Minkyoung Yoo¹, Diana Brixner¹, Uchenna Iloeje². ¹Pharmacotherapy Outcomes Research Center, Department of Pharmacotherapy, University of Utah, United states, ²Alexion Pharmaceuticals, Inc., United states

**Disclosures:** Joseph Biskupiak, None
**FR0330**  
**SLC34A1/NPT2a** Mutations cause Hereditary Hypophosphatemic Rickets with Hypercalciuria  
Alyssa Chen*1, Avram Traum2, Amita Sharma2, Henry Fehrenbach3, Anne Schafer4, Dolores Shoback5, Magged Hussein5, Bernd Hoppe6, Harald Jüppner5, Clemens Bergwitz1.  
1Yale School of Medicine, United states, 2Massachusetts General Hospital, United states, 3Klinikum Memmingen, Germany, 4University of California San Francisco, United states, 5King Faisal Specialist Hospital & Research Center, Saudi arabia, 6Universität Bonn, Germany  
Disclosures: Alyssa Chen, None

**FR0331**  
Evaluating the Effects of KRN23, a Fully Human Anti-FGF23 Monoclonal Antibody, on Functional Outcomes in Children with X-linked Hypophosphatemia (XLH): 40-week Interim Results from a Randomized, Open-label Phase 2 Study  
Erik Imel*1, Thomas Carpenter2, Agnès Linglart3, Annemieke Boot4, Wolfgang Höglér5, Raja Padidela6, William van’t Hoff7, Anthony Portale8, Sunil Agarwal9, Chao-Yin Chen9, Alison Skrinar1, Javier San Martin1, Michael Whyte10.  
1Indiana University School of Medicine, United states, 2Yale University School of Medicine, United states, 3Hôpital Bicêtre, France, 4University of Groningen, Netherlands, 5Birmingham Children’s Hospital, United Kingdom, 6Royal Manchester Children’s Hospital, United Kingdom, 7Great Ormond Street Hospital, United Kingdom, 8University of California, United states, 9Ultranegyx Pharmaceutical Inc., United states, 10Shriners Hospital for Children, United states  
Disclosures: Erik Imel, Ultranegyx Pharmaceuticals Inc., 13; Ultranegyx Pharmaceuticals Inc., 17

**FR0332**  
Factors Associated with Serum Intact FGF23 Levels in Patients with X-linked Hypophosphatemic Rickets  
Keiko Yamamoto*, Takuo Kubota, Kei Miyata, Shinji Takeyari, Kenichi Yamamoto, Hirofumi Nakayama, Makoto Fujiiwa, Taichi Kitaoaka, Satoshi Takakawa, Keichi Ozono. Department of Pediatrics, Osaka University Graduate School of Medicine, Japan  
Disclosures: Keiko Yamamoto, None

**FR0333**  
Non-lethal Type VIII Osteogenesis Imperfecta has Elevated Bone Matrix Mineralization  
Nadja Fratzl-Zelman*, Aileen M. Barnes2, MaryAnn Weis3, Erin Carter4, Theresa E. Hefferan5, Giorgio Perino4, Weizhong Chang2, Peter A. Smith6, Paul Roschger1, Klaus Klaushofer1, Francis H. Glorieux7, David R. Eyrre1, Cathleen Raggio8, Joan C. Marini2.  
1Ludwig Boltzmann Institute of Osteology at Hanusch Hospital of WGKK & AUVA Trauma Centre Meidling, 1st Med. Dept. Hanusch Hospital, Vienna, Austria, 2Section on Heritable Disorders of Bone, NICHD, NIH, Bethesda, United states, 3The Orthopaedic Research Laboratories, University of Washington, Seattle, United states, 4Hospital for Special Surgery, New York, United states, 5Department of Orthopedics, Mayo Clinic College of Medicine, Rochester, United states, 6Shriners’ Hospital for Children, Chicago, United states, 7Shriners’ Hospital for Children & McGill University, Montreal, Canada, 8Department of Orthopedics, Mayo Clinic College of Medicine, Seattle, United states  
Disclosures: Nadja Fratzl-Zelman, None

**FR0335**  
Intra-Tibial Injection of Lymphatic Endothelial Cells Leads to Aggressive Osteolysis, a Mouse Model of Gorham-Stout Disease  
Hua Wang*, Wensheng Wang, Xing Li, Wen Sun, Brendan Boyce, Lianping Xing. University of Rochester Medical Center, United states  
Disclosures: Hua Wang, None

**FR0336**  
Meckel’s and condylar cartilages anomalies in achondroplasia result in defective development and growth of the mandible  
Martin Biosse Duplañ1, Davide Komla-Ebri2, Yann Heuze3, Valentin Estibals2, Emilie Gaudas2, Nabil Kaci2, Catherine Benoist-Lasselin3, Michel Zerah4, Ina Kramer5, Michaela Kneissel6, Diana Graus Porta6, federico Di Rocco7, Laurence Legeai-Mallet2.  
1Institut Imagine, France, 2Institut Imagine-INSERM U1163, France, 3UMR5199 PACEA, Université de Bordeaux, France, 4Hôpital Necker, France, 5Novartis, Switzerland, 6Novartis, France, 7Neurochirurgie Pédriatrique, Hopital Femme Mère Enfant CHU de Lyon, France  
Disclosures: Laurence Legeai-Mallet, None
FR0338 Rescue of Short-lived Progressive Ankylosis Protein in Craniometaphyseal Dysplasia
Jitendra Kanaujiya*, Edward Bastow, Zhifang Hao, Ernst J Reichenberger, I-Ping Chen.
University of Connecticut Health, United states
Disclosures: Jitendra Kanaujiya, None

FR0339 Small molecule Alk inhibitors with improved selectivity and pharmacokinetics inhibit heterotopic ossification without toxicity in a mouse model of fibro dysplasia ossificans progressiva
Daniel Perrien*, Corey Hopkins, Craig Lindsley, Audrey Frist, Heather Durai, Nicole Fleming, Sabrina Booton, Charles Hong. Vanderbilt University Medical Center, United states
Disclosures: Daniel Perrien, La Jolla Pharmaceutical Company, 13

FR0344 Thoracic muscle density and size are associated with kyphosis severity: Framingham Study
Amanda Lorbergs*, Dennis Anderson2, Brett Allaire2, Douglas Kiel1, Michelle Yau1, Mary Bouxsein1, L. Adrienne Cupples5, Tom Travison1, Elizabeth Samelson1, 1Institute for Aging Research, Hebrew Senior Life & Harvard Medical School, United states, 2Center for Advanced Orthopedic Studies, Beth Israel Deaconess Medical Center, United states, 3Institute for Aging Research, Department of Medicine BIDMC, & Hebrew Senior Life & Harvard Medical School, United states, 4Center for Advanced Orthopedic Studies, Beth Israel Deaconess Medical Center & Harvard Medical School, United states, 5Department of Biostatistics, Boston University School of Public Health & Framingham Heart Study, United states
Disclosures: Amanda Lorbergs, None

FR0345 Targeted Spine Strengthening Exercise Program to Reduce Hyperkyphosis in Older Adults: Preliminary Results from the SHEAF Study
Wendy B. Katzman*, Deborah M. Kado2, Eric Vittinghoff1, Anne Schafer1, Roger K. Long1, Shirley Wong1, Amy Gladin3, Nancy E. Lane4, Feng Lin1. 1UCSF, United states, 2UCSD, United states, Kaiser Permanente Northern CA, United states, 4UCDavis, United states
Disclosures: Wendy B. Katzman, None

FR0348 A Sumo peptidase, SENP6, promotes KAP1-mediated p53 suppression to maintain osteochondro progenitor dynamics
Jianshuang Li*, Di Lu, Hong Dou, Huadie Liu, Kevin Weaver, Wenjun Wang, Jiada Li, Edward Yeh, Bart Williams, Ling Zheng, Tao Yang, Van Andel institute, United states, MD Anderson Cancer Center, United states, College of Life Sciences, Wuhan University, China, State Key Laboratory of Medical Genetics & School of Life Sciences, Central South University, China
Disclosures: Jianshuang Li, None

FR0349 Ablation of IGF-1R Signaling in Osteochondro progenitor Cells Induces a Substantial and Persistent Attenuation of Skeletal Development
Alessandra Esposito*, Joseph Temple, Tieshi Li, Lai Wang, Anna Spagnoli. Rush University Medical Center, United states
Disclosures: Alessandra Esposito, None

FR0350 Actin Filament Associated Protein 1 (AFAP1) is a Novel Regulator of Bone Formation
Holly Corkill*, Albena Gesheva, Kier Blevins, Broc Wenrich, Evan Frigoletto, Jess Cunnick, John Arnott, Youngjin Cho. The Commonwealth Medical College, United states, University of Scranton, United states
Disclosures: Holly Corkill, None

FR0351 Dysregulated murine bone osteogenesis and adipogenesis upon loss of chemokine Cxcl12/Sdf1 in the osteoprogenitor cells
Yi-Shiuan Tzeng, Ni-Chun Chung, Hsiang-Ru Huang, Yu-Ren Chen, Dar-Ming Lai. Graduate Institute of Oncology, National Taiwan University College of Medicine, Taiwan, Department of Surgery, National Taiwan University Hospital, Taiwan
Disclosures: Yi-Shiuan Tzeng, None
GATA4 Regulates RUNX2 expression in osteoblasts
Susan Miranda, Aysha Khalid*, Gustavo Miranda-Carboni. University of Tennessee, United states
Disclosures: Aysha Khalid, None

Gut Microbiota Induce IGF-1 and Promote Bone Formation and Growth
Jing Yan*, Jeremy Herzog, Kelly Tsang1, Maureen Bower2, Balfour Sartor2, Antonios Aliprantis2, Julia Charles1, Brigham & Women’s Hospital & Harvard Medical School, United states, University of North Carolina at Chapel Hill, United states
Disclosures: Jing Yan, None

Impact of Maternal Myostatin and the Uterine Environment on Offspring Bone Strength in Wildtype and Osteogenesis Imperfecta Model (oim) Mice
Arin Oestreich*, William Kamp, Marcus McCray, Stephanie Carleton, Natalia Karasseva, Kristin Lenz, Youngjae Jeong, Salah Daghlas, Xiaomei Yao, Yong Wang, Ferris Pfeiffer, Laura Schulz, Charlotte Phillips. Department of Ob, Gyn & Women’s Health, University of Missouri School of Medicine, United states, Department of Biochemistry, University of Missouri, United states, Transgenic Research Core, University of Missouri, United states, Department of Restorative Clinical Sciences, University of Missouri- Kansas City, United states, Department of Oral & Craniofacial Sciences, University of Missouri - Kansas City, United states, Department of Orthopaedic Surgery, University of Missouri, United states, Departments of Biochemistry & Child Health, University of Missouri School of Medicine, United states
Disclosures: Arin Oestreich, None

The RhoGAP Myo9b is Essential for Normal Bone Growth and Osteoblast Responsiveness to IGF-1
Brooke McMichael, Yong-Hoon Jeong, Justin Auerbach, Cheol-Min Han, Ryan Sedlar, Martin Baeher, Sudha Agarwal, Do-Gyoon Kim, Beth Lee. The Ohio State University College of Medicine, United states, The Ohio State University College of Dentistry, United states, Institut fur Molekulare Zellbiologie, Universitat Muenster, Germany
Disclosures: Beth Lee, None

YOUNG INVESTIGATOR AND DIVERSE MEMBER NETWORKING HOUR
Sponsored by the ASBMR Membership Engagement and Education Committee, Diversity in Bone and Mineral Research Subcommittee and Young Investigator Subcommittee
7:15 pm - 8:00 pm Omni Atlanta Hotel at CNN Center International Ballroom A

Young Investigators and diverse members who wish to continue building connections with peers in a fun and informal setting are invited to attend this event.

MUSCLE AND BONE WORKING GROUP
Supported by Stratec Medizintechnik and Novotec Medical GmbH
7:15 pm - 9:45 pm Georgia World Congress Center Room A302

7:30 pm Opening Remarks and Dinner
8:00 pm Sarcopenia and falls related neuromuscular assessment of muscle function
Dieter Felsenberg, Prof. Zentrum für Muskel und Knochen (ZMK), Charité Berlin, Germany

8:20 pm The lower muscle strength strongly predicts osteoporotic fractures more than muscle mass itself in healthy elderly Korean women
Yumie Rhee, Prof. Internal Medicine, Yonsei University College of Medicine, Seoul, Korea
8:40 pm  Comparison of traditional physical functions tests with novel computerized methods  
Björn Bühring, Ass. Prof.  
Assistant Professor of Medicin, Division of Geriatrics and Gerontology / Osteoporosis  
Clinical Research Program University of Wisconsin – Madison, USA

9:00 pm  FORMOsA Project: Study Background and Preliminary Leonardo Mechanography Data  
Lothar Seefried, MD.  
Head, Clinical Trial Unit, Orthopedic Department, University of Wuerzburg, Germany

9:00 pm  Concluding Remarks

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**NUTRITION AND BONE WORKING GROUP**  
*Supported by an educational grant from the National Dairy Council*  
7:15 pm - 9:00 pm  
Georgia World Congress Center  
Room A303

7:15 pm  Introduction  
Sue Shapes, M.D., Rutgers University (USA)

7:20 pm  Dietary Intakes and Sources of P and Its Metabolism  
Kathleen Hil Gallant, M.D., Purdue University (USA)

7:50 pm  The Importance of Diet in the Treatment of CKD-Mineral Bone Disorder  
Sharon Moe, M.D., Indiana University (USA)

8:20 pm  Making Sense of Things that Don’t Make Sense: A Phosphate Mystery  
Linda Casey, M.D., University of British Columbia (Canada)

8:50 pm  Concluding Remarks  
Connie Weaver, M.D., Purdue University (USA)  
Rick Lewis, M.D., University of Georgia (USA)

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**RARE BONE DISEASE WORKING GROUP**  
*Supported by educational grants from Alexion Pharmaceuticals, Clementia Pharmaceuticals, Regeneron Pharmaceuticals and Ultragenyx Pharmaceutical Inc.*  
7:15 pm - 9:45 pm  
Georgia World Congress Center  
Room A311

7:15 pm – 7:30 pm  Dinner

7:30 pm – 8:15 pm  Basic and Translational Research in Fibrodysplasia Ossificans Progressiva (FOP)  
A Tale of Convergence  
Eileen Shore, Ph.D., University of Pennsylvania (USA)  
Aris Economides, Ph.D., Regeneron Pharmaceuticals (USA)  
Edward Hsiao, M.D., Ph.D., University of California (USA)

8:15 pm – 9:15 pm  Discussion of Several Rare Bone Diseases: What We Know and Don’t Know; How Do We Move Forward?  
Osteogenesis Imperfecta  
Jay Shapiro, M.D., Uniform Services University of the Health Services (USA)  
XLH Disorders  
Suzanne Jan De Beur, M.D., Johns Hopkins University Medical Center (USA)  
Hypophosphatasia and Osteopetrosis  
Michael Whyte, M.D., Shriners Hospital (USA)  
Fibrous Dysplasia and Gorham’s Disease  
Michael Collins, M.D., NIDCR/NIH (USA)  
Melorheostosis and Multiple Hereditary Exostoses  
Bart Clarke, M.D., Mayo Clinic (USA)
9:15 pm – 9:45 pm Panel Discussion
Michael Collins, M.D., NIDCR/NIH (USA)
Bart Clarke, M.D., Mayo Clinic (USA)
Faye Chen, Ph.D., NIAMS/NIH (USA)
Aris Economides, Ph.D., Regeneron Pharmaceuticals (USA)
Edward Hsiao, M.D., Ph.D., University of California (USA)
Suzanne Jan De Beur, M.D., Johns Hopkins University Medical Center (USA)
Joan McGowan, Ph.D., NIAMS/NIH (USA)
Jay Shapiro, M.D., Uniform Services University of the Health Services (USA)
Eileen Shore, Ph.D., University of Pennsylvania (USA)
Michael Whyte, M.D., Shriners Hospital (USA)

WORKING GROUP ON AGING
Supported by an educational grant from the National Institute on Aging

7:15 pm - 9:15 pm Georgia World Congress Center
Room A315

Moderated by: Sundeep Khosla, M.D.

7:15 pm Overview of Age-Related Bone Loss
Moustapha Kassem, M.D., Ph.D., Odense University Hospital (Denmark)

7:45 pm Fractures in the Context of Multiple Aging Comorbidities
Deborah Kado, M.D., University of California, San Diego (USA)

8:15 pm Senolytic Drugs to Treat Multiple Aging Conditions
James Kirkland, M.D., Ph.D., Boston University (USA)

8:45 pm Open Discussion

BONE TURNOVER MARKERS WORKING GROUP

7:30 pm - 9:30 pm Georgia World Congress Center
Room A305

7:30 pm Welcome and Introduction
Nuèria Guanabens, MD. University of Barcelona (Spain)
Richard Eastell, MD, FRCP, FRCPath, FMedSci. University of Sheffield (UK)

7:35 pm Treatment targets for bone turnover markers
Samuel Vasikaran, MD. University of Western Australia, Nedlands (Australia)

8:05 pm Periostin action in bone
Nicolas Bonnet, MD. Geneva University Hospital & Faculty of Medicine (Switzerland)

8:45 pm Myokines (myostatin, irisin and agrin)
Nicola Napoli, MD. University Campus Biomedico of Rome (Italy)

9:25 pm Closing Remarks

WOMEN’S COMMITTEE NETWORKING RECEPTION
Supported by UCB and by a donation from Paula H. Stern, Ph.D.

8:00 pm - 9:30 pm Omni Atlanta Hotel at CNN Center
International Ballroom C

Join the ASBMR Women in Bone and Mineral Research Committee and Past ASBMR President, Sylvia Christakos, Ph.D. for a reception and discussion on navigating the “Imposter Syndrome” through your career. Don’t miss this opportunity to network with your fellow colleagues!
SATURDAY, SEPTEMBER 17, 2016

DAY-AT-A-GLANCE

Time/Event/Location All locations in the Georgia World Congress Center unless otherwise noted

6:45 am - 8:00 am ................................................................. 45
ASBMR Networking Breakfast
Room A305

7:00 am - 5:00 pm ................................................................... 45
ASBMR Registration Open
Registration Hall - Main Entrance

8:00 am - 9:30 am ................................................................... 45
Louis V. Avioli Lecture & Presentation of the Louis V. Avioli, Frederic C. Bartter and
Paula Stern Achievement Awards
Thomas B. Murphy Ballroom - Building B Level 5

9:30 am - 4:30 pm ................................................................... 45
Posters Open
ASBMR Discovery Hall - Expo Hall A1

9:30 am - 9:45 am ................................................................... 45
Network Break
ASBMR Discovery Hall - Expo Hall A1

9:45 am - 11:00 am ................................................................... 45
Plenary Orals: Energy Metabolism, Muscle, Bone and Fat
Sidney Marcus Auditorium - Building A

9:45 am - 11:00 am ................................................................... 46
Plenary Orals: Mechanobiology
Room A411/412

11:00 am - 12:00 pm ............................................................. 47
Meet-The-Professor Sessions
Rooms A311-316

11:00 am - 12:00 pm ............................................................. 48
Publications Workshop: Increase Your Chances of Getting Published
Room A302

12:00 pm - 12:30 pm ............................................................. 49
Network Break

12:30 pm - 2:30 pm ............................................................... 49
Poster Session I & Poster Tours
ASBMR Discovery Hall - Expo Hall A1

12:30 pm - 2:30 pm ............................................................... 97
Late-Breaking Posters I
ASBMR Discovery Hall - Expo Hall A1
2:30 pm - 4:00 pm  
Concurrent Orals: Bone Marrow Fat  
*Room A411*

2:30 pm - 4:00 pm  
Concurrent Orals: Musculoskeletal Development  
*Room A402/403*

2:30 pm - 4:00 pm  
Concurrent Orals: Osteoclastogenesis and Bone Resorption  
*Room A404/405*

2:30 pm - 4:00 pm  
Concurrent Orals: Rare Bone Diseases (Clinical)  
*Room A412*

4:00 pm - 4:30 pm  
Network  
*Networking Break*  
*ASBMR Discovery Hall - Expo Hall A1*

4:30 pm - 6:00 pm  
Concurrent Orals: Bone Acquisition and Pediatric Bone Disorders  
*Room A404/405*

4:30 pm - 6:00 pm  
Concurrent Orals: Fracture Epidemiology  
*Sidney Marcus Auditorium - Building A*

4:30 pm - 6:00 pm  
Concurrent Orals: Osteoblast Biology and Pathophysiology  
*Room A411*

4:30 pm - 6:00 pm  
Concurrent Orals: Preclinical Models: Genetics and Pharmacology  
*Room A412*

6:30 pm - 8:30 pm  
Basic Science Evening-Brain Signaling to Bone  
*Room A305*

6:30 pm - 8:30 pm  
Clinical Evening-Can We Close the Treatment Gap for Osteoporosis?  
*Thomas B. Murphy Ballroom - Building B Level 5*

8:30 pm - 11:30 pm  
ASBMR Networking Event  
*Omni Atlanta Hotel at CNN Center, Grand Ballroom*
New Investigators (early-career stage), new ASBMR members and young and diverse investigators are invited to join ASBMR leadership, senior investigators and NIH Representatives for an informal networking breakfast. New Investigators and first-time attendees will have the opportunity to network with multiple senior investigators at tables assigned by topic. Breakfast will be provided.

ASBMR REGISTRATION OPEN
7:00 am - 5:00 pm
Georgia World Congress Center
Registration Hall - Main Entrance

LOUIS V. AVIOLI LECTURE & PRESENTATION OF THE LOUIS V. AVIOLI, FREDERIC C. BARTTER AND PAULA STERN ACHIEVEMENT AWARDS
8:00 am - 9:30 am
Georgia World Congress Center
Thomas B. Murphy Ballroom - Building B Level 5

POSTERS OPEN
9:30 am - 4:30 pm
ASBMR Discovery Hall - Expo Hall A1

DISCOVERY HALL OPEN
9:30 am - 4:30 pm
ASBMR Discovery Hall - Expo Hall A1

NETWORKING BREAK
9:30 am - 9:45 am
ASBMR Discovery Hall - Expo Hall A1

PLENARY ORALS: ENERGY METABOLISM, MUSCLE, BONE AND FAT
9:45 am - 11:00 am
Sidney Marcus Auditorium - Building A
9:45 am ASBMR 2016 Annual Meeting Young Investigator Award

9:45 am - 11:00 am Georgia World Congress Center
Room A411/412

Moderators:
Tamara Alliston, Ph.D.
University of California, San Francisco, USA
Disclosures: Tamara Alliston, None

9:45 am ASBMR 2016 Annual Meeting Young Investigator Award

9:45 am
Hypoxia Signaling-Induced Glycolytic Metabolism in Osteoblasts can Affect Systemic Glucose Homeostasis by Increasing Glucose Utilization by the Skeleton
Naomi Dirckx*, Robert J. Tower¹, Evi M. Mercken¹, Tom Breugelmans¹, Elena Nefyodova¹, Roman Vangoitsenhoven², Bart Van der Schueren², Chantal Mathieu², Thomas L. Clemens¹, Christa Maes¹. ¹Laboratory of Skeletal Cell Biology & Physiology (SCEBP), Skeletal Biology & Engineering Research Center (SBE), KU Leuven, Belgium, ²Clinical & Experimental Endocrinology, KU Leuven, Belgium, ³Department of Orthopaedic Surgery, John Hopkins University School of Medicine, United states
Disclosures: Naomi Dirckx, None

10:00 am Sclerostin influences body composition by regulating catabolic and anabolic metabolism in adipocytes

10:00 am - 11:00 am Georgia World Congress Center
Room A411/412

Moderators:
Patricia Ducy, Ph.D.
Columbia University, USA
Disclosures: Patricia Ducy, None

Gabriel Mbalaviele, Ph.D.
Washington University in St. Louis School of Medicine, USA
Disclosures: Gabriel Mbalaviele, None

10:00 am ASBMR 2016 Annual Meeting Young Investigator Award

10:00 am
Sclerostin influences body composition by regulating catabolic and anabolic metabolism in adipocytes
Julie Frey, Soohyun Kim, Zhu Li, Ryan Tomlinson, Mehboob Hussain, Daniel Thorek, Michael Wolfgang, Ryan Riddle*. Johns Hopkins University, United states
Disclosures: Ryan Riddle, None

10:15 am ASBMR 2016 Annual Meeting Young Investigator Award

10:15 am
Regulation of Appetite by the Skeleton
Ioanna Mosialou*, Steven Shikhel, Na Luo, Stavroula Kousteni. Columbia University, United states
Disclosures: Ioanna Mosialou, None

10:30 am ASBMR 2016 Annual Meeting Young Investigator Award

10:30 am
Succinate and its G-Protein-Coupled Receptor Stimulates Osteoclastogenesis and Bone Loss
Yuqi Guo*, Tao Yu, Jian Yang, Xin Li. New York University, United states
Disclosures: Yuqi Guo, None

10:45 am ASBMR 2016 Most Outstanding Basic Award

10:45 am
Mechanically-Induced Calcium Oscillations in Osteocytes Facilitate Release of RANKL, OPG, and Sclerostin Through Extracellular Vesicles and Mediate Skeletal Adaptation
Disclosures: Genevieve Brown, None
10:00 am Subchondral bone plate sclerosis during late osteoarthritis is mediated by loading-induced decrease in Sclerostin amount
Haoruo Jia*1, Xiaoyuan Ma1, Zhaochun Yang2, Zeyang Sun3, Wei Tong1, Lin Han4, James H-C. Wang5, Motomi Enomoto-Iwamoto*, Ling Qin1. 1Department of Orthopaedic Surgery, School of Medicine, University of Pennsylvania, United States, 2Department of Orthopaedic Surgery, University of Pittsburgh School of Medicine, United States, 3School of Engineering & Applied Science, University of Pennsylvania, United States, 4School of Biomedical Engineering, Science & Health Systems, Drexel University, United States, 5Department of Surgery, The Children’s Hospital of Philadelphia, United States
Disclosures: Haoruo Jia, None

10:15 am Mechanical Loading Induces CD31hiEmcnhi Vessel Formation by Preosteoclast Secretion of PDGF-BB
Weicheng Xu*, Hui Xie1, Ryan Tomlinson1, Zhuying Xia1, Genevieve Brown2, Maureen Pickarski3, Le Duong4, X. Edward Guo5, Xu Cao1. 1Department of Orthopaedic Surgery, Johns Hopkins University School of Medicine, United States, 2Department of Biomedical Engineering, Columbia University, United States, 3Merck Res. Lab, Bone Biology Group, United States, 4Merck Res. Labs., Bone Biology Group, United States
Disclosures: Weicheng Xu, None

10:30 am Plasma Membrane Disruptions are a Novel Mechanosensation Mechanism in Osteocytes
Kanglun Yu1, Ahmed Elsherbini1, David Sellman2, Kayce Vanpelt1, Oran Kennedy3, Anna McNeil4, Paul McNeil5, Meghan McGee-Lawrence1. 1Augusta University, United States, 2Medical College of Georgia, Augusta University, United States, 3NYU, United States
Disclosures: Meghan McGee-Lawrence, None

10:45 am Sensory Nerve Signals Mediate Skeletal Adaptation to Mechanical Loads
Ryan Tomlinson*, Zhi Li, Ryan Riddle, Thomas Clemens. Johns Hopkins University, United States
Disclosures: Ryan Tomlinson, None

MEET-THE-PROFESSOR SESSIONS
11:00 am - 12:00 pm Georgia World Congress Center Rooms A311-316
Meet the Professor: Biomechanics Meets Bone Biology: The Ultimate in Multidisciplinary Translational Research
Room A311
Clifford Rosen, M.D.
Maine Medical Center, USA
Disclosures: Clifford Rosen, None

Meet the Professor: Following up GWAS Findings - From the Dry Lab to the Wet Lab
Room A313
Brent Richards
McGill University, Canada
Disclosures: Brent Richards, None

Matthew Maurano, Ph.D.
New York University,
Disclosures: Matthew Maurano, None

Meet the Professor: Matricellular Proteins in Bone Remodeling and Repair: Novel Insights
Room A314
Andrea Alford, Ph.D.
University of Michigan, USA
Disclosures: Andrea Alford, None
Meet the Professor: Progenitors for Bone Growth and Repair
Room A315
Kurt Hankenson, D.V.M., Ph.D.
Michigan State University, USA
Disclosures: Kurt Hankenson, None

Meet the Professor: Sequential and Combination Therapy for Osteoporosis: Where Are We Now?
Room A312
Henry Kronenberg, M.D.
Massachusetts General Hospital, USA
Disclosures: Henry Kronenberg, None

Meet the Professor: Phosphate Sensing: Two Sensors - A Metabolic and an Endocrine One?
Room A316
Noriaki Ono, D.D.S., Ph.D.
University of Michigan School of Dentistry, USA
Disclosures: Noriaki Ono, None

Felicia Cosman, M.D.
Helen Hayes Hospital/Columbia University College of Physicians and Surgeons, USA
Disclosures: Felicia Cosman, Amgen, Eli Lilly 15; Amgen, Eli Lilly, Merck, Radius, Tarsa 14; Amgen, Eli Lilly 13

Meet the Professor: Progenitors for Bone Growth and Repair
Room A315

Meet the Professor: Sequential and Combination Therapy for Osteoporosis: Where Are We Now?
Room A312

Meet the Professor: Phosphate Sensing: Two Sensors - A Metabolic and an Endocrine One?
Room A316

PUBLICATIONS WORKSHOP: INCREASE YOUR CHANCES OF GETTING PUBLISHED
11:00 am - 12:00 pm Georgia World Congress Center
Room A302

Meet with JBMR® Editor-in-Chief Dr. Juliet Compston at this year’s Publications Workshop. You’ll learn how to improve the quality of your journal manuscripts, what JBMR® is looking for and how to increase your chances of getting published. Whether you’re a new author considering submitting a paper or a seasoned journal contributor, don’t miss this unique opportunity to hear directly from and interact with JBMR®’s editor!

ASBMR/IOF CO-SPONSORED SESSION - FRACTURE RISK ASSESSMENT TO TARGET TREATMENT: EFFECTIVENESS AND COST-UTILITY
11:00 am - 12:00 pm Georgia World Congress Center
Room A404/405

Co-Chairs
John Kanis, M.D.
University of Sheffield, United Kingdom
Disclosures: John Kanis, None

Jane Cauley, Ph.D.
University of Pittsburgh Graduate School of Public Health, USA
Disclosures: Jane Cauley, None

11:00 am Economic Consequences of Treatment on Basis of Fracture Risk Assessment
Eugene McCloskey, M.D., MRCP, M.B.
University of Sheffield, United Kingdom
Disclosures: Eugene McCloskey, None
11:20 am Innovations in Approach to Absolute Risk Assessment
Cyrus Cooper, D.M., FRCP, MedSci
University of Southampton, United Kingdom
Disclosures: Cyrus Cooper, None

11:40 am Prospective RCTs to Evaluate Effectiveness of Such Strategies
Michael McClung, M.D.
Oregon Osteoporosis Center, USA
Disclosures: Michael McClung, Radius 14; Amgen 14; Merck 14

NETWORKING BREAK
12:00 pm - 12:30 pm

POSTER SESSION I & POSTER TOURS
12:30 pm - 2:30 pm
Georgia World Congress Center
ASBMR Discovery Hall - Expo Hall A1

Odd # Posters will present from 12:30 pm - 1:30 pm
Even # Posters will present from 1:30 pm - 2:30 pm

ADULT METABOLIC BONE DISORDERS: OSTEOMALACIA AND VITAMIN D DEFICIENCY

SA0001 Serum 25-Hydroxyvitamin D Values and Risk of All-Cause Mortality: A Population-Based, Retrospective, Cohort Study
Daniel Dudenkov*, Kristin Mara, Tanya Petterson, Julie Maxson, Tom Thacher. Mayo Clinic, United states
Disclosures: Daniel Dudenkov, None

SA0002 The Association of Gender, Antiepileptic Drug Use and Hypovitaminosis D among Patients with Epilepsy
Poranee Ganokroj, Natnicha Houngngam, Lalita Wattanachanya*. Chulalongkorn University & King Chulalongkorn Memorial Hospital, Thailand
Disclosures: Lalita Wattanachanya, None

SA0003 Vitamin D in Older People (VDOP): A Does Ranging Intervention Trail to Prevent Bone Loss
Terry J Aspray*, Roger M Francis1, Elaine McColl2, Thomas J Chadwick2, Elaine Stamp2, Ann Prentice3, Inez Schoenmakers3. 1Institute for Cellular Medicine, Newcastle University, United Kingdom, 2Institute for Health & Society, Newcastle University, United Kingdom, 3MRC Human Nutrition Research, United Kingdom
Disclosures: Terry J Aspray, None

ADULT METABOLIC BONE DISORDERS: OTHER ADULT METABOLIC BONE DISORDERS

SA0004 Clinical Characteristics, Causes and Survival in 115 Cancer Patients with PTHrP-mediated Hypercalcemia
Dong Jin Chung*, Joon Jin, Jin Ook Chung, Dong Hyeok Cho, Min Young Chung. Chonnam National University Medical School, Korea, republic of
Disclosures: Dong Jin Chung, None

SA0005 Relationship between biochemical and imaging biomarkers of vascular calcification in normal weight, overweight and obese individuals
Antoine Bouquegneau*, Jennifer Walsh2, Amy Evans2, Fatma Gossiel2, Margaret Paggiosi2, Richard Eastell2. 1Department of Nephrology - Dialysis - Transplantation CHU Sart-Tilman, Liège, Belgium, Belgium, 2Mellanby Centre for Bone Research, Department of Oncology & Metabolism, The University of Sheffield, Sheffield, United Kingdom, United Kingdom
Disclosures: Antoine Bouquegneau, None
ADULT METABOLIC BONE DISORDERS: PAGET’S DISEASE

SA0006  ASBMR 2016 Annual Meeting Young Investigator Award
Measles Virus Nucleocapsid Protein Expressing Osteoclasts Increase Expression of SPHK1/S1P1/S1PR3 to Enhance Osteoblast Differentiation in Paget’s Disease
Yuki Nagata1, Yasuhisa Ohata1, Jolene Windle2, David Roodman3, Noriyoshi Kurihara1.
1Medicine / Hematology-Oncology, Indiana University, United states, 2Human & Molecular Genetics, Virginia Commonwealth University, United states, 3Medicine / Hematology-Oncology, Indiana University; Roudebush VA Medical Center, United states
Disclosures: Yuki Nagata, None

SA0007 2016 ASBMR Fund for Research and Education Young Investigator Award
MVNP Modulation of NFAM1 Signaling Enhances Osteoclast Formation and Bone Resorption Activity in Paget’s Disease of Bone
Yuvaraj Sambandam1, Kumaran Sundaram1, Takamitsu Saigusa2, Sudhaker Rao3, William Ries4, Sakamuri Reddy1. 1Darby Children’s Research Institute, Medical University of South Carolina, United states, 2Division of Nephrology, Medical University of South Carolina, United states, 3Henry Ford Hospital, United states, 4College of Dental Medicine, Medical University of South Carolina, United states
Disclosures: Yuvaraj Sambandam, None

ADULT METABOLIC BONE DISORDERS: PARATHYROID DISORDERS

SA0008 An overview of the etiology, clinical manifestations, management strategies and complications of hypoparathyroidism: An update from the Canadian National Hypoparathyroidism Registry
Aliya Khan*, Reema Shah, Hamid Syed, Tayyab Khan, J.E.M. Young. McMaster University, Canada
Disclosures: Aliya Khan, None

SA0009 Determinants of Bone Mineral Density Changes Post-Parathyroidectomy in Patients with Primary Hyperparathyroidism
Shilpa Shetty*, Li Hao Richie Xu, Beverley Huet, John Poindexter, Jennifer Rabaglia, Naim Maalouf. UT Southwestern Medical Center, United states
Disclosures: Shilpa Shetty, None

SA0010 Expression profile of microRNAs in multiple endocrine neoplasia type 1
gurjeet kaur*, Sanjay Bhadada1. 1PhD student, India, 2Additional Professor, India
Disclosures: gurjeet kaur, None

SA0011 Long-Term rhPTH(1-84) Administration Persistently Affects Bone Remodeling Dynamics and Structure in Hypoparathyroidism
Mishaela Rubin*, Natalie Cusano, Hua Zhou, Wen-Wei Fan, Diane Cozadd, Aline Costa, David Dempster, John Bilezikian. Columbia University, United states
Disclosures: Mishaela Rubin, Shire Pharma, 13

SA0012 PTH(1-34) for the primary prevention of post-surgical hypocalcemia: an interventional prospective randomized trial (THYPOS trial)
Andrea Palermo*, Nicola Napoli1, Gaia Tabacco2, Giuseppe Mangiamei2, Filippo Longo3, Daria Maggi2, silvia Briganti2, angelo Lauria Pantano2, Anda Naciu3, Silvia Angeletti4, Fabio Vescini4, Paolo Pozzilli5, Pier Filippo Crucitti2, Silvia Manfrini2.
1University Campus Bio-Medico, Italy, 2Department of endocrinology, University Campus Bio-Medico, Italy, 3Department of Surgery, university Campus Bio-Medico, Italy, 4laboratory, University Campus Bio-Medico, Italy, 5Department of Endocrinology, Ospedaliero-Universitaria Santa Maria della Misericordia di Udine, Italy
Disclosures: Andrea Palermo, None

SA0013 Site Specific Difference Of Bone Geometry Indices In Hypoparathyroid Patients
HyeSun Park*, Sung kil Lim, Yumie Rhee, Da Hea Seo, Dongdong Zhang. Division of Endocrinology & Metabolism, Department of Internal Medicine, Yonsei University College of Medicine, Korea, republic of
Disclosures: HyeSun Park, None
BIOMECHANICS AND BONE QUALITY: ASSESSMENT OF BONE QUALITY AND STRENGTH

SA0014 AFM & AFM-IR Studies of Collagen Microstructure and Chemical Composition for Estrogen Depleted and Drug Treated Cortical Bone and Lumbar Vertebrae
Mark M Banaszak Holl*1, Meagan Cauble2, Matthew Muckle3, Taeyong Ahn4, Sriram Vaidyanathan5, Rachel Merzel6, Jeffrey A. Fessler3, Bradford G. Orr6, Le T. Duong7.
1Macromolecular Science & Engineering, 2Chemistry, 3Biomedical Engineering, University of Michigan, United states, 4Macromolecular Science & Engineering, Univ of Michigan, United states, 5Biomedical Engineering, Univ of Michigan, United states, 6Univ of Michigan, United states, 7Merck & Co., United states
Disclosures: Mark M Banaszak Holl, None

SA0015 Age and Gender Differences in Loading Induced Strain and Biomechanical Properties of C57Bl/6 Mice
Mark T. Begonia, Hammad Mumtaz, Mark Dallas, An-Lin Cheng, Ganesh Thiagarajan*, Mark L. Johnson. University of Missouri-Kansas City, United states
Disclosures: Ganesh Thiagarajan, None

SA0016 Alendronate treatment improves vertebral structural properties and maintains vertebral trabecular bone material properties in hound dogs
Daniel J Brooks1, Julia N Moulton1, Caroline DiNapoli2, Tessabella Magliochetti2, Stephanie McCarthy1, Robert M Urban3, Deborah J Hall3, Thomas M Turner3, Mary L Bouxsein4, 1Center for Advanced Orthopaedic Studies, Beth Israel Deaconess Medical Center, United states, 2Center for Advanced Orthopedic Studies, Beth Israel Deaconess Medical Center, United states, 3Rush University Medical Center, United states, 4Center for Advanced Orthopedic Studies, Beth Israel Deaconess Medical Center & Department of Orthopedic Surgery, Harvard Medical School, United states
Disclosures: Mary L Bouxsein, Merck, 100

SA0017 Feasibility of Quantitative In Vivo Assessment of Mineral and Matrix Properties by Solid-State Phosphorus-31 and Proton Magnetic Resonance
Xia Zhao*1, Hee Kwon Song1, Cheng Li1, Alan C Seifert2, Felix W Wehrli1. 1University of Pennsylvania, United states, 2Icahn School of Medicine at Mount Sinai, United states
Disclosures: Xia Zhao, None

SA0018 Glycated Osteocalcin Contributes to Loss of Bone Toughness
Stacyann Morgan*1, Caren Gundberg2, Gerard Karsenty3, Deepak Vashishth1. 1Rensselaer Polytechnic Institute, United states, 2Yale University, United states, 3Columbia University, United states
Disclosures: Stacyann Morgan, None

SA0019 Mapping of Trabecular Anisotropy Improves QCT-based Finite Element Estimation of Hip Strength in Pooled Stance and Side-Fall Load Configurations
Jarunan Panyasantisuk*1, Enrico Dall’Ara2, Dieter Pahr3, Philippe Zysset1. 1Institute for Surgical Technology & Biomechanics, University of Bern, Switzerland, 2Department of oncology & metabolism & INSIGNEO Institute for in silico medicine, University of Sheffield, United Kingdom, 3Institute of Lightweight Design & Structural Biomechanics, Vienna University of Technology, Austria
Disclosures: Jarunan Panyasantisuk, None

SA0020 Matrix-bound water concentration is lower in mice with brittle bones caused by osteogenesis imperfecta and separately ATF4 deficiency
Mathilde Granke*1, Sasidhar Uppuganti1, Amy Creecy1, Julie Schnur2, Ben Greene3, Mark Does2, Jeffry Nyman1. 1Vanderbilt university Medical Center, United states, 2Vanderbilt University, United states, 3Genzyme, United states
Disclosures: Mathilde Granke, None

SA0021 Role of Advanced Glycation End-Products and Cortical Porosity in Type 2 Diabetes
Lamya Karim*1, Miranda Van Vliet2, Kelsey Vele2, Ayesha Abdeen1, Douglas Ayres1, Mary Bouxsein1. 1Harvard Medical School, United states, 2Beth Israel Deaconess Medical Center, United states
Disclosures: Lamya Karim, None
BIOMECHANICS AND BONE QUALITY: DISUSE OSTEOPOROSIS – ANIMAL MODELS

SA0023 Bisphosphonate Pre-Treatments Enhance Trabecular Bone Architecture during Unloading and Reambulation Despite Lower Resorption and Formation
Jeremy Black*1, Jessica Brezicha1, Corinne Metzger2, Scott Lenfest1, Jennifer Kosniewski1, Susan Bloomfield1, Matt Allen1, Harry Hogan1,2, TAMU Department of Mechanical Engineering, United states, 3TAMU Department of Biomedical Engineering, United states, 4TAMU Department of Health & Kinesiology, United states, 5Department of Anatomy & Cell Biology, Indiana University School of Medicine, United states, 6TAMU Department of Mechanical Engineering/ Department of Biomedical Engineering, United states
Disclosures: Jeremy Black, None

SA0024 Collagen nanoeelasticity is tunable via osmotic pressure
Orestis Andriotis, Sylvia Desissaire, Philipp Thurner*. Vienna University of Technology, Austria
Disclosures: Philipp Thurner, None

SA0025 Withdrawn

SA0026 Long-term Administration of Oncology Doses of Zoledronic Acid does not Compromise Femoral Biomechanical Properties in Rice Rats (Oryzomys palustris)
Disclosures: Jonathan Messer, None

SA0027 Identification of the Damping Matrix for a Dynamic Finite Element Model of the rat Forelimb
Wubin Cheng*, Kim Harrison, Majid Nazemi, David Cooper, James Johnston. University of Saskatchewan, Canada
Disclosures: Wubin Cheng, None

SA0028 Nanoparticulate Mineralized Collagen Scaffolds Induce in Vivo Bone Regeneration Independent of Progenitor Cell Loading or Exogenous Growth Factor Stimulation
Xiaoyan Ren*1, Victor Tu1, David Bischoff2, Daniel Weisgerber3, Michael Lewis4, Dean Yamaguchi5, Timothy Miller6, Brendan Harley3, Justine Lee6. 1UCLA & VA Great Los Angeles Healthcare System, United states, 2VA Great Los Angeles Healthcare System, United states, 3University of Illinois at Urbana-Champaign, United states, 4VA Great Los Angeles System, United states, 5VA Great Los Angeles Healthcare System, United states, 6UCLA & VA Great Los Angeles Healthcare System, United states
Disclosures: Xiaoyan Ren, None

SA0029 Sensitivity of Proximal Femur Regions to Mechanical Loading in Young Adults
Fátima Baptista*, Edgar Lopes, Vera Zymbal. Exercise & Health Laboratory, Faculty of Human Kinetics, University of Lisbon, Portugal
Disclosures: Fátima Baptista, None

SA0030 Why Do Spine Fusions Fail?
J Edward Puzas*. University of Rochester School of Medicine & Dentistry, United states
Disclosures: J Edward Puzas, None
SA0031 Novel Associations Between Reduced Serum Sclerostin and Adaptive Bone Changes Following Exercise Training
Melissa Ramcharan*, Rachel Izard1, Bonnie Nolan1, Lauren Smith1, Stephen Schlecht1, William Fraser3, Julie Greeves4, Karl Jepsen1, 1University of Michigan, United states, 2HQ Army & Training Division, United Kingdom, 3Norwich Medical School, University of East Anglia, United Kingdom, 4HQ Army Recruiting & Training Division, United Kingdom
Disclosures: Melissa Ramcharan, None

SA0032 Associations of Behavioral Characteristics of Young Adults and Bone Health: Iowa Bone Development Study (IBDS)
Elena Letuchy, Julie Eichenberger*, Linda Snetselaar, Kathleen Janz, Trudy Burns, Punam Saha, James Torner, Steven Levy. University of Iowa, United states
Disclosures: Julie Eichenberger, None

SA0033 Lean and fat mass indices: An alternative to BMI for assessing growth outcomes in young children
Neil R. Brett*, Kristina E. Parsons, Catherine Vanstone, Hope A. Weiler. McGill University, Canada
Disclosures: Neil R. Brett, None

SA0034 Poor Glycemic Control is Associated with Greater Urinary Calcium Excretion in Adolescents with Type 1 Diabetes
David Weber*, Kimberly O’Brien2, Mary Leonard3, Noya Rackovsky4, George Schwartz4. 1University of Rochester, United states, 2Cornell University, United states, 3Stanford University, United states, 4University of Rochester, United states
Disclosures: David Weber, None

SA0035 Precision of pQCT Measurements of Total, Trabecular and Cortical Bone Area, Content, Density, and Strength in Children
Whitney Duff*, Kelsey Björkman2, Chantal Kawalilak3, Sheldon Wiebe4, Saija Kontulainen2. 1Department of Gastroenterology, College of Medicine, University of Saskatchewan, Canada, 2College of Kinesiology, University of Saskatchewan, Canada, 3Department of Mechanical Engineering, College of Engineering, University of Saskatchewan, Canada, 4Department of Radiology, College of Medicine, University of Saskatchewan, Canada
Disclosures: Whitney Duff, None

SA0036 Prickle1 is required for neural crest development
Yong Wan*, Brandi Gillian, Brian Cusack, Heather Szabo-Rogers. university of pittsburgh, United states
Disclosures: Yong Wan, None

SA0037 Sexual Dimorphism in the Distal Radius and Tibia Bone Size, Density, Micro-architecture and Strength is Manifested in Favor of Boys Already in Childhood
Saija Kontulainen*, Kelsey Bjorkman1, Chantal Kawalilak1, Whitney Duff2, Hassanali Vatanparast1, J.D. Johnston1. 1University of Saskatchewan, Canada, 2University of Saskatchewan, Canada
Disclosures: Saija Kontulainen, None

SA0038 The Muscle-Dependent Link Between IGF-I and Cortical Bone is Suppressed in Children with Insulin Resistance
Joseph Kindler*, Norman Pollock2, Emma Laing1, Carlos Isales2, Mark Hamrick2, Ke-Hong Ding2, Dorothy Hausman1, George McCabe2, Berdine Martin1, Kathleen Hill Gallant1, Stuart Warden3, Connie Weaver3, Munro Peacock4, Richard Lewis1. 1The University of Georgia, United states, 2Augusta University, United states, 3Purdue University, United states, 4Indiana University, United states
Disclosures: Joseph Kindler, None
SA0039 Intestinal microbiome present in Crohn disease impairs the skeletal health and linear growth
Anu Maharjan*, Young Huh, Maureen Bower, Hong Yuan, Young Truong, Ian Carroll, Francisco Sylvester. University of North Carolina, United states

Disclosures: Anu Maharjan, None

SA0040 Aging bone marrow microenvironments impart age-associated changes to hematopoietic stem and progenitor cells
Corey Hoffman, Frank Akwaa, Rachel Rubinova, John Ashton, Mark LaMere, Brandon Zaffuto, Michael Becker, Benjamin Frisch*, Laura Calvi. University of Rochester School of Medicine & Dentistry, United states

Disclosures: Benjamin Frisch, None

SA0041 Erythropoietin signaling regulates bone homeostasis
Luis Fernandez De Castro Diaz*, Soumyadeep Dey, Pamela Robey, Constance Noguchi, Sukanya Suresh. 1Skeletal Biology Section, Craniofacial & Skeletal Diseases Branch, National Institute of Dental & Craniofacial Research, NIH, United states, 2Molecular Medicine Branch, National Institute of Diabetes & Digestive & Kidney Diseases, United states

Disclosures: Sukanya Suresh, None

SA0042 Macrophage Progenitor RIP140 Knockdown Regulates Osteoclast Differentiation and Results in Osteopenia
Bomi Lee*, Urszula T. Iwaniec, Russell T. Turner, Li-Na Wei, Anne Gingery. 1University of Minnesota, United states, 2Oregon State University, United states, 3Mayo Clinic, United states

Disclosures: Bomi Lee, None

SA0043 Fat, Inflammation, and Aging
Raysa Rosario*, Hongfang Yu, Mark Hamrick, Carlos Isales, Babak Baban, Xing-Ming Shi. Georgia Regents University, United states

Disclosures: Raysa Rosario, None

SA0044 HDL is essential for normal bone formation in mice
Harry Blair*, Elena Kalyvioti, Nicholas Papachristou, Irina Tourkova, Spyros Syggelos, K.E. Kyptos, Dionysios Papachristou. 1Veteran’s Affairs Medical Center & Departments of Pathology & Cell Biology, University of Pittsburgh, United states, 2Department of Anatomy-Histology-Embryology, & the Unit of Bone & Soft Tissue Studies, University of Patras Medical School, Greece, 3Pittsburgh VA Medical Center, & Departments of Pathology & Cell Biology, University of Pittsburgh, United states, 4Dept. Of Pharmacology, School of Medicine, University of Patras, Greece, 5Dept. Of Pharmacology, School of Medicine, Universirty of Patras., Greece

Disclosures: Harry Blair, None

SA0045 Bioactive PTHrP(12-48) modulates the bone marrow microenvironment independent of PTH1 receptor, is internalized into cells, and suppresses osteoclast differentiation and lifespan
Charity Washam*, Diarra Williams, Archana Kamalakar, Nisreen Akel, Frances Swain, Dana Gaddy, Larry Suva. Texas A&M University, United states

Disclosures: Charity Washam, None
SA0046  Leukemia inhibitory factor receptor (LIFR) signals via Stat3 to mediate tumor dormancy in bone
Rachelle Johnson*, Rebecca Miao, Amato Giaccia. Stanford University, United states
Disclosures: Rachelle Johnson, None

**BONE TUMORS AND METASTASIS: GENERAL**

SA0047  Oncogenic and Osteolytic Function of Histone Demethylase NO66 in Prostate Cancer induced Bone Metastasis
Krishna Sinha*, Rozita Bagheri-Yarmand2, Nora Navone2, Xinhai Wan2, Christopher Logothetis2, robert Gagel3, Johnny Huard1. 1UT Health Science Center at Houston, United states, 2MD Anderson Cancer Center, United states
Disclosures: Krishna Sinha, None

SA0048  PKC-Zeta downregulation associates with metabolic plasticity in breast cancer cells during bone metastasis
Manish Tandon*, Jitesh Pratap. Rush University Medical Center, United states
Disclosures: Manish Tandon, None

SA0049  The Effects of Low Magnitude Mechanical Signals on Myeloma-induced Osteolysis are Both Anti-resorptive and Systemic
Gabriel M. Pagnotti*1, Kimberly DeCarr1, Janet Rubin2, Steven D. Bain3, Clinton T. Rubin1. 1Stony Brook University, United states, 2University of North Carolina: Chapel Hill, United states, 3University of Washington, United states
Disclosures: Gabriel M. Pagnotti, None

SA0050  The Role of the COP9 Signalosome in the Pathogenesis of Osteosarcoma
William Samsa*, Guang Zhou. Case Western Reserve University, United states
Disclosures: William Samsa, None

**BONE TUMORS AND METASTASIS: MECHANISMS OF BONE METASTASIS**

SA0051  Novel ERα positive breast cancer model with estrogen independent growth in the bone microenvironment
Biancamaria Ricci*, Aude-Hélène Capietto2, Szeman Ruby Chan3, Debora V Novak4, Robert D Schreiber5, Roberta Faccio2. 1Department of Orthopaedic Surgery - Washington University School of Medicine, United states, 2Department of Orthopaedic Surgery - Washington University School of Medicine, United states, 3Department of Pathology & Immunology - Washington University School of Medicine, United states, 4Department of Pathology & Immunology- Washington University School of Medicine, United states
Disclosures: Biancamaria Ricci, None

**BONE TUMORS AND METASTASIS: THERAPEUTIC TARGETS FOR BONE TUMORS**

SA0052  Effects of cabozantinib alone and in combination with bortezomib in the 5TGM1 murine multiple myeloma model
Mari I Suominen*, Katja M Fagerlund1, Esa Alhoniemi2, Jukka P Rissanen1, Jussi M Halleen1, Dana T Aftab3. 1Pharmatest Services Ltd., Finland, 2Avoltus Oy, Finland, 3Exelixis Inc., United states
Disclosures: Mari I Suominen, Pharmatest Services Ltd, 17

**CHONDROCYTES AND CARTILAGE MATRIX: ARTICULAR CARTILAGE**

SA0053  A Novel Protective Role of GPNMB/Osteoactivin in Post-traumatic Osteoarthritis
Asaad Al Adlaan*, Nazar Hussein1, Fatima Jaber1, Tariq Haqqi2, Fayez Safadi2. 1Kent State University, United states, 2Northeast Ohio Medical University, United states
Disclosures: Asaad Al Adlaan, None

SA0054  Articular Cartilage Preservation in Mice Lacking Cathepsin K
Fabiana Soki*, Ryu Yoshida1, David N. Paglia1, Maureen Pickarski2, Marc Hansen1, Le Duong2, Hicham Drissi1. 1Uconn Health Center, United states, 2Merck & Co., Inc., United states
Disclosures: Fabiana Soki, None
Activation in Postnatal Chondrocytes Results in a Chronic Inflammatory Environment within the Knee Joint and Recapitulates an Age-Associated Osteoarthritis Phenotype

Sarah Catheline*, Martin Chang, Michael Zuscik, Jennifer Jonason. University of Rochester, United States
Disclosures: Sarah Catheline, None

Repair of Focal Cartilage Defects in the Rat using Human Embryonic Stem Cell-Derived Articular Cartilage Tissues

April Craft*, 1 Subhash Junega, 2, Heather Whetstone, 3 Christian Veillette, 2 Gordon Keller. 4 1Boston Children’s Hospital, Harvard Medical School, United States, 2Arthritis Program, Toronto Western Hospital, Canada, 3Hospital for Sick Children, Canada, 4McEwen Centre for Regenerative Medicine, University Health Network, Canada
Disclosures: April Craft, None

Saturated Fatty Acids Differently Alter Osteoarthritis Development in Diet Induced Obese Rats

Indira Prasadam*, Sunderajhan Sekar, Yin Xiao, Ross Crawford. Institute of Health & Biomedical Innovation & Queensland University of Technology, Australia
Disclosures: Indira Prasadam, None

CHONDROCYTES AND CARTILAGE MATRIX: GENERAL

Modulation of Hypoxia Signaling, but not Angiogenesis Alone, Improves Regenerative Outcome During Endochondral Bone Tissue Engineering

Disclosures: Pieter-Jan Stiers, None

mTORC1 Modulates Craniofacial Cartilage Development in Zebrafish and Mice

Meng Xie*, 1 Lei Li, 1 Phillip Newton, 1 Evgeny Ivashkin, 1 Vyacheslav Dyachuk, 2 Olov Andersson, 3 Hong Qian, 4 Igor Adameyko, 1 Andrei Chagin. 1 Department of Physiology & Pharmacology, Karolinska Institutet, Stockholm SE-171 77, Sweden., Sweden, 2Neuroscience Dep., Karolinska Institutet, Sweden, 3Department of Cell & Molecular Biology (CMB), C5, Karolinska Institutet, Sweden, 4Department of Medicine, Huddinge (MedH), H7, Karolinska Institutet, Sweden
Disclosures: Meng Xie, None

Raf Kinases are Essential for Phosphate Induction of Erk1/2 Phosphorylation in Hypertrophic Chondrocytes and Normal Endochondral Bone Development

Garyfallia Papaioannou*, 1 Elizabeth T. Petit, 2 Eva S. Liu, 3 Manuela Baccarini, 4 Catrin Pritchard, 3 Marie B. Demay. 1 Endocrine Unit, Massachusetts General Hospital & Harvard Medical School, United States, 2Endocrine Unit, Massachusetts General Hospital, United States, 3Endocrine Unit, Massachusetts General Hospital, Harvard Medical School & Brigham & Women’s Hospital, United States, 4Department of Microbiology, Immunology & Genetics, Center of Molecular Biology, Max F. Perutz Laboratories, University of Vienna, Austria, 5Department of Molecular Cell Biology, University of Leicester, UK, United Kingdom
Disclosures: Garyfallia Papaioannou, None

CHONDROCYTES AND CARTILAGE MATRIX: ORIGIN, DIFFERENTIATION, APOPTOSIS

Role of Discoidin Receptor 2 in Intervertebral Disc Development and Degeneration

chunxi Ge*, 1 Ernestina Schipani, 2 Renny Franceschi, 1 Hanshi Sun. 1 University of Michigan School of Dentistry, United States, 2University of Michigan School of Medicine, United States
Disclosures: chunxi Ge, None
SA0062 Inhibition of Epigenetic Factor Dnmt3b within Articular Chondrocytes Coordinates Cellular Metabolic Response during the Development of Osteoarthritis
Jie Shen1, Cuicui Wang1, Daofeng Li2, Jason Myers3, John Ashton3, Audrey McAlinden1, Ting Wang2, Regis O’Keeffe1. 1Department of Orthopaedic Surgery, School of Medicine, Washington University in St. Louis, United states, 2Department of Genetics, School of Medicine, Washington University in St. Louis, United states, 3University of Rochester Medical Center, United states
Disclosures: Jie Shen, None

ENERGY METABOLISM AND BONE: DIABETES AND BONE (ANIMAL MODELS)

SA0063 Bone-Derived Lipocalin 2 is an Anorexigenic Hormone
Steven Shikhel*, Stavroula Kousteni. Columbia University, United states
Disclosures: Steven Shikhel, None

SA0064 Osteoblastic Hdac3 Expression Systemically Regulates Energy Metabolism
Jessica Pierce1, Kanglan Yu1, Ahmed Elsherbini1, Elizabeth Bradley2, Jennifer Westendorf3, Meghan McGee-Lawrence3, 1Augusta University, United states, 2Mayo Clinic, United states, 3Medical College of Georgia, Augusta University, United states
Disclosures: Jessica Pierce, None

ENERGY METABOLISM AND BONE: FAT AND BONE

SA0065 Bone Marrow Adipose Changes After Gastric Bypass Surgery-Induced Weight Loss Are Influenced by Diabetes Improvement and Total Body Fat Loss
Tiffany Kim*1, Ann Schwartz2, Xiaojian Li2, Kaipin Xu2, Dennis Black2, Dimitry Petrenko2, Lygia Stewart1, Stanley Rogers2, Andrew Posselt2, Jonathan Carter2, Dolores Shoback2, Anne Schafer3. 1University of California, San Francisco & the San Francisco VA Medical Center, United states, 2University of California, San Francisco, United states, 3Alabama College of Osteopathic Medicine, United states
Disclosures: Tiffany Kim, None

SA0066 Exercise Shrinks Marrow Adipocytes by Burning Fat
Maya Styner*, Gabriel Pagnotti, Xin Wu1, Cody McGrath1, Buer Sen1, Gunes Uzer1, Zhihui Xie2, Xiaopeng Zong3, Martin Styner1, Clinton Rubin1, Janet Rubin1. 1Department of Medicine, Division of Endocrinology, University of North Carolina, Chapel Hill, NC, United states, 2Department of Biomedical Engineering, State University of New York, Stony Brook, NY, United states, 3Department of Medicine, Division of Endocrinology, University of North Carolina, Chapel Hill, NC, United states, 4Biomedical Research Imaging Center, University of North Carolina, Chapel Hill, NC, United states, 5Departments of Psychiatry & Computer Science, University of North Carolina, Chapel Hill, NC, United states
Disclosures: Maya Styner, None

SA0067 FSH Regulates Body Fat and Whole Body Metabolism
Yaoting Ji1, Peng Liu1, Elizabeth Rendina-Ruedy2, Victoria DeMambro3, Tony Yuen*, Ping Lu1, Bin Zhou1, Ling-Ling Zhu1, Samuel Robinson1, Eric Yu1, Christoph Buettner1, Maria New1, Marc Feldmann4, Bian Zhu1, Jay Cao1, Edward Guo1, Jameel Iqbal2, Li Sun1, Clifford Rosen2, Mone Zaidi1. 1Icahn School of Medicine, United states, 2Maine Medical Center Research Institute, United states, 3Columbia University, United states, 4Kennedy Institute of Rheumatology, United Kingdom, 5Wuhan University, China, 6USDA Department of Agriculture, United states, 7Greater Los Angeles VA Medical Center, United states
Disclosures: Tony Yuen, None

SA0068 Osteocalcin levels in adult women with different body mass index having normal glucose and hemoglobin A1c levels
Disclosures: Susana Zeni, None
SA0069  Osteocyte-specific ablation of Pparaγ (Ocy-Pparaγ) improves energy metabolism and prevents fat accumulation and steatosis in response to a high fat diet
Julia brun*,1, flavien Berthou2, Mirko Trajkovski2, Michelangelo Foti3, Pierre Maechler2, serge ferrari1, Nicolas Bonnet1. 1Service des Maladies Osseuses, Switzerland, 2laboratoires des Maladies métaboliques, Switzerland
Disclosures: Julia brun, None

SA0070  Serum Phosphate is Related to Fat Mass in Healthy Adults
Emma Billington4,1, Greg Gamble2, Ian Reid2. 1University of Calgary, Canada, 2University of Auckland, New zealand
Disclosures: Emma Billington, None

ENERGY METABOLISM AND BONE: GENERAL

SA0071  Adipocyte- and Osteoblast-Specific Function of Protein Phosphatase 5 (PP5) in Modulation of PPARγ and Runx2 Activities and Regulation of Bone Mass and Energy Metabolism
Lance A. Stechschulte*,1, Piotr J. Czernik2, Edwin R. Sanchez3, Renny Franceschi3, Beata Lecka-Czernik1. 1University of Toledo Health Science Campus, United states, 2MicroTomografix Ltd, United states, 3Periodontics & Oral Medicine University of Michigan School of Dentistry, United states
Disclosures: Lance A. Stechschulte, None

SA0072  Cross-talk between oxidative metabolism and osteogenic signaling
Roman Eliseev*, Melanie Busch, Noelle White. University of Rochester, United states
Disclosures: Roman Eliseev, None

SA0073  Cyclophilin D Knock-out Mice Show Enhanced Resistance to Osteoporosis and to Metabolic Changes Observed in Aging Bone
Laura Shum*, Roman Eliseev. University of Rochester, United states
Disclosures: Laura Shum, None

SA0074  Eicosapentaenoic acid attenuates Dexamethasome-induced apoptosis by inducing adaptive autophagy via GPR120 in murine Bone Marrow-Derived Mesenchymal Stem Cells
Bo Gao*,1, Liu Yang2, Zhuo-Jing Luo2. 1Xijing Hospital, Fourth Military Medical University, United states, 2Xijing Hospital, Fourth Military Medical University, China
Disclosures: Bo Gao, None

GENETIC MODELS OF MUSCULOSKELETAL DISEASES: ANIMAL MODELS

SA0075  Fkbp10 is essential for normal bone quality and joint homeostasis in postnatal mice
Joohyun Lim*,1, Caressa Lietman3, Hamilton Wang1, Ingo Grafe1, Elda Munivez1, Merry Ruan1, Keren Machol1, Brian Dawson1, Terry Bertin1, Yuqing Chen1, Hao Ding2, Dongsu Park1, Xiaohong Bi2, Catherine Ambrose3, Nadja Fratzl-Zelm3, Paul Roschger4, Klaus Kulaohfer4, Ingo Schmidt1, Peter Rohrer5, Jyoti Rai6, MaryAnn Weis6, David Eyre6, Deborah Krakow7, Brendan Lee1. 1Department of Molecular & Human Genetics, Baylor College of Medicine, United states, 2Department of Nanomedicine & Biomedical Engineering, University of Texas Health Science Center at Houston, United states, 3Department of Orthopaedic Surgery, University of Texas Health Science Center at Houston, United states, 4Ludwig Boltzmann Institute of Osteology, Hanusch Hospital of WGGK & AUVA Trauma Centre Meiding 1st Med. Dept. Hanusch Hospital, Austria, 5Department of Biomaterials, Max Planck Institute of Colloids & Interfaces, Research Campus Golm, Germany, 6Department of Orthopaedics & Sports Medicine, University of Washington, United states, 7Department of Orthopaedic Surgery, David Geffen School of Medicine at UCLA, United states
Disclosures: Joohyun Lim, None

SA0076  Anti-Notch2 Antibodies Reverse the Severe Osteopenia of Hajdu Cheney Syndrome Mutants
Ernesto Canalis*, Archana Sanjay, Jungeun Yu, David Bridgewater, Stefano Zanotti. UConn Health, United states
Disclosures: Ernesto Canalis, None
SA0077 CRISPR/Cas9-generated Mouse Model of Autosomal-dominant Hypocalcemia Harboring the Activating G Protein Alpha 11 Mutation Arg60Cys and Use of Calcilytics and a Gaq/Ga11-specific Inhibitor
Kelly Lauter Roszko*,1, Ruizi Bi1, Sarah Howles2, Hans Brauner-Osborne3, Xiaofeng Xiong4, Fadiel Hannan4, M Andrew Nesbit5, Rajesh Thakker6, Kristian Stromgaard3, Thomas Gardella1, Michael Mannstadt1. 1Endocrine Unit, Massachusetts General Hospital, United states, 2University of Oxford, United Kingdom, 3Department of Drug Design & Pharmacology, University of Copenhagen, Denmark, 4University of Liverpool, United Kingdom, 5Ulster University, United Kingdom, 6Nuffield Department of Clinical Medicine, University of Oxford, United Kingdom

Disclosures: Kelly Lauter Roszko, None

SA0078 Generation and Phenotypic Characterization of a Lrp4 R1170Q Knock-In Mouse Model
Eveline Boudin*,1, Igor Fijalkowski1, Stephan Sonntag2, Gretl Hendrickx3, Timur A Yorgan3, Thorsten Schinke3, Geert Mortier1, Wim Van Hul1. 1Centre of Medical Genetics, University & University Hospital of Antwerp, Belgium, Belgium, 2PolyGene AG, Rümlang, Switzerland, Switzerland, 3Department of Osteology & Biomechanics, University Medical Center Hamburg, Germany, Germany

Disclosures: Eveline Boudin, None

SA0079 Genetic Variation Affects the Rate of Tibial Fracture Healing
Jun Zhang*, Dana A. Godfrey, Robert D Maynard, Michael J Zuscik, Cheryl L. Ackert-Bicknell. Center for Musculoskeletal Research, University of Rochester Medical Center, United states

Disclosures: Jun Zhang, None

SA0080 Increased Trabecular Bone, Altered Glucose Homeostasis and Improved Biomechanics in an Osteocalcin Null Rat Model Created by CRISPR/Cas9 Technology
Laura Lambert*,1, Anil Challah1, Aidi Niu1, Lihua Zhou1, Janusz Tucholski1, Maria Johnson1, Tim Nagy1, Alan Eberhardt1, Patrick Estep1, Robert Kesterson1, Jayleen Grams2, 1UAB, United states, 2UAB/Birmingham VA Medical Center, United states

Disclosures: Laura Lambert, None

SA0081 Multi-Trait Mapping Reveals Novel Loci Controlling Relationships between Calcium Absorption, Bone Density, and Serum 1,25 Dihydroxyvitamin D in BXD Mice
James Fleet*, Krittikan Chanpaisaeng, Perla Reyes-Fernandez, Rebecca Replogle. Department of Nutrition Science, Purdue University, United states

Disclosures: James Fleet, None

SA0082 Spectrum of bone architectural abnormalities detected by µCT screening of mouse gene knockout lines
Cheryl Ackert-Bicknell*,1, Douglas Adams2, Renata Rydzik2, LI Chen2, Zhihua Wu2, Seung-Hyun Hong2, Gaven Garland3, Pujan Joshi2, Caibin Zhang2, John Sundberg3, Dong-Guk Shin2, David Rowe2. 1University of Rochester, United states, 2University of Connecticut, United states, 3The Jackson Laboratory, United states

Disclosures: Cheryl Ackert-Bicknell, None

SA0083 The Effects of Soluble Activin Receptor Type IIB (ActRIIB-mFc) Treatment on Muscle and Bone Properties of Two Distinct Osteogenesis Imperfecta Mouse Models
Youngjae Jeong*,1, Marybeth Brown2, Ferris Pfeiffer3, Mark Dallas4, Yixia Xie5, R. Scott Pearsall6, Sarah Dallas4, Charlotte Phillips7. 1Department of Biochemistry, University of Missouri, United states, 2Department of Biomedical Sciences & Physical Therapy Program, University of Missouri, United states, 3Department of Bioengineering, University of Missouri, United states, 4Department of Oral & Craniofacial Biology, University of Missouri at Kansas City, United states, 5Department of Oral & Craniofacial Sciences, University of Missouri at Kansas City, United states, 6Acceleron Pharma Inc., United states, 7Departments of Biochemistry & Child Health, University of Missouri, United states

Disclosures: Youngjae Jeong, None
SA0084 Osteoprotegerin is Critical for the Formation of Heterotopic Ossification
Song Xue1, Roberto Fajardo2, Kevin McHugh1. 1University of Florida, United states, 2University of Texas Helath Science Center San Antonio, United states
Disclosures: Song Xue, None

SA0085 Epigenomic Signature of Bisphosphonate use
Robby Joehanes*, Yi-Hsiang Hsu, David Karasik, Douglas Kiel. Institutes for Aging Research; Hebrew SeniorLife; Harvard Medical School, United states
Disclosures: Roby Joehanes, None

SA0086 Comprehensive genome characterization of alcohol-induced osteonecrosis of femoral head
Dewei Zhao*, Yan Ding. The Affiliated Zhongshan Hospital of Dalian University, China
Disclosures: Dewei Zhao, None

SA0087 TRAC, a novel time and cost saving gene expression analysis technology with improved efficacy
Jani Salmivaara1, Oona Kivelä2, Jussi Halleen2, Jari Rautio3, 1ValiRx Finland Ltd, Finland, 2Pharmatest Services Ltd, Finland, 3Biotech Start-Up Management, Finland
Disclosures: Oona Kivelä, ValiRx Finland Ltd, 13

SA0088 Increased Detection of Genetic Loci Associated With Risk Predictors of Osteoporosis Using a Pleiotropic cFDR Method
Jonathan Greenbaum*, Kehao Wu, Lan Zhang, Hui Shen, Jigang Zhang, Hong-Wen Deng. Tulane University Department of Biostatistics & Bioinformatics, United states
Disclosures: Jonathan Greenbaum, None

SA0089 Individual Variants and Genetic Risk Score for Puberty Timing Associate with Pediatric Bone Mineral Density
Diana Cousminer*1, Jonathan Mitchell1, Alessandra Chesi1, Sani Roy1, Heidi Kalkwarf2, Joan Lappe3, Vincente Gilsanz3, Benjamin Voight5, Sharon Oberfield6, John Shepherd7, Andrea Kelly1, Shana McCormack1, Struan Grant1, Babette Zemel1, 1Children’s Hospital of Philadelphia, United states, 2Cincinnati Children’s Hospital Medical Center, United states, 4Children’s Hospital of Los Angeles, United states, 5University of Pennsylvania, United states, 6Columbia University Medical Center, United states, 7University of California San Francisco, United states
Disclosures: Diana Cousminer, None

SA0090 Several novel susceptibility loci identified in trans-ethnic genome-wide association for trabecular volumetric bone mineral density
Xiaoying Fu*, Hong-Wen Deng. Center for Bioinformatics & Genomics, Tulane University, New Orleans, LA, USA Department of Biostatistics & Bioinformatics, School of Public Health & Tropical Medicine, Tulane University, New Orleans, LA, United states
Disclosures: Xiaoying Fu, None

SA0091 Elevations in FGF23 precede abrogation of either phosphate or iron homeostasis in the Ebf1-KO model of renal insufficiency
Jackie Fretz*, Tracy Nelson, Li Li. Yale School of Medicine–Orthopaedics, United states
Disclosures: Jackie Fretz, None
SA0092  ASBMR 2016 Annual Meeting Young Investigator Award
Genetic Ablation of Fgf23 Does not Modulate Experimental Heart Hypertrophy Induced by Pressure Overload
Svetlana Slavic*, Kristopher Ford, Ute Zeitz, Reinhold Erben, Olena Andrukhova.
University of Veterinary Medicine, Vienna, Austria
Disclosures: Svetlana Slavic, None

SA0093  The roles of ENPP1 in osteocytes under phosphate overload condition
Ryuichi Watanabe*, Takeshi Miyamoto, Morio Matsumoto, Masaya Nakamura.
Department of Orthopaedic Surgery, Keio University School of Medicine, Japan
Disclosures: Ryuichi Watanabe, None

SA0094  TNFα triggers renal FGF23 expression and elevates systemic FGF23 levels in mouse models of chronic kidney disease
Daniela Egli-Spichtig*1, Pedro Imenez Silva2, Bob Glaudemans3, Gehring Nicole2, Carla Bettoni4, Martin Zhang5, Desiree Schoenenberger2, Michal Rajski2, David Hoogewijjs2, Felix Krauf6, Isabelle Frey-Wagner7, Gerhard Rogler1, Farzana Perwad3, Foeller Michael8, Florian Lang9, Roland H. Wenger2, Ian Frew2, Carsten A. Wagner2. 1Institute of Physiology, University of Zurich; Division of Pediatric Nephrology, University of California San Francisco, United states, 2Institute of Physiology, University of Zurich, Switzerland, 3University of Zurich, Switzerland, 4Insttitute of Physiology, University of Zurich, Switzerland, 5Division of Pediatric Nephrology, University of California San Francisco, United states, 6Univérsitésklinikum Erlangen, Nephrologie und Hypertensiologie, Germany, 7Division of Gastroenterology & Hepatology, University Hospital Zurich, Switzerland, 8Ernaehrungsphysiologie, Martin-Luther-University Halle-Wittenberg, Germany, 9Institute of Physiology, University of Tuebingen, Germany
Disclosures: Daniela Egli-Spichtig, None

HORMONAL REGULATORS: OTHER HORMONES

SA0095  NLRP3 Inflammasome Promotes Bone resorption In Non-inflammatory Conditions Of Accelerated Bone Turnover
Yael Allipe*, Chun Wang, Biancamaria Ricci, Rong Zeng, Chao Qu, Roberto Civitelli, Deborah Novack, Yousef Abu-Amer, Gabriel Mbalaviele. Washington University School of Medicine, United states
Disclosures: Yael Allipe, None

HORMONAL REGULATORS: SEX HORMONES AND GLUCOCORTICOIDS

SA0096  From Conditional ERα Deletion Mouse Models to Novel Gene Targets of the Anti-Resorptive Effects of Estrogens
Srividhya Iyer*1, Ha-Neui Kim1, Serra Semahat Ucer1, Li Han1, Aaron Warren1, Julie Crawford1, Rafael DeCabo2, Haibo Zhao1, Maria Almieda1, Stavros Manolagas1, 1Center for Osteoporosis & Metabolic Bone Diseases, Univ. Arkansas for Medical Sciences, & Central Arkansas Veterans Healthcare System, United states, 2Laboratory of Experimental Gerontology, National Institute on Aging, National Institutes of Health, United states
Disclosures: Srividhya Iyer, None

HORMONAL REGULATORS: PARATHYROID HORMONE AND CALCIUM SENSING RECEPTORS

SA0097  Lrp6 is a Novel Target of the PTH-activated αNAC Transcriptional Coregulator
Martin Pellicelli*, Hadla Hariri, Julie Miller, René St-Arnaud. Shriners Hospitals for Children - Canada, Canada
Disclosures: Martin Pellicelli, None

SA0098  Anabolic Effects of Parathyroid Hormone is MKP1 Independent in Male Mice Bone
Nabanita Datta*, Sonali Sharma, Chandrika Mahalingam. Wayne State University School of Medicine, United states
Disclosures: Nabanita Datta, None
SA0099  The Deacetylase, Sirtuin 1, is Necessary for Parathyroid Hormone’s Actions on Murine Bone
Nicola Partridge*, Teruyo Nakatani1, Jennifer Westendorf2, David Sinclair3, Yurong Fei4.
1New York University, United States, 2Mayo Clinic, United States, 3Harvard Medical School, United States, 4North Shore LIJ Health System, United States
Disclosures: Nicola Partridge, None

HORMONAL REGULATORS: SEX HORMONES AND GLUCOCORTICOIDS

SA0100  A role for TIEG and estrogen-regulated miRNAs in mediating SOST expression in bone
Malayannan Subramaniam*, Kevin Petel, Elizabeth Bruinisma, John Hawse. Mayo Clinic, United States
Disclosures: Malayannan Subramaniam, None

SA0101  Androgen Receptor SUMOylation Regulates Bone Mass in Male Mice
Jianyao Wu*, Sofia Movéreare-Skrtic1, Fu-Ping Zhang1, Matti Poutanen3, Claes Ohlsson1.
1Center for Bone & Arthritis Research, Institute of Medicine, Sahlgrenska Academy, University of Gothenburg, Sweden, Sweden, 2Department of Physiology, & Turku Center for Disease Modeling, Institute of Biomedicine, University of Turku, Finland, Finland, 3Center for Bone & Arthritis Research, Institute of Medicine, Sahlgrenska Academy, University of Gothenburg, Sweden; Department of Physiology, & Turku Center for Disease Modeling, Institute of Biomedicine, University of Turku, Finland, Finland
Disclosures: Jianyao Wu, None

SA0102  Glucocorticoid Signaling Is important For Exercise-induced Bone Formation
Robert MacDonell1, Jianrui Xu*, KeHong Ding1, Qing Zhong1, William Hill1, Wendy Bollag1, Monte Hunter1, Meghan McGee-Lawrence1, Mona El Refaey2, Maribeth Johnson1, Christopher Treager1, Ying Han1, Mohammed Elsalanty1, Mark Hamrick1, Xingming Shi1, Carlos Isales3. 1Medical College of Georgia, United States, 2Ohio State University, United States, 3Medical College of Georgia, United States, 4School & Hospital of Stomatology Xi’an Jiaotong University, China
Disclosures: Jianrui Xu, None

SA0103  Influence of Progesterone Nuclear Receptor Signaling in Osteoprogenitor Cells on Sexual Dimorphism of Trabecular Bone Mass
UC Davis Medical Center, United States
Disclosures: Alexander Kot, None

SA0104  Withdrawn

HORMONAL REGULATORS: VITAMIN D AND ANALOGS

SA0105  25(OH)D3 HALF-LIFE IS LONGER IN OLDER THAN YOUNGER ADULTS
Inez Schoenmakers*, Shima Assar1, Terry Aspray2, Ann Prentice1, Kerry Jones1. 1MRC Human Nutrition Research, United Kingdom, 2Newcastle University, Institute for Cellular Medicine, United Kingdom
Disclosures: Inez Schoenmakers, None

SA0106  Epigenetic Signals Modulate 1,25(OH)2D3 Regulation of Innate Immune Responses in Lung Epithelial Cells
Ran Wei*, Ki-Yoon Kim2, Puneet Dhawan3, Gill Diamond4, Sylvia Christakos3.
1Department of Microbiology, Biochemistry & Molecular Genetics, Rutgers- New Jersey Medical School, United States, 2Department of Microbiology, Biochemistry & Molecular Genetics, Rutgers-New Jersey Medical School, United States, 3Department of Microbiology, Biochemistry & Molecular Genetics, Rutgers-New Jersey Medical School, United States, 4Department of Oral Biology, University of Florida, United States
Disclosures: Ran Wei, None

SA0107  Vitamin D metabolism in human mesenchymal stem cells: Effects of body composition and leptin
Jing Li*, Julie Glowacki, Meryl LeBoff, Shuanhu Zhou. Brigham & Women’s Hospital, United States
Disclosures: Jing Li, None
MECHANOBIOLOGY: CELLULAR AND MOLECULAR EFFECT OF MECHANICAL LOADING AND UNLOADING

SA0108 Disruption of Aldehyde Dehydrogenase 2 (Aldh2) Gene Results in Suppression of Increase in Trabecular Bone Mass After Climbing Exercise in Growing Mice
Kayoko Furukawa*1, Kunitaka Menuki2, Manabu Tsukamoto2, Taka-fumi Tajima1, Hokuto Fukuda1, Toshiharu Mori2, Akinori Sakai2. 1MD, Japan, 2MD, Ph.D, Japan
Disclosures: Kayoko Furukawa, None

SA0109 Mechanically-Induced Osteocyte-Th17 Cell Signaling and Osteolastogenesis
Travis McCumber*, Michael Turturro, Kristen Drescher, Diane Cullen. Creighton University, United states
Disclosures: Travis McCumber, None

SA0110 Mechanoresponsive miR-138-5p targets MACF1 to inhibit bone formation
Airong Qian*1, Zhihao Chen1, Fan Zhao1, Chao Liang2, Lifang Hu1, Chong Yin1, Peng Shang3, Ge Zhang3. 1Key Laboratory for Space Biosciences & Biotechnology, Institute of Special Environmental Biophysics, School of Life Sciences, Northwestern Polytechnical University, China, 2Institute for Advancing Translational Medicine in Bone & Joint Diseases, School of Chinese Medicine, Hong Kong Baptist University, China, 3Institute for Advancing Translational Medicine in Bone & Joint Diseases, School of Chinese Medicine, Hong Kong Baptist University, China
Disclosures: Airong Qian, None

SA0111 Osteoblast-Derived Paracrine Factors Regulate Angiogenesis in Response to Mechanical Stimulation
Chao Liu*, Xin Cui, Thomas Ackermann, Vittoria Flaminii, Wei-qiang Chen, Alesha Castillo. New York University, United states
Disclosures: Chao Liu, None

MECHANOBIOLOGY: CELLULAR AND MOLECULAR MECHANOSENSING

SA0112 Mechanical LINC between nucleus and cytoskeleton regulates β-catenin nuclear access
Gunes Uzer*, Guniz Bas, Melis Olcum, Buer Sen, Zhihui Xie, Cody McGrath, Maya Styner, Janet Rubin. University of North Carolina, United states
Disclosures: Gunes Uzer, None

MECHANOBIOLOGY: GENERAL

SA0113 Osteocyte distribution does not influence locations of mechanically induced bone formation in cancellous bone
Erin Cresswell*, Thu Nguyen1, Michael Horsfield1, Thomas Metzger2, Glen Niebur2, Christopher Hernandez1. 1Cornell University, United states, 2University of Notre Dame, United states
Disclosures: Erin Cresswell, None

SA0114 Radiation-induced bone loss is attenuated by mechanical loading
Peter Govey1, Yue Zhang2, Henry Donahue*2. 1Penn State, United states, 2Virginia Commonwealth University, United states
Disclosures: Henry Donahue, None

MUSCLE BIOLOGY AND BONE-MUSCLE CROSSTALK: CELLULAR AND MOLECULAR INTERACTIONS

SA0115 A Metabolite of Contracted Muscle, β-aminoisobutyric Acid, BAIBA, Inhibits Trabecular Bone Loss by Hindlimb Unloading Potentially through Maintenance of Osteocyte Viability
Yukiko Kitase*, Jianxun Yi, Julian Vallejo1, Harika Vemula2, William Gutheil2, Marco Brotto3, Lynda Bonewald1. 1University of Missouri-Kansas City, Department of Oral & Craniofacial Sciences, School of Dentistry, United states, 2University of Missouri-Kansas City, School of Pharmacy, United states, 3University of Texas at Arlington, United states
Disclosures: Yukiko Kitase, None

SA0116 Osteocytic gene expression is not rapidly altered following muscle paralysis
Dylan Mogk, Leah Worton, Dewayne Threet, Brandon Ausk, Edith Gardiner, Steven Bain, Ted Gross*. University of Washington, United states
Disclosures: Ted Gross, None
Transgenic Expression of FNDC5 Impacts Skeletal Turnover by Targeting Osteoblasts, Osteoclasts and Adipocytes

clifford rosen*, christiane wrann, bruce spiegelman, mary bouxsein, roland baron, kneichi nagano, phuong le, michaela reagan, lynda bonewald, maine medical center research institute, united states, dana farber cancer institute, united states, harvard medical school, united states, harvard dental school, united states, university of missouri kansas city, united states

Disclosures: clifford rosen, None

Hindlimb Immobilisation, but Not Castration, Induces Reduction of Undercarboxylated Osteocalcin Associated with Muscle Atrophy in Rats

Xuzhu Lin*, Erik Hanson, Andrew Betik, Tara Brennan-Speranza, Alan Hayes, Itamar Levinger, institute of sport, exercise & active living (ISEAL), victoria university, australia, department of physiology & bosch institute for medical research, university of sydney, australia, exercise & active living (ISEAL), victoria university, australia

Disclosures: Xuzhu Lin, None

Age-related Changes in the 3D Microstructural Mouse Cortical Bone Using High Resolution Desktop Micro-CT System


Disclosures: Haniyeh Hemmatian, None

Bmi1 Plays A Critical Role in Protecting Bone Against Premature Aging by Inactivating p16 and p53 Signaling And Inhibiting Oxidative Stress

Xianhui Lyu*, Qian Wang, Jianliang Jin, Dengshun Miao, Nanjing Medical University, China

Disclosures: Xianhui Lyu, None

DNA damage and senescence in osteoprogenitors expressing Osx1 may cause their decline in number with age

Ha-Neui Kim, Jianhui Chang, Lijian Shao, Li Han, Srividhya Iyer, Aaron Warren, stavros manolagas, Robert Jilka, Charles O’Brien, Daohong Zhou, Maria Almeida, central Arkansas veterans healthcare system, university of Arkansas for medical sciences, united states, university of Arkansas for medical sciences, united states

Disclosures: Ha-Neui Kim, None

Treatment of Aged Mice With PDGF-bb and Bortezomib (a Proteasome Inhibitor) Enhances Fracture Repair

Hengwei Zhang, mengmeng Wang, Brendan Boyce, lianping Xing, university of Rochester, united states

Disclosures: Hengwei Zhang, None
MUSCULOSKELETAL AGING: BONE AND MUSCLE INTERACTIONS

**SA0124** May Satellite Cells CD44+ Drive Muscle Regeneration in Osteoarthritis Patients?
Umberto Tarantino¹, Jacopo Baldi*¹, Manuel Scimeca², Eleonora Piccirilli¹, Gasbarra Elena¹, Elena Bonanno². ¹Department of Orthopaedics & Traumatology, Università degli Studi di Roma “Tor Vergata”, Italy, ²Department of Biomedicine & Prevention, Anatomic Pathology Section, Università degli Studi di Roma “Tor Vergata”, Italy

*Disclosures: Jacopo Baldi, None*

**SA0125** Patterns of estrogen use and kyphosis in older women 15 years later
Gina Woods¹, Mei-Hua Huang², Howard Fink³, Corinne McDaniels-Davidson¹, Peggy Cawthon⁴, Deborah Kado¹. ¹University of California, San Diego, United states, ²University of California, Los Angeles, United states, ³VA Healthcare System, United states, ⁴California Pacific Medical Center Research Institute, United states

*Disclosures: Gina Woods, None*

MUSCULOSKELETAL AGING: MUSCLE WASTING AND DYSTROPHY

**SA0126** No effect of vitamin D on Physical Performance and balance in Elderly Women
J Christopher Gallagher*¹, Shervin Yousefian¹, Lynette Smith². ¹Creighton University Medical School, United states, ²University Nebraska Medical Center, United states

*Disclosures: J Christopher Gallagher, None*

**SA0127** Bmp2 Gene is required for In Vivo Differentiation of aSMA+ Periodontal Stem-like cells and In Vitro for Differentiation Associated changes in mRNA and Candidate Genomic Level Enhancer Function
Stephen E Harris*¹, Audrey Rakian¹, Rebecca Neitzke¹, Michael Rediske¹, Marie A Harris¹, Ivo Kalajzic², Jian Q Feng¹, Jelica Gluhak-Heinrich¹, Yong Cui¹. ¹UTHSCSA, United states, ²U. of Connecticut Health Center, United states

*Disclosures: Stephen E Harris, None*

**SA0128** High-content *in vivo* imaging of zebrafish bone regeneration reveals dynamic NADH events during osteoblast dedifferentiation
Claire Watson*, Edith Gardiner, Werner Kaminsky, Ronald Kwon. University of Washington, United states

*Disclosures: Claire Watson, None*

**SA0129** Intranuclear Actin Polymerization Controls MSC Differentiation
Buer Sen¹, Gunes Uzer¹, Zhihui Xie¹, Cody McGrath¹, Amel Dudakovic², Maya Styner¹, Andre Van Wijnen², Janet Rubin*¹. ¹UNC School of Medicine, United states, ²Mayo Clinic, United states

*Disclosures: Janet Rubin, None*

MUSCULOSKELETAL PROGENITOR CELLS AND LINEAGE DETERMINATION: OSTEOBLASTS

**SA0130** Chondrocyte (CC) to Osteoblast (OB) Transdifferentiation Represents a Major Mechanism for Promotion of Trabecular (Tb) Bone Formation (BF) in Mice
Patrick Aghajanian*, Shaohong Cheng, Chandrasekhar Kesavan, Weirong Xing, Jon Wergedal, Subburaman Mohan. VA Loma Linda Healthcare System, United states

*Disclosures: Patrick Aghajanian, None*

**SA0131** Commitment and differentiation of mesenchymal stromal cells is controlled by novel regulatory regions and transcription factor programs
Jonathan Gordon*, Hai Wu, Coralee Tye, Joseph Boyd, Janet Stein, Gary Stein, Jane Lian. University of Vermont College of Medicine, United states

*Disclosures: Jonathan Gordon, None*
Enhanced Osteogenic and Vasculogenic Differentiation Potential of Human Adipose Stem Cells on Biphasic Calcium Phosphate Scaffolds in Fibrin Gels

Fransisca van Esterik*, Behrouz Zandieh-Doulabi, Cees Kleverlaan, Jennene Klein-Nuend. 1Department of Oral Cell Biology, Academic Centre for Dentistry Amsterdam (ACTA), University of Amsterdam & Vrije Universiteit Amsterdam, MOVE Research Institute Amsterdam, Netherlands, 2Department of Dental Materials Science, Academic Centre for Dentistry (ACTA), University of Amsterdam & Vrije Universiteit Amsterdam, MOVE Research Institute Amsterdam, Netherlands, 3Department of Oral Cell Biology, Academic Centre for Dentistry (ACTA), University of Amsterdam & Vrije Universiteit Amsterdam, MOVE Research Institute Amsterdam, Netherlands

Disclosures: Fransisca van Esterik, None

Mature Chondrocytes Are Able to Develop into Bone Marrow Osteo/Mesenchymal Progenitor Cells and Canonical Wnt Signaling Is Required for These Progenitor Cells to Commit to Osteogenic Fate in Endochondral Bones

Xin Zhou*, Ailing Hunag, Klaus von der Mark, Benoit de Crombrugghe. 1UT MD Anderson Cancer Center, United states, 2University Erlangen-Nuremberg, Germany

Disclosures: Xin Zhou, None

Notch Activation Enhances Mesenchymal Stem Cell Sheet Osteogenic Potential by Inhibition of Cellular Senescence

Bo Tian*, Sheila Rogers, Dollie Smith, Todd Jaeblon, Massimo Max Morandi, John Marymont, Yufeng Dong. LSU Health Sciences Center, United states

Disclosures: Bo Tian, None

Transcriptional Control of CaSR by P300 in MSCs is mediated by HIF-1α

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Disclosures: Chao Wan, None

OSTEOARTHRITIS AND OTHER JOINT DISORDERS: GENERAL

A novel combination of bone micro architecture descriptors and selected ROIs for the identification of osteoarthritis

Richard Ljuhar*, Stefan Nehrer, Benjamin Norman, Davul Ljuhar, Tobias Haftner, Jiří Hladuvka, Marianne Bui Thi Mai, Helena Canhão, Jaime Branco, Ana Maria Rodrigues, Nelia Gouveia, Astrid Fahrleitner-Pammer, Hans-Peter Dimai. 1Braincon Technologies, Austria, 2Center for Regenerative Medicine & Orthopedics, Danube University, Austria, 3VRVis Research Competence Center, Austria, 4Faculdade de Medicina da Universidade de Lisboa, Portugal, 5NOVA Medical School Faculdade de Ciências Médicas Universidade Nova de Lisboa, Portugal, 6Department of Internal Medicine, Division of Endocrinology & Metabolism, Medical University of Graz, Austria

Disclosures: Richard Ljuhar, None

Alterations in hip Shape may Explain the Increased Risk of hip Osteoarthritis in Individuals with High Bone Mass

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Disclosures: Celia Gregson, None

Genome-wide association study of knee bone marrow lesions and association with previously reported bone mineral density loci

Michelle S. Yau*, Braxton D. Mitchell, Rebecca D. Jackson, Marc C. Hochberg, Douglas P. Kiel, David T. Felson. 1Hebrew SeniorLife, BIDMC/Harvard, United states, 2University of Maryland School of Medicine, United states, 3The Ohio State University, United states, 4Boston University School of Medicine, United states

Disclosures: Michelle S. Yau, None
SA0139  Odanacatib Prevents Cartilage Damage and Osteophyte Development in the Anterior Cruciate Ligament Transection Rabbit Model of Osteoarthritis
Ya Zhuo1, Maureen Pickarski1, Gregg Wesolowski1, Jacques Yves Gauthier2, Le Duong2. 1Merck & Co.Inc, United states, 2Merck & Co. Inc., United states, 3Formerly Merck & Co., Inc., United states, 4Formerly Merck & Co., Inc., Canada
Disclosures: Ya Zhuo, Merck. Co. Inc., 17

SA0140  Proteasome Inhibition Is a Potential Treatment for Osteoarthritis by Attenuating Inflammation and Improving Lymphatic Function
Xi Lin*, Wensheng Wang, Wen Sun, Michael Zuscik, Lianping Xing. University of Rochester Medical Center, United states
Disclosures: Xi Lin, None

OSTEOARTHRITIS AND OTHER JOINT DISORDERS: RHEUMATOID ARTHRITIS AND INFLAMMATORY ARTHRITIS

SA0141  Osteoclast microRNA Profiling in Erosive Rheumatoid Arthritis
Hugues Allard-Chamard1, Gilles Boire1, Artur De Brum- Fernandes1, Michelle Scott2, Luigi Bouchard1, Sophie Roux1. 1Rheumatology, Faculty of Medicine, Sherbrooke University, Canada, 2Biochemistry, Faculty of Medicine, Sherbrooke University, Canada
Disclosures: Hugues Allard-Chamard, None

SA0142  ASBMR 2016 Annual Meeting Young Investigator Award
Superficial cells disappear during early stages of osteoarthritis via accelerated differentiation into chondrocytes
Lei Li1, Thibault Bouderlique2, Phillip Newton2, Elena Kozhemyakina3, Andrew Lassar3, Matthew Warman1, Björn Barenius1, Igor Adameyko2, Andrei Chagin2. 1Department of Physiology & Pharmacology, Karolinska Institutet, Sweden, 2Department Physiology & Pharmacology, Karolinska Institute, Sweden, 3Harvard Medical School, Boston, Massachusetts, United states, 4Orthopaedic Research Labs, Boston Children’s Hospital, Boston, Massachusetts, United states, 5Södersjukhuset, Stockholm, Sweden
Disclosures: Lei Li, None

OSTEOBLASTS – MATRIX PROTEINS AND FUNCTION: ADHESION, MOTILITY AND CELL-CELL COMMUNICATION

SA0143  Changes in Membrane Potential Regulates RANKL Intracellular Transport via Voltage-gated Calcium Channels in Osteoblasts
Takuya Notomi1, Miyuki Kuno1, Akiko Hiyama1, Yoichi Ezura3, Kiyoshi Ohura1, Masaki Noda3. 1Osaka Dental University, Japan, 2Osaka City University, Japan, 3Tokyo Medical & Dental University, Japan
Disclosures: Takuya Notomi, None

SA0144  ASBMR 2016 Annual Meeting Young Investigator Award
Osteoblasts Inhibit Osteoclast Formation by Targeting Prdm1 via the Mechanism Underlying Matrix Vesicle-Mediated Transfer of miR-125b
Yasumasa Irie1, Tomoko Minamizaki2, Faisal Ahmed2, Yuko Nakao3, Hirotaka Yoshioka2, Kotaro Tanimoto2, Katsuyuki Kozai2, Yuji Yoshiko2. 1Department of Calcified Tissue Biology, Department of Pediatric dentistry, Hiroshima University Institute of Biomedical & Health Sciences, Hiroshima, JAPAN., Japan, 2Department of Calcified Tissue Biology, Hiroshima University Institute of Biomedical & Health Sciences, Hiroshima, JAPAN., Japan, 3Department of Calcified Tissue Biology & Department of Orthodontics & Craniofacial Developmental Biology, Hiroshima University Institute of Biomedical & Health Sciences, Hiroshima, JAPAN., Japan, 4Orthodontics & Craniofacial Developmental Biology, Hiroshima University Institute of Biomedical & Health Sciences, Hiroshima, JAPAN., Japan, 5Pediatric dentistry, Hiroshima University Institute of Biomedical & Health Sciences, Hiroshima, JAPAN., Japan
Disclosures: Yasumasa Irie, None
Truncation of the Cx43 C-terminal domain disrupts multiple signaling pathways and recapitulates the skeletal phenotype of full length Cx43 conditional deletion in the osteoblast lineage
Megan C. Moorer¹, Carla Hebert², Ryan E. Tomlinson¹, Shuo Liu², Max Chason⁴, Joseph P Stains². ¹University of Maryland, Baltimore, Graduate School, United states, ²University of Maryland, Baltimore, United states, ³Johns Hopkins University, United states, ⁴University of Maryland, United states

Disclosures: Megan C. Moorer, None

OSTEOBLASTS – MATRIX PROTEINS AND FUNCTION: BONE FORMATION MECHANISMS

Conditional Knockout of the MicroRNA 17-92 Cluster in Type-I Collagen Expressing Cells Decreases Alveolar Bone Size and Incisor Teeth Mechanical Properties
Subburaman Mohan¹, Micheal Ibrahim², Chandrasekhar Kesavan*². ¹VA Loma Linda Healthcare System, United states, ²VA Loma Linda Healthcare System, United states

Disclosures: Chandrasekhar Kesavan, None

CRISPR/Cas9 Editing of IFITM5 Introduces BRIL p.Ser40Leu Substitution, Connecting Types V and VI OI, and Suppresses PEDF-mediated Induction of PPARγ
Heeseog Kang*¹, Joan C. Marini¹, Susan Crawford². ¹NIH, United states, ²Northwestern University, United states

Disclosures: Heeseog Kang, None

Deletion of Axin1 in Osteoblast Progenitor Cells Leads to Delayed Endochondral Bone Formation through Inhibition of Osteoclast Formation
Bing Shu*¹, Yongjian Zhao¹, Chunchun Xue¹, Rong Xie², Yongjun Wang³, Di Chen². ¹Longhua Hospital, Shanghai University of Traditional Chinese Medicine; Spine Research Institute, Shanghai University of Traditional Chinese Medicine, China, ²Rush University Medical Center, United states, ³School of Rehabilitation Science, Shanghai University of Traditional Chinese Medicine; Spine Research Institute, Shanghai University of Traditional Chinese Medicine, China

Disclosures: Bing Shu, None

Engineering a hyper-anabolic, super-secreting osteoblast
Sara Young, Yu Shao, Paul Childress, Ronald Wek, Joseph Bidwell*. Indiana University School of Medicine, United states

Disclosures: Joseph Bidwell, Other

Glutaminase acts in osteoblasts to regulate bone formation
Yilin Yu¹, Everett Knudsen¹, Fanxin Long², Courtney Karner*¹. ¹Duke University School of Medicine, United states, ²Washington University School of Medicine, United states

Disclosures: Courtney Karner, None

Kindlin-2 Plays A Pivotal Role in Skeletal Development and Homeostasis through Its Expression in Osteoblastic Cells and Osteocytes
Huiling Cao*, Guozhi Xiao. Department of Biology & Shenzhen Key Laboratory of Cell Microenvironment, Southern University of Science & Technology, China

Disclosures: Huiling Cao, None
SA0152  Legumain is a Novel Regulator of Bone Formation and Deregulated in Postmenopausal Osteoporosis
Abbas Jafari1, Diyako Qanie2, Thomas L. Andersen3, Li Chen2, Nicholas Ditzel4, Sundeeq Khosla5, Harald T. Johansen6, Per Kjersgaard-Andersen7, Jean-Marie Delaisse8, Basem M. Abdallah9, Daniel Hesselson10, Rigmor Solberg6, Moustapha Kassem2.
1Department of Cellular & Molecular Medicine, University of Copenhagen, Denmark, 2Endocrine Research Laboratory (KMEB), Odense University Hospital & University of Southern Denmark, Denmark, 3Department of Clinical Cell Biology (KCB) Institute of Regional Health Research, University of Southern Denmark, Denmark, 4Endocrine Research Laboratory (KMEB), Odense University Hospital & University of Southern Denmark, Denmark, 5Endocrine Research Unit, Mayo Clinic College of Medicine., United states, 6Department of Orthopaedic Surgery, Vejle/Lillebaelt Hospital, Denmark, 7Department of Clinical Cell Biology, Vejle/ Lillebaelt Hospital, Institute of Regional Health Research, University of Southern Denmark, Denmark, 8Department of Endocrinology & Metabolism, Endocrine Research Laboratory (KMEB), Odense University Hospital & University of Southern Denmark, Denmark, 9St Vincent’s Clinical School, UNSW, Australia
Disclosures: Abbas Jafari, None

SA0153  TUT7/ZCCHC6 is a novel regulator of matrix mineralization and osterix activity in osteoblasts
Gregory Sondag1, Mohammad Khan1, Mohammad Ansari2, Nazar Hussein3, Sara Haynie4, Fayeza Safadi1, Tariq Haqqi1. 1Northeast Ohio Medical University, United states, 2Northeast Ohio Medical, United states, 3Kent State University, United states
Disclosures: Gregory Sondag, None

OSTEOBLASTS – MATRIX PROTEINS AND FUNCTION: HORMONAL AND LOCAL REGULATION
SA0154  Pyk2-Deletion Potentiates Osteoblast Differentiation and Mineralization By Estrogen and Raloxifene
Sumana Posritong1, Pierre P. Eleniste1, Evan R. Himes2, Melissa A. Kacena2, Angela Bruzzaniti1. 1Indiana University School of Dentistry, United states, 2Indiana University School of Medicine, United states
Disclosures: Sumana Posritong, None

OSTEOBLASTS – MATRIX PROTEINS AND FUNCTION: SIGNAL TRANSDUCTION AND TRANSCRIPTIONAL REGULATION
SA0155  A novel Osteoblast Differentiation inhibiting lncRNA, AK138929
Chong Yin1, Yan Zhang1, Kun Yan1, Zhihao Chen1, Dijie Li1, Fan Zhao1, Lifang Hu1, Yonghua Wang2, Ge Zhang1, Peng Shang1, Airong Qian1. 1School of Life Sciences, Northwestern Polytechnical University, China, 2School of Life Sciences, Northwest A&F University, China, 3School of Chinese Medicine, Hong Kong Baptist University, Hong kong
Disclosures: Chong Yin, None

SA0156  Autophagy suppresses proliferation of bone marrow-derived osteoblast progenitor cells (BMOPCs) by targeting Cyclin D1
Li Wang1, Paul Krebsbach1, Jun-Lin Guan2, Fei Liu1. 1University of Michigan School of Dentistry, United states, 2University of Cincinnati College of Medicine, United states
Disclosures: Li Wang, None

SA0157  Epigenetic Regulation of Osteoblast Differentiation by Vitamin C Involving Prolyl Hydroxylase Domain-containing Protein 2 (PHD2)
Richard Lindsey1, Shaohong Cheng2, Sheila Pursseymoor2, Catrina Alarcon2, Subburaman Mohan1, 1VA Loma Linda Healthcare System; Loma Linda University, United states, 2VA Loma Linda Healthcare System, United states
Disclosures: Richard Lindsey, None

SA0158  miR-1254 inhibits expression of sclerostin in human osteoblastic cell lines
Osman M Azuraidi*, Peter Wilson, Kasia Goljanek-Whysall., Jane P Dillon, Nick Rhodes, James A Gallagher. University of Liverpool, United Kingdom
Disclosures: Osman M Azuraidi, None
SA0159  Modulation of the histone H3K27 methyltransferase EZH2 stimulates WNT, PTH and BMP2-related paracrine signaling to promote osteogenesis
Christopher Paradise*, Amel Dudakovic, Martina Gluscevic, Farah Ahmed, Eric Lewallen, Roman Thaler, Andre van Wijnen. Mayo Clinic, United states
Disclosures: Christopher Paradise, None

SA0160  Protein Kinase D1 Plays an Important Role in Osteogenesis
Wendy Bollag*, Vivek Choudhary1, Qing Zhong1, Kehong Ding1, Jianrui Xu1, Lakiea Bailey1, Maribeth Johnson1, Yun Su1, Mohammed Elsalanty2, Meghan McGee-Lawrence1, Xingming Shi1, Carlos Isales1. 1Medical College of Georgia at Augusta University, United states, 2Augusta University, United states
Disclosures: Wendy Bollag, None

OSTEOCLASTS - FUNCTION: BONE RESORPTION MECHANISMS

SA0161  Control of bone resorption by the rate of osteoprogenitor recruitment during bone remodeling
Nicolaï E Lassen1, Thomas L Andersen1, Kent Soe1, Ellen M Hauge2, Soren Harving3, Gete ET Eschen2, Jean-Marie Delaisse*1. 1Vejle/Lillebælt Hospital, University of Southern Denmark, Denmark, 2Aarhus hospital, Denmark, 3Aalborg Hospital, Denmark
Disclosures: Jean-Marie Delaisse, None

SA0162  Cross Talk Between CD36 and CD47/Tsp1 in Osteoclastogenesis
Joanne Walker*, Srinivas Koduru, Ben-hua Sun, Meiling Zhu, Christine Simpson, Madhav Dhodapkar, Karl Insogna. Yale University School of Medicine, United states
Disclosures: Joanne Walker, None

SA0163  Fluoride regulates osteoclastogenesis in a strain-specific manner
Flávia Amadeu de Oliveira*1, Amanda Amaral Pereira1, Talita da Silva Ventura1, Marília Buzalaf1, Rodrigo Cardoso de Oliveira1, Camila Peres-Buzalaf2. 1University of Sao Paulo, Brazil, 2Universidade do Sagrado Coração, Brazil
Disclosures: Flávia Amadeu de Oliveira, None

SA0164  Function of novel splicing variant of NF-κB receptor activator (vRANK)
Riko Kitazawa*, Ryuma Haraguchi2, Yosuke Mizuno1, Yasuhiro Kobayashi3, Sohei Kitazawa2. 1Department of Diagnostic Pathology, Ehime University Hospital, Japan, 2Department of Molecular Pathology, Ehime University Graduate School of Medicine, Japan, 3Institute of Oral Science, Matsumoto Dental University, Japan
Disclosures: Riko Kitazawa, None

SA0165  ICOS-Ligand Triggering Impairs Osteoclast Differentiation and Function
CASIMIRO L GIGLIOTTI1, ELENA BOGGIO1, NAUSICAA CLEMENTE1, Chiara Dianzani2, Annalisa Chiochetti1, Renzo Boldorini1, Michela Bosetti3, Giancarlo Isaia4, Patrizia D’Amelio*4, Umberto Dianzani1. 1Interdisciplinary Research Center of Autoimmune Diseases (IRCAD) & Department of Health Sciences, University of Piemonte Orientale (UPO), Italy, 2Department of Drug Science & Technology, University of Torino, Italy, 3Departamento de Medicina Celular y Molecular, Centro de Investigaciones Biologicas, Consejo Superior de Investigaciones Científicas, Spain, 4Dept of Medical Science University of Torino, Italy
Disclosures: Patrizia D’Amelio, None

SA0166  Osteoclast Vitamin D Receptor Increases Bone Resorption and Regulates Osteoblast Activity in vivo
Na-Rae Park*, Da-In Yeo2, Gyeong-Hwa Kim2, Xiangguo Che1, Yu-ra Choi2, Clara Yongjoo Park2, Shigeaki Kato3, Je-Yong Choi2. 1Department of Biochemistry & Cell Biology, Kyungpook National University School of Medicine, Daegu, South Korea, Korea, republic of, 2Department of Biochemistry & Cell Biology, BK21 PLUS KNU Biomedical Convergence Program, Kyungpook National University, School of Medicine, Daegu, South Korea, Korea, republic of, 3Soma Central Hospital, Fukushima, Japan, Japan
Disclosures: Na-Rae Park, None
ASBMR 2016 Felix Bronner Young Investigator Award
Osteoclast-Secreted Slit3 as a Novel Regulator Linking Bone Resorption and Formation
Beom-Jun Kim*1, Young-Sun Lee2, Sun-Young Lee2, Seung Hun Lee3, Jung-Eun Kim3, Eun-Ju Chang3, Seung-Whan Kim3, Sung Ho Ryu3, Sun-Kyeong Lee4, Joseph A Lorenzo3, Seong Hee Ahn3, Hyeonmok Kim3, Jung-Min Koh4. 1Division of Endocrinology & Metabolism, Asan Medical Center, University of Ulsan College of Medicine, Korea, republic of, 2Asan Institute for Life Sciences, Korea, republic of, 3Department of Molecular Medicine, Cell & Matrix Research Institute, Kyungpook National University School of Medicine, Korea, republic of, 4Department of Anatomy & Cell Biology, Cellular Dysfunction Research Center & BMIT, University of Ulsan College of Medicine, Korea, republic of, 5Department of Life Science & Division of Molecular & Life Sciences, Pohang University of Science & Technology, Korea, republic of, 6UConn Center on Aging, University of Connecticut Health Center, United states, 7Division of Endocrinology, Department of Medicine, University of Connecticut Health Center, United states, 8Department of Internal Medicine, Inha University School of Medicine, Korea, republic of
Disclosures: Beom-Jun Kim, None

OSTEOCLASTS - FUNCTION: SIGNAL TRANSDUCTION
Smad4 In Osteoclasts Reduce Bone Mass by Inhibiting Osteoclast Differentiation
Mayu Morita*1, Ryotaro Iwasaki2, Hiromasa Kawana2, Shigeyuki Yoshida2, Taneaki Nakagawa2, Takeshi Miyamoto3. 1DDS, Japan, 2DDS, Ph.D, Japan, 3MD, Ph.D, Japan
Disclosures: Mayu Morita, None

OSTEOCLASTS - FUNCTION: TRANSCRIPTIONAL REGULATION AND GENE EXPRESSION
Functional Role of Endothelin in Inflammatory Bone Loss
Inik Chang*, Sue Young Oh, Dong Min Shin. Yonsei University College of Dentistry, Korea, republic of
Disclosures: Inik Chang, None

Novel critical role for EZH2-increased H3K27 trimethylation and C/EBPβ-LAP to LIP switch at the MafB promoter during the early phase of osteoclastogenesis
Juraj Adamik*, Peng Zhang, Quanhong Sun, Deborah L. Galson. University of Pittsburgh, United states
Disclosures: Juraj Adamik, None
SA0175 Comparative roles of c-Fos and C/EBPα in osteoclast differentiation through regulation by the RANK cytoplasmic IVVY538-538 motif in a RBP-J downregulation manner
Joel Jules*, Wei Chen, Yi-Ping Li. University of Alabama at Birmingham, United states
Disclosures: Joel Jules, None

SA0176 Notch2 Expression is Required for Spleen B Cell Allocation and Osteoclastogenesis
Archana Sanjay*, Bhavita Walia, Jungeun Yu, Stefano Zanotti, Ernesto Canalis. UConn Health, United states
Disclosures: Archana Sanjay, None

SA0177 Similarities between IL8 and RANKL Stimulation of Osteoclast Formation Suggests a Highly Conserved Signaling Cascade that Facilitates Bone Resorption in Breast Cancer
Diarra Williams¹, Archana Kamalakar Kamalakar¹, Nisreen Akel¹, Frances Swain², Dana Gaddy³, Larry Suva⁴. ¹Texas A&M University, United states, ²Texas A&M University, United Kingdom
Disclosures: Diarra Williams, None

OSTEOCYTES: BONE REMODELING REGULATION

SA0178 Deletion of Mitofusin-2 in Osteocytes Causes a Profound Skeletal Phenotype Characterized by Reduced Bone Turnover
Meiling Zhu*, Ben-hua Sun, Christine Simpson, Steven Tommasini, Karl Insogna. Yale University School of Medicine, United states
Disclosures: Meiling Zhu, None

SA0179 Deletion of YAP and TAZ in Osteoblasts and Osteocytes Suppresses Bone Formation and Reduces Bone Mass
Jinhu Xiong*, Marilina Piemontese, Yu Liu, Yuko Fujiwara, Priscilla Baltz, Charles O’Brien. University of Arkansas for Medical Sciences, United states
Disclosures: Jinhu Xiong, None

SA0180 HDAC5 is required for loading-induced sclerostin down-regulation
Marc Wein¹, Elizabeth Williams¹, Maureen O’Meara¹, Belinda Beqo¹, Leah Worton², Edith Gardiner², Paola Divieti-Pajevic², Ted Gross², Henry Kronenberg¹. ¹Massachusetts General Hospital, United states, ²University of Washington, United states, ³Boston University, United states
Disclosures: Marc Wein, None

SA0181 Increased Wnt/β-catenin Signaling and Decreased Osteoclastogenic Potential of Osteocytic Cells Lacking Cx37
Rafael Pacheco-Costa*, Iraj Hassan, Lilian Plotkin. Indiana University School of Medicine, United states
Disclosures: Rafael Pacheco-Costa, None

SA0182 Osteocyte-Driven Perilacunar Remodeling is Impaired in Glucocorticoid Induced Osteonecrosis
Tristan Fowler*, Courtney Mazur¹, Faith Hall-Glenn¹, Aaron Fields¹, Hrishkesh Bale², Robert Ritchie², Jeffrey Lotz¹, Thomas Vail¹, Tamara Alliston¹. ¹University of California San Francisco, United states, ²Lawrence Berkeley National Laboratory, United states
Disclosures: Tristan Fowler, None

SA0183 Osteocytes Utilize Lacunar Acidification to Remove Calcium from Their Perilacunar Matrix During Lactation
Katharina Jähn¹, Shilpa Kelkar¹, Hong Zhao², Yixia Xie², LeAnn M Tiede-Lewis², Vladimir Dusevich², Sarah L Dallas², Lynda F Bonewald², ¹University Medical Center Hamburg-Eppendorf, Germany, ²University of Missouri-Kansas City, United states
Disclosures: Katharina Jähn, None

OSTEOCYTES: ORIGIN, CELL CYCLE AND APOPTOSIS

SA0184 Occurrence of apoptosis in cementocytes
Katharina Oliveira*, Raquel Silva, Marcio Beloti, Alberto Consolaro, Lea Silva. University of São Paulo, Brazil
Disclosures: Katharina Oliveira, None
Acute in vivo osteocyte responses to mechanical load in mice bearing a genetic intracellular calcium sensor: recruitment of responding cells depends on both strain magnitude and loading frequency
Karl J Lewis*1, Joyce Louie1, Samuel Stephen1, Zeynep Seren-Ferlengiz2, David C Spray2, Mia M Thi2, Robert J Majeksa1, Sheldon Weinbaum1, Mitchell B Schaffler1. 1Dept. of Biomedical Engineering, City College of New York, United states, 2Dept. of Neuroscience, Albert Einstein College of Medicine, United states
*Disclosures: Karl J Lewis, None

Cinacalcet hydrochloride increases bone strength in patients with renal hyperparathyroidism
Aiji Yajima*1, Ken Tsuchiya1, Yasuo Imanishi2, Masaaki Inaba3, Yoshihiro Tominaga1, Tatsuhiko Tanizawa4, Akemi Ito5, Kōsaku Nitta1. 1Kidney Center, Medicine, Tokyo Women’s Medical University, Japan, 2Department of Metabolism, Endocrinology & Molecular Medicine, Osaka City University Graduate School of Medicine, Japan, 3Department Endocrine Surgery, Nagoya Second Red Cross Hospital, Japan, 4Tanizawa Clinic, Orthopedic Surgery, Japan, 5Ito Bone Histomorphometry Institute, Japan
*Disclosures: Aiji Yajima, None

Vitamin D regulates perilacunar remodeling and osteocyte survival in human and murine bone
Tim Rolvien*1, Björn Busse2, Klaus Püschel3, Matthias Krause4, Marie B. Demay5, Michael Amling2. 1Department of Osteology & Biomechanics, University Medical Center Hamburg-Eppendorf, Hamburg, Germany, Germany, 2Department of Osteology & Biomechanics, University Medical Center Hamburg-Eppendorf, Hamburg, Germany, 3Department of Legal Medicine, University Medical Center Hamburg-Eppendorf, Hamburg, Germany, Germany, 4Department of Trauma & Reconstructive Surgery, Asklepios Clinic St. Georg, Hamburg, Germany, Germany, Germany, 5Endocrine Unit, Massachusetts General Hospital, Harvard Medical School, Boston, Massachusetts 02114, United states
*Disclosures: Tim Rolvien, None

Establishing reference intervals of serum 24,25-dihydroxyvitamin D and 25-hydroxyvitamin D-to-24,25-dihydroxyvitamin D ratio by LC-MS/MS
Jonathan Tang*1, Holly Nicholls1, Isabelle Piec1, Christopher Washbourne1, John Dutton1, Sarah Jackson2, Julie Greeves2, William Fraser1. 1University of East Anglia, United Kingdom, 2HQ Army Recruiting & Training Division, United Kingdom
*Disclosures: Jonathan Tang, None

Relationship Between Serum Levels of Fibroblast Growth factor 23 (FGF23) and Osteoporotic Fracture Risk in Postmenopausal Women with Chronic Kidney Disease Stage G2
Mika Yamauchi*1, Kiyoko Nawata2, Masahiro Yamamoto1, Toshitsugu Sugimoto1. 1Internal Medicine 1, Shimane University Faculty of Medicine, Japan, 2Health & Nutrition, The University of Shimane, Japan
*Disclosures: Mika Yamauchi, None

Serum osteoprotegerin is a marker of both fracture and cardiovascular risk in older men – the prospective STRAMBO study
Pawel Szulc*1, Lorenz C Hofbauer2, Roland Chapurlat1. 1INSERM UMR 1033, University of Lyon, Hospices Civils de Lyon, France, 2Universitätssklinikum Carl Gustav Carus, Technische Universität Dresden, Germany
*Disclosures: Pawel Szulc, None

25-Hydroxyvitamin-D Concentration and Bone Mineral Density as Predictors of Fragility Fracture in a Bone Health Clinic
Matthew McCarley*, Gordon Klein, Kelsey L. Wise, Ronald W. Lindsey. University of Texas Medical Branch, United states
*Disclosures: Matthew McCarley, None

Withdrawn
SA0193 Evaluation of Trabecular Bone Score in Patients with a Distal Radius Fracture
Hyun Sik Gong*. Department of Orthopedic Surgery, Seoul National University College of Medicine, Korea, republic of
Disclosures: Hyun Sik Gong, None

SA0194 Patients with Klinefelter syndrome have severe bone microarchitecture impairment: the KLINOS study
Cyrille Confavreux*1, Anne Piot2, Pawel Szulc3, Justine Bacchetta2, Sylviane Aillaud4, Hervé Lejeune5, Roland Chapurlat2, Stéphanie Boutroy3, Ingrid Plotton5. 1INSERM UMR1033 – LYOS - Université de Lyon - Hospices Civils de Lyon, France, 2INSERM UMR1033 – LYOS - Université de Lyon, Hospices Civils de Lyon, France, 3INSERM UMR1033 – LYOS - Université de Lyon, France, 4Hospices Civils de Lyon, France, 5Reproductive Medicine Department, Hospices Civils de Lyon, France, 6INSERM UMR1208 INRA- StemGamE - Université de Lyon - Department of Molecular Morphology & Endocrinology, Hospices Civils de Lyon, France
Disclosures: Cyrille Confavreux, None

SA0195 The trabecular bone score reflects bone microarchitecture at the peripheral skeleton in kidney transplant recipients
Matthew Luckman*1, Didier Hans2, Natalia Cortez2, Kyle Nishiyama3, Sanchita Agarwal3, Lucas Nikkel3, Sapna Iyer6, Chengchen Zhang3, Edward Guo3, Donald McMahon3, Elizabeth Shae3, Tom Nickolas3. 1Department of Human Nutrition, Columbia University, United states, 2Lausanne University, Switzerland, 3Columbia University, United states, 4Columbia University, United states, 5University of Rochester, United states, 6Kaiser Health Center, United states
Disclosures: Matthew Luckman, None

SA0196 Trabecular bone score (TBS) reference values from all combination of lumbar vertebrae in dual-energy absorptiometry (DXA) from NHANES 2005-2008 multiethnic Survey
Bo Fan*, John Shepherd. University of California San Francisco, United states
Disclosures: Bo Fan, None

SA0197 Validation study of a new ultrasonic device targeting cortical bone by HR-pQCT
Ko Chiba*1, Ryoichi Suetoshi2, Narihiro Okazaki3, Ayako Kurogi3, Tatsuo Araki2, Takeshi Kawajiri2, Shuntaro Sato4, Makoto Osaki3. 1Department of Orthopaedic Surgery, Nagasaki University Hospital, Japan, 2Technology Development & Researching Laboratory, Furuno Electric Co., Ltd, Japan, 3Department of Orthopaedic Surgery, Nagasaki University Hospital, Japan, 4Clinical Research Center, Nagasaki University Hospital, Japan
Disclosures: Ko Chiba, None

OSTEOPOROSIS - ASSESSMENT: DXA

SA0198 Analyzing the cortical and trabecular bone of tenofovir-treated HIV patients using 3D-DXA
Robert Güerri-Fernández*1, Ludovic Humbert2, Judit Villar-Garcia3, Roger Fonollà4, Lucia Moro5, Leo Mellibovsky6, Xavier Nogues7, Marta Trenchs-Rodriguez8, Hernando Knobel1, Adolfo Díez-Pérez6. 1Infectious Diseases Hospital del Mar Medical Research Institute, Spain, 2Galgo Medical, Barcelona, Medical, Spain, 3Infectious Diseases. Hospital del Mar., Spain, 4GALGO Medical, Barcelona, Spain, Spain, 5Internal Medicine. Hospital del Mar Medical Research Institute, Spain, 6Internal Medicine. Hospital del Mar., Spain, 7Internal Medicine. Hospital del Mar. Barcelona, Spain, 8Catalan Institute of Health. ICS. Barcelona, Spain, Spain
Disclosures: Robert Güerri-Fernández, None

SA0199 Analyzing the cortical and trabecular bone of type 1 diabetes patients using 3D-DXA – a longitudinal study
Ludovic Humbert*1, Martin Keil2, Gabriele Lehmann1, Alexander Sämann2, Roger Fonolla1, Thomas Neumann2. 1Galgo Medical, Spain, 2Department of Internal Medicine III, Jena University Hospital, Germany, 3Institute of Medical Statistics, Computer Sciences & Documentation, Jena University Hospital, Germany
Disclosures: Ludovic Humbert, None

SA0200 Bone structural components and lean mass assessed by 3D-DXA in Hip Fracture Patients
Luis Del Rio*1, Silvana Di Gregorio1, Patricia Sanchez2. 1MD, Spain, 2CTD, Spain
Disclosures: Luis Del Rio, None
SA0201 Chronic Joint Pain is Associated with Spinal Osteoporosis in Midlife Asian Women
Yue Luna Wang*, Susan Jane Sinclair Logan2, Lay Wai Khin3, Saw Myat Sabai1, Pa Pa Thu Win1, Yeon Ling Mayvien Teo1, Stephen Fearns Smagula4, Jane A. Cauley5, Eu-Leong Yong1. 1Department of Obstetrics & Gynaecology, National University of Singapore (NUS), Singapore, Singapore, 2Department of Obstetrics & Gynaecology, National University Hospital (NUH), Singapore, Singapore, 3Singapore Institute for Clinical Sciences - A*STAR, Singapore, Singapore, 4Department of Psychiatry, Western Psychiatric Institute & Clinic, University of Pittsburgh Medical Center (Pennsylvania), United States of America, United states, 5Department of Epidemiology, University of Pittsburgh (Pennsylvania) Graduate School of Public Health (GSPH), United States of America, United states

Disclosures: Yue Luna Wang, None

SA0202 Feasibility study of a Quality Control methodology for TBS
Renaud Winzenrieth*, Jessy Libber1, Diane Krueger2, Franck Michelet3, Neil Binkley2. 1R&D department, Med-Imaps SASU, France, 2University of Wisconsin Osteoporosis Clinical Research Program, United states

Disclosures: Renaud Winzenrieth, Med-Imaps, 17

SA0203 Performance of FRAX in Clinical Practice According to WHO and NOF Definitions of Osteoporosis in Canadian Women and Men: The Manitoba BMD Cohort
William Leslie*, Sumit Majumdar2, Suzanne Morin3, Lisa Lix1, John Schousboe4, Kris Ensrud5, Helena Johansson2, Anders Oden5, Eugene McCloskey2, John Kanis5. 1University of Manitoba, Canada, 2University of Alberta, Canada, 3McGill University, Canada, 4University of Minnesota, United states, 5Centre for Metabolic Bone Diseases, University of Sheffield Medical School, United Kingdom

Disclosures: William Leslie, None

OSTEOPOROSIS - ASSESSMENT: OTHER IMAGING TECHNIQUES

SA0204 ASBMR 2016 Annual Meeting Young Investigator Award
Accuracy of MRI-Based Measures of Bone Strength Compared to Direct Mechanical Testing
Elizabeth A. Kobe*, Olivia M. Teter, Michelle Slinger, Karyll Davis, Abigail Hong, Chamith S. Rajapakse, Felix W. Wehrli. University of Pennsylvania Perelman School of Medicine (Radiology), United states

Disclosures: Elizabeth A. Kobe, None

SA0205 ASBMR 2016 Annual Meeting Young Investigator Award
Assessment of bone strength and cortical porosity in a group of premenopausal women with celiac disease after 3-years on gluten-free diet
Maria Belen Zanchetta1, Vanesa Carla Longobardi*, Fernando Silveira2, Florencia Costa1, Cesar Bogado1, Julio Cesar Bai1, Jose R Zanchetta1. 1MD, Argentina, 2PH, Argentina, 3PHD, Argentina

Disclosures: Vanesa Carla Longobardi, None

SA0206 Body Mass Index is Negatively Correlated with Lumbar Spine Trabecular Bone Score on Hologic but not GE-Lunar Densitometers
Gillian Mazzetti*, Claudie Berger1, William Leslie2, Didier Hans3, Lisa Langsetmo1, David Hanley4, Christopher Kovacs4, Jerilynn Prior5, Stephanie Kaiser2, K. Shawn Davison8, Robert Josse9, Alexandra Papaioannou10, Rick Adachi10, David Goltzman1, Suzanne Morin1, McGill University, Canada, 2University of Manitoba, Canada, 3University of Lausanne, Switzerland, 4University of Calgary, Canada, 5Memorial University, Canada, 6University of British Columbia, Canada, 7Dalhousie University, Canada, 8Saskatoon Osteoporosis & CaMos Centre, Canada, 9University of Toronto, Canada, 10McMaster University, Canada

Disclosures: Gillian Mazzetti, None

SA0207 Finite Element Analysis Based in pQCT Imaging To Improve Assessment of Fracture Risk
Dale Robinson1, Oichun Song2, Hongyuan Jiang3, Peter Vee Sin Lee1, John Wark*. 1University of Melbourne, Australia, 22nd Affiliated Hospital, Xi’an Jiaotong University, China, 3University of Melbourne & Royal Melbourne Hospital, Australia

Disclosures: John Wark, None
SA0208 Fracture Discrimination Using a Novel Pulse-Echo Ultrasound Device
John Schousboe¹, Ossi Riekkinen², Janne Karjalainen³. ¹Park Nicollet Institute, United states, ²Bone Index Finland, Finland
Disclosures: Janne Karjalainen, None

SA0209 Reliable quantification of marrow fat unsaturation level using in vivo MR spectroscopy
Xiaojuan Li⁴, Kaipin Xu⁵, Sigurdur Sigurdsson⁶, Trisha Hue⁷, Ann Schwartz⁸. ¹University of California, San Francisco, United states, ²Icelandic Heart Association, Iceland
Disclosures: Xiaojuan Li, None

SA0210 Risk factors including age, gender, osteoporosis in spine or hip, and local osteoporosis for more severe pattern of fracture in proximal humerus fracture
Kyoung Hwan Koh, Jin Hwan Kim*. Inje University Ilsan Paik Hospital, Korea, republic of
Disclosures: Jin Hwan Kim, None

SA0211 Subject-Specific Finite Element Modeling Based on HR-pQCT at the Distal Tibia Predicts Bone Strength at Hip and Spine
Andres Kroeker*, Ryan Plett, Britta Jorgenson, Kyle Nishiyama, Steven Boyd. 1. McCaig Institute for Bone & Joint Health, 2. Department of Radiology, Cumming School of Medicine, University of Calgary, Calgary, AB, Canada, Canada
Disclosures: Andres Kroeker, None

SA0212 The Canadian Multicentre Osteoporosis Study (CaMos) and Vertebral Fractures
Brian Lentle⁴, Claudie Berger⁵, Jacques Brown⁶, Lisa Langsetmo⁷, Doneal Thomas⁸, Benjamin Fine⁹, Kevin Lian¹⁰, Arvind Shergill¹¹, J Jacques Trollip¹², Linda Probyn¹³, William D Leslie¹⁴, Stephanie M Kaiser¹⁵, Jonathan D Adachi¹⁶, Tanveer Towheed¹⁷, David A Hanley¹⁸, K Shawn Davison¹⁹, Jerilynn Prior¹⁰, David Goltzman¹³. ¹UBC, Canada, ²CaMos, RI-MUHC, McGill University, Canada, ³Centre Hospitalier de l’Université Laval, Canada, ⁴University of Minnesota, Canada, ⁵University of Toronto, Canada, ⁶Sunnybrook Health Sciences Centre, Canada, ⁷University of Manitoba, Canada, ⁸Dalhousie University, Canada, ⁹McMaster University, Canada, ¹⁰Queen’s University, Canada, ¹¹University of Calgary, Canada, ¹²University of Victoria, Canada, ¹³McGill University, Canada
Disclosures: Brian Lentle, None

SA0213 The Impact of QCT Reconstruction Kernel on Bone Mineral Density and Finite Element Estimated Bone Strength
Andrew Michalski*, W. Brent Edwards², Steven Boyd¹. ¹Department of Radiology, Cumming School of Medicine, University of Calgary, Canada, ²Faculty of Kinesiology, University of Calgary, Canada
Disclosures: Andrew Michalski, None

SA0214 Trabecular Bone Score (TBS) and its association with Cobb angle kyphosis in older men
Erin Deiotte¹, Jian Shen¹, Jaclyn Bergstrom¹, Jeanne Nichols¹, John Schousboe², David Wing¹, Gina Woods¹, Nancy Lane¹, Wendy Katzman¹, Deborah Kado². ¹University of California, San Diego, United states, ²Park Nicollet Institute & University of Minnesota, United states, ³University of California, Davis, United states, ⁴University of California, San Francisco, United states
Disclosures: Deborah Kado, None

SA0215 Ultrashort Echo Time Magnetization Transfer (UTE-MT) Imaging and Modeling of Cortical Bone
Yajun Ma*, Eric Chang², Jiang Du¹. ¹Department of Radiology, University of California, San Diego, United states, ²VA San Diego Healthcare System, San Diego; Department of Radiology, University of California, San Diego, United states
Disclosures: Yajun Ma, None
SA0216  Weight Change in Men in Late Life and Bone Microarchitecture at the Distal Tibia
Kristine Ensrud*1, Tien Vo2, Lisa Langsetmo3, Andrew Burghardt4, John Schousboe5, Jane Cauley3, Sharmila Majumdar5, Brent Taylor2, Andrew Hoffman6, Eric Orwoll6.
1University of Minnesota / VA Health Care System, United states, 2University of Minnesota, United states, 3University of California, United states, 4University of Pittsburgh, United states, 5Stanford University, United states, 6Oregon Health & Science University, United states
Disclosures: Kristine Ensrud, None

OSTEOPOROSIS - EPIDEMIOLOGY: BONE MINERAL DENSITY

SA0217  A Mathematical Model to Quantify Links Between Bone Mineral Density, Patient Factors and Therapeutic Interventions on Fracture Risk in Patients with Osteoporosis
Rena Eudy*, William Gillespie, Matthew Riggs, Marc Gastonguay. Metrum Research Group LLC, United states
Disclosures: Rena Eudy, None

SA0218  Accelerated Bone Loss at the Hip: Association with Increased Risk of Subsequent Mortality in Older Men
Peggy Cawthon1, Eric Orwoll2, Sheena Patel1, Susan Ewing3, Kristine Ensrud4, Jane Cauley5, Jennifer Lyons6, Lisa Fredman6, Deborah Kado7, Andrew Hoffman8. 1California Pacific Medical Center Research Institute, United states, 2Bone & Mineral Unit, Oregon Health & Science University, United states, 3University of California San Francisco, United states, 4University of Minnesota & Minneapolis VA Health Care System, United states, 5University of Pittsburgh, United states, 6Boston University School of Public Health, United states, 7University of California San Diego, United states, 8Stanford University & VA Palo Alto Health Care System, United states
Disclosures: Eric Orwoll, None

SA0219  Comparison of Volumetric Bone Mineral Density and Macro-architecture among Indian, United States Caucasians and Afro Caribbean Older Men
Guru Rajesh Jammy*1, Robert M. Boudreau1, Tushar Singh1, Pawan Sharma2, Kristine E Ensrud3, Joseph M. Zmuda1, P S Reddy1, Anne B Newman1, Jane A Cauley1. 1Department of Epidemiology, University of Pittsburgh, United states, 2SHARE INDIA - Mediciti Institute of Medical Sciences, India, 3Division of Epidemiology & Community Health, University of Minnesota; Department of Medicine, University of Minnesota; Center for Chronic Disease Outcomes Research, VA Health Care System, Minneapolis., United states
Disclosures: Guru Rajesh Jammy, None

SA0220  Genome-Wide Association Study of DNA Methylation Identifies a Novel Locus Associated with Bone Mineral Density
John Morris*1, Pei-Chien Tsai2, Yi-Hsiang Hsu3, Roby Joehanes3, Jie Zheng4, Katerina Trajanoska5, Mette Soerensen6, Vincenzo Foretta7, Kaare Christensen7, Lene Christiansen7, Tim Spector2, Fernando Rivadeneira4, Jonathan Tobias4, David Evans4, Douglas Kiel3, Brent Richards1, Jordana Bell1. 1Department of Human Genetics, McGill University, Canada, 2Department of Twin Research & Genetic Epidemiology, King's College London, United Kingdom, 3Department of Medicine, Institute for Aging Research, Hebrew SeniorLife, BIDMC, & Harvard Medical School, United states, 4MRC Integrative Epidemiology Unit, University of Bristol, United Kingdom, 5Department of Epidemiology, Erasmus Medical Center, Netherlands, 6The Danish Twin Registry, Epidemiology, Institute of Public Health, University of Southern Denmark, Denmark, 7Centre for Clinical Epidemiology, Lady Davis Institute, Jewish General Hospital, McGill University, Canada
Disclosures: John Morris, None

SA0221  Regional Variations in Rates of Osteopenia, Osteoporosis, Fractures, and Bone Mineral Density Screening in Male US Veterans
Joanne LaFleur*1, Yan Cheng2, Jacob Crook2, Robert Adler3, Kenneth Lyles4, Cathleen Colon-Emeric4. 1University of Utah College of Pharmacy Department of Pharmacotherapy, United states, 2University of Utah Division of Epidemiology, United states, 3Richmond VA Medical Center, United states, 4Duke University Department of Geriatrics, United states
Disclosures: Joanne LaFleur, None
SA0222 Relationship Between Serum Vitamin B6 and Bone Mineral Density in the Middle-aged and Elderly People in Shanghai, China
Lin Chen*, Jing Wang, Chenguang Li, Liang Qiao, Xiaofeng Qi, Qiang Wang, Xuejun Cui, Bing Shu, Yongjun Wang. 1Longhua Hospital, Shanghai University of Traditional Chinese Medicine; Spine Research Institute, Shanghai University of Traditional Chinese Medicine, China, 2Longhua Hospital, Shanghai University of Traditional Chinese Medicine; Shanghai Geriatric institute of Chinese Medicine, China, 3Longhua Hospital, Shanghai University of Traditional Chinese Medicine, China, 4Longhua Hospital, Shanghai University of Traditional Chinese Medicine; School of Rehabilitation Science, Shanghai University of Traditional Chinese Medicine; Spine Research Institute, Shanghai University of Traditional Chinese Medicine, China
Disclosures: Lin Chen, None

OSTEOPOROSIS - EPIDEMIOLOGY: FALLS AND FRACTURES

SA0223 Biochemical Markers of Inflammation Associated with Increased Mortality in Hip Fracture Patients
Debbie Norring-Agerskov*, Lise Bathum, Ole Vesterager Pedersen, Jes Bruun Lauritzen, Henrik Jorgensen, Niklas Rye Jorgensen. 1Department of Clinical Biochemistry, Hvidovre Hospital, University of Copenhagen, Denmark, 2Department of Clinical Immunology, Naestved Sygehus, Denmark, 3Department of Orthopaedic Surgery, Bispebjerg Hospital, University of Copenhagen, Denmark, 4Department of Clinical Biochemistry, Bispebjerg Hospital, University of Copenhagen, Denmark, 5Department of Clinical Biochemistry, Rigshospitalet Glostrup, University of Copenhagen, Denmark
Disclosures: Debbie Norring-Agerskov, None

SA0224 Fracture Risk After Bariatric Surgery: Roux-en-Y Gastric Bypass Versus Adjustable Gastric Banding
Elaine Yu*, Moa Park, Joan Landon, Seoyoung Kim. 1Endocrine Unit, Massachusetts General Hospital, United states, 2Division of Pharmacoeconomics, Brigham & Women's Hospital, United states
Disclosures: Elaine Yu, Amgen, 100

SA0225 Fracture Risk Assessment In Long term care: FRAIL
Sarah Berry, Yoojin Lee, Andrew Zullo, Vincent Mor, Kevin McConeghy, Geetanjoli Banerjee, Ralph D’Agostino, Douglas Kiel. 1Department of Clinical Biochemistry, Rigshospitalet Glostrup, University of Copenhagen, Denmark, 2Brown University, United states, 3Boston University, United states
Disclosures: Sarah Berry, Amgen, 100

SA0226 Osteoporosis and Functional Outcome after a Distal Radius Fracture in Men – A prospective study of the first post-fracture year
Lisa Egund, Fiona McGuigan, Kristina Akesson. Clinical & Molecular Osteoporosis Research Unit, Department of Clinical Science Malmö, Lund University & Department of Orthopedics, Skåne University Hospital Malmö, Sweden, Sweden
Disclosures: Lisa Egund, None

SA0227 Vertebral Fractures have Similar Impact as hip Fractures on the Progression of Frailty
Olga Gajic-Veljanoski*, Jonathan D. Adachi, Courtney Kennedy, George Ioannidis, Claudie Berger, Andy Kin On Wong, Kenneth Rockwood, Susan Kirkland, Parminder Raina, Lehana Thabane, Alexandra Papaioannou. 1McMaster University & Hamilton Health Sciences/St. Peter’s Hospital – GERA Centre, Canada, 2McMaster University & St. Joseph’s Healthcare Hamilton, Canada, 3Hamilton McMaster University/McMaster University & Health Sciences/St. Peter’s Hospital - GERA Centre, Canada, 4McMaster University &Hamilton Health Sciences/St. Peter’s Hospital – GERA Centre, Canada, 5Camos – McGill University, Canada, 6University Health Network, Canada, 7Dalhousie University, Canada, 8McMaster University, Canada
Disclosures: Olga Gajic-Veljanoski, None
SA0228  Estrogen-Containing Contraceptives are Associated with Reduced Risk of Stress Fracture in Female Soldiers
1Endocrine Unit, Massachusetts General Hospital & Harvard Medical School, United states, 2Military Performance Division, United States Army Research Institute of Environmental Medicine, United states, 3Divisions of Sports Medicine & Endocrinology, Boston Children’s Hospital, Endocrine Unit, Massachusetts General Hospital, & Harvard Medical School, United states, 4Endocrine Unit, Massachusetts General Hospital, Harvard Medical School & Center for Advanced Orthopedic Studies, Beth Israel Deaconess Medical Center, Department of Orthopaedic Surgery, United states
Disclosures: Kristin L. Popp, None

SA0229  Pubertal timing predicts adult non-vertebral fracture risk in men – the BEST cohort
Claes Ohlsson*, Maria Bygdell1, Liesbeth Vandenput1, Dan Mellström1, Arvid Sonden2, Jenny Kindblom1. 1Center for Bone & Arthritis Research, Institute of Medicine, the Sahlgrenska Academy at Gothenburg University, Sweden, 2Bioinformatics Core Facility, Sahlgrenska Academy at University of Gothenburg, Sweden
Disclosures: Claes Ohlsson, None

SA0230  2016 ASBMR Fund for Research and Education Young Investigator Award
The Effects of Cross-sex Hormonal Treatment in Transgender Persons on their Bone Mineral Density: a 1 year Prospective Observational Study
Chantal Wiepjes*, Mariska Vlot, Maartje Klaver, Paul Lips, Renate de Jongh, Annemieke Heijboer, Martin den Heijer. VU Medisch Centrum, Netherlands
Disclosures: Chantal Wiepjes, None

SA0231  CHANGE IN BONE STRUCTURE WITH AGE AS ASSESSED BY PERIPHERAL QUANTITATIVE COMPUTED TOMOGRAPHY AND RELATIONSHIPS WITH MUSCLE IN OLDER MEN AND WOMEN
Elaine Dennison*, Kate Ward, Karen Jameson, Mark Edwards, Cyrus Cooper. MRC Lifeourse Epidemiology Unit, United Kingdom
Disclosures: Elaine Dennison, None

SA0232  Gender differences in proximal femur shape: findings from a population based study in adolescents
Monika Frysz*, Denis Baird2, Jennifer S Gregory3, Rebecca J Barr3, Richard M Aspden3, Lavinia Paternoster1, Jon H Tobias3. 1School of Social & Community Medicine, University of Bristol, UK; MRC Integrative Epidemiology Unit at the University of Bristol, UK, United Kingdom, 2Musculoskeletal Research Unit, School of Clinical Sciences, University of Bristol, UK, United Kingdom, 3Arthritis & Musculoskeletal Medicine, Institute of Medical Sciences, University of Aberdeen, UK, United Kingdom
Disclosures: Monika Frysz, None

SA0233  High Risk of Second Fracture within 1, 2, 5 years after Prior Fracture among Women 65 years or Older
Akhila Balasubramanian1, Jie Zhang2, Lang Chen2, Deborah Wenkert1, Shanette G Daigle2, Andreas Grauer1, Jeffrey R Curtis*2. 1Amgen, United states, 2University of Alabama at Birmingham, United states
Disclosures: Jeffrey R Curtis, Janssen, 13; Amgen, 14; Crescendo, 13; Janssen, 14; Pfizer, 14; BMS, 14; Coronna, 13; BMS, 13; Roche/Genentech, 14; Corona, 14; Crescendo, 14; Pfizer, 13; Roche/Genentech, 13; AbbVie, 13; Amgen, 13; UCB, 13; AbbVie, 14; UCB, 14

SA0234  Imminent Risk of Clinical Vertebral Fracture After Fracture (Reykjavik Study)
Helena Johansson*, Kristín Siggeirsdóttir2, Nicholas C Harvey3, Anders Odén1, Vilmundur Guðnason2, Eugene McCloskey1, Gunnar Sigurdsson2, John Kanis1. 1Centre for Metabolic Bone Diseases, University of Sheffield, United Kingdom, 2Icelandic Heart Association, Kopavogur, Iceland, 3MRC Lifeourse Epidemiology Unit, University of Southampton, United Kingdom
Disclosures: Helena Johansson, None
**SA0235** Kidney Function and Fracture Risk among Older Male Veterans
Rasheeda Hall¹, Rick Sloane², Robert Adler³, Kenneth Lyles¹, Joanne LaFleur³, Cathleen Colon-Emeric*¹. ¹Duke University, United states, ²Richmond VAMC, United states, ³University of Utah, United states
Disclosures: Cathleen Colon-Emeric, None

**SA0236** Lower TBS Score is a Risk Factor for Atypical Femur Fractures but not Independent of Duration of Antiresorptive Therapy
Andy Kin On Wong¹, K. Shawn Davison², William D. Leslie³, Jonathan D. Adachi⁴, Jacques P. Brown², Robert G. Josse², Aliya Khan³, Angela M. Cheung⁴. ¹University Health Network, Canada, ²University of Victoria, Canada, ³University of Manitoba, Canada, ⁴McMaster University, Canada, ⁵Laval University, Canada, ⁶St. Michael's Hospital, Canada
Disclosures: Andy Kin On Wong, None

**SA0237** Prediction of two-year risk of fracture among older US women
Annette Adams*,², Eric Johnson³, Hui Zhou¹, Robert Platt², Deborah Wenkert², Steven Jacobsen¹, Akhila Balasubramanian¹. ¹Kaiser Permanente Southern California, United states, ²The Center for Health Research, United states, ³McGill University Health Center Research Institute, Canada
Disclosures: Annette Adams, Amgen Inc, United states

**OSTEOPOROSIS - HEALTH CARE DELIVERY: GENERAL**

**SA0238** A One Year Post Hip Fracture Survey: Why Are Older Adults Not Receiving Osteoporosis Treatment
Mia Barnett*,¹, Judy Beizer², Stuart Weinerman¹, Liron Sinvani¹, Gisele Wolf-Klein¹, Andrej Kozikowski¹. ¹Northwell Health, United states, ²St. John’s University College of Pharmacy & Health Sciences, United states
Disclosures: Mia Barnett, None

**SA0239** Factors Associated with the Online Uptake of a Multi-modal Educational Intervention for the Activating Patients at Risk for OsteoPOroSis (APROPOS) Study: a Randomized Trial within the GLOW Cohort
Maria Danila¹, Elizabeth Rahn*,¹, Ryan Outman¹, Amy Mudano¹, Tammi Thomas¹, Jeroan Allison¹, Fred Anderson², Julia Anderson³, Peter Cram², Jeffrey Curtis¹, Liana Fraenkel³, Susan Greenspan³, Andrea LaCroix³, Sumit Majumdar³, Michael Miller³, Jeri Nieves¹⁴, David Redden¹, Monika Safford¹¹, Stuart Silverman¹², Ethel Siris¹³, Daniel Solomon¹⁴, Amy Warriner¹, Nelson Watts¹⁵, Robert Yood¹⁶, Kenneth Saag¹. ¹The University of Alabama at Birmingham, United states, ²University of Massachusetts Medical School, United states, ³Group Health Cooperative, United states, ⁴University of Toronto, Canada, ⁵Yale University, United states, ⁶University of Pittsburgh, United states, ⁷University of California - San Diego, United states, ⁸University of Alberta, Canada, ⁹The University of Oklahoma, United states, ¹⁰Helen Hayes Hospital, United states, ¹¹Weill Cornell Medical Center, United states, ¹²Cedars-Sinai Medical Center, United states, ¹³Columbia University Medical Center, United states, ¹⁴Brigham & Women's Hospital, United states, ¹⁵Mercy Health Osteoporosis & Bone Health Services, United states, ¹⁶Reliant Medical Group, United states
Disclosures: Elizabeth Rahn, None

**SA0240** Impact of Frailty on Health Care Services Use among Non-institutionalized Quebec Seniors with Non-Hip Fracture: a Population-based Study using Administrative Databases
Vanessa Fillion¹, Marie-Josée Sirois¹, Suzanne N Morin², Philippe Gamache³, Sonia Jean*.¹, ²Laval University, Canada, ³McGill University, Canada, ⁴INSPIQ, Canada
Disclosures: Sonia Jean, None

**SA0241** Impact of Gastrointestinal Events on Patient-Reported Outcomes in Asia-Pacific Women with Osteoporosis: Baseline Results of the MUSIC OS-AP Study
Ankita Modi¹, Peter Ebeling², Mel Lee³, Yong-Ki Min⁴, Ambrish Mithal⁵, Xiaoqin Yang¹, Santwona Baidya⁶, Shuvayu Sen¹, Shiva Sajian¹, ¹Merck & Co., Inc., United states, ²Monash University, Australia, ³Chang Gung Memorial Hospital, Taiwan, province of china, ⁴Sungkyunkwan University, Korea, republic of, ⁵Medanta the Medicity, India, ⁶Optum, Australia
Disclosures: Xiaoqin Yang, Merck & Co., Inc., 17
Over 48,000 Ontario seniors have started denosumab: patient characteristics, regional variation in use and persistence with therapy
Suzanne M. Cadarette*, Guilia P. Consiglio, B. Boyd Hao, Joann K. Ban, M. Amine Amiche. University of Toronto, Canada
Disclosures: Suzanne M. Cadarette, None

Patient- and Hospital-Level Factors associated with Receipt of Bone Densitometry (DXA) in Male Veterans Hospitalized for Hip Fracture
Samantha Solimeo*, Gary Rosenthal, Mary Vaughan Sarrazin. CADRE, Iowa City VA HCS & Department of Internal Medicine, University of Iowa, United states
Disclosures: Samantha Solimeo, None

Rush Fracture Liaison Service for Capturing "missed opportunities" to Treat Osteoporosis
MILLI JAIN*1, SHUCHI SHAH2, SANFORD BAIM1. 1RUSH university, United states, 2Graduate College, Rush University, United states
Disclosures: MILLI JAIN, None

The Activating Patients at Risk for OsteoPOroSis (APROPOS) Study: a Randomized Trial within the GLOW Cohort
Maria Danila*1, Ryan Outman1, Elizabeth Rahn1, Amy Mudano1, David Redden1, Peng Li1, Fred Anderson2, Jeffrey Curtis3, Susan Greenspan3, Andrea LaCroix4, Michael Miller5, Jeri Nieves6, Stuart Silverman7, Amy Warriner1, Nelson Watts8, Nicole Wright1, Kenneth Saag1. 1The University of Alabama at Birmingham, United states, 2University of Massachusetts Medical School, United states, 3University of Pittsburgh, United states, 4University of California San Diego, United states, 5University of Oklahoma, United states, 6Helen Hayes Hospital, United states, 7Cedars Sinai Hospital, United states, 8Mercy Health, United states
Disclosures: Maria Danila, None

Clinical Utility of Spinal Imaging in Patients Deemed at Moderate Fracture Risk in an Orthopaedic Post Fracture Intervention Program for Osteoporosis Care
Earl Bogoch, Victoria Elliot-Gibson*, Erin Norris, Robert Josse, Joanna Sale. St. Michael’s Hospital, Canada
Disclosures: Victoria Elliot-Gibson, Novartis Canada Ltd, 100; Mr. and Mrs. W. Saunders, 100; Amgen Canada Inc, 100; Warner Chilcott, 100; Helen McCrea Peacock Foundation, 100; Merck Frosst Canada Inc, 100; Martin Family Foundation, 100; Mr. Clifford Martin, 100; Procter and Gamble Pharmaceuticals Inc, 100; Alliance for Better Bone Health, 100

Calcium and Vitamin D Supplementation Leads to Greater Improvements in Trabecular Bone Microarchitectue in Young Adults undergoing Initial Military Training
Erin Gaffney-Stomberg*1, Katelyn Guerriere1, Sonya Cable2, Mary Bouxsein3, Julie Hughes1, James McClung1. 1USARIEM, United states, 2WAMC, United states, 3Harvard Medical School, United states
Disclosures: Erin Gaffney-Stomberg, None

Cardiovascular disease and calcium supplementation: a cross-sectional study primary care in South Brazil
Ronaldo Godinho, Pietra Zorzo, Thales Ilha, Adhan de Vieira, Felipe Langer, Leo Dal Osto, Rafaela Copes, Fabio Comim, Melissa Premaor*. Federal University of Santa Maria, Brazil
Disclosures: Melissa Premaor, None
SA0249 Dietary Calcium Intake and Vascular Markers in Healthy Postmenopausal Women
Angel Ong*1, Shubhabrata Das2, Hope Weiler3, Michelle Wall3, Angela Cheung4, Elham Rahme5, Susan Whiting2, Stella Daskalopoulou2, David Goltzman5, Suzanne Morin7.
1School of Dietetics & Human Nutrition, McGill University, Canada, 2Division of Experimental Medicine, Department of Medicine, McGill University, Canada, 3McGill University Health Centre Research Institute, Canada, 4Department of Medicine, University of Toronto, Canada, 5Division of Clinical Epidemiology, McGill University Health Centre Research Institute, Canada, 6College of Pharmacy & Nutrition, University of Saskatchewan, Canada, 7Department of Medicine, McGill University Health Centre Research Institute, Canada
Disclosures: Angel Ong, None

SA0250 Effects of Low-fat Dairy Foods on Bone and Body Composition, Lipid Profile and Pro-inflammatory Markers in Overweight/Obese Women During the Weight Loss Regimen
Ashley Carter*1, Pei-Yang Liu2, Hyehyung Shin3, Youjin Kim4, Jasminka Ilich5. 1Florida State University, United states, 2University of Akron, United states, 3Samsung Life Insurance, Korea, democratic people’s republic of, 4The State University of New Jersey, United states
Disclosures: Ashley Carter, None

OSTEOPOROSIS – NUTRITION, DIETARY SUPPLEMENTS AND PHYSICAL ACTIVITY: EXERCISE

SA0251 High Impact Mechanical Loading Increases Bone Material Strength – Results from a 3-Month Intervention Study
Daniel Sundh*, Mattias Lorentzon, Martin Nilsson, Michail Zoulakis, Martin Hellgren.
Geriatric Medicine, Department of Internal Medicine & Clinical Nutrition, Institute of Medicine, University of Gothenburg, Gothenburg, Sweden, Sweden
Disclosures: Daniel Sundh, None

SA0252 High Intensity Progressive Resistance Training for Postmenopausal Women with Low to Very Low Bone Mass: The LIFTMOR Trial
Steven Watson*1, Benjamin Weeks1, Lisa Weis2, Amy Harding1, Sean Horan1, Belinda Beck1. 1School of Allied Health Sciences & Menzies Health Institute Queensland, Griffith University, Gold Coast, Australia, Australia, 2The Bone Clinic, Brisbane, Australia, Australia
Disclosures: Steven Watson, None

SA0253 Moderate-to-vigorous Physical Activity but not Sedentary Time is Associated with Musculoskeletal Health Outcomes in a Cohort of Australian Middle-aged Women
Feitong Wu*1, Karen Wills1, Laura Laslett1, Brian Oldenburg3, Graeme Jones1, Tania Winzenberg1. 1Menzies Institute for Medical Research, University of Tasmania, Australia, 3School of Population & Global Health, University of Melbourne, Australia
Disclosures: Feitong Wu, None

SA0254 Yoga-Associated Vertebral Compression Fractures: Experience from a Tertiary Referral Care Center
Jad Sfeir*, Vikram Sonawane, Mehrsheed Sinaki, Matthew Drake. Mayo Clinic, United states
Disclosures: Jad Sfeir, None

OSTEOPOROSIS – NUTRITION, DIETARY SUPPLEMENTS AND PHYSICAL ACTIVITY: GENERAL

SA0255 Comparison of Lifestyle Factor, Nutritional Status and Bone Mineral Density in Korean Women
Hee-Sook Lim1, Tae-Hee Kim2, Dong-Won Byun*3, Hae-Hyeog Lee2, Yoo-Jin Park2.
1Department of Nutrition, Soonchunhyang University Bucheon Hospital, Korea, republic of, 2Department of Obstetrics & Gynecology, Soonchunhyang University College of Medicine, Korea, republic of, 3Division of Endocrinology & Metabolism, Department of Internal Medicine, Soonchunhyang University College of Medicine, Korea, republic of
Disclosures: Dong-Won Byun, None
SA0256 Does Magnesium Status Influence Bone Mineral Density?
Michael Johnson¹, R. Erin Johnson², Karen Hansen*¹,¹ University of Wisconsin School of Medicine & Public Health, United states, ²Saint Luke’s Health System, United states
Disclosures: Karen Hansen, None

OSTEOPOROSIS – NUTRITION, DIETARY SUPPLEMENTS AND PHYSICAL ACTIVITY: OTHER NUTRIENTS

SA0257 Increased Milk Protein Isolate Consumption during Diet-Induced Energy Restriction Does Not Influence Changes in Bone Quantity in Overweight and Obese Older Adults
Christian Wright*, Jing Zhou, Wayne Campbell. Purdue University, Department of Nutrition Science, United states
Disclosures: Christian Wright, None

OSTEOPOROSIS – NUTRITION, DIETARY SUPPLEMENTS AND PHYSICAL ACTIVITY: PROTEINS

SA0258 LGG and VSL#3 Probiotics Prevent Ovariectomy Induced Bone Loss and Induce Bone Anabolism in Normal Mice by Decreasing Gut Permeability and Inducing Wnt10b Production
Jau-Yi Li*¹, Abdul Malik Tyagi¹, Emory Hsu¹, Marcelo Steiner¹, Jonathan Adams¹, Reinhard Irie², Roberto Pacifici². ¹Emory University, School of Medicine, United states, ²Department of Pediatrics, Emory University, United states
Disclosures: Jau-Yi Li, None

OSTEOPOROSIS - PATHOPHYSIOLOGY: BONE AND THE MICROBIOME, BONE INFECTIONS

SA0259 The Gut Microbiome Influences Bone Strength and Regulates Differences in Bone Biomechanical Phenotype Among Inbred Mouse Strains
Jason Guss*¹, Michael Horsfield¹, Fernanda Fontenele¹, Taylor Sandoval¹, Marysol Luna¹, Fnu Apoorva¹, Svetlana Lima¹, Rodrigo Bicalho¹, Marjolein van der Meulen¹, Ankur Singh¹, Ruth Ley¹, Steven Goldring², Christopher Hernandez¹. ¹Cornell University, United states, ²Hospital for Special Surgery, United states
Disclosures: Jason Guss, None

OSTEOPOROSIS - PATHOPHYSIOLOGY: BONE MODELING AND REMODELING

SA0260 Delayed bone healing in type 1 diabetic rats is ameliorated by insulin treatment
Ariane Zamarioli*¹, Francisco de Paula¹, Maysa Campos¹, Raquel Silva², José Volpon¹. ¹School of Medicine of Ribeirão Preto, Brazil, ²School of Dentistry of Ribeirão Preto, Brazil
Disclosures: Ariane Zamarioli, None

SA0261 Different Effects of Absence of Complement Component 3 and Anaphylatoxin Receptors on Tissue-Level Properties of Bone
Danielle MacKay*¹, Thomas Kean¹, Kristina Bernardi², Heather Haeberle³, Catherine Ambrose⁴, Feng Lin⁵, James Dennis⁶. ¹Baylor College of Medicine, United states, ²University of Texas, United states, ³University of Texas Health Science Center at Houston, United states, ⁴Cleveland Clinic Lerner Research Institute, United states
Disclosures: Danielle MacKay, None

SA0262 Upregulation of SOST before arthritis onset in arthritis model could partly explain paradoxical effect of sclerostin inhibition in arthritis
Guillaume Courbon*, Raphaëlle Lamarche, Marie-Thérèse Linossier, Norbert Laroche, Thierry Thomas, Laurence Vico, Hubert Marotte. INSERM 1059, University of Lyon, France
Disclosures: Guillaume Courbon, None
SA0263 S-Allylmercapro-N-Acetylcysteine Modulates Stromal Bone Marrow Cells and Bone Structure in Adult Healthy and Diabetic Mice
Naphtali Savion*, Reem Abu-Kheit, Shlomo Kotev-Emeth, Yankel Gabet. Sackler Faculty of Medicine, Tel Aviv University, Israel
Disclosures: Naphtali Savion, None

OSTEOPOROSIS - PATHOPHYSIOLOGY: GENERAL

SA0264 Association between bone turnover markers and level of cognition in older community dwelling individuals with memory concerns
Ryan Ross*, Raj Shah, Rick Sumner. Rush University Medical Center, United states
Disclosures: Ryan Ross, None

SA0265 Bone Loss After Roux-en-Y Gastric Bypass in Mice is Independent of Weight Loss
Elaine Yu*, Joseph Brancale2, Matthew Scott1, Daniel Brooks1, Scott Lajoie2, Lee Kaplan3, Mary Boussein3. 1Endocrine Unit, Massachusetts General Hospital, United states, 2Obesity, Metabolism & Nutrition Institute, Massachusetts General Hospital, United states
Disclosures: Elaine Yu, None

SA0266 Irreversible Deterioration of Cortical and Trabecular Microstructure Associated with Breastfeeding
Ashild Bjornerem*, Ali Ghasem-Zadeh2, Xiaofang Wang2, Minh Bui3, Susan P Walker2, Roger Zebaze2, Ego Seeman2. 1UiT The Arctic University of Norway, Australia, 2University of Melbourne, Australia
Disclosures: Ashild Bjornerem, None

SA0267 Loss of Bone in Sickle Cell Trait and Sickle Cell Disease Female Mice Is Associated with Reduced IGF-1 in Bone and Serum
Liping Xiao*, Bree Andemariam1, Pam Taxel1, Douglas J Adams1, William T Zempsky2, Marja M Hurley1. 1UConn Health, United states, 2Connecticut Children’s Hospital, United states
Disclosures: Liping Xiao, None

OSTEOPOROSIS - PATHOPHYSIOLOGY: GLUCOCORTICOIDS AND OTHER DRUGS

SA0268 A unique peptide containing the heparin binding domain of IGFBP-2 increases bone mass in ovariectomized (OVX) rats
Gang Xi*, Christine Wai1, Thierry Abribat2, Thomas Delale2, Victoria DeMambro3, Clifford Rosen3, David Clemmons1. 1University of North Carolina at Chapel Hill, United states, 2Alize Pharma III, France, 3Maine Medical Center Research Institute, United states
Disclosures: Gang Xi, Alize Pharma III, 100

OSTEOPOROSIS - SECONDARY OSTEOPOROSIS: DIABETES

SA0269 Effects of Obesity and Diabetes on the Rate of Bone Density Loss in Women: The Manitoba BMD Cohort
William Leslie*, Suzanne Morin*, Sumit Majumdar1, Lisa Lix1. 1University of Manitoba, Canada, 2McGill University, Canada, 3University of Alberta, Canada
Disclosures: William Leslie, None

SA0270 Insulin Sensitivity is Positively Associated with Appendicular Bone Density
Se-Min Kim*, Xiuqing Guo2, Yii-Der I. Chen2, Willa A. Hsueh3, Jerome I. Rotter2, Mark O. Goodarzi1, 1Cedars-Sinai Medical Center, United states, 2Harbor-UCLA Medical Center, United states, 3The Ohio State University, United states
Disclosures: Se-Min Kim, None
SA0271 Type 2 Diabetes Mellitus Is Associated with Enhanced Bone Microarchitecture but Lower Bone Material Strength and Poorer Physical Function in Elderly Women
Anna G. Nilsson*1, Daniel Sundh2, Martin Nilsson2, Robert Rudäng2, Anna Darelid2, Michail Zoulakis2, Dan Mellström2, Mattias Lorentzon2, 1Institute of Medicine, Sahlgrenska Academy, Gothenburg University, Sweden, 2Geriatric Medicine, Centre for Bone & Arthritis Research, The Sahlgrenska Academy, University of Gothenburg, Sweden
Disclosures: Anna G. Nilsson, None

OSTEOPOROSIS - SECONDARY OSTEOPOROSIS: DRUGS, OTHER THAN GLUCOCORTICOIDS

SA0272 Biopsy-based bone remodeling characteristics of premenopausal women with idiopathic osteoporosis on selective serotonin reuptake inhibitors (SSRIs)
Adi Cohen*1, Mafo Kamanda-Kosseh1, Donald McMahon1, David Dempster2, Hua Zhou2, Joan Lappe3, Robert Recker3, Julie Stubby3, Mariana Bucovsky1, Elizabeth Shane1, 1Columbia University, United states, 2Helen Hayes Hospital, United states, 3Creighton University, United states
Disclosures: Adi Cohen, None

OSTEOPOROSIS - SECONDARY OSTEOPOROSIS: GLUCOCORTICOIDS

SA0273 Effects of Alendronate and Low-intensity Pulsed Ultrasound Therapies on Bone Mineral Density in Cancellous Osteotomy Sites in the Proximal Tibias of Rats with Glucocorticoid-induced Osteoporosis
Tetsuya Kawano*, Naohisa Miyakoshi, Yuji Kasukawa, Chie Sato, Masashi Fujii, Masazumi Suzuki, Norimitsu Masutani, Manabu Akagawa, Yuichi Ono, Yoichi Shimada. Department of Orthopedic Surgery, Akita University Graduate School of Medicine, Japan
Disclosures: Tetsuya Kawano, None

OSTEOPOROSIS - SECONDARY OSTEOPOROSIS: HIV

SA0274 Bone Metabolism Dysfunction Mediated by the Increase of Proinflammatory Cytokines in Chronic HIV Infection
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Disclosures: Erika Grasiela Marques de Menezes, None

OSTEOPOROSIS - SECONDARY OSTEOPOROSIS: MOBILITY DISORDERS, DISUSE OSTEOPOROSIS

SA0275 Bone Loss Countermeasures for Long Duration Spaceflight
Elisabeth Spector*1, Toshio Matsumoto2, Jeffrey Jones3, Jay Shapiro4, Thomas Lang5, Linda Shackelford6, Scott M. Smith6, Harlan Evans1, Robert Ploutz-Snyder7, Jean Sibonga6, Joyce Keyak8, Toshi Nakamura9, Kenjiro Kohri10, Hiroshi Ohshima11, Gilbert Moralez12, Adrian LeBlanc13. 1Wyle Science, Technology & Engineering Group, United states, 2U of Tokushima Graduate School of Medicine, Japan, 3Baylor College of Medicine, United states, 4Kennedy Krieger Institute, United states, 5UCSF, United states, 6NASA Johnson Space Center, United states, 7Universities Space Research Association, United states, 8U of California at Irvine, United states, 9U of Occupational & Environmental Health, Japan, 10Nagoya City U, Japan, 11JAXA, Japan, 12U of N Texas Health Science Center, United states, 13Baylor College of Medicine & Universities Space Research Association, United states
Disclosures: Elisabeth Spector, None
SA0276 Bone Quantity and Quality Impairments Contribute to the Fragility of Rib in End-Stage Cystic Fibrosis Patients
Louis-Georges Ste-Marie*1, Natalie Dion1, Delphine Farlay2, Saphyto Sankhe3, Sébastien Rizzo2, Valérie Jomphe1, Nathalie J Bureau1, Georges Boivin2, Larry C Lands4, Pasquale Ferrari1, Geneviève Mailhot3, 1CHUM-Centre hospitalier de l’université de Montréal, Canada, 2INSERM, UMR 1033, Université de Lyon, Université Claude Bernard Lyon 1, France, 3Research Centre, CHU Sainte-Justine, Canada, 4MUHC-McGill University, Canada

Disclosures: Louis-Georges Ste-Marie, None

SA0277 Denosumab Versus Bisphosphonate Treatment for Secondary Osteoporosis Caused by Rheumatoid Arthritis
Hayato Kinoshita*1, Naohisa Miyakoshi2, Takeshi Kashiwagura3, Hidekazu Abe1, Yusuke Sugimura4, Yoichi Shimada2, 1Ugo municipal hospital, department of orthopedic surgery, Japan, 2Akita University graduate school of medicine, Department of orthopedic surgery, Japan, 3Akita city hospital, department of orthopedic surgery, Japan, 4Nakadori general hospital, department of orthopedic surgery, Japan

Disclosures: Hayato Kinoshita, None

SA0278 Dipeptidyl Peptidase-4 Activity and Osteoporosis. Findings from the Cardiovascular Health Study
monique bethel*1, Petra Buzkova2, Laura Carbone3, Howard Fink3, John Robbins4, Carlos Isales1, William Hill3, 1Medical College of Georgia, United states, 2University of Washington, United states, 3University of Minnesota, United states, 4University of California, United states, 5Augusta University, United states
Disclosures: monique bethel, None

SA0279 Evidence for the prevention of bone loss in postmenopausal breast cancer patients treated with aromatase inhibitors
Peter Schwarz*1, Bo Abrahamsen2, 1Dept. Endocrinology, Rigshospitalet, Copenhagen University, Denmark, 2University of Southern Denmark & Holbæk Hospital, Denmark
Disclosures: Peter Schwarz, Novartis, 13

SA0280 Osteoporosis with Multiple Spontaneous Vertebral Fractures in a Young Male Carrying Triple Polymorphism in COL1A, VDR and LRP5 Genes
Panagoullia Kollia1, Eleni Vafeiadou2, John Yovos*2, Maria Yavropoulou2, 1Department of Genetics & Biotechnology, Faculty of Biology, School of Physical Sciences, University of Athens, Athens, Greece., Greece, 2Laboratory of Clinical & Molecular Endocrinology, AHEPA University hospital, Aristotle University of Thessaloniki, Greece
Disclosures: John Yovos, None

SA0281 TBS VARIATION IN BREAST CANCER WOMEN COMPLETING AI-THERAPY: A PROSPECTIVE STUDY OF THE B-ABLE COHORT
Maria Rodriguez-Sanz1, Marta Pineda-Moncusi1, Natalia Garcia-Giraltd1, Sonia Servitja2, Tamara Martos2, Josep Blanch-Rubió3, Ignasi Tusquets2, Maria Martinez2, Jaime Rodriguez-Morera4, Adolfo Diez-Pérez2, Joan Albanell2, Xavier Nogues-Solan*4, 1IMIM (Hospital del Mar Research Institute), Red Temática de Investigación Cooperativa en Envejecimiento y Fragilidad (RETICEF), Barcelona, Spain, 2Cancer Research Program, IMIM (Hospital del Mar Research Institute), Medical Oncology Department, Hospital del Mar, Autonomous University of Barcelona, Barcelona, Spain., Spain, 3Medical Reumathology Department, Hospital del Mar, Barcelona, Spain., Spain, 4Internal Medicine Department, Hospital del Mar, Universitat Autònoma de Barcelona, Barcelona, Spain

Disclosures: XAVIER NOGUES-SOLAN, None
SA0282 The Predictors for Twelve Months Efficacy of Denosumab, an Anti-RANKL Antibody, on Osteoporosis in Rheumatoid Arthritis Patients from Japanese Multicenter Study (TBCR-BONE)
Yuji Hirano*1, Yasuhide Kanayama2, Masaaki Isono3, Nobunori Takahashi4, Naoki Ishiguro5, Toshihisa Kojima6. 1Rheumatology, Toyohashi Municipal Hospital, Japan, 2Orthopaedic Surgery & Rheumatology, Toyota Kosei Hospital, Japan, 3Rheumatology, Toyohashi Municipal Hospital, Japan, 4Orthopaedic Surgery, Nagoya University Graduate School of Medicine, Japan, 5Orthopaedic Surgery, Nagoya University Graduate School of Medicine, Japan
Disclosures: Yuji Hirano, None

OSTEOPOROSIS - SECONDARY OSTEOPOROSIS: SMOKING, ALCOHOL AND OTHER ENVIRONMENTAL FACTORS

SA0283 Short-term smoking cessation improved bone formation in male smokers
Reiko Watanabe*, Nobuyuki Tai, Junko Hirano, Daisuke Inoue, Ryo Okazaki. Teikyo University Chiba Medical Center, Japan
Disclosures: Reiko Watanabe, None

OSTEOPOROSIS - TREATMENT: ANABOLIC AGENTS

SA0284 Effect of Teriparatide or Risedronate in BMD and Fracture Recovery in Elderly Patients with a Recent Pertrochanteric Hip Fracture: Final Results of a 78-week Randomized Clinical Trial
Jorge Malouf*1, Umberto Tarantino2, Per Aspenberg3, Soren Overgaard4, Costantino Corradini5, Jan Stepan6, Lars Borris7, Pedro García-Hernández8, Eric Lespessailles9, Frede Frihagen10, Kyriakos Papavasiliou11, Helmut Petto12, José Ramón Caeiro13, Fernando Marín14, 1Internal Medicine; Hospital San Pablo, Spain, 2Orthopaedic Surgery; University Tor Vergata, Italy, 3Department of Clinical & Experimental Medicine, Linköping University, Sweden, 4Orthopaedic Surgery, University of Southern Denmark, Denmark, 5Orthopaedic Institute Gaetano Pini, Italy, 6Institute of Rheumatology, Charles University, Czech republic, 7Orthopaedic Surgery, University Hospital, Denmark, 8Osteoporosis Center, University Hospital, Mexico, 9IPROS Unit, Hôpital Porte Madeleine, France, 10Orthopaedic Surgery, University Hospital, Norway, 11Orthopaedic Surgery, Aristotle University, Greece, 12Eli Lilly Austria GmbH, Austria, 13Orthopaedic Surgery, University Hospital, Spain, 14Eli Lilly Research Centre Ltd, Erl Wood Manor, United Kingdom
Disclosures: Jorge Malouf, None

SA0285 Withdrawn

SA0286 Relative Efficacy of Prompt Follow-up Therapy in Postmenopausal Women Completing the Denosumab and Teriparatide Administration (DATA) Study
Benjamin Leder*, Linda Jiang, Joy Tsai. Massachusetts General Hospital, United states
Disclosures: Benjamin Leder, Amgen, 13; Amgen, 14; Lilly, 13; Merck, 14; Lilly, 14

SA0287 Response to teriparatide treatment differs by anatomical site and bone compartment
Margaret Paggiosi1, Lang Yang1, Daniel Blackwell1, Jennifer Walsh1, Nicola Peel1, Eugene McCloskey*, Richard Eastell*. 1Mellanby Centre for Bone Research, Department of Oncology & Metabolism, The University of Sheffield, United Kingdom, 2Mellanby Centre for Bone Research, Sheffield Teaching Hospitals NHS Foundation Trust, United Kingdom
Disclosures: Richard Eastell, None

SA0288 The Risk of Subsequent Osteoporotic Fractures Is Decreased in Patients Experiencing Fracture While on Denosumab: Results From the FREEDOM and FREEDOM Extension Studies
Dl Kendler*, A Chines2, Ml Brandi3, S Papapoulos4, Em Lewiecki5, J-Y Reginster6, CRoux7, M Munoz Torres8, A Wang9, Hg Bone1. 1University of British Columbia, Canada, 2Amgen Inc., United states, 3University of Florence, Italy, 4Leiden University Medical Center, Netherlands, 5New Mexico Clinical Research & Osteoporosis Center, United states, 6University of Liège, Belgium, 7Paris Descartes University, France, 8Hospital Universitario San Cecilio, Spain, 9Michigan Bone & Mineral Clinic, United states
Disclosures: Dl Kendler, Amgen, Eli Lilly, Astra Zeneca, Astalis, 13; Amgen, Eli Lilly, 15; Amgen, Eli Lilly, 14
Effect of long-term Denosumab Treatment on Bone Mineral Density in Women with Osteoporosis and Contraindications to Oral Bisphosphonates - Observational Study

Andrzej Sawicki*. Medical Centre Synexux, Poland
Disclosures: Andrzej Sawicki, None

Effect of Risedronate on Bone Loss due to Anastrozole Given to Prevent Breast Cancer: 5-year Results from the IBIS-II Prevention Trial

Ivana Sestak*, Jack Cuzick¹, Glen Blake⁴, Raj Patel³, Robert Coleman⁴, Richard Eastell⁵. ¹Centre for Cancer Prevention, Queen Mary University, United Kingdom, ²Charing Cross Hospital, United Kingdom, ³Yorkshire Cancer Research Professor of Medical Oncology, Department of Oncology & Metabolism, Weston Park Hospital, University of Sheffield, United Kingdom, ⁴Metabolic Bone Centre, Northern General Hospital, United Kingdom

Disclosures: Ivana Sestak, None

Efficacy and Safety of Denosumab in Chinese Postmenopausal Women with Osteoporosis at Increased Risk of Fracture: Results From a 12-Month, Randomized, Double-blind, Placebo-controlled Phase III Study

Han Min Zhu¹, Hai Tang⁶, Qun Cheng¹, Liang He³, Peng Qiu Li⁴, Qing Yun Xue⁵, De Cai Chen¹, Xiao Lan Jin¹, Wen Jing Zhu⁸, Hong Xin Zhao⁵, Antonio Nino*, Zhen Lin Zhang¹⁰. ¹Huadong Hospital Affiliated to Fudan University, China, ²Beijing Friendship Hospital, Capital Medical University, China, ³Beijing Jishuitan Hospital, China, ⁴Sichuan Provincial People’s Hospital, China, ⁵Beijing Hospital, China, ⁶West China Hospital, Sichuan University, China, ⁷Chinese People’s Liberation Army General Hospital of Chengdu, China, ⁸GlaxoSmithKline (China) R&D Company Limited, China, ⁹Metabolic Pathways & Cardiovascular Therapeutic Area Unit, GlaxoSmithKline, Collegeville, Pennsylvania, USA, United states, ¹⁰The Sixth People’s Hospital affiliated to Shanghai Jiaotong University, China

Disclosures: Antonio Nino, GlaxoSmithKline, 14

Exploratory Pooled Analysis on the Effect of Ibandronate in the MOVER and MOVEST Studies by Propensity Score Matching

Seitaro Yoshida*, Masato Tobinai, Koichi Endo, Shingo Katakura, Junko Hashimoto, Rumiko Matsumoto, Hiroshi Hagiwara, Tetsuo Nakanishi, Hideki Mizunuma, Toshitaka Nakamura, Chugai Pharmaceutical Co. Ltd., Japan, ²Taisho Pharmaceutical Co. Ltd., Japan, ³Tottori University, Japan, ⁴Nagasaki University, Japan, ⁵Tamana Central Hospital, Japan, ⁶Hirosaki University, Japan, ⁷National Center for Global Health & Medicine, Japan

Disclosures: Seitaro Yoshida, Chugai Pharmaceutical Co. Ltd., 17

Fracture risk after discontinuation of denosumab

Akeem Yusuf*, Hai Feng Guo, Akhila Balasubramanian, Nicola Pannacciulli, Rachel Wagman, J. Michael Sprafka. ¹Chronic Disease Research Group, United states, ²Amgen Inc., United states

Disclosures: Akeem Yusuf, None
SA0295 Improving Feasibility for The Effectiveness of Discontinuing bisphosphonates (EDGE) Trial: A Pilot Study
Nicole Wright*1, P. Jeffrey Foster2, Amy Mudano2, E. Michael Lewiecki3, William Shergy*, Jeffrey Curtis2, Gary Cutter2, Maria Danila2, Meredith Kilgore2, Cora Lewis7, Sarah Morgan2, David Redden2, Amy Warriner3, Kenneth Saag4. 1Department of Epidemiology, University of Alabama at Birmingham, United states, 2Division of Clinical Immunology & Rheumatology, University of Alabama at Birmingham, United states, 3University of New Mexico, United states, 4Rheumatology Associates of North Alabama, United states, 5Department of Biostatics, University of Alabama at Birmingham, United states, 6Department of Health Care Organization & Policy, University of Alabama at Birmingham, United states, 7Division of Preventive Medicine, University of Alabama at Birmingham, United states, 8Division of Endocrinology, Diabetes & Metabolism, University of Alabama at Birmingham, United states, 9Division of Clinical Immunology & Rheumatology, United states
Disclosures: Nicole Wright, Amgen, 100

SA0296 Pathogenesis of Atypical Femur Fractures: Analysis at Midpoint of Recruitment
Pooja Kulkarni*1, Mahalakshmi Honasoge1, Elizabeth Warner1, Arti Bhan1, Shiri Levy1, Heather Remtema1, George Divine2, Sudhaker Rao1. 1Henry Ford Division of Endocrinology, Diabetes & Bone & Mineral Disorders, United states, 2Henry Ford Public Health Services, United states
Disclosures: Pooja Kulkarni, None

SA0297 Surgically Treated Osteonecrosis and Osteomyelitis of the jaw and Oral Cavity in Patients Highly Adherent to Alendronate Treatment. User-only National Cohort Study
Bo Abrahamsen*1, Pia A Eiken2, Daniel Prieto-Alhambra1, Richard Eastell4. 1Holbæk Hospital & University of Southern Denmark, Denmark, 2Hillerød Hospital, Denmark, 3NIHR Musculoskeletal Biomedical Research Unit, University of Oxford, United Kingdom, 4Metabolic Bone Centre, Northern General Hospital, United Kingdom
Disclosures: Bo Abrahamsen, Novartis, 13; UCB, 13

OSTEOPOROSIS - TREATMENT: COMPLIANCE AND PERSISTENCE

SA0298 Comparison of Osteoporosis Pharmacotherapy Fracture Rates: Analysis of a MarketScan* Claims Database Cohort
Alan Reynolds*1, Paul Kocis2, Guodong Liu3, Ed Fox4. 1Penn State College of Medicine, United states, 2Penn State Hershey Medical Center, United states, 3Penn State Public Health Sciences, United states, 4Penn State Hershey Bone & Joint Institute, United states
Disclosures: Alan Reynolds, None

OSTEOPOROSIS - TREATMENT: OTHER AGENTS

SA0299 Differential Effects of Odanacatib Therapy on Markers of Bone Resorption and Formation in Postmenopausal Women with Osteoporosis: A Subgroup Study of the 5-Year Data from the Extension of the Phase 3 Long-Term Odanacatib Fracture Trial (LOFT)
Le T. Duong*1, Maureen Pickarski1, Seth Clark1, Hilde Giezek2, Dosinda Cohn1, Rachid Massaad2, S. Aubrey Stoch1. 1Merck & Co., Inc., United states, 2MSD Europe Inc., Belgium
Disclosures: Le T. Duong, Merck & Co (employment), 17

OSTEOPOROSIS - TREATMENT: QUALITY OF LIFE

SA0300 Effects of a therapy with anti-RANKL antibody denosumab on bone metabolism markers and QOL in patients with osteoporosis
Toshihisa Maeda*1, Shinya Hayashi1, Yasushi Miura2, Yoshitada Sakai3, Ryosuke Kuroda4, Masahiro Kurosaka1. 1Department of Orthopaedic Surgery, Kobe University Graduate School of Medicine, Japan, 2Division of Orthopedic Science, Department of Rehabilitation Science, Kobe University Graduate School of Health Sciences, Japan, 3Division of Rehabilitation Medicine, Kobe University Graduate School of Medicine, Japan
Disclosures: Toshihisa Maeda, None
PARACRINE REGULATORS: BONE MORPHOGENETIC PROTEINS AND TRANSFORMING GROWTH FACTORS

SA0301 PDGF-BB inhibits BMP2-Smad signaling during osteogenic differentiation of periosteal progenitor cells
Xi Wang*, Brya Matthews, Ivo Kalajzic. UConn Health, United states
Disclosures: Xi Wang, None

SA0302 Thrombospondin status affects matrix-level control of endogenous TGF-beta bioavailability via tissue specific mechanisms
Dylan Shearer*, Nolan Bick, Anita Reddy, Andrea Alford. University of Michigan, United states
Disclosures: Dylan Shearer, None

PARACRINE REGULATORS: CYTOKINES AND IMMUNOMODULATORS

SA0303 Smoothened Agonist (SAG) Induced Mouse Calvarial Defect Healing
Soonchul Lee*, Hsin Chuan Pan, Alan Nguyen, Jia Shen, Swati Shrestha, Greg Asatrian, Nicholas Bernthal, Kang Ting, Chia Soo, Aaron James. UCLA, United states
Disclosures: Soonchul Lee, None

SA0304 Soluble Interleukin-6 receptor released by osteocytes promotes bone formation and maintains trabecular bone mass by trans-signaling
Melissa Murat, Emma C Walker, Patricia Ho, Brett Tonkin, Narelle McGregor, T J Martin, Natalie A Sims*. St. Vincent’s Institute of Medical Research, Australia
Disclosures: Natalie A Sims, None

PARACRINE REGULATORS: FIBROBLAST AND INSULIN-LIKE GROWTH FACTORS

SA0305 Ablation of Ephrin B2 in Chondrocytes Leads to Impaired Osteoprogenitor Stem Cell Activation and Delayed Fracture Repair
Yongmei Wang*, Lin Ling, Nicholas Heiniger, Wasima Wayer, Thai Nguyen, Carly Matsukuma, Daniel Bikle. Endocrine Unit, University of California, San Francisco/San Francisco VA Medical Center, United states
Disclosures: Yongmei Wang, None

PRECLINICAL MODELS – NUTRITION: GENERAL

SA0306 1,25(OH)2D3 Prevents Bone Aging by Inhibiting Oxidative Stress And Inactivating p16-Rb And p53-p21 Signaling
Renlei Yang*, Lulu Chen¹, Wei Zhang¹, David Goltzman², Dengshun Miao¹. ¹Nanjing Medical University, China, ²McGill University, Canada
Disclosures: Renlei Yang, None

SA0307 A Maternal Low Protein Diet During Pregnancy and Weaning Negatively Impacts Offspring Bone Mineral Density
Ke-Hong Ding¹, Kunglun Yu¹, Qing Zhong¹, William Hill¹, Xingming Shi¹, Jianrui Xu¹, Wendy Bollag¹, Monte Hunter¹, Meghan McGee-Lawrence¹, Mona El Refaey², Maribeth Johnson¹, Mohammed Elsalanty¹, Ying Han³, Mark Hamrick¹, Carlos Isales¹. ¹Medical College of Georgia, United states, ²Ohio University, United states, ³Stomatology Hospital of Xi’an Jiao Tong University, China
Disclosures: Ke-Hong Ding, None
SA0308 Free Fatty Acid Receptor 4 (GPR120) Stimulates Bone Formation and Suppresses Bone Resorption in the Presence of Elevated n-3 Fatty Acid Levels
Seong Hee Ahn*1, Sook-Young Park2, Ji-Eun Baek2, Su-Youn Lee2, Wook-Young Baek2, Sun-Young Lee2, Young-Sun Lee2, Hyun Ju Yoo2, Hyeonmok Kim4, Seung Hun Lee4, Dong-Soon Im4, Sun-Kyeong Lee5, Beom-Jun Kim2, Jung-Min Koh1. 1Department of Endocrinology & Metabolism, Inha University Hospital, Inha University School of Medicine, Korea, republic of, 2Asan Institute for Life Sciences, Korea, republic of, 3Biomedical Research Center, Asan Medical Center, University of Ulsan College of Medicine, Korea, republic of, 4Division of Endocrinology & Metabolism, Asan Medical Center, University of Ulsan College of Medicine, Korea, republic of, 5Molecular Inflammation Research Center for Aging Intervention (MRCA) & College of Pharmacy, Pusan National University, Korea, republic of, 6UConn Center on Aging, University of Connecticut Health Center, Korea, republic of
Disclosures: Seong Hee Ahn, None

PRECLINICAL MODELS – NUTRITION: MACRONUTRIENTS

SA0309 High fat diets rich in monounsaturated or saturated fatty acids differentially alter vitamin D hydroxylase and bone in older female mice
Yang Wang*, Joshua Miller, Patricia Buckendahl, Sue Shapses. Rutgers University, United states
Disclosures: Yang Wang, None

PRECLINICAL MODELS – PHARMACOLOGY: ANTIRESORPTIVES

SA0310 Competitive equilibrium-based displacement of bisphosphonates for the prevention of BRONJ
Akishige Hokugo*1, Shuting Sun2, Mark Lundy2, Charles E. McKenna3, Frank H. Ebetino2, Ichiro Nishimura2. 1Regenerative Bioengineering & Repair (REBAR) Lab. Division of Plastic & Reconstructive Surgery Department of Surgery, David Geffen School of Medicine at UCLA, United states, 2BioVinc LLC, United states, 3Department of Chemistry, USC Dornsife College of Letters, Arts & Sciences, United states, 4Weintraub Center for Reconstructive Biotechnology, UCLA School of Dentistry, United states
Disclosures: Akishige Hokugo, None

SA0311 Maxillary Periodontitis and Osteonecrosis of the Jaw-Like Lesions in Rice Rats (Oryzomys palustris) Fed a Standard Diet and Treated with Zoledronic Acid
J.Ignacio Aguirre*, Jonathan Messer1, Jessica Jiron1, Hung-Yuan Chen1, Evelyn Castillo1, Jorge Mendieta Calle1, Catherine Van Poznak2, Donald Kimmel1. 1Department of Physiological Sciences, University of Florida, United states, 2Internal Medicine Oncology, University of Michigan, United states
Disclosures: J.Ignacio Aguirre, None

PRECLINICAL MODELS – PHARMACOLOGY: BONE-FORMING AGENTS

SA0312 Bone-Targeted Bortezomib Prevents OVX- and Myeloma-Induced Bone Loss with Less Systemic Adverse Effects more Effectively than Bortezomib
Hua Wang*, L Xiao1, Hengwei Zhang1, Wen Sun1, Frank Hal Ebetino3, Robert K. Boeckman, Jr1, Babatunde Oyajobi2, Brendan Boyce1, Lianping Xing1. 1University of Rochester Medical Center, United states, 2University of Texas Health Science Center at San Antonio, United states
Disclosures: Hua Wang, None

SA0313 Co-deletion of Lrp5 and Lrp6 in bone severely diminishes bone gain from sclerostin antibody administration
Kyung-Eun Lim*, Bart Williams3, Chris Paszty3, Matthew Warman4, Alexander Robling1. 1Indiana University School of Medicine, United states, 2Van Andel Research Institute, United states, 3Amgen, Inc., United states, 4Boston Children’s Hospital, United states
Disclosures: Kyung-Eun Lim, None
SA0314 Forces Associated with SpaceX Launch do not Impact Bone Healing but Unloading Inhibits Bone Regeneration
Paul Childress*, 1, Cynthia-May S. Gong2, Evan Himes1, Sungshin Choi2, Yasaman Shirazi-Fard2, Todd McKinley1, Tien-min Chu3, Nabarun Chakraborty4, Rasha Hammamieh4, Melissa Kacena1. 1Department of Orthopaedic Surgery, Indiana University School of Medicine, United states, 2WYLE Labs, United states, 3Department of Biomedical & Applied Sciences, Indiana University School of Dentistry, United states, 4US Army Center for Environmental Health Research, United states
Disclosures: Paul Childress, None

SA0315 Single Bisphosphonate Dosing Enhances Effects of Sclerostin Antibody On Stiffness of the Vertebral Body During Growth in an Osteogenesis Imperfecta Mouse Model
Diana Olvera*, 1, Basma Khoury1, Joan C. Marinii, Michelle S. Caird1, Kenneth M. Kozloff1. 1Orthopaedic Research Laboratories, Department of Orthopaedic Surgery, University of Michigan, United states, 2Bone & Extracellular Matrix Branch, National Institute of Child Health & Human Development, NIH, United states
Disclosures: Diana Olvera, None

SA0316 Alleviating Osteonecrosis of the Femoral Head by Suppressing the ER Stress
Daquan Liu1, Xinle Li1, Jie Li1, Shuang Yang1, Hiroki Yokota2, Ping Zhang*. 1Department of Anatomy & Histology, School of Basic Medical Sciences, Tianjin Medical University, China, 2Department of Biomedical Engineering, Indiana University-Purdue University, United states
Disclosures: Ping Zhang, None

SA0317 Bisphosphonate-Modified PEG-NELL, a Novel Bone-Targeted Molecule, as a Systemic Therapeutic for Osteoporosis
Yulong Zhang*, 1, Justine Tanjaya2, Jin Hee Kwak2, Mengliu Yu3, Soonchul Lee4, Jiayu Shi5, Rui Dong6, Jia Shen5, Eric Chen5, Xinli Zhang5, Chia Soo7, Benjamin Wu8, Kang Ting9. 1Department of Bioengineering, UCLA, Los Angeles & Division of Advanced Prosthodontics, School of Dentistry, UCLA, Los Angeles, United states, 2Division of Growth & Development, Section of Orthodontics, School of Dentistry, UCLA, Los Angeles & Department of Craniofacial Research Institute, School of Dentistry, UCLA, Los Angeles, United states, 3Department of Craniofacial Research Institute, School of Dentistry, UCLA, Los Angeles, CA 90095, United states, 4Orthopaedic Hospital Department of Orthopaedic Surgery & the Orthopaedic Hospital Research Center, UCLA, Los Angeles, United states, 5Division of Growth & Development, Section of Orthodontics, School of Dentistry, UCLA, Los Angeles, United states, 6Department of Bioengineering, UCLA, Los Angeles, United states, 7Orthopaedic Hospital Department of Orthopaedic Surgery & the Orthopaedic Hospital Research Center, UCLA, Los Angeles & Division of Plastic & Reconstructive Surgery, Department of Surgery, David Geffen School of Medicine, UCLA, Los Angeles, United states, 8Department of Bioengineering, UCLA, Los Angeles & Division of Advanced Prosthodontics, School of Dentistry, UCLA, Los Angeles & Weintraub Center for Reconstructive Biotechnology, School of Dentistry, UCLA, Los Angeles, United states
Disclosures: Yulong Zhang, None

SA0318 Changes of Articular Cartilage and Subchondral Bone in Rat Osteoarthritis Model Induced by Surgical MMT and MCLT Operation
ZhiQi Peng*, Jukka Vääräniemi, Katja M Fagerlund, Jukka P Rissanen, Jenni Bernoulli, Jussi M Halleen, Jukka Morko. Pharmatest Services Ltd, Finland
Disclosures: ZhiQi Peng, None

SA0319 In Vivo Hypobaric Hypoxia, Hypodynamia and Bone Healing in Mice
Marjorie DURAND*, Xavier Holy. Institut de Recherche Biomédicale des Armées, France
Disclosures: Marjorie DURAND, None
SA0320  Role of matrix-bound Bisphosphonates in the development of osteonecrosis of the jaw
Ranya Elsayed1, R. Nicole Howie2, Sudha Ananth1, Pheba Abraham1, Mohamed Awad1, Zachary Patterson1, Mohammed Elsalanty*3, 1Augusta University, United states, 2Medical University of South Carolina, United states, 3Dental College of Georgia, Augusta University, United states
Disclosures: Mohammed Elsalanty, None

SA0321  The Effects of Streptozotocin on Osteoblast to Osteocyte Differentiation In Vitro
Amanda Sutherland*1, Tammy Brown2, Donna Pacicca2. 1University of Kansas School of Medicine, United states, 2Children’s Mercy Hospital, United states
Disclosures: Amanda Sutherland, None

SA0322  The Effects of Switching From Teriparatide to Anti-Rankl Antibody on Bone Metabolism
Toshinobu Omiya*1, Jun Hirose2, Yuho Kadono3, Yasunori Omata4, Naohiro Izawa5, Takeshi Miyamoto6, Sakaie Tanaka7. 1oomiya9ort@yahoo.co.jp, Japan, 2ji.hirose513@yahoo.com, Japan, 3ykadono-ktky@umin.net, Japan, 4grandbleu_1024@yahoo.co.jp, Japan, 5izawa.naohiro@gmail.com, Japan, 6miyamoto@z5.keio.jp, Japan
Disclosures: Toshinobu Omiya, None

RARE BONE DISEASES: Fibrous Dysplasia

SA0323  Dental Findings from the National Institutes of Health Fibrous Dysplasia/McCune-Albright Syndrome Cohort
Andrea Burke*, Alison Boyce, Michael Collins. NIDCR, United states
Disclosures: Andrea Burke, None

SA0324  Increased Risk of Breast Cancer in Polyostotic Fibrous Dysplasia and McCune-Albright Syndrome
Bas Major*, Olaf Dekkers, Sander Dijkstra, Judith Bovee, Vincent Smit, Neveen Hamdy, Natasha Appelman-Dijkstra. Leiden University Medical Center, Netherlands
Disclosures: Bas Major, None

SA0325  Inhibition of Activin A Stops the Regrowth of Surgically Resected Heterotopic Bone in a Mouse Model of Fibrodysplasia Ossificans Progressiva and Indicates a New Potential Path to Therapy
Lily Huang, Liqin Xie, Nanditha Das, Xiaoling Wen, Lili Wang, Andrew Murphy, Vincent Idone, Aris Economides, Sarah Hatsell*. Regeneron Pharmaceuticals, United states
Disclosures: Sarah Hatsell, None

RARE BONE DISEASES: Hypophosphatasia

SA0326  Ambulatory Performance in Adolescents and Adults with Hypophosphatasia Treated with Asfotase Alfa: Data from a Phase II, Randomized, Dose-ranging, Open-label, Multi-center Study
Priya S. Kishnani*1, Cheryl Rockman-Greenberg2, Katherine L. Madson3, Marisa Gayron4, Uchenna Iloje5, Michael P. Whyte3, 1Duke University Medical Center, United states, 2University of Manitoba, Canada, 3Shriners Hospital for Children, United states, 4Alexion Pharmaceuticals, United states, 5Shriners Hospital for Children & Washington University School of Medicine, United states
Disclosures: Priya S. Kishnani, Alexion Pharmaceuticals, Inc, 17; Alexion Pharmaceuticals, Inc, 13

SA0327  Skeletal, growth, and functional improvements in infants and young children with life-threatening hypophosphatasia treated with asfotase alfa for 5 years
Jill H. Simmons*, Nick Bishop2, Richard Lutz3, Hui Zhang4, Kenji P. Fujita4, Michael P. Whyte3. 1Vanderbilt University School of Medicine, United states, 2University of Sheffield, United Kingdom, 3University of Nebraska Medical Center, United states, 4Alexion Pharmaceuticals, Inc, United states, 5Shriners Hospital for Children & Washington University School of Medicine, United states
Disclosures: Jill H. Simmons, Alexion Pharmaceuticals, Inc, 17

SA0328  Subtrochanteric, diaphyseal femoral fractures in Hypophosphatasia
Franca Genest*, Lothar Seefried. Wuerzburg University, Germany
Disclosures: Franca Genest, None
SA0329 Utilization of an algorithm to identify individuals at risk for hypophosphatasia (HPP) within an electronic health record (EHR) database
Joseph Biskupiak*1, Amy Sainski1, Minkyoung Yoo1, Diana Brixner1, Uchenna Iloje2.
1Pharmacotherapy Outcomes Research Center, Department of Pharmacotherapy, University of Utah, United states, 2Alexion Pharmaceuticals, Inc., United states
Disclosures: Joseph Biskupiak, None

RARE BONE DISEASES: HYPOPHOSPHATEMIC RICKETS

SA0330 SLC3A1/NPT2a Mutations cause Hereditary Hypophosphatemic Rickets with Hypercalcemia
Alyssa Chen*, Avram Traum2, Amita Sharma2, Henry Fehrenbach3, Anne Schafer4, Dolores Shoback3, Marged Hussein3, Bernd Hoppe6, Harald Jüppner2, Clemens Bergwitz1, 1Yale School of Medicine, United states, 2Massachusetts General Hospital, United states, 3Klinikum Memmingen, Germany, 4University of California San Francisco, United states, 5King Faisal Specialist Hospital & Research Center, Saudi arabia, 6Universität Bonn, Germany
Disclosures: Alyssa Chen, None

SA0331 Evaluating the Effects of KRN23, a Fully Human Anti-FGF23 Monoclonal Antibody, on Functional Outcomes in Children with X-linked Hypophosphatemia (XLH): 40-week Interim Results from a Randomized, Open-label Phase 2 Study
Erik Imel*, Thomas Carpenter2, Agnès Linglart3, Annemieke Boot4, Wolfgang Högl5, Raja Padidela3, William van’t Hoff7, Anthony Portale8, Sunil Agarwal9, Chao-Yin Chen4, Alison Skrina5, Javier San Martin9, Michael Whyte10, 1Indiana University School of Medicine, United states, 2Yale University School of Medicine, United states, 3Hôpital Bikètre, France, 4University of Groningen, Netherlands, 5Birmingham Children’s Hospital, United Kingdom, 6Royal Manchester Children’s Hospital, United Kingdom, 7Great Ormond Street Hospital, United Kingdom, 8University of California, United states, 9Ultragenyx Pharmaceutical Inc., United states, 10Shriners Hospital for Children, United states
Disclosures: Erik Imel, Ultragenyx Pharmaceuticals Inc., 13; Ultragenyx Pharmaceuticals Inc., 17

RARE BONE DISEASES: OSTEOGENESIS IMPERFECTA

SA0332 Factors Associated with Serum Intact FGF23 Levels in Patients with X-linked Hypophosphatemic Rickets
Keiko Yamamoto*, Takuo Kubota, Kei Miyata, Shinji Takeyari, Kenichi Yamamoto, Hiroyumi Nakayama, Makoto Fujiwara, Taichi Kitaoka, Satoshi Takakuwa, Keiichi Ozono. Department of Pediatrics, Osaka University Graduate School of Medicine, Japan
Disclosures: Keiko Yamamoto, None

SA0333 Non-lethal Type VIII Osteogenesis Imperfecta has Elevated Bone Matrix Mineralization
Nadja Fratzl-Zelman*, Aileen M. Barnes2, MaryAnn Weis3, Erin Carter4, Theresa E. Hefferan2, Giorgio Perino4, Weizhong Chang2, Peter A. Smith6, Paul Roschger1, Klaus Klaushofer1, Francis H. Glorieux7, David R. Eyre1, Cathleen Raggio8, Frank Rauch1, Joan C. Marin2, 1Ludwig Boltzmann Institute of Osteology at Hanusch Hospital of WGKK & AUVA Trauma Centre Meidling, 1st Med. Dept. Hanusch Hospital, Vienna, Austria, 2Section on Heritable Disorders of Bone, NICHD, NIH, Bethesda, United states, 3The Orthopaedic Research Laboratories, University of Washington, Seattle, United states, 4Hospital for Special Surgery, New York, United states, 5Department of Orthopedics, Mayo Clinic College of Medicine, Rochester, United states, 6Shriners’ Hospital for Children, Chicago, United states, 7Shriners’ Hospital for Children & McGill University, Montreal, Canada, 8Department of Orthopedics, Mayo Clinic College of Medicine, Seattle, United states
Disclosures: Nadja Fratzl-Zelman, None

RARE BONE DISEASES: OTHER RARE BONE DISEASES

SA0334 Characteristics of Vertebral Deformity in Gaucher Disease: the Gaucherite Study UK
Fjola Johannesdottir*, Timothy M. Cox, Patrick Deegan, Simona D’Amore, Kenneth E. Poole. Department of Medicine, University of Cambridge, United Kingdom
Disclosures: Fjola Johannesdottir, None
Intra-Tibial Injection of Lymphatic Endothelial Cells Leads to Aggressive Osteolysis, a Mouse Model of Gorham-Stout Disease
Hua Wang*, Wensheng Wang, Xing Li, Wen Sun, Brendan Boyce, Lianping Xing.
University of Rochester Medical Center, United states
Disclosures: Hua Wang, None

Meckel’s and condylar cartilages anomalies in achondroplasia result in defective development and growth of the mandible
Martin Biosse Duplan1, Davide Komla-Ebri2, Yann Heuze3, Valentin Estibals2, Emilie Gaudas6, Nabil KaciC, Catherine Benoist-Lasseloin7, Michel Zerah1, Ina Kramer5, Michaela Kneissel6, Diana Graus Porta4, federico Di Rocco5, Laurence Leggeai-Mallet1, 1Institut Imagine, France, 2Institut Imagine-INSERM U1163, France, 3UMR5199 PACEA, Université de Bordeaux, France, 4Hôpital Necker, France, 5Novartis, Switzerland, 6Novartis, France, 7Neurochirurgie Pédiatrique, Hopital Femme Mère Enfant CHU de Lyon, France
Disclosures: Laurence Leggeai-Mallet, None

Observation of Recurrent Bone Marrow Oedemas in HIV Patients on Antiviral Therapy
Sebastian Radmer1, Ilko Kastirr2, Reimer Andresen2. 1Centre for Orthopaedics, Berlin, Germany, 2Institute of Diagnostic & Interventional Radiology/Neuroradiology, Westkuestenklinikum Heide, Academic Teaching Hospital of the Universities of Kiel, Luebeck & Hamburg, Heide, Germany
Disclosures: Ilko Kastirr, None

Rescue of Short-lived Progressive Ankylosis Protein in CranioMetaphyseal Dysplasia
Jitendra Kanaujiya*, Edward Bastow, Zhifang Hao, Ernst J Reichenberger, I-Ping Chen. University of Connecticut Health, United states
Disclosures: Jitendra Kanaujiya, None

Small molecule Alk inhibitors with improved selectivity and pharmacokinetics inhibit heterotopic ossification without toxicity in a mouse model of fibrodysplasia ossificans progressiva
Daniel Perrien*, Corey Hopkins, Craig Lindsley, Heather Durai, Nicole Fleming, Sabrina Booton, Charles Hong. Vanderbilt University Medical Center, United states
Disclosures: Daniel Perrien, La Jolla Pharmaceutical Company, 13

Anxiety Disorders and Falls among Older Adults
Kara Holloway1, Lana Williams1, Sharon Brennan-Olsen1, Amelia Morse1, Mark Kotowicz1, Geoff Nicholson2, Julie Pasco*1. 1Deakin University, Geelong, VIC Australia, Australia, 2Melbourne Medical School, Western Campus, The University of Melbourne, VIC, Australia, Australia
Disclosures: Julie Pasco, None

Distal Radius Fracture Patients Show Reduced Ability of Dynamic Body Balancing
Hidetoshi Kaburagi*, Koji Fujita1, Akimoto Nimura2, Takashi Miyamoto3, Ryuichi Kato1, Atsuhi Okawa1. 1Dept. of Orthopedic Surgery, Tokyo Medical & Dental University, Japan, 2Dept. of Clinical Anatomy, Tokyo Medical & Dental University, Japan, 3JA Kyosai Research Institute, Japan
Disclosures: Hidetoshi Kaburagi, None

Age-related Changes and Sex-related Differences in Spinal Kyphosis Angles and Spinal Mobility in an Elderly Japanese Population
Yuji Kasukawa*, Naohisa Miyakoshi, Michio Hongo, Yoshinori Ishikawa, Daisuke Kudo, Masazumi Suzuki, Tetsuya Kawano, Norimitsu Masutani, Manabu Akagawa, Yuichi Ono, Yoichi Shimada. Department of Orthopedic Surgery, Akita University Graduate School of Medicine, Japan
Disclosures: Yuji Kasukawa, None
Prevalence of Sarcopenia in Korean Patients After Hip Fracture: A Case-Control Study
Yong-Chan Ha*1, Ho-Yeon Chung2, Hyoung-Moo Park1. 1Chung-Ang University College of Medicine, Korea, republic of, 2Kyung Hee University, Korea, republic of
Disclosures: Yong-Chan Ha, None

Thoracic muscle density and size are associated with kyphosis severity: Framingham Study
Amanda Lorbergs*1, Dennis Anderson2, Brett Allaire2, Douglas Kiel3, Michelle Yau1, Mary Bouxsein1, L. Adrienne Cupples1, Tom Travison1, Elizabeth Samelson1. 1Institute for Aging Research, Hebrew Senior Life & Harvard Medical School, United states, 2Center for Advanced Orthopedic Studies, Beth Israel Deaconess Medical Center, United states, 3Institute for Aging Research, Department of Medicine BIDMC, & Hebrew Senior Life & Harvard Medical School, United states, 4Center for Advanced Orthopedic Studies, Beth Israel Deaconess Medical Center & Harvard Medical School, United states, 5Department of Biostatistics, Boston University School of Public Health & Framingham Heart Study, United states
Disclosures: Amanda Lorbergs, None

Targeted Spine Strengthening Exercise Program to Reduce Hyperkyphosis in Older Adults: Preliminary Results from the SHEAF Study
Wendy B. Katzman*1, Deborah M. Kado2, Eric Vittinghoff1, Anne Schafer1, Roger K. Long1, Shirley Wong1, Amy Gladin1, Nancy E. Lane2, Feng Lin1. 1UCSF, United states, 2UCSD, United states, 3Kaiser Permanente Northern CA, United states, 4UCDavis, United states
Disclosures: Wendy B. Katzman, None

Postmenopausal Women with Sarcopenia have Higher Prevalence of Fragility Fractures
Maria Belen Zanchetta*1, ruben abdala1, vanesa carla longobardi2, fabio massari1, Fernando silveira3, Rodolfo spivaco1, Paula rey1, Cesar Bogado1, jose r. zanchetta1. 1md, Argentina, 2mb, Argentina, 3b, Argentina, 4PHD, Argentina
Disclosures: Maria Belen Zanchetta, None

The difference in association of vitamin D with body composition between men and women
Woong Hwan Choi*. Division of Endocrinology, Department of Internal Medicine, College of Medicine, Hanyang University, Korea, republic of
Disclosures: Woong Hwan Choi, None

Ablation of IGF-1R Signaling in Osteochondroprogenitor Cells Induces a Substantial and Persistent Attenuation of Skeletal Development
Alessandra Esposito*, Joseph Temple, Tieshi Li, Lai Wang, Anna Spagnoli. Rush University Medical Center, United states
Disclosures: Alessandra Esposito, None

Actin Filament Associated Protein 1 (AFAP1) is a Novel Regulator of Bone Formation
Holly Corkill*1, Albena Gesheva2, Kier Blevins3, Broc Wenrich1, Evan Frigoletto1, Jess Cunnick1, John Arnott1, Youngjin Cho1. 1The Commonwealth Medical College, United states, 2University of Scranton, United states
Disclosures: Holly Corkill, None
Dysregulated murine bone osteogenesis and adipogenesis upon loss of chemokine Cxcl12/Sdf1 in the osteoprogenitor cells
Yi-Shiuan Tzeng*, Ni-Chun Chung², Hsiang-Ru Huang², Yu-Ren Chen¹, Dar-Ming Lai².
¹Graduate Institute of Oncology, National Taiwan University College of Medicine, Taiwan, province of china, ²Department of Surgery, National Taiwan University Hospital, Taiwan, province of china
Disclosures: Yi-Shiuan Tzeng, None

GATA4 Regulates RUNX2 expression in osteoblasts
Susan Miranda, Alysha Khalid*, Gustavo Miranda-Carboni. University of Tennessee, United states
Disclosures: Alysha Khalid, None

Gut Microbiota Induce IGF-1 and Promote Bone Formation and Growth
Jing Yan*, Jeremy Herzog², Kelly Tsang¹, Maureen Bower², Balfour Sartor², Antonios Aliprantis², Julia Charles¹, Bringham & Women’s Hospital & Harvard Medical School, United states, ²University of North Carolina at Chapel Hill, United states
Disclosures: Jing Yan, None

Impact of Maternal Myostatin and the Uterine Environment on Offspring Bone Strength in Wildtype and Osteogenesis Imperfecta Model (oim) Mice
Arin Oestreich*, William Kamp², Marcus McCray², Stephanie Carleton², Natalia Karasseva¹, Kristin Lenz², Youngjae Jeong², Salah Daghlas³, Xiaomei Yao⁴, Yong Wang⁵, Ferris Pfeiffer⁶, Laura Schulz¹, Charlotte Phillips². ¹Department of Ob, Gyn & Women’s Health, University of Missouri School of Medicine, United states, ²Department of Biochemistry, University of Missouri, United states, ³Transgenic Research Core, University of Missouri, United states, ⁴Department of Restorative Clinical Sciences, University of Missouri- Kansas City, United states, ⁵Department of Oral & Craniofacial Sciences, University of Missouri - Kansas City, United states, ⁶Department of Orthopaedic Surgery, University of Missouri, United states, ⁷Departments of Biochemistry & Child Health, University of Missouri School of Medicine, United states
Disclosures: Arin Oestreich, None

The RhoGAP Myo9b is Essential for Normal Bone Growth and Osteoblast Responsiveness to IGF-1
Brooke McMichael¹, Yong-Hoon Jeong², Justin Auerbach¹, Cheol-Min Han², Ryan Sedlar², Martin Baehler³, Sudha Agarwal², Do-Gyoon Kim², Beth Lee*. ¹The Ohio State University College of Medicine, United states, ²The Ohio State University College of Dentistry, United states, ³Institut fur Molekulare Zellbiologie, Universitat Muenster, Germany
Disclosures: Beth Lee, None

LATE-BREAKING POSTERS I
12:30 pm - 2:30 pm Georgia World Congress Center ASBMR Discovery Hall - Expo Hall A1

ADULT METABOLIC BONE DISORDERS: OTHER ADULT METABOLIC BONE DISORDERS
LB-SA0356 Case report of hypercalciuria and markedly elevated 1,25-dihydroxyvitamin D in a patient with Diamond Blackfan Anemia: Could 24 hydroxylase enzyme deficiency be the cause?
Caitlin White*, Farzana Sayani², Ravinder J Singh¹, Dawn Milliner⁴, Alan Wasserstein⁵, Mona Al Mukaddam¹. ¹University of Pennsylvania, Division of Endocrinology, United states, ²University of Pennsylvania, Division of Hematology, United states, ³Mayo Clinic, Department of Lab Medicine, United states, ⁴Mayo Clinic, Division of Nephrology, United states, ⁵University of Pennsylvania, Division of Nephrology, United states
Disclosures: Caitlin White, None
BORON SUPPLEMENTATION IMPROVES BONE HEALTH OF NON-OBESE DIABETIC MICE
Renata Dessordi1, Adriano Levi Spirlandeli2, Ariane Zamarioli3, José Batista Volpon3, Anderson Marliere Navarro2. 1Department of Food & Nutrition, Faculty of Pharmaceutical Sciences, State University of São Paulo - UNESP, Brazil, 2Department of Clinical Medicine, Ribeirão Preto Medical School, University of São Paulo - FMRP/USP, Brazil, 3Biomechanics, Medicine & Rehabilitation, School of Medicine of Ribeirão Preto, University of São Paulo, Brazil
Disclosures: Renata Dessordi, None

The Effects of Experimental Periodontitis on Alveolar Bone Mass and Mineralization
Mandee Yang*1, Grace Eun Nam1, Michael Baldwin2, Atriya Salamati2, Zi-Jun Liu1. 1Dept of Orthodontics, School of Dentistry, University of Washington, Seattle, United states, 2Dept of Oral Health Sciences, School of Dentistry, University of Washington, Seattle, United states
Disclosures: Mandee Yang, None

Prevention of Breast Cancer Skeletal Metastases with Parathyroid Hormone
Srilatha Swami*1, Joshua Johnson1, Lance Bettinson1, Megan Albertelli2, Joy Wu1. 1Division of Endocrinology, Department of Medicine, Stanford University School of Medicine, United states, 2Department of Comparative Medicine, Stanford University School of Medicine, United states
Disclosures: Srilatha Swami, None

Prevention of Breast Cancer Skeletal Metastases with Parathyroid Hormone
Srilatha Swami*1, Joshua Johnson1, Lance Bettinson1, Megan Albertelli2, Joy Wu1. 1Division of Endocrinology, Department of Medicine, Stanford University School of Medicine, United states, 2Department of Comparative Medicine, Stanford University School of Medicine, United states
Disclosures: Srilatha Swami, None

Crucial role of Elovl6 in chondrocyte growth and differentiation during growth plate development in mice
Masako Shimada*1, Manami Kikuchi2, Takashi Matsuzaka2, Yoshimi Nakagawa2, Hitoshi Shimano2. 1Graduate School of Nutritional Science, Sagami Women’s University, Japan, 2Department of Internal Medicine, Faculty of Medicine, University of Tsukuba, Japan
Disclosures: Masako Shimada, None

Cold stress in mice requires Nerve Growth Factor activity in brown fat and increases Osteocalcin expression in bone
Claudia Camerino*, Elena Conte, Adriano Fonzino, Kejla Musaraj, Roberta Caloiero, Domenico Tricarico. University of Bari, Italy
Disclosures: Claudia Camerino, None

Genetic Risk of Hip Fracture Due to Bone Quality Deficit
Daniel Evans1, Tamara Alliston2, Bin Zhang3, Jack Youngren3, Robert Recker4, Joan Lappe4, Sjur Reppe5, Thomas Lang*2. 1California Pacific Medical Center, United states, 2University of California, San Francisco, United states, 3Mount Sinai School of Medicine, United states, 4Creighton University, United states, 5Oslo University Hospital, Norway
Disclosures: Thomas Lang, None
HORMONAL REGULATORS: FGF23 AND OTHER PHOSPHATONINS

LB-SA0363 Effect of iron deficient diet on Fetuin A, calciprotein particle and FGF23 levels in an adriamycin-induced early CKD model mouse
Masanori Takaiwa*1, Kosei Hasegawa2, Takayuki Miyai2, Hirokazu Tsukahara2.  
1Department of Pediatrics, Matsuyama Red Cross Hospital, Japan, 2Department of Pediatrics, Okayama University Graduate School of Medicine, Dentistry & Pharmaceutical Sciences, Japan  
Disclosures: Masanori Takaiwa, None

HORMONAL REGULATORS: PARATHYROID HORMONE AND CALCIUM SENSING RECEPTORS

LB-SA0364 The Calcium-Sensing Receptor Supports the Growth and Survival of Breast Cancer Cells By Stimulating Parathyroid Hormone-related Protein Production
Wonnam Kim*, Miralireza Takyar, Jaekwang Jeong, Pamela Dann, John Wysolmerski. Yale School of Medicine, United states  
Disclosures: Wonnam Kim, None

MECHANOBIOLOGY: GENERAL

LB-SA0365 Isometric Force Training Enhances Bone Density in Aged and ALS Rat Forelimbs
1University of Missouri-Kansas City School of Medicine, United states, 2University of Missouri-Kansas City School of Dentistry, United states, 3University of Kansas Medical Center, United states  
Disclosures: Ajay K. Patel, None

OSTEOARTHRITIS AND OTHER JOINT DISORDERS: GENERAL

LB-SA0366 Subchondral Tibial Bone Texture Predicts Incident Radiographic Knee Osteoarthritis: Data From The Osteoarthritis Initiative
Thomas Janvier*1, Rachid Jennane1, Hechmi Toumi1, Eric Lespessailles2. 1Univ. Orléans, I3MTO - EA 4708, France, 2CHR Orléans, Service de Rhumatologie, France  
Disclosures: Thomas Janvier, None

OSTEOBLASTS – MATRIX PROTEINS AND FUNCTION: SIGNAL TRANSDUCTION AND TRANSCRIPTIONAL REGULATION

LB-SA0367 miR-9-5p targets LRP5 to inhibit beta-catenin mediated osteogenesis
Tianhao Sun*1, Frankie Leung1, Songlin Peng2, William W. Lu1.  
1University of Hong Kong, Hong kong, 2Department of Spine Surgery, Shenzhen People's Hospital, Jinan University Second College of Medicine, China  
Disclosures: Tianhao Sun, None

OSTEOCLASTS - FUNCTION: SIGNAL TRANSDUCTION

LB-SA0368 NUMBL Negatively Regulates NF-κB Signaling via Interaction with TAK1/TRAF6 During Osteoclastogenesis
Gaurav Swarnkar*, Kannan Karuppaiah, Gabriel Mbalaviele, Yousef Abu-Amer. Washington University School of Medicine, United states  
Disclosures: Gaurav Swarnkar, None

OSTEOCLASTS - FUNCTION: TRANSCRIPTIONAL REGULATION AND GENE EXPRESSION

LB-SA0369 RBP-J-Regulated miR-182 Promotes TNF-α-Induced Osteoclastogenesis and bone resorption
Kazuki Inoue*1, Christine Miller1, Mahmoud Elguindy1, Xiaoyu Hu2, Lionel Ivashkiv3, Baohong Zhao4.  
1Arthritis & Tissue Degeneration Program, David Z. Rosensweig Genomics Research Center, Hospital for Special Surgery, United states, 2Institute for Immunology & School of Medicine, Tsinghua University, China, 3Arthritis & Tissue Degeneration Program, David Z. Rosensweig Genomics Research Center, Hospital for Special Surgery & Weill Cornell Graduate School of Medical Sciences, United states, 4Arthritis & Tissue Degeneration Program, David Z. Rosensweig Genomics Research Center, Hospital for Special Surgery & Department of Medicine, Weill Cornell Medical College, United states  
Disclosures: Kazuki Inoue, None
OSTEOPOROSIS - ASSESSMENT: OTHER IMAGING TECHNIQUES

LB-SA0370  Office-based prescreening of cortical bone thickness in female hip arthroplasty patients
Sanaz Nazari-Farsani1, Kari Peura1, Mia Vuopio2, Jessica Alm2, Hannu Aro*2.
1University of Turku, Finland, 2Turku University Hospital, Finland

Disclosures: Hannu Aro, None

OSTEOPOROSIS - EPIDEMIOLOGY: BONE MINERAL DENSITY

LB-SA0371  Health literacy and the agreement between osteoporosis defined by self-report versus bone mineral density results in older women
Sarah M Hosking*1, Rachelle Buchbinder2, Amanda L Stuart1, Julie A Pasco1, Natalie K Hyde1, Lana J Williams1, Sharon L Brennan-Olsen1. 1School of Medicine, Deakin University, Australia, 2Department of Epidemiology & Preventive Medicine, Monash University, Australia

Disclosures: Sarah M Hosking, None

OSTEOPOROSIS - EPIDEMIOLOGY: RISK FACTORS

LB-SA0372  Association of Musculoskeletal Health Score with Fracture Risk in the MrOS cohort
Bjoern Buehring*1, Brian Lewis1, Karen Hansen2, Steven Cummings3, Nancy Lane4, Neil Binkley1, Kristine Ensrud5, Peggy Cawthon6. 1Osteoporosis Clinical Research Program, University of Wisconsin-Madison, United states, 2Department of Medicine, UW-Madison, United states, 3California Pacific Medical Center Research Institute, United states, 4University of California Davis, United states, 5Department of Medicine, University of Minnesota, United states, 6California Pacific Medical Center, United states

Disclosures: Bjoern Buehring, None

OSTEOPOROSIS – NUTRITION, DIETARY SUPPLEMENTS AND PHYSICAL ACTIVITY: CALCIUM AND VITAMIN D

LB-SA0373  Dietary Calcium Intake and Cardiovascular Health: Is there any relationship?
Shubhabrata Das*1, David Goltzman2, Angel M. Ong3, Jessica Gorgui4, Michelle Wall5, Suzanne N. Morin6, Stella S. Daskalopoulou7. 1Division of Experimental Medicine, Department of Medicine, McGill University, Montreal, Canada; McGill University Health Centre Research Institute, Montreal, Canada, Canada, 2Departments of Medicine & Physiology, McGill University, Montreal, Canada, Canada, 3School of Dietetics & Human Nutrition, McGill University, Sainte-Anne-de-Bellevue, Canada; McGill University Health Centre Research Institute, Montreal, Canada, Canada, 4Department of Pharmaceutical Science, Faculty of Pharmacy, Université de Montréal, Montreal, Canada, Canada, 5McGill University Health Centre Research Institute, Montreal, Canada, Canada, 6Division of Internal Medicine, Department of Medicine, McGill University, Montreal, Canada; McGill University Health Centre Research Institute, Montreal, Canada, Canada, 7Divisions of Internal & Experimental Medicine, Department of Medicine, McGill University, Montreal, Canada; McGill University Health Centre Research Institute, Montreal, Canada, Canada

Disclosures: Shubhabrata Das, None

OSTEOPOROSIS – NUTRITION, DIETARY SUPPLEMENTS AND PHYSICAL ACTIVITY: EXERCISE

LB-SA0374  Is sitting time (sedentary behaviour) associated with Bone Mineral density? Results from the CaMos population-based cohort
Jerilynn C. Prior*1, Bradley Drayton2, Zeljko Pedisic3, Claudie Berger4, David Golfzman2, Adrian Bauman2. 1UBC, Canada, 2Sydney University, Australia, 3Victoria University, Australia, 4CaMos, RI-MUHC, McGill University, Canada, 5McGill University, Canada

Disclosures: Jerilynn C. Prior, None
OSTEOPOROSIS - PATHOPHYSIOLOGY: GENERAL

LB-SA0375 Oxidative stress impairs the expression levels of Lgr4 in osteoblastic cells
Chantida Pawaputanon Na Mahasarakham1, Yoichi Ezura1, Yayoi Izu2, Katsuhiko Nishimori3, Yuichi Izumi4, Masaki Nada5. 1Department of Molecular Pharmacology, Medical Research Institute, Tokyo Medical & Dental University, Japan, 2Department of Animal Risk Management, Chiba Institute of Science, Japan, 3Laboratory of Molecular Biology, Department of Molecular & Cell Biology, Graduate School of Agricultural Science, Tohoku University, Japan, 4Department of Periodontology, Graduate School of Medical & Dental Sciences, Tokyo Medical & Dental University, Japan, 5Yokohama City Minato Red Cross Hospital, Japan
Disclosures: Chantida Pawaputanon Na Mahasarakham, None

OSTEOPOROSIS - SECONDARY OSTEOPOROSIS:
GLUCOCORTICOIDS

LB-SA0376 POTENTIAL RISK FACTORS FOR VERTEBRAL FRACTURES IN SURVIVORS OF CHILDHOOD ACUTE LYMPHOBLASTIC LEUKEMIA
Melissa Fiscaletti1, Josée Dubois1, Marie-Claude Miron1, Mariia Samoilenko2, Geneviève Lefebvre3, Renaud Winzenrieth4, Maja Krajnovic1, Caroline Lavérière1, Daniel Sinnett1, Nathalie Alos1. 1Sainte Justine University Health Center, Canada, 2Université de Montréal, Canada, 3Université de Québec à Montréal, Canada, 4Medimaps Group, France
Disclosures: Melissa Fiscaletti, None

OSTEOPOROSIS - TREATMENT: ANTIRESORPTIVE AGENTS

LB-SA0377 Are the cracks starting to appear in bisphosphonate therapy?
Shaocheng Ma, Andi Jin, Justin Cobb, Rajarshi Bhattacharya, Ulrich Hansen, Richard Abel*. Imperial College, United Kingdom
Disclosures: Richard Abel, None

OSTEOPOROSIS - TREATMENT: QUALITY OF LIFE

LB-SA0378 Pain, quality of life and safety outcomes of kyphoplasty for vertebral compression fractures
Alexander Rodriguez1, Howard Fink2, Lynn Mirigian3, Nuria Guanabens4, Richard Eastall5, Kristina Akesson6, Robert Wermers7, Douglas Bauer8, Peter Ebeling1. 1Monash University, Australia, 2Minneapolis VA Health Care System, United states, 3American Society for Bone & Mineral Research, United states, 4University of Barcelona, Spain, 5University of Sheffield, United states, 6Lunds University, Sweden, 7Mayo Clinic, United states, 8University of California San Francisco, United states
Disclosures: Alexander Rodriguez, None

PRECLINICAL MODELS – NUTRITION: GENERAL

LB-SA0379 Blackberry, blueberry, and strawberry polyphenol-rich extracts attenuate osteoclast differentiation in LPS-stimulated RAW264.7 macrophages
Rafaela Feresin1, Yitong Zhao2, Marcus Elam3, Bahram Arjmandi4. 1Department of Dietetics & Nutrition, University of Arkansas for Medical Sciences, United states, 2Department of Nutrition, Food & Exercise Sciences, Florida State University, United states, 3Department of Human Nutrition & Food Science, California State Polytechnic University, United states, 4Department of Nutrition, Food & Exercise Sciences & Center for Advancing Exercise & Nutrition Research on Aging, Florida State University, United states
Disclosures: Rafaela Feresin, None

RARE BONE DISEASES: OSTEOGENESIS IMPERFECTA

LB-SA0380 TGF-β Signaling in a Mouse Model of Severe Osteogenesis Imperfecta
Josephine Tauer*, Sami Abdullah, Frank Rauch. Shriners Hospital for Children & McGill University, Canada
Disclosures: Josephine Tauer, None
SKELETAL DEVELOPMENT: GROWTH AND DEVELOPMENT

LB-SA0381 Two-Year, School-Based Resistance Band Exercise Increases Bone Acquisition in Adolescent Girls
Deena Weiss*, Jodi Dowthwaite, Jill Thein-Nissenbaum, Tamara Scerpella.
1University of Wisconsin, United States, 2SUNY Upstate Medical University, United States
Disclosures: Deena Weiss, None

CONCURRENT ORALS: BONE MARROW FAT

Moderators:
Christa Maes, Ph.D.
KU Leuven, Belgium
Disclosures: Christa Maes, None

Maria Jose Almeida, Ph.D.
Central Arkansas VA Healthcare System, Univ of Arkansas for Medical Sciences, USA
Disclosures: Maria Jose Almeida, None

2:30 pm Marrow Adipose Tissue is Distinct from White and Brown Fat and Does Not Beige
Ryan Berry, Brandon Holtrup, Julie Hens, Gene Ables, Tracy Nelson, Rose Webb, Clifford Rosen, Matthew Rodeheffer, Mark Horowitz.
1Yale School of Medicine, United States, 2Orentreich Foundation, United States, 3Maine Medical Center Research Institute, United States
Disclosures: Mark Horowitz, None

2:45 pm Phosphate Restriction Promotes the Differentiation of Multipotent Marrow Stromal Cells into Marrow Adipose Tissue
Frank Ko, Marie Demay.
Massachusetts General Hospital, United States
Disclosures: Frank Ko, None

3:00 pm Bone Marrow Adiposity is Induced by the Osteocyte Derived Factor Sclerostin
Michaela Reagan, Heather Fairfield, Carolyne Falank, Clifford Rosen.
Maine Medical Center Research Institute, United States
Disclosures: Michaela Reagan, None

3:15 pm Critical Function Of PTH1R In Regulation Of Mesenchymal Cell Fate And Bone Resorption
Yi Fan, Phuong Le, Jun-ichi Hanai, Ruiye Bi, Clifford Rosen, Beate Lanske.
1Department of Oral Medicine, Infection & Immunity, Harvard School of Dental Medicine, United States, 2Maine Medical Center Research Institute, United States, 3Renal Division, Beth Israel Deaconess Medical Center & Harvard Medical School, United States, 4Endocrine Unit, Massachusetts General Hospital & Harvard Medical School, United States
Disclosures: Yi Fan, None

3:30 pm Leptin-induced loss of marrow adipose tissue is mediated by sympathetic and sensory neurotransmission
Brian S Learman, Tezin Walji, Shaima Khandaker, Kayla Moller, Ben Schell, Clarissa S Craft, Ormond A MacDougald, Erica L Scheller.
1University of Michigan, United States, 2Washington University, United States
Disclosures: Erica L Scheller, None
3:45 pm Marrow adipose tissue expansion coincides with insulin resistance in MAGP1-deficient mice
Tezin Walji1, Sarah Turecamo1, Alejandro Coca Sanchez2, Bryan Anthony3, Grazia Abou Ezzi4, Erica Scheller4, Daniel Link5, Robert Mecham5, Clarissa Craft*. 1Department of Cell Biology & Physiology, Washington University School of Medicine, United states, 2Department of Medicine & Medical Specialties, Faculty of Medicine & Health Sciences, University of Alcala de Henares, Spain, 3Oncology Division, Department of Medicine, Washington University School of Medicine, United states, 4Bone & Mineral Diseases Division, Department of Internal Medicine; Washington University School of Medicine, United states, 5Department of Cell Biology & Physiology, Washington University School of Medicine, St. Louis, United states
Disclosures: Clarissa Craft, None

CONCURRENT ORALS: MUSCULOSKELETAL DEVELOPMENT
2:30 pm - 4:00 pm Georgia World Congress Center
Room A402/403

Moderators:
Yingzi Yang, Ph.D.
Harvard University, USA
Disclosures: Yingzi Yang, None
Angela Bruzzaniti, Ph.D.
Indiana University School of Dentistry, USA
Disclosures: Angela Bruzzaniti, None

2:30 pm ASBMR 2016 Annual Meeting Young Investigator Award
1049 Over-expression of HES1 in skeletogenic mesenchyme results in preaxial polydactyly
Deepika Sharma*, Timothy Rutkowski2, Anthony Miranda3, Matthew Hilton5.
1University of Rochester School of Medicine, Duke University School of Medicine, United states, 2Emory University, United states, 3Duke University, United states
Disclosures: Deepika Sharma, None

2:45 pm ASBMR 2016 Annual Meeting Young Investigator Award
1050 The Impact and Mechanism of Tsc1 Deletion in Craniofacial Bone Development
Xiaoxi Wei*, Min Hu2, Brannon Cavanaugh3, Andrea Alford3, Rachel Merzel3, Mark Banaszak Holl4, Fei Liu4. 1Jilin University School & Hospital of Stomatology & University of Michigan School of Dentistry, United states, 2Jilin University School & Hospital of Stomatology, China, 3University of Michigan, United states, 4University of Michigan School of Dentistry, United states
Disclosures: Xiaoxi Wei, None

3:00 pm How do Osteoclasts Shape the Cranial Base Bones During Development?
1051 Mio Edamoto*, Yukiko Kuroda, Koichi Matsuo. Keio University School of Medicine, Japan
Disclosures: Mio Edamoto, None

3:15 pm Smpd3 Expression in Both Chondrocytes and Osteoblasts Is Required for Normal Endochondral Bone Development
Garthiga Manickam*, Jingjing Li, Chun-do Oh, Hideyo Yasuda, Pierre Moffatt, Monzur Murshed. 1McGill University, Canada, 2Rush University Medical Center, United states, 3Konkuk University, Korea, democratic people's republic of
Disclosures: Garthiga Manickam, None

3:30 pm Compensatory roles of osteoprogenitor YAP and TAZ in skeletal development
1053 Christopher Kegelman*, James Dawahare, Joel Boerckel. University of Notre Dame, United states
Disclosures: Christopher Kegelman, None
Runx2 Activity in Mature Osteoblast is Essential for Postnatal Bone Acquisition and to Prevent Premature Ageing

Haiyan Chen1*, Harunur Rashid1, Kayla King1, Ying Liu2, Jerry Feng2, Amjad Javed1.
1Department of Oral & Maxillofacial Surgery, School of Dentistry, University of Alabama at Birmingham, United states, 2Department of Biomedical Sciences, Baylor College of Dentistry, Texas A&M University, United states
Disclosures: Haiyan Chen, None

CONCURRENT ORALS: OSTEOCLASTOGENESIS AND BONE RESORPTION

2:30 pm - 4:00 pm Georgia World Congress Center Room A404/405

Moderators:
Roberta Faccio, Ph.D.
Washington University in St Louis School of Medicine, USA
Disclosures: Roberta Faccio, None

Charles O’Brien, Ph.D.
Central Arkansas VA Healthcare System, Univ of Arkansas for Medical Sciences, USA
Disclosures: Charles O’Brien, None

2:30 pm 
**ASBMR 2016 Annual Meeting Young Investigator Award**
Osteoclast Precursor Cells That Form Osteoclasts In Vivo Under Homeostatic Conditions Express CX3CR1, Form Osteoclasts Within 5 Days And Rarely Derive From Circulating Cells
Disclosures: Emilie Roeder, None

2:45 pm 
**Synchronized fusion of osteoclast precursors involves syncytin 1, phosphatidylserine and annexins at the surface of the cells**
Santosh Verma*, Evgenia Leikina1, Kamran Melikov1, Claudia Gebert1, Vardit Kram2, Marian Young2, Leonid Chernomordik1. 1NICHD, NIH, United states, 2NIDCR, NIH, United states
Disclosures: Santosh Verma, None

3:00 pm 
**ASBMR 2016 Annual Meeting Young Investigator Award**
A novel role of c-FMS Intracellular cytoplasmic domain (FICD) as a transcriptional regulator in osteoclastogenesis
Kyung-Hyun Park-Min, Seyeon Bae, Min Joon Lee, Koichi Murata, Se Hwan Mun*.
Hospital for Special Surgery, United states
Disclosures: Se Hwan Mun, None

3:15 pm 
**ASBMR 2016 Annual Meeting Young Investigator Award**
ASXL1 epigenetically suppresses osteoclast formation by methylating NFATc1
Nidhi Rohatgi*, Wei Zou, Timothy Hung-Po Chen, Yousef Abu-Amer, Steven Teitelbaum. Washington University in St. Louis, United states
Disclosures: Nidhi Rohatgi, None

3:30 pm 
**ASBMR 2016 Annual Meeting Young Investigator Award**
COMMD1 negatively regulates osteoclastogenesis and pathologic bone resorption via pRB-E2F1-CKB pathway and is inactivated by hypoxia
Koichi Murata*, Min Joon Lee, Seyeon Bae, Sehwan Mun, Kyung-Hyun Park-Min, Lionel Ivashkiv. Hospital for special surgery, United states
Disclosures: Koichi Murata, None
ASBMR 2016 Annual Meeting Young Investigator Award

Absence of the VDR in Osteoclasts Results in Increased Bone Resorption and Osteoclast Survival


1School of Pharmacy & Medical Sciences, University of South Australia, Australia, 2Centre for Orthopaedics & Trauma Research, Faculty of Health Sciences, University of Adelaide, Australia, 3Department of Medicine, Austin Health, University of Melbourne, Australia

Disclosures: Yolandi Starczak, None

CONCURRENT ORALS: RARE BONE DISEASES (CLINICAL)

2:30 pm - 4:00 pm Georgia World Congress Center Room A412

Moderators:
Michael Whyte, M.D.
Shriners Hospital for Children, USA
Disclosures: Michael Whyte, None

Michael Econs, M.D.
Indiana University School of Medicine, USA
Disclosures: Michael Econs, None

2:30 pm

First X-linked Form of Osteogenesis Imperfecta, Caused by Mutations in MBTPS2, Demonstrates a Fundamental Role for Regulated Intramembrane Proteolysis in Normal Bone Formation

Wayne Cabral*, Uschi Lindert, Surasawadee Ausavarat, Siraprapa Tongkobpetch, Katja Ludin, Aileen Barnes, Patra Yeetong, Maryann Weis, Birgit Krabichler, Chalurmon Srichomthong, Elena Makareeva, Andreas Janecke, Benno Röthlisberger, Marianne Rohrbach, Ingo Kennerknecht, David Eyre, Kanya Suphapeetiporn, Cecilia Giunta, Vorasuk Shotelersuk, Joan Marini.

1Section on Heritable Disorders of Bone & Extraglacellular Matrix, NICHD, National Institutes of Health, United states, 2Division of Metabolism, Connective Tissue Unit & Children’s Research Center, University Children’s Hospital Zurich, Switzerland, 3Center of Excellence for Medical Genetics, Department of Pediatrics, Faculty of Medicine, Chulalongkorn University & Excellence Center for Medical Genetics, King Chulalongkorn Memorial Hospital, the Thai Red Cross Society, Thailand, 4Center of Excellence for Medical Genetics, Department of Pediatrics, Faculty of Medicine, Chulalongkorn University, & Thai Excellence Center for Medical Genetics, King Chulalongkorn Memorial Hospital, the Thai Red Cross Society, Thailand, 5Center for Laboratory Medicine, Department of Medical Genetics, Kantonsspital Aarau, Switzerland, 6Department of Orthopedics & Sports Medicine, University of Washington, United states, 7Division of Human Genetics, Medical University of Innsbruck, Austria, 8Section on Physical Biochemistry, National Institute of Child Health & Human Development, National Institutes of Health, United states, 9Institute of Human Genetics, Westfälische Wilhelms University, Germany, 10Bone & Extracellular Matrix Branch, National Institute of Child Health & Human Development, National Institutes of Health, United states

Disclosures: Wayne Cabral, None

2:45 pm

ASBMR 2016 Annual Meeting Young Investigator Award

Transient Receptor Potential Melastatin 6 (TRPM6) as a Channel-Kinase Regulator of Mineral Metabolism

Nora Renthal*, David Clapham. Boston Children’s Hospital, United states

Disclosures: Nora Renthal, None
Vitamin D Deficiency Due to a Recurrent Gain-of-Function Mutation in CYP3A4 Causes a Novel Form of Vitamin D Dependent Rickets

Jeffrey Roizen*1, Dong Li2, Lauren O’Lear3, Muhammad K Jaivaid4, Nicholas Shaw5, Peter Ebeling6, Hanh Nguyen7, Christine Rodda8, Kenneth Thummel9, Hakon Hakonarson2, Michael Levine3. 1Division of Endocrinology & Diabetes The Children’s Hospital of Philadelphia, Philadelphia, PA, United States, United states, 2Center for Applied Genomics, The Children’s Hospital of Philadelphia, Philadelphia, PA, University of Pennsylvania Perelman School of Medicine, Philadelphia, PA, United States, United states, 3Division of Endocrinology & Diabetes, The Children’s Hospital of Philadelphia, Philadelphia, PA, University of Pennsylvania Perelman School of Medicine, Philadelphia, PA, United States, United states, 4National Institute for Health Research (NIHR) Musculoskeletal Biomedical Research Unit, University of Oxford, Oxford, UK, United Kingdom, 5Birmingham Children’s Hospital & University of Birmingham, Birmingham, UK, United Kingdom, 6Monash University, Monash Medical Centre, Clayton, Victoria, Australia, 7Monash University, Monash Medical Centre, Clayton, Victoria, Australia, Australia, 8NorthWest Academic Centre, University of Melbourne, Australia, Australia, 9Department of Pharmacetics, University of Washington, Seattle, WA, USA, United states

Disclosures: Jeffrey Roizen, None

Feingold syndrome skeletal dysplasia, type 1 and 2 are caused by distinct molecular mechanisms

Fatemeh Mirzamohammadi*, Garyfallia Papaioannou, Elena Paltrinieri, Tatsuya Kobayashi. Endocrine Unit, Massachusetts General Hospital & Harvard Medical School, United states

Disclosures: Fatemeh Mirzamohammadi, None

Relationship between parathyroid hormone levels and treatment response in patients with hypophosphatasia treated with asfotase alfa

Andrew Denker*, Hui Zhang, Rajendra Pradhan. Alexion Pharmaceuticals, Inc, United states

Disclosures: Andrew Denker, Alexion Pharmaceuticals, Inc, 103; Alexion Pharmaceuticals, Inc, 104

Metabolic Expressivity and Clinical Significance of Genotype-Variations in Hypophosphatasia

Lothar Seefried*, Franz Jakob, Franca Genest. Wuerzburg University, Germany

Disclosures: Lothar Seefried, Alexion Pharmaceuticals, Inc, 13

NETWORKING BREAK

4:00 pm - 4:30 pm ASBMR Discovery Hall - Expo Hall A1

CONCURRENT ORALS: BONE ACQUISITION AND PEDIATRIC BONE DISORDERS

Georgia World Congress Center

Room A404/405

Moderators:
Thierry Chevalley, M.D.
University Hospitals of Geneva Division of Bone Diseases, Switzerland
Disclosures: Thierry Chevalley, None

IGF-I-Dependent Musculoskeletal Development is Blunted in Adolescents with Insulin Resistance: A 5-Year Prospective Study

Joseph Kindler*1, Norman Pollock2, Emma Laing3, Carlos Isales2, Mark Hamrick3, Ke-Hong Ding2, Richard Lewis1. 1The University of Georgia, United states, 2Augusta University, United states

Disclosures: Joseph Kindler, None
| Time   | Session | Title                                                                                           | Authors                                                                                   | Affiliations                                                                                     | Disclosures                          |
|--------|---------|-------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|
| 4:45 pm| 1068    | Are Sex Differences in Fracture Incidence During Adolescence due to Factors Other than Bone Quality? A Longitudinal HR-pQCT Study | Leigh Gabel*1, Heather M. Macdonald2, Heather A. McKay1. 1University of British Columbia & Centre for Hip Health & Mobility, Vancouver Coastal Research Institute, Canada, 2Centre for Hip Health & Mobility, Vancouver Coastal Health Research Institute, Canada | *Leigh Gabel, None                      |
| 5:00 pm| 1069    | ASBMR 2016 Annual Meeting Young Investigator Award                                               | Vibha Singhal1, Shreya Tulsiani2, Meghan Slattery2, Madhusmita Misra2, Anne Klibanski1, 1Massachusetts General Hospital, United states, 2MGH, United states | *Vibha Singhal, None                      |
| 5:15 pm| 1070    | Dietary Factors during Early Life Program Bone Formation                                         | Jin-Ran Chen*, Oxana P. Lazarenko, Michael L. Blackburn, Aline Andres, Thomas M. Badger. Arkansas Children’s Nutrition Center & the Department of Pediatrics, University of Arkansas for Medical Sciences, United states | Jin-Ran Chen, None                      |
| 5:30 pm| 1071    | Prepubertal Impact of Environmental Factors on Proximal Femur Peak Bone Mass : the Key Role of Protein Intake on the Response to Physical Activity in the Skeletal Development of Healthy Male Subjects | Thierry Chevalley*1, Jean-Philippe Bonjour1, Marie-Claude Audet1, Fanny Merminod1, Bert van Rietbergen2, Rene Rizzoli1, Serge Ferrari1, 1Division of Bone Diseases, Switzerland, 2Eindhoven University of Technology, Netherlands | Thierry Chevalley, None                |
| 5:45 pm| 1072    | Decreased bone turnover in HIV-infected children on antiretroviral therapy                        | Stephen Arpadi*1, Stephanie Shiau1, Renate Strehla2, Faeezah Patel2, Ndileka Mbete2, Donald McMahon1, Louise Kuhn1, Ashraf Coovadia2, Michael Yin1, 1Columbia University, United states, 2University of the Witwatersrand, South Africa | Stephen Arpadi, None                    |

**CONCURRENT ORALS: FRACTURE EPIDEMIOLOGY**

**4:30 pm - 6:00 pm Georgia World Congress Center**

**Sidney Marcus Auditorium - Building A**

**Moderators:**
Lora Giangregorio, Ph.D.
University of Waterloo, Canada
*Disclosures: Lora Giangregorio, None*

**4:30 pm 1073**
Hospital based Fracture Liaison Service reduces re-fracture rate and is cost-effective and cost saving
Charles Inderjeeth*1, Warren Raymond2, Elizabeth Geelhoed3, Andrew BRIGGS4, Kathy Briffa5, David Oldham6, Jean McQuade7, David MOUNTAIN6. 1University of Western Australia & North Metropolitan Health Service, Australia, 2University of Western Australia & Sir Charles Gairdner Hospital, Australia, 3University of Western Australia, Australia, 4Department of Health, Australia, 5Curtin University, Australia, 6Sir Charles Gairdner Hospital, Australia, 7Arthritis & Osteoporosis WA, Australia
*Disclosures: Charles Inderjeeth, None*

**4:45 pm 1074**
Felicia Cosman*1, John Krege2, Anne Looker3, John Schousboe4, Bo Fan5, Neda Sarafrazi Isfahani3, John Shepherd5, Kelly Krohn2, Peter Steiger6, Kevin Wilson7, Harry Genant5.
1Helen Hayes Hospital, United states, 2Eli Lilly & Company, United states, 3National Center for Health Statistics, Centers for Disease Control & Prevention, United states, 4Park Nicollet Clinic & HealthPartners Institute, United states, 5University of California, United states, 6Parexel International, United states, 7Hologic, Inc., United states
*Disclosures: Felicia Cosman, Eli Lilly and Company, 104*
5:00 pm  Longer Duration of Diabetes Strongly Impacts Fracture Risk Assessment: The Manitoba BMD Cohort
William Leslie*1, Suzanne Morin2, Sumit Majumdar3, Lisa Lix1, Helena Johansson4, Anders Oden4, Eugene McCloskey4, John Kanis4.  1University of Manitoba, Canada, 2McGill University, Canada, 3University of Alberta, Canada, 4Centre for Metabolic Bone Diseases, University of Sheffield Medical School, United Kingdom
Disclosures: William Leslie, None

5:15 pm  Measurement of Cortical and Trabecular Deterioration Identifies Postmenopausal Women at Imminent Risk for Fracture: the OFELY Study
Stephanie Boutroy*1, Roger Zebaze2, Elisabeth Sornay-Rendu1, Ego Seeman2, Roland Chapurlat1.  1INSERM UMR 1033, University of Lyon, France, 2Austin Health, University of Melbourne, Australia
Disclosures: Stephanie Boutroy, None

5:30 pm  Hip Fractures and Declining DXA Testing: At a Breaking Point?
E. Michael Lewiecki*1, Robert Adler2, Jeffrey Curtis3, Robert Gagel4, Kenneth Saag5, Andrea Singer6, Ethel Siris7, Nicole C. Wright8, Huifeng Yun9, Peter M. Steven10.  1UNM Health Sciences Center, United states, 2VA Medical Center, United states, 3University of Alabama at Birmingham, Division of Clinical Immunology & Rheumatology, United states, 4MD Anderson, United states, 5University of Alabama Birmingham Medical College, United states, 6MedStar Georgetown University Hospital, United states, 7New York-Presbyterian Hospital, United states, 8University of Alabama at Birmingham, United states, 9University Alabama Birmingham School of Public Health, United states, 10ISCD, United states
Disclosures: E. Michael Lewiecki, Shire, 15; Eli Lilly, Amgen, Merck, Radius Health, 13; Eli Lilly, Amgen, Merck, 13

5:45 pm  Falls Predict Fractures Independently of FRAX Probability: The Osteoporotic Fractures in Men (MrOS) Study
Nicholas Harvey*1, Anders Oden2, Eric Orwoll3, Jodi Lapidus4, Timothy Kwok5, Magnus Karlsson6, Björn Rosengren6, Osten Ljunggren7, Cyrus Cooper1, Eugene McCloskey4, John Kanis7, Claes Ohlsson2, Dan Mellström2, Helena Johansson2.  1MRC Lifecourse Epidemiology Unit, University of Southampton, United Kingdom, 2Centre for Bone & Arthritis Research (CBAR), Sahlgrenska Academy, University of Gothenburg, Sweden, 3Oregon Health & Science University, United states, 4Department of Public Health & Preventive Medicine, Division of Biostatistics, Oregon Health & Science University, United states, 5Department of Medicine & Therapeutics & School of Public Health, The Chinese University of Hong Kong, Hong kong, 6Clinical & Molecular Osteoporosis Research Unit, Department of Clinical Sciences Malmo, Lund University & Department of Orthopedics, Skane University Hospital, Sweden, 7Department of Medical Sciences, University of Uppsala, Sweden, 8Centre for Metabolic Bone Diseases, & Centre for Integrated research in Musculoskeletal Ageing (CIMA), Mellanby Centre for Bone Research, University of Sheffield, United Kingdom, 9Centre for Metabolic Bone Diseases, University of Sheffield, United Kingdom
Disclosures: Nicholas Harvey, None
CONCURRENT ORALS: OSTEOBLAST BIOLOGY AND PATHOPHYSIOLOGY

4:30 pm - 6:00 pm  Georgia World Congress Center  
Room A411

Moderators:
Rene St-Arnaud, Ph.D.  
Shriners Hospital for Children and McGill University, Canada  
Disclosures: Rene St-Arnaud, None  

James Gallagher, Ph.D.  
University of Liverpool, United Kingdom  
Disclosures: James Gallagher, None  

4:30 pm  Intravital Imaging of Osteoblast, Osteocyte and GFP-Collagen Dynamics  
1079  Lora McCormick*1, Michael Grillo1, LeAnn Tiede-Lewis2, Kun Wang2, Hong Zhao2, Sarah Dallas2. 1University of Missouri-Kansas City, United states, 2University of Missouri, Kansas City, United states  
Disclosures: Lora McCormick, None  

4:45 pm  Induction of the Hajdu Cheney Syndrome Mutation in Osteoblasts Causes Severe Osteopenia  
1080  Stefano Zanotti*1, Jungeun Yu1, Archana Sanjay1, Lauren Schilling1, Christopher Schoenherr2, Aris Economides2, Ernesto Canalis1. 1UConn Health, United states, 2Regeneron Pharmaceuticals, United states  
Disclosures: Stefano Zanotti, None  

5:00 pm  Novel Role for Claudin-11 in the Regulation of ADAM10-mediated Notch Signaling  
1081  Richard Lindsey*1, Shaohong Cheng2, Weirong Xing1, Catrina Alarcon2, Sheila Pourteymoor2, Alexander Gow3, Subburaman Mohan1. 1VA Loma Linda Healthcare System; Loma Linda University, United states, 2VA Loma Linda Healthcare System, United states, 3Wayne State University, United states  
Disclosures: Richard Lindsey, None  

5:30 pm  Ca2+ signaling through the Cav1.2 L-type Ca2+ channel regulates bone formation  
1083  Chike Cao*1, Anthony Mirando2, Amy McNulty2, Farshid Guilak2, Matthew Hilton2, Geoffery Pitt1. 1Ion Channel Research Unit; Department of Medicine, Duke University Medical Center, United states, 2Department of Orthopaedic Surgery, Duke University Medical Center, United states  
Disclosures: Chike Cao, None  

5:45 pm  Osteoblasts Mediate Immunosuppression During Sepsis by Regulating Lymphopoiesis  
1084  Asuka Terashima*1, Kazuo Okamoto1, Tomoki Nakashima2, Koichi Ikuta1, Hiroshi Takayanagi1. 1Department of Immunology, Graduate School of Medicine & Faculty of Medicine, The University of Tokyo, Japan, 2Department of Cell Signaling, Graduate School of Medical & Dental Sciences, Tokyo Medical & Dental Universit, Japan, 3Laboratory of Biological Protection, Department of Biological Responses, Institute for Virus Research, Kyoto University, Japan  
Disclosures: Asuka Terashima, None
CONCURRENT ORALS: PRECLINICAL MODELS: GENETICS AND PHARMACOLOGY

4:30 pm - 6:00 pm Georgia World Congress Center
Room A412

Moderators:
Bart Williams, Ph.D.
Van Andel Research Institute, USA
Disclosures: Bart Williams, None

Valerie Geoffroy, Ph.D.
INSERM, France
Disclosures: Valerie Geoffroy, None

4:30 pm 1085

Crispr-Cas9 Engineered Mouse Model for Osteogenesis Imperfecta Type V

Pierre Moffatt*1, Janice Penney1, Lisa Lamplugh2, Yeqing Geng3, Marie-Helene Gaumond2, Frank Rauch2, Yojiro Yamanaka1. 1McGill University, Canada, 2Shriners Hospitals for Children, Canada
Disclosures: Pierre Moffatt, None

4:45 pm 1086

A Loss of Function Mutation in DDRGK1 Causes Shohat Type SEMD Via Increased SOX9 Ubiquitination

Adetutu Egunsola1, Yangjin Bae1, Ming-Ming Jiang2, David Liu1, Daniel Cohn3, Eric Swindell4, Yuqing Chen-Evenson5, Terry Bertin6, Lisette Nevarez5, Richard Gibbs5, Philippe Campeau1, Mordechai Shohat7, Brendan Lee1, 1Molecular & Human Genetics at Baylor College of Medicine, United states, 2Department of Molecular & Human Genetics at Baylor College of Medicine, United states, 3Department of Molecular Cell & Developmental Biology; Department of Orthopaedic Surgery International Skeletal Dysplasia Registry University of California, Los Angeles, United states, 4Department of Pediatrics The University of Texas Medical School at Houston, United states, 5department of molecular cell developmental biology, University of California Los Angeles, United states, 6Department of Molecular & Human Genetics; Human Genome Sequencing Center at Baylor College of Medicine, United states, 7Recanati Institute For Medical Genetics, Rabin & Schneider Medical Centers; Departments of Pediatrics & Medical Genetics, Sackler School of Medicine, Tel Aviv University, Israel
Disclosures: Adetutu Egunsola, None

5:00 pm 1087

Sclerostin antibody administration converts bone lining cells into active osteoblasts

Marc Wein*1, Yanhui Lu1, Elizabeth Williams1, Sang Wan Kim2, Tetsuya Enishi1, Michael Ominsky3, H.Z. Ke4, Henry Kronenberg1. 1Massachusetts General Hospital, United states, 2Seoul National University College of Medicine, Korea, democratic people's republic of, 3Amgen, United states, 4UCB, United Kingdom
Disclosures: Marc Wein, Amgen, 13

5:15 pm 1088

Dose-response Relationship of Palovarotene in the ALK2 (Q207D) Cre-Inducible Transgenic Mouse Model of HO Under Mild and Severe Injury Conditions

Isabelle Lemire*1, Dominic Poulin2, Philippe Colucci3, Michael Harvey1. 1Clementia Pharmaceuticals Inc., Canada, 2Charles River Montreal ULC, CR-MTL, Canada, 3Learn & Confirm, Inc., Canada
Disclosures: Isabelle Lemire, None

5:30 pm 1089

ASBMR 2016 Annual Meeting Young Investigator Award

The Role of Canonical Wnt Signaling in the Development of Spondyloarthritis

Wanqing Xie*1, Tianqian Hui1, Lianfan Liao2, Shan Li2, Chundo Oh2, Qiming Fan1, Jeffrey S Kroin3, Hee-Jeong Im3, Di Chen1. 1Rush University Medical Center, China, 2Rush University Medical Center, United states
Disclosures: Wanqing Xie, None

5:45 pm 1090

Differential effects of the cathepsin K inhibitor, MK-0674, and alendronate on bone mass, remodeling, and strength of cortical bone in cynomolgus monkeys with established osteopenia

Maureen Pickarski*, Brenda Pennypacker, Le Duong. Merck & Co., Inc, United states
Disclosures: Maureen Pickarski, Merck & Co., Inc, 17

110
Space is limited and available on a first-come, first-served basis. Attendees must be registered for the ASBMR 2016 Annual Meeting.

**BASIC SCIENCE EVENING-BRAIN SIGNALING TO BONE**

6:30 pm - 8:30 pm  
Georgia World Congress Center  
Room A305

**Co-Chairs**  
Patricia Ducy, Ph.D.  
Columbia University, USA  
*Disclosures: Patricia Ducy, None*

Florent Elefteriou, Ph.D.  
Baylor College of Medicine, USA  
*Disclosures: Florent Elefteriou, None*

**6:30 pm  Reception**

7:00 pm  **Vestibular Signals and Bone Remodeling**  
Florent Elefteriou, Ph.D.  
Baylor College of Medicine, USA  
*Disclosures: Florent Elefteriou, None*

7:30 pm  **The Sympathetic Nervous System and Bone**  
Clifford Rosen, M.D.  
Maine Medical Center, USA  
*Disclosures: Clifford Rosen, None*

8:00 pm  **Energy Expenditure, Bone Formation and the Hypothalamus**  
Roland Baron, DDS, PhD  
Harvard Medical School and School of Dental Medicine, USA  
*Disclosures: Roland Baron, None*

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**CLINICAL EVENING-CAN WE CLOSE THE TREATMENT GAP FOR OSTEOPOROSIS?**

Supported by Educational Grants from Merck & Co., Inc., Radius Health, and Amgen, Inc.

6:30 pm - 8:30 pm  
Georgia World Congress Center  
Thomas B. Murphy Ballroom - Building B Level 5

**Co-Chairs**  
Felicia Cosman, M.D.  
Helen Hayes Hospital, USA  
*Disclosures: Felicia Cosman, None*

Socrates Papapoulos, M.D.  
Leiden University Medical Center, The netherlands  
*Disclosures: Socrates Papapoulos, Merck & Co 14; UCB 14; Amgen 14; Axsome 14*

**6:30 pm  Dinner**

7:00 pm  **Revisiting the Screening Recommendations for Osteoporosis in Men and Women**  
Juliet Compston, M.D., FRCP  
University of Cambridge School of Clinical Medicine, United Kingdom  
*Disclosures: Juliet Compston, None*
7:30 pm  What Are the Real Reductions with Treatments and What Are the Risks: How Do They Compare?
Dennis Black, Ph.D.
UC San Francisco, USA
Disclosures: Dennis Black, Merck 14; Asahi-Kasei 14; Alexion 13; Radius 14

8:00 pm  What are the Outstanding Needs for Overcoming the Barriers to Treating Individuals with Osteoporosis, and How Does the Future Look?
Susan Greenspan, M.D.
University of Pittsburgh, USA
Disclosures: Susan Greenspan, None

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**ASBMR NETWORKING EVENT**

*Supported in part by a donation from Lilly*

8:30 pm - 11:30 pm  Omni Atlanta Hotel at CNN Center
Grand Ballroom

Join us for an evening of food, drinks and dancing at the ASBMR Networking Event! Enjoy the company of colleagues, both old and new, while reveling in a fun and relaxed atmosphere. Admission is included with Annual Meeting registration.
## Sunday, September 18, 2016
### Day-At-A-Glance

<table>
<thead>
<tr>
<th>Time/Event/Location</th>
<th>Location/Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>5:30 am - 7:45 am</td>
<td>Industry Supported Symposium (ISS): New Horizons in Osteoporosis: Building a Strong Foundation for Evidence Based Diagnosis and Treatment &lt;br&gt;Omni Atlanta Hotel at CNN Center, Grand Ballroom ABC</td>
</tr>
<tr>
<td>7:00 am - 5:00 pm</td>
<td>ASBMR Registration Open &lt;br&gt;Registration Hall - Main Entrance</td>
</tr>
<tr>
<td>8:00 am - 9:30 am</td>
<td>Plenary Symposium-Gut Microbiome and Bone Homeostasis &amp; Presentation of the Fuller Albright and Stephen Krane Awards &lt;br&gt;Thomas B. Murphy Ballroom - Building B Level 5</td>
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<tr>
<td>9:30 am - 4:30 pm</td>
<td>Posters Open &lt;br&gt;ASBMR Discovery Hall - Expo Hall A1</td>
</tr>
<tr>
<td>9:30 am - 4:30 pm</td>
<td>Discovery Hall Open &lt;br&gt;ASBMR Discovery Hall - Expo Hall A1</td>
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<tr>
<td>9:30 am - 9:45 am</td>
<td>Networking Break &lt;br&gt;ASBMR Discovery Hall - Expo Hall A1</td>
</tr>
<tr>
<td>9:45 am - 11:00 am</td>
<td>Plenary Orals: Bone Tumors and Metastasis I &lt;br&gt;Room A411/412</td>
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<tr>
<td>11:00 am - 12:00 pm</td>
<td>Meet-The-Professor Sessions &lt;br&gt;Rooms A311-316</td>
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<tr>
<td>11:00 am - 11:30 am</td>
<td>A Crisis in the Treatment of Osteoporosis &lt;br&gt;A404/405</td>
</tr>
<tr>
<td>11:30 am - 12:30 pm</td>
<td>ASBMR Task Force Reports &lt;br&gt;Sidney Marcus Auditorium - Building A</td>
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<tr>
<td>12:00 pm - 12:30 pm</td>
<td>Poster Session II &amp; Poster Tours &lt;br&gt;ASBMR Discovery Hall - Expo Hall A1</td>
</tr>
<tr>
<td>12:30 pm - 2:30 pm</td>
<td>Late-Breaking Posters II &lt;br&gt;ASBMR Discovery Hall - Expo Hall A1</td>
</tr>
</tbody>
</table>
2:30 pm - 4:00 pm
Concurrent Orals: Bone Tumors and Metastasis II
Room A412

2:30 pm - 4:00 pm
Concurrent Orals: Nutrition, Exercise and Falls
Sidney Marcus Auditorium - Building A

2:30 pm - 4:00 pm
Concurrent Orals: Osteoporosis Pathophysiology I
Room A404/405

2:30 pm - 4:00 pm
Concurrent Orals: Osteocytes: Remodeling and Communication
Room A411

4:00 pm - 4:30 pm
Networking Break
ASBMR Discovery Hall - Expo Hall A1

4:30 pm - 5:45 pm
Symposium-BMPs in Development and Disease
Sidney Marcus Auditorium - Building A

4:30 pm - 5:45 pm
Greg Mundy Symposium: New Mechanisms on Cancer and Bone
Thomas B. Murphy Ballroom - Building B Level 5

6:00 pm - 7:00 pm
ASBMR Annual Town Hall Meeting and Reception
Room A402/403

7:15 pm - 10:00 pm
Adult Bone and Mineral Working Group
Room A305

7:15 pm - 9:45 pm
Bone Strength Working Group
Room A302

7:15 pm - 9:30 pm
Pediatric Bone and Mineral Working Group
Room A314

7:30 pm - 8:30 pm
Diversity Reception
Omni Atlanta Hotel at CNN Center, International Ballroom A
INDUSTRY SUPPORTED SYMPOSIUM (ISS): NEW HORIZONS IN OSTEOPOROSIS: BUILDING A STRONG FOUNDATION FOR EVIDENCE BASED DIAGNOSIS AND TREATMENT

Supported by an educational grant from Radius Health, Inc. Jointly provided by Potomac Center for Medical Education and Rockpointe

5:30 am - 7:45 am

Omni Atlanta Hotel at CNN Center
Grand Ballroom ABC

5:30 am  Registration

6:00 am  Introduction

6:10 am  Strategies to Improve the Detection and Diagnosis of Osteoporosis
Paul D. Miller, MD, Colorado Center for Bone Research at Centura Health, USA

6:35 am  Challenges in Identification of Patients in Need
E. Michael Lewiecki, MD, New Mexico Clinical Research & Osteoporosis Center, USA

7:00 am  New Treatment Options for Building Better Bone
John Bilezikian, MD, Columbia University, USA

7:30 am  Conclusion and Q & A Session

Accreditation  This activity has been planned and implemented in accordance with the accreditation requirements and policies of the Accreditation Council for Continuing Medical Education (ACCME) through the joint providership of the Potomac Center for Medical Education and Rockpointe. The Potomac Center for Medical Education is accredited by the ACCME to provide continuing medical education for physicians.

Designation Statement  The Potomac Center for Medical Education designates this live activity for a maximum of 1.75 AMA PRA Category 1 Credits™. Physicians should only claim credit commensurate with the extent of their participation in the activity.

For questions regarding CME credit, the post-test, evaluation, please email contact@potomacme.org.

ASBMR REGISTRATION OPEN

7:00 am - 5:00 pm
Georgia World Congress Center
Registration Hall - Main Entrance

PLENARY SYMPOSIUM-GUT MICROBIOME AND BONE HOMEOSTASIS & PRESENTATION OF THE FULLER ALBRIGHT AND STEPHEN KRANE AWARDS

Supported by an Educational Grant from Merck & Co., Inc.

8:00 am - 9:30 am
Georgia World Congress Center
Thomas B. Murphy Ballroom - Building B Level 5

Co-Chairs
Laura McCabe, Ph.D.
Michigan State University, USA
Disclosures: Laura McCabe, None

Eric Orwoll, M.D.
Oregon Health and Science University, USA
Disclosures: Eric Orwoll, None
8:00 am  Overview of the Field and Interaction Between Human Genome and Gut Microbiome
Andre Uitterlinden, Ph.D.
Rm Ee 575, Genetic Laboratory, The Netherlands
Disclosures: Andre Uitterlinden, None

8:25 am  Interaction Between Nutrition and Microbiome
Rene Rizzoli, M.D.
Geneva University Hospitals and Faculty of Medicine, Switzerland
Disclosures: Rene Rizzoli, Nestlé 14; Labatec 14; Danone 15; Radius 14

8:50 am  Experimental Approach of Bone and the Microbiome
Roberto Pacifici, M.D.
Emory University School of Medicine, USA
Disclosures: Roberto Pacifici, None

POSTERS OPEN
9:30 am - 4:30 pm  Georgia World Congress Center
ASBMR Discovery Hall - Expo Hall A1

DISCOVERY HALL OPEN
9:30 am - 4:30 pm  Georgia World Congress Center
ASBMR Discovery Hall - Expo Hall A1

NETWORKING BREAK
9:30 am - 9:45 am  Georgia World Congress Center
ASBMR Discovery Hall - Expo Hall A1

PLENARY ORALS: BONE TUMORS AND METASTASIS I
9:45 am - 11:00 am  Georgia World Congress Center
Room A411/412

Moderators:
Claire Edwards, Ph.D.
University of Oxford, United Kingdom
Disclosures: Claire Edwards, None

Florent Elefteriou, Ph.D.
Baylor College of Medicine, USA
Disclosures: Florent Elefteriou, None

9:45 am  ASBMR 2016 Most Outstanding Translational Abstract Award
1091  Genetic Sost Deletion or Pharmacological Inhibition of Sclerostin Prevents Bone Loss and Decreases Osteolytic Lesions in Immunodeficient and Immunocompetent Preclinical Models of Multiple Myeloma
Jesus Delgado-Calle*1, Judith Anderson2, Meloney D Cregor1, Dan Zhou2, Lilian I Plotkin1, Teresita Bellido1, G David Roodman2. 1Department of Anatomy & Cell Biology, Indiana University School of Medicine, United states, 2Department of Medicine, Indiana University School of Medicine, United states
Disclosures: Jesus Delgado-Calle, None
10:00 am  Molecular Mechanisms of Breast Cancer Cellular Dormancy in the Bone Marrow
1092  Mattia Capulli*, Dayana Hristova, Ronak Arjan, Alfredo Cappariello, Antonio Maurizi, Argia Ucci, Nadia Rucci, Anna Teti. 1University of L’Aquila, Italy, 2University of Manchester, United Kingdom
Disclosures: Mattia Capulli, None

10:15 am  Targeting TRPV1 on sensory neurons as a potential therapy for breast cancer in bone
1093  Tatsuo Okui1, Masahiro Hiasa1, Fletcher White2, G David Roodman1, Toshiyuki Yoneda1. 1Department of Medicine, Hematology Oncology, Indiana University School of Medicine, United states, 2Department of Anesthesia, Paul & Carole Stark Neurosciences Research Institute, United states
Disclosures: Tatsuo Okui, None

10:30 am  Myeloid-Derived Suppressor Cells (MDSC) Mediate Prostate Cancer-Bone Interactions
1094  Serk In Park*, Hye Eun Kim, Hyo Min Jeong, Geurim Son. Korea University College of Medicine, Korea, republic of
Disclosures: Serk In Park, None

10:45 am  MicroRNA-30 Family Reduces Skeletal Lesions in Tumor Bearing Mice by Targeting Osteomimicry
1095  Martine Crouzet1, Francesco Pantano2, Casina Kang3, Francoise Descotes4, Edith Bonnelye1, Saw-See Hong4, Philippe Clezardin*1, 1INSERM, UMR_S1033, UFR de medecine Lyon-Est, University of Lyon, France, 2Medical Oncology Dept./Translational Oncology Laboratory, Italy, 3Service biochimie biologie moleculaire Hospices civils de Lyon, France, 4Université Claude Bernard Lyon 1 UMR754 INRA-UCBL-EPHE, France
Disclosures: Philippe Clezardin, None

PLENARY ORALS: JOHN H. CARSTENS MEMORIAL SESSION - OSTEOPOROSIS TREATMENT II
9:45 am - 11:00 am  Georgia World Congress Center
Sidney Marcus Auditorium - Building A

Moderators:
Socrates Papapoulos, M.D.
Leiden University Medical Center, The Netherlands
Disclosures: Socrates Papapoulos, None
Kenneth G. Saag, M.D., MSc
University of Alabama at Birmingham, USA
Disclosures: Kenneth G. Saag, None

9:45 am  Fracture Risk Reduction With Romosozumab: Results of the Phase 3 FRAME Study (FRAculture study in postmenopausal woMen with ostEoporosis)
1096  F Cosman1, Db Crittenden2, Jd Adachi3, N Binkley4, E Czerwinski5, S Ferrari6, Lc Hofbauer7, E Lau8, Em Lewiecki9, A Miyauchi10, Caf Zerbini11, L Chen12, J Maddox13, Pd Meisner14, Ce Milmont15, C Libanati12, A Grauer12, Helen Hayes Hospital, West Havenstraw, & Columbia University, United states, 2Amgen Inc., United states, 3McMaster University, Canada, 4University of Wisconsin–Madison Osteoporosis Clinical Center & Research Program, United states, 5Krakow Medical Centre, Poland, 6Geneva University Hospital, Switzerland, 7Division of Endocrinology, Diabetes, & Bone Diseases, TU Dresden Medical Center, Germany, 8Center for Clinical & Basic Research, China, 9New Mexico Clinical Research & Osteoporosis Center, United states, 10Miyauchi Medical Center, Japan, 11Centro Paulista de Investigação Clírica, Brazil, 12UCB Pharma, Belgium
Disclosures: F Cosman, Amgen, Eli Lilly, Merck, Radius, Tarsus, 14; Amgen, Eli Lilly, 15; Amgen, Eli Lilly, 13
10:00 am Effects of Odanacatib on Transilial Cortical Remodeling/Modeling and Microarchitecture in Postmenopausal Women with Osteoporosis: 5-Year Data from the Extension of the Phase 3 Long-Term Odanacatib Fracture Trial (LOFT)


1Creighton University, United states, 2Helen Hayes Hospital, United states, 3Aarhus University Hospital, Denmark, 4Synexus Helderberg Clinical Research Centre, South Africa, 5University of Stellenbosch, South Africa, 6Merck & Co., Inc., United states, 7Formerly Merck & Co., Inc., United states, 8MSD Europe Inc., Belgium

Disclosures: Robert Recker, Merck, Lilly, Amgen, 13; Merck, Lilly, 14

10:15 am Effects of KRN23, an Anti-FGF23 Antibody, in Patients With Tumor Induced Osteomalacia and Epidermal Nevus Syndrome: Results from an Ongoing Phase 2 Study


1Yale University School of Medicine, United states, 2Colorado Center for Bone Research, United states, 3Duke University, United states, 4Indiana University School of Medicine, United states, 5Houston Methodist Hospital, United states, 6Ultragenyx Pharmaceutical Inc., United states, 7Johns Hopkins University School of Medicine, United states

Disclosures: Thomas Carpenter, Ultragenyx, 13; Ultragenyx, 17

10:30 am Odanacatib Efficacy and Safety in Postmenopausal Women with Osteoporosis: 5-Year Data from the Extension of the Phase 3 Long-Term Odanacatib Fracture Trial (LOFT)

Michael R. McClung*, Bente Langdahl, Socrates Papapoulos, Kenneth G. Saag, Henry Bone, Douglas P. Kiel, Kurt Lippuner, Toshihika Nakamura, Ian Reid, Norman Heyden, Carolyn DaSilva, Boyd B. Scott, Rachid Massaad, Keith D. Kaufman, S. Aubrey Stoch, Arthur Santora, Antonio Lombardi, Oregon Osteoporosis Center, United states, 2Aarhus University Hospital, Denmark, 3Leiden University Medical Center, Netherlands, 4University of Alabama at Birmingham, United states, 5Michigan Bone & Mineral Clinic & The Osteoporosis Center at St. Luke’s Hospital, United states, 6Institute for Aging Research, Hebrew Senior Life, Harvard Medical School, United states, 7Bern University Hospital, Switzerland, 8University of Occupational & Environmental Health, Japan, 9University of Auckland, New Zealand, 10Merck & Co., Inc., United states, 11MSD Europe Inc., Belgium

Disclosures: Michael R. McClung, Amgen, Merck, 14

10:45 am Discontinuation of Denosumab and Associated Fracture Incidence: Analysis From FREEDOM and its Extension


1Laval University & CHU de Québec (CHUL), Canada, 2Geneva University Hospital, Switzerland, 3The Princess Margaret Hospital, New Zealand, 4Hvidovre University Hospital, Denmark, 5Amgen Inc., United states, 6United Osteoporosis Centers, United states, 7Paris Descartes University, France, 8Karolinska Institutet, Södersjukhuset, Sweden, 9Center for Clinical & Basic Research, Estonia, 10San Francisco Coordinating Center, CPMC Research Institute, United states

Disclosures: Jacques P Brown, Amgen, Eli Lilly, Merck, 14; Amgen, Eli Lilly, 13; Amgen, Eli Lilly, 17

MEET-THE-PROFESSOR SESSIONS

11:00 am - 12:00 pm Georgia World Congress Center Rooms A311-316

Meet the Professor: A Guide to Basic Scientist and Clinician Collaboration
Room A311

Larry Suva, Ph.D.
Texas Veterinary Medical Center, USA
Disclosures: Larry Suva, None

Marie-Hélène LAFASTE-PROUST,
University St Etienne, France
Disclosures: Marie-Hélène LAFASTE-PROUST, None
Meet the Professor: Fracture Risk Off Osteoporosis Therapy
Room A313

Supported by an Educational Grant from Merck & Co., Inc.
Michael McClung, M.D.
Oregon Osteoporosis Center, USA
Disclosures: Supported by an Educational Grant from Merck & Co., Inc.
Michael McClung, Merck 14; Amgen 14; Radius 14

Meet the Professor: Hypophosphatasia
Room A312

Michael Whyte, M.D.
Shriners Hospital for Children, USA
Disclosures: Michael Whyte, Alexion Pharmaceuticals, Inc., Cheshire, CT 13; Alexion Pharmaceuticals, Inc.; Cheshire, CT 14

Jose Luis Millan, Ph.D.
Sanford Burnham Prebys Medical Discovery Institute, USA
Disclosures: Jose Luis Millan, Alexion 13; AM Pharma 14

Meet the Professor: Skeletal Development and Mineral Metabolism in the Fetus and Newborn: Insights from Animal Models and Limited Human Data
Room A314

Christopher Kovacs, M.D.
Memorial University of Newfoundland, Canada
Disclosures: Christopher Kovacs, None

Deborah Krakow, M.D.
David Geffen School of Medicine At UCLA, USA
Disclosures: Deborah Krakow, None

Meet the Professor: Bone Marrow Microenvironment and Myeloma
Room A315

Claire Edwards, Ph.D.
University of Oxford, United Kingdom
Disclosures: Claire Edwards, None

G. David Roodman, M.D., Ph.D.
Indiana University, USA
Disclosures: G. David Roodman, None

Meet the Professor: Pathogenesis and Treatment of Heterotopic Ossification
Room A316

Benjamin Levi, M.D.
University of Michigan, USA
Disclosures: Benjamin Levi, None

A CRISIS IN THE TREATMENT OF OSTEOSPOROSIS

11:00 am - 12:00 pm Georgia World Congress Center
A404/405

11:00 am Public Health Impact of Hip Fractures
Kenneth Saag, M.D.
University of Alabama at Birmingham, USA
Disclosures: Kenneth Saag, None

11:10 am Undertreatment of Patients at High Risk for Hip Fractures
Juliet Compston, M.D., FRCP
University of Cambridge School of Clinical Medicine, United Kingdom
Disclosures: Juliet Compston, None

11:20 am What Can We Do About It
Sundeep Khosla, M.D.
Mayo Clinic College of Medicine, USA
Disclosures: Sundeep Khosla, None
This session will feature presentations from the ASBMR-ORS Task Force on Cell Based Therapies and the ASBMR Task Force on the Long Term Safety and Efficacy of Vertebral Augmentation.

11:30 am  ASBMR Task Force on the Long Term Safety and Efficacy of Vertebral Augmentation
Mary Bouxsein, Ph.D.
Beth Israel Deaconess Medical Center, Harvard Medical School, USA
Disclosures: Mary Bouxsein, None

Peter Ebeling AO, M.D., FRACP
School of Clinical Sciences, Monash University, Australia
Disclosures: Peter Ebeling AO, None

11:30 am  ASBMR-ORS Task Force on Cell Based Therapies
Regis O’Keefe, M.D.
Washington University, USA
Disclosures: Regis O’Keefe, None

Rocky Tuan, Ph.D.
University of Pittsburgh, USA
Disclosures: Rocky Tuan, None

NETWORKING BREAK
12:00 pm - 12:30 pm  Georgia World Congress Center
ASBMR Discovery Hall - Expo Hall A1

POSTER SESSION II & POSTER TOURS
12:30 pm - 2:30 pm  Georgia World Congress Center
ASBMR Discovery Hall - Expo Hall A1

Odd # Posters will present from 12:30 pm - 1:30 pm
Even # Posters will present from 1:30 pm - 2:30 pm

ADULT METABOLIC BONE DISORDERS: CHRONIC KIDNEY DISEASE – METABOLIC BONE DISORDER

SU0001  Chronic Kidney Disease and Aging Diminish Bone Quality in C57Bl/6 Mice
Chelsea Heveran*1, Eric Livingston2, Sarah Whetstone3, Moshe Levi3, Ted Bateman2, Karen King3, Virginia Ferguson1. 1University of Colorado at Boulder, United states, 2University of North Carolina at Chapel Hill, United states, 3University of Colorado School of Medicine, United states
Disclosures: Chelsea Heveran, None

SU0002  FRAX with and without DXA result in prediction of the risk of bone fractures in patients with end-stage renal disease undergoing dialysis - 4-year observational study
Jerzy Przedlacki*1, Paweł Zebrowski1, Ewa Wojtasiak2, Mariusz Mieczkowski2, Agnieszka Grzejszczak*, Monika Staszkow2, Michał Pyrza2, Małgorzata Kościelska2, Małgorzata Kępka2, Joanna Matuszkiewicz-Rowinska1. 1Chair & Department of Nephrology, Dialysis & Internal Diseases, Medical University of Warsaw, Poland, 2Chair & Department of Nephrology, Dialysis & Internal Medicine, Medical University of Warsaw, Poland
Disclosures: Jerzy Przedlacki, None
ADULT METABOLIC BONE DISORDERS: OSTEONECROSIS

SU0003 Effect of Bisphosphonates on Cytokine/Chemokine-mediated Angiogenesis in Alveolar Bone
Mohamed Awad*, Sudha Ananth, Ranya Elsayed, Amany Tawfik, Mohammed Elsalanty.
Augusta University, United states
Disclosures: Mohamed Awad, None

ADULT METABOLIC BONE DISORDERS: OTHER ADULT METABOLIC BONE DISORDERS

SU0004 Serum Osteocalcin Concentration is an Independent Risk for Incident Type 2 Diabetes Mellitus in Japanese Postmenopausal Women
Tomohiko Urano*, Masataka Shiraki, Tatsuhiko Kuroda, Shiro Tanaka, Fumihiko Urano, Kazuhiro Uenishi, Satoshi Inoue. 1The University of Tokyo, Japan, 2Research Institute & Practice for Involutional Diseases, Japan, 3Public Health Research Foundation, Japan, 4Kyoto University, Japan, 5Washington University School of Medicine, United states, 6Kagawa Nutrition University, Japan, 7Tokyo Metropolitan Institute of Gerontology, Japan
Disclosures: Tomohiko Urano, None

SU0005 The majority of adults with persistent hypophosphatasemia harbor mutations in the ALPL gene
Indira Rai*, Juan Dong, Richard Berg, Erica Scotty, Fergus McKiernan. 1Marshfield Clinic, United states, 2Prevention Genetics, United states, 3Center for Biomedical Informatics, Marshfield Medical Research Foundation, United states, 4Marshfield Medical Research Foundation, United states
Disclosures: Indira Rai, None

SU0006 Vitamin D Levels in Patients with Diabetes Mellitus Type 1 and 2
Vaclav Vyskocil*, Anna Planickova. Charles University Hospital Metabolic Bone Disease Centre, Czech republic
Disclosures: Vaclav Vyskocil, None

ADULT METABOLIC BONE DISORDERS: PAGET’S DISEASE

SU0007 Effect of a Rare Genetic Variant of TM7SF4 Gene on Osteoclast Phenotype in Paget’s Disease of Bone
Emilie Laurier*, Nathalie Amiable, Edith Gagnon, Jacques P. Brown, Laetitia Michou. 1CHU de Québec research centre, Canada, 2CHU de Quebec research centre, Canada, 3CHU de Quebec research centre & departement of medicine, division of rheumatology, CHU de Québec-Université Laval, Canada, 4CHU de Quebec research centre & department of medicine, division of rheumatology, CHU de Quebec-Université Laval, Canada
Disclosures: Emilie Laurier, None

ADULT METABOLIC BONE DISORDERS: PARATHYROID DISORDERS

SU0008 Comparison of cinacalcet and subtotal parathyroidectomy for treating hypercalcemia in tertiary hyperparathyroidism
Namki Hong*, Hyemin Jo, Da Hea Seo, Jong Ju Jeong, Yumie Rhee. 1Department of Internal Medicine, Severance Hospital, Endocrine Research Institute, Yonsei University College of Medicine, 120-752, Korea, republic of, 2Thyroid Cancer Clinic, Yonsei University College of Medicine, Seodaemun-gu, Korea, republic of
Disclosures: Namki Hong, None

SU0009 Estimated Prevalence of Chronic Hypoparathyroidism Through the Analysis of a Regional Dataset
Luisella Cianferotti*, Simone Parri, Giorgio Gronchi, Carla Rizzuti, Gemma Marcucci, Maria Luisa Brandi. 1Metabolic Bone Diseases Unit, Department of Surgery & Translational Medicine, University of Florence, Italy, 2Region of Tuscany, Italy
Disclosures: Luisella Cianferotti, None
SU0010 Occult Nephrolithiasis in Primary Hyperparathyroidism is Associated with Higher Activated Vitamin D Levels and Urinary Calcium Excretion
Leonardo Bandeira*1, Diane Cozadd1, Mariana Bucovsky1, Donald McMahon1, James Lee2, Shonni Silverberg1, Marcella Walker1. 1Metabolic Bone disease unit, College of Physicians & Surgeons, Columbia University Medical Center, United states, 2Department of Surgery, Columbia University Medical Center, United states
Disclosures: Leonardo Bandeira, None

SU0011 Preliminary Biopsy Findings Indicate Opposing Effects of Vitamin D and PTH on Bone Remodeling in PHPT
Marcella Walker*1, Hua Zhou2, Mariana Bucovsky1, David Dempster1, Shonni Silverberg1. 1Columbia University, United states, 2Helen Hayes Hospital, United states
Disclosures: Marcella Walker, None

SU0012 The Prevalence of Normocalcemic Primary Hyperparathyroidism among Blood Donors Volunteers
Salvatore MINISOLA*1, Vittoria DANEO1, Federica FERRASO1, Valeria FASSINO1, Giancarlo FERRAZZA2, Enrico PANZINI1, Veronica CECCHETTI1, Jessica PEPE1, Frank BLOCKI3, Cristiana CIPRIANI1. 1Department of Internal Medicine & Medical Disciplines, University of Rome “Sapienza”, Policlinico Umberto I, Viale del Policlinico 155, 00161 Rome, Italy, Italy, 2Department of Immunohematology & Transfusion Medicine, University of Rome “Sapienza” Policlinico Umberto I, Viale del Policlinico 155, 00161 Rome, Italy, Italy, 3DiaSorin, 1951 Northwestern Avenue, Stillwater, MN, USA., United states
Disclosures: Salvatore MINISOLA, Dia Sorin, 13

BIOMECHANICS AND BONE QUALITY: ASSESSMENT OF BONE QUALITY AND STRENGTH

SU0013 Bisphosphonates do not affect collagen-bound water in a rat model of estrogen withdrawal
Mathilde Granke*1, Sasidhar Uppuganti1, Julie Schnur2, Daniel Perrien1, Mark Does2, Jeffry Nyman1. 1Vanderbilt University Medical Center, United states, 2Vanderbilt University, United states
Disclosures: Mathilde Granke, None

SU0014 Characterization of High and Low Turnover Bone Disease Associated with Chronic Kidney Disease
Teppei Ito*1, Megumi Asai1, Yuya Kanehira1, Mitsuru Yashiro2, Tomohiro Sonou3, Takashi Shigematsu, Hiromi Kimura-Suda1. 1Graduate School of Photonics Science, Chitose Institute of Science & Technology, Japan, 2Division of Nephrology, Department of Internal Medicine, Wakayama Medical University, Japan, 3Division of Nephrology, Department of Internal Medicine, Wakayama Medical University, Japan
Disclosures: Teppei Ito, None

SU0015 Effect of Once-Weekly hPTH(1-34) on Collagen Fiber Orientation in Lumbar Vertebrae of Ovariectomized Monkeys
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SU0016 Effects of BMU and Lamellar Thickness on Single Osteonal-Unit Fatigue Life
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Disclosures: George Pellegrino, None

SU0017 Effects of Ionizing Radiation on Ex-Vivo Fatigue Mechanics of Mouse Vertebra
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Disclosures: Megan Pendleton, None
**SU0018** Ribation of Human Cortical Bone decreases Bound water, alters the Secondary structure of Collagen, but does not affect Tissue resistance to Cyclic microindentation

Sasidhar Uppuganti*, Mathilde Granke†, Amy Creece‡, Shoshana Hodes§, Deanna Bradley*, Mark Does*, Jeffrey Nyman*. 1Vanderbilt University, United states, 2Lafayette College, United states, 3Vanderbilt University, VA Tennessee Valley Healthcare System, United states

Disclosures: Sasidhar Uppuganti, None

**BIOMECHANICS AND BONE QUALITY: DISUSE OSTEOPOROSIS – ANIMAL MODELS**

**SU0019** Differential Response of Trabecular Bone to Unloading in Two Substrains of C57BL/6 Mice

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Disclosures: Jeyantt Srinivas Sankaran, None

**SU0020** The Effects of Botox-induced Muscle Paralysis on Bone Microporosities in Skeletally Mature Rats

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Disclosures: Vittorio Gatti, None

**BIOMECHANICS AND BONE QUALITY: GENERAL**

**SU0021** Computational Model Development of Spaceflight Bone Physiology

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Disclosures: James Pennline, None

**SU0022** Contribution of mineral characteristics to the tissue level material properties in Lrp5 mutant mouse models

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**SU0023** Correlation of DXA Measured on Isolated Femurs by Faxitron and PIXImus Densitometry versus Ashing and MicroCT

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Disclosures: Douglas Adams, None

**SU0024** Determination of Osteocyte Lacunar Strains using Confocal Microscopy and Finite Element Modeling

Sravan Kola, Mark T. Begonia, Leann Tiede-Lewis, Sarah Dallas, Mark L. Johnson, Ganesh Thiagarajan*. University of Missouri Kansas City, United states

Disclosures: Ganesh Thiagarajan, None

**SU0025** Global Phosphorylation of Human Osteopontin

Grazyna Sroga*, Deepak Vashishth. Rensselaer Polytechnic Institute, United states

Disclosures: Grazyna Sroga, None

**SU0026** Lacunar Void Properties in Bone Tissue from Women Treated With Alendronate

Mohammed Akhter*, Brad Hugenroth, Robert Recker. Creighton University, United states

Disclosures: Mohammed Akhter, None

**SU0027** Relationship Between Oxidative Stress And Trabecular Bone Microstructure In Osteoporotic Patients

Merce` Giner*, Cristina Miranda, M Jose Montoya‡, Sergio Portal‡, M Angeles Vazquez‡, M Jose Miranda‡, Pedro Esbrit‡, Ramon Perez-Cano‡, HUV Macarena/ University of Seville, Spain, HUV Macarena, Spain, University of Seville, Spain, IVSF Jimenez Diaz, Spain

Disclosures: Merce` Giner, None
Sex-specific Cellular Differences in Mouse Bone with Moderate Iron Elevations Leads to Differences in Mechanical Properties
Rihana Bokhari*, Corinne Metzger, Matthew Allen, Scott Lenfest, Jennifer Kosniewski, Derek Seidel, Harry Hogan, Nancy Turner, Sara Zwart, Susan Bloomfield. 1Texas A&M University, United states, 2Indiana University, United states
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Spinal Loading Estimates from a Detailed Musculoskeletal Model of the Thoracolumbar Spine Explains the High Incidence of Vertebral Fractures at the Thoracolumbar Region
Katelyn Burkhart, Alexander Bruno, Brett Allaire, Hossein Mokhtarzadeh, Dennis Anderson, Mary Bouxsein, Harvard-MIT Division of Health Sciences & Technology; Center for Advanced Orthopaedic Studies, Beth Israel Deaconess Medical Center, United states, 2Center for Advanced Orthopaedic Studies, Beth Israel Deaconess Medical Center, United states, 3Center for Advanced Orthopaedic Studies, Beth Israel Deaconess Medical Center; Department of Orthopedic Surgery, Harvard Medical School, United states, 4Harvard-MIT Division of Health Sciences & Technology; Center for Advanced Orthopaedic Studies, Beth Israel Deaconess Medical Center; Department of Orthopedic Surgery, Harvard Medical School, United states
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Exogenous Hedgehog Signal Inhibition Impairs Fracture Healing
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Childhood Cancer Survivors (CCS) are at High Risk of Reduced Bone Mass during Bone Mass Accrual
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Tmem178 deficiency aggravates macrophage activation syndrome by promoting M1 macrophage polarization
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X-Linked Hypophosphatemic Rickets due to a 112kb deletion of the PHEX gene and Mosaic Turner Syndrome (45,X/46 XX)
Alaina P Vidmar*, Pedro A Sanchez-Lara, Brian Miyazaki, Pisit Pitukcheewanont. 1Center for Endocrinology, Diabetes & Metabolism Children’s Hospital of Los Angeles & Keck School of Medicine of University of Southern California, Los Angeles, California, Unites States, United states, 2Center for Personalized Medicine, Department of Pathology & Pediatrics Children’s Hospital Los Angeles & Keck School of Medicine of University of Southern California, Los Angeles, California, United States, United states, 3Center for Endocrinology, Diabetes & Metabolism, Children’s Hospital Los Angeles & Keck School of Medicine of University of Southern California, Los Angeles, California, United States, United states, 4Center for Endocrinology, Diabetes & Metabolism Children’s Hospital Los Angeles & Keck School of Medicine of University of Southern California, Los Angeles, California, United States
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An Exploratory Analysis of Modeled Bone Stresses at the Radial Metaphysis in the Context of Circum-menarcheal Gymnastic Loading
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DXA Trabecular Bone Score Correlates Poorly with Posteroanterior-Lateral Bone Mineral Apparent Density, Exercise Exposure and Key Diet Variables in Pre-pubertal Girls
Jodi Dowthwaite*1, Renaud Winzenrieth2, Dongliang Wang3, Paula Rosenbaum1, Tamara Scerpella3, 1SUNY Upstate Medical University, United states, 2Med-Imaps SASU, France, 3University of Wisconsin - Madison, United states
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Insights from Murine Carpal Bone Development into the Pathogenesis of Human Carpal-Tarsal Osteolysis Syndromes: Is Osteolysis Really the Cause?
Emma Duncan*1, Syndia Lazarus2, Hsu-Wen Tseng2, Felicity Lawrence3, Mia Woodruff3, Allison Pettit4, 1Royal Brisbane & Women’s Hospital, The University of Queensland & Queensland University of Technology., Australia, 2The University of Queensland Diamantina Institute, Australia, 3Queensland University of Technology, Australia, 4Mater Research Institute - The University of Queensland, Australia
Disclosures: Emma Duncan, None

Criteria defining low body weight: Which are the most relevant for predicting low bone mineral density in adolescent females with anorexia nervosa?
Nurgun Kandemir*, Kendra Becker, Vibha Singhal, Shreya Tulsiani, Ryan Woolley, Meghan Slattery, Kamryn Eddy, Madhusmita Misra, Anne Klibanski. Massachusetts General Hospital, United states
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Osteocytes regulate myelopoiesis via secreted factors
Ehab Azab*1, Yuhei Uda2, Chao Shi2, Christopher Dedic2, Forest Lai2, Ningyuan Sun2, Majed Alshehri3, Maureen O’Meara4, Marc Wein5, keertik Fulzele2, Paola Divieti Pajevic1, 1Boston University- Department of Molecular & Cell Biology, United states, 2Boston University, United states, 3Cohen Children’s Medical Center, United states, 4Cohen Children’s Medical Cente, United states, 5Montefiore Medical Center, United states, 2Feinstein Institute for Medical Research, United states
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Conditioned-medium of amniotic fluid-derived stromal cells ameliorate bone mass and bone marrow angiogenesis
Sun Wook Cho*1, Hyun Jin Sun1, JoonHo Lee2, Eun Sil Koh3, Chan Soo Shin1, 1Seoul National University Hospital, Korea, republic of, 2Yonsei University College of Medicine, Korea, republic of, 3National Medical Center, Korea, republic of
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SU0041  Ossified Bone Marrow Blood Vessel Volume and Short-Term Intermittent PTH (1-34) Administration in Mature and Middle-Aged C57BL/6 Mice
Seungyong Lee*, Rhonda Prisby. University of Delaware, United states
Disclosures: Seungyong Lee, None

BONE MARROW MICROENVIRONMENT AND NICHES: OSTEOMMUNOLOGY

SU0042  Evidence to Support Causality of White Blood Cell Counts on Bone Mineral Density
John Morris*1, Stephanie Ross2, William Astle3, Heather Elding4, Tao Jian5, Dace Ruklisa6, John Danesh6, David Roberts6, Willem Ouwehand3, Adam Butterworth5, Nicole Soranzo2, Brent Richards1. 1Department of Human Genetics, McGill University, Canada, 2Department of Epidemiology, Biostatistics & Occupational Health, McGill University, Canada, 3Department of Haematology, University of Cambridge, Cambridge Biomedical Campus, United Kingdom, 4Department of Human Genetics, The Wellcome Trust Sanger Institute, Wellcome Trust Genome Campus, Hinxton, United Kingdom, 5Department of Public Health & Primary Care, University of Cambridge, Strangeways Research Laboratory, United Kingdom, 6Blood Research Group, NHS Blood & Transplant, John Radcliffe Hospital, Headley Way, Headington, United Kingdom
Disclosures: John Morris, None

SU0043  MFG-E8 Mutant Mice Exhibit Reduced Bone Mass and Enhanced Anabolic Response to Parathyroid Hormone
Megan Michalski*, Benjamin Sinder, Amy Koh, Hernan Roca, Laurie McCauley. University of Michigan, United states
Disclosures: Megan Michalski, None

BONE TUMORS AND METASTASIS: BONE TUMOR MICROENVIRONMENT

SU0044  IL-32 is produced by myeloma cells in response to hypoxia: potential role for exosomal IL-32 in multiple myeloma bone disease
Muhammad Zahoor*1, Siv Moen2, Marita Westhrin3, Katarzyna Maria Psonka-Antonczyk4, Anders Waage3, Glenn Buene3, Anne-Marit Sponaas3, Therese Standal5. 1Centre of Molecular Inflammation Research, Norwegian University of Science & Technology, Trondheim, Norway & Department of Cancer Research & Molecular Medicine, Norwegian University of Science & Technology, Norway, 2Centre of Molecular Inflammation Research, Norwegian University of Science & Technology, Trondheim, Norway & Department of Cancer Research & Molecular Medicine, Norwegian University of Science & Technology, Norway, 3Biophysics & Medical Technology, Department of Physics, Norwegian University of Science & Technology, Trondheim, Norway, 4Centre of Molecular Inflammation Research, Norwegian University of Science & Technology, Trondheim, Norway, 5Centre of Molecular Inflammation Research, Norwegian University of Science & Technology, Trondheim, Norway, 2 Department of Cancer Research & Molecular Medicine, Norwegian University of Science & Technology, Norway
Disclosures: Muhammad Zahoor, None

SU0045  Involvement of the p62/Gfi1 axis in Multiple Myeloma Bone Disease
Daniela Petrusca*, Cheolkyu Park1, Rebecca Silbermann1, Dan Zhou1, Noriyoshi Kurihara1, Yasuhisa Ohata4, Judith Anderson1, G. David Roodman2. 1Indiana University, Department of Medicine/Hematology-Oncology, United states, 2Indiana University, Department of Medicine/Hematology-Oncology; Rodebush VA, United states
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BONE TUMORS AND METASTASIS: GENERAL

SU0046  Analysis of osteogenic and adipogenic differentiation potential of osteosarcoma cells transformed by Notch1 oncogene
Kirby Rickel*, Fang Fang, Jianning Tao. Sanford Research & University of South Dakota, United states
Disclosures: Kirby Rickel, None
SU0047  The Expression of PTH1 and PTH2 Receptors in Bone Marrow is Associated with the Progression of Newly Diagnosed Myeloma Patients
Maurizio Zangari*1, Amy Buros1, Donghoon Yoon1, Antonio Branca1, Carolina Schinke1, Sharmilan Thanendrarajan1, Larry Suva2, Meera Mohan1, Faith Davies1, Frits van Rhee1, Gareth Morgan1. 1University of Arkansas for Medical Sciences, United states, 2Texas A&M University, United states
Disclosures: Maurizio Zangari, None

BONE TUMORS AND METASTASIS: MECHANISMS OF BONE METASTASIS

SU0048  Abrogation of prostaglandin E and its receptor EP4 signaling in osteoblasts prevents the bone destruction induced by human prostate cancer
Kenta Watanabe1, Michiko Hirata1, Tsukasa Tominari1, Takayuki Maruyama2, Masaki Inada*1, Chisato Miyaura1. 1Tokyo University of Agriculture & Technology, Japan, 2Ono Pharmaceutical Co., Ltd., Japan
Disclosures: Masaki Inada, None

SU0049  Effects Of P2X7R Activation On Receptor And Cell Functions In Human Myeloma Cell Lines
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Disclosures: Ankita Agrawal, None

SU0050  Secreted microRNAs from Prostate Cancer Cells: Novel Therapeutic Targets
Nicholas Farina*1, Cody Callahan1, Coralee Tye1, Joseph Boyd1, Gary Stein2, Janet Stein3, Jane Lian4, 1University of Vermont, United states, 2University of Vermont Medical School, United states, 3University of Vermont, United states, 4University of Vermont, United states
Disclosures: Nicholas Farina, None

SU0051  The histone methyltransferase EZH2 is a novel therapeutic target in multiple myeloma bone disease
Juraj Adamik*1, Peng Zhang1, Quanhong Sun1, Rebecca Silbermann2, G. David Roodman1, Deborah L. Galson1. 1University of Pittsburgh, United states, 2Indiana University, United states, 3University of Indiana, Veterans Administration Medical center, United states
Disclosures: Juraj Adamik, None

CHONDROCYTES AND CARTILAGE MATRIX: ARTICULAR CARTILAGE

SU0052  Coculture with Adipose Derived Stem Cells Inhibits Inflammation and Improves Differentiation of ATDC5 Chondrogenic Progenitor Cells
Zhibo Sun*, Xiaoyan Tang, Lakshmi Nair, Cato Laurencin. UConn Health Center, United states
Disclosures: Zhibo Sun, None

SU0053  Inhibition of Osteoclast-secreted Sphingosine 1 Phosphate reduces chondrocyte catabolism and prevents osteoarthritis in mice
Chahrazad CHERIFI*1, Augustin LATOURTE1, Pascal RICHETTE2, Eric HAY3, Martine COHEN-SOLAL2. 1INSERM U1322, UNIVERSITY PARIS 7, France, 2INSERMu1132, University Paris7, Hopital Lariboisiere, France, 3INSERMu1132, University Paris7, France
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Secreted factors from synovial fibroblasts immediately regulate gene expression in articular chondrocytes
Anke Jeschke*, Martin Bonitz, Stephanie Peters, Michael Amling, Thorsten Schinke.
Department of Osteology & Biomechanics, University Medical Center Hamburg Eppendorf, Germany
Disclosures: Anke Jeschke, None

The role of camk in degenerative cartilage of rats mandibular condylar induced by unilateral anterior crossbite
Xianghong Wan¹, Mian Zhang¹, Jing Zhang¹, Lei Lu¹, Hongyun Zhang², Hongxu Yang¹, Meiqing Wang*¹. ¹College of Stomatology, Fourth Military Medical University, China, ²College of Stomatology, Forth Military Medical University, China
Disclosures: Meiqing Wang, None

Changes in the phosphorylation of guanylyl cyclase-B (GC-B) regulates bone growth in a mouse model
Jerid Robinson*¹, Leia Shuhaibar², Siu-Pok Yee², Laurinda Jaffe², Lincoln Potter¹.
¹University of Minnesota, United states, ²University of Connecticut Health Centers, United states
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Dwarfism in Agc1-Cre Mice is Associated With Decreased Expression of Aggrecan in Chondrocytes
Harunur Rashid*, Haiyan Chen, Mohammad Hassan, Amjad Javed. Department of Oral & Maxillofacial Surgery, School of Dentistry, University of Alabama at Birmingham, United states
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Novel Intracellular Function of CCN2 -Role of Interaction Between CCN2 and Rab14 in Vesicle Trafficking in Chondrocytes-
Mitsuhiro Hoshijima*¹, Takako Hattori², Eriko Aoyama³, Takashi Nishida², Satoshi Kubota², Hiroshi Kamioka⁴, Masaharu Takigawa³. ¹Department of Orthodontics Okayama University Graduate School of Medicine, Dentistry & Pharmaceutical Sciences, Advanced Research Center for Oral & Craniofacial Sciences, Japan, ²Department of Biochemistry & Molecular Dentistry Okayama University Graduate School of Medicine, Dentistry & Pharmaceutical Sciences, Japan, ³Advanced Research Center for Oral & Craniofacial SciencesOkayama University Graduate School of Medicine, Dentistry & Pharmaceutical Sciences, Japan, ⁴Department of Orthodontics Okayama University Graduate School of Medicine, Dentistry & Pharmaceutical Sciences, Japan
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Targeting Developmental Phases of Heterotopic Ossification with BMP Receptor Inhibitors Allows for Delayed, Short-term Treatment
Shailesh Agarwal*, Shawn Loder¹, John Li¹, Christopher Breuler¹, James Drake¹, Cameron Brownley¹, Jonathan Peterson¹, Kavitha Ranganathan¹, Oluwatobi Eboda¹, Hsiao Hsin Sung¹, Shuli Li¹, Nabuhiro Kamiya², Yuji Mishina¹, Benjamin Levi¹.
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Epigenetic Regulator, Uhrf1, Controls not Only Cell Proliferation but Also Chondrocyte Differentiation During Limb Development
Michiko Yamashita*, Kazuki Inoue, Iori Sakakibara, Yuuki Imai. Division of Integrative Pathophysiology, Proteo-Science Center, Ehime University, Japan
Disclosures: Michiko Yamashita, None
SU0061 Exercise or Caloric Restriction Treatments Beneficially Affect Trabecular Microarchitecture, while Cortical Bone Strength is only Improved with Exercise in Obese, T2D rats
Laura Ortinau*, Matthew Richard, Rebecca Dirkes, Melissa Linden, R. Scott Rector, Pamela Hinton. University of Missouri, United states
Disclosures: Laura Ortinau, None

SU0062 Role of Panx1-P2X7R Signaling in Anabolic Bone Response of Type 1 Diabetic Mice
Zeynep Seref-Ferlengez*, Aylin E. Uyar1, Marcia Urban-Maldonado1, Mitchell B. Schaffler2, Hui B. Sun1, Sylvia O. Suadicani1, Mia M. Thi1, 1Albert Einstein College of Medicine, United states, 2City College of New York, United states
Disclosures: Zeynep Seref-Ferlengez, None

SU0063 Association of Increased Serum Leptin with Ameliorated Anemia and Body Mass Index in Stage 5 Chronic Kidney Disease Patients after Parathyroidectomy
Yao Jiang1, Jingjing Zhang1, Yanggang Yuan1, Xiaoming Zha1, Changying Xing1, Chong Shen1, Zhiqiang Shen1, Chao Qin1, Ming Zeng1, Guang Yang1, Huijuan Mao1, Bo Zhang1, Xiangbo Yu1, Bin Sun1, Chun Ouyang1, Xueqiang Xu1, Yifei Ge1, Jing Wang1, Lina Zhang1, Chen Cheng1, Caixia Yin1, Jing Zhang1, Huimin Chen1, Haoyi Ma1, Ningning Wang1. 1The First Affiliated Hospital with Nanjing Medical University, China, 2Nanjing Medical University, China, 3Jiangsu Province Geriatric Hospital, China
Disclosures: Ningning Wang, None

SU0064 Does the Adipokine, Adiponectin, play a role in the Coupling between Fat and Bone?
Jillian Cornish*, David Musson, Dorit Naot. University of Auckland, New zealand
Disclosures: Jillian Cornish, None

SU0065 High Fat Diet-Induced Maternal Obesity Programs Skeletal Development in Mice
Jin-Ran Chen*, Oxana P. Lazarenko, Michael L. Blackburn, Kartik Shankar. Arkansas Children’s Nutrition Center & the Department of Pediatrics, University of Arkansas for Medical Sciences, United states
Disclosures: Jin-Ran Chen, None

SU0066 The Relationship between Insulin Resistance and Lipids Overflow with Marrow Adipose Tissue (MAT) and Bone Mineral Density (BMD)
Iana de Araújo*, Carlos Salmon, Marcello Nogueira Barbosa, Jorge Elias Jr, Francisco de Paula. Ribeirao Preto Medical School, University of Sao Paulo, Brazil
Disclosures: Iana de Araújo, None

SU0067 Glucose intolerance induced by persistent activation of calcium-sensing receptor
Kiyoe Kurahashi1, Itsuo Endo1, Mayuko Nakamura1, Yukio Ohnishi1, Takeshi Kondo1, Shinichi Aizawa2, Toshio Matsumoto2, Seiji Fukumoto2, Masahiro Abe1. 1Department of Medicine & Bioregulatory Sciences, University of Tokushima Graduate School of Medical Sciences, Japan, 2Genetic Engineering Team, RIKEN Center for Life Science Technologies, Japan, 3Fujii Memorial Institute of Medical Sciences, Tokushima University, Japan
Disclosures: Kiyoe Kurahashi, None

SU0068 No Association Between the Bone Turnover Markers CTX and P1NP and Insulin Sensitivity or Beta-cell Function in Healthy men
Morten Frost*, Kurt Hojlund, Jens-Jacob Lauterlein, Henning Beck-Nielsen. Department of Endocrinology, Denmark
Disclosures: Morten Frost, None

SU0069 Regulation of Mitochondrial Uniporter Expression by 1,25-Dihydroxyvitamin D3 in Human Muscle Cells
Zachary Ryan, Xuewei Wang, Rajiv Kumar*. Mayo Clinic, United states
Disclosures: Rajiv Kumar, None
SU0070 Role of Phosphate in the Central Ox/Phos Metabolic Processes and Its Linkage to Collagen Production
Amira Hussein*, Kevin Blank, Deven Carroll, Kyle Lybrand, Margaret Cooke, Heather Matheny, Brenna Hogue, Serkalem Demissie, Louis Gerstenfeld. Boston University, United states
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SU0071 Treatment with soluble activin type IIB receptor rescues ovariectomy-induced bone loss and fat gain in mice
Tero Puolakkainen*1, Petri Rummukainen1, Olli Ritvos2, Eriika Savontaus1, Riku Kiviranta1, 1University of Turku, Finland, 2University of Helsinki, Finland
Disclosures: Tero Puolakkainen, None

GENETIC MODELS OF MUSCULOSKELETAL DISEASES: ANIMAL MODELS

SU0072 Rhbdf2 knock-out mice display distinct bone phenotypes: a genetic association study with Collaborative Cross mice
Roei Levy*,1, Clemence Lever2, Keren Cohen1, Mathew Freeman2, Richard Mott3, Fuad Iraqi1, Yankel Gabet1. 1Tel Aviv University, Israel, 2Dunn School of Pathology, United Kingdom, 3UCL Genetics Institute, United Kingdom
Disclosures: Roei Levy, None

SU0073 Calcium Metabolism of 6 and 17 Month-old Vitamin D Receptor Knockout Mice: A Pilot Study
Yu-ra Choi*,1, Clara Yongjoo Park1, Xiangguo Che1, Na-Rae Park1, Da-In Yeo1, Shigeaki Kato2, Je-Yong Choi1. 1Kyungpook National University, Korea, republic of, 2Soma Central Hospital, Japan
Disclosures: Yu-ra Choi, None

SU0074 Characterization of a Mouse Model with a cMET Mutation-Causing Osteofibrous Dysplasia
Ralph Zirngibl*,1, Andrew Wang1, Simon Kelley2, Raymond Poon2, Benjamin Alman3, Peter Kannu1, Irina Voronov1. 1University of Toronto, Canada, 2Hospital for Sick Children, Canada, 3Duke University, United states
Disclosures: Ralph Zirngibl, None

SU0075 Differential Roles of Runx2 Deficiency in Chondrocytes and Osteoblasts for Cleidocranial Dysplasia
Kayla King*,1, Harunur Rashid1, Mitra Adhami1, Haiyan Chen1, Yang Yang2, Amjad Javed1. 1Department of Oral & Maxillofacial Surgery, School of Dentistry, University of Alabama at Birmingham, United states, 2Department of Pathology, School of Dentistry, University of Alabama at Birmingham, United states
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SU0076 P2X7 receptor inhibition reduces bone resorption in vivo
Solveig Petersen*,1, Maria Ellegaard1, Susanne Syberg1, Peter Schwarz2, Michael Boes3, Niklas Rye Jorgensen1. 1Copenhagen University Hospital Rigshospitalet, Denmark, 2Copenhagen University Hospital Rigshospitalet & Faculty of Health & Medical Sciences, University of Copenhagen, Denmark, 3Afectis Pharmaceuticals AG, Martinsried, Germany, Germany, 4Copenhagen University Hospital Rigshospitalet & University of Southern Denmark, Denmark
Disclosures: Solveig Petersen, None

SU0077 Phenotypic Severity of AutosomalDominant Osteopetrosis Type II (ADO2) Mice on Different Genetic Backgrounds Recapitulates the Features of Human Disease
Imranul Alam*, Dana Oakes, Amie McQueen, Dena Acton, Austin Reilly, Rita Gerard-O’Riley, Michael Econs. Indiana University School of Medicine, United states
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SU0078 Spatiotemporal Regulation of Osteogenesis and Angiogenesis in Autograft and Allograft Repair
Tao Wang, Xinpeng Zhang*. University of Rochester Medical Center, United states
Disclosures: Xinpeng Zhang, None
SU0079 Transcriptomic Analysis of Osteoclasts from Autosomal Dominant Osteopetrosis type 2 (ADO2) Mice harboring the G213R Mutation of the Chloride-Proton Antiporter type 7 (ClC7) Antonio Maurizi*1, Nadia Rucci1, Tina Schleicher2, Yadhu Kumar2, Anna Teti1, Mattia Capulli1. 1Dept. of Biotechnological & Applied Clinical Sciences, University of L’Aquila, Italy, 2GATC Biotech AG, Germany
Disclosures: Antonio Maurizi, None

GENETIC MODELS OF MUSCULOSKELETAL DISEASES: MONOGENIC BONE DISEASES

SU0080 CNP/NPRB Signaling Expands the Hypertrophic Zone in the Growth Plate Cartilage by Modulating Cell Cycle
Keiko Yamamoto*1, Masanobu Kawai1, Miwa Yamazaki2, Kanako Tachikawa1, Wei Wang2, Takuo Kubota2, Keiichi Ozono2, Toshimi Michigami2, 1Osaka Medical Center & Research Institute for Maternal & Child Health, Japan, 2Osaka Medical Center & Research Institute for Maternal Child Health, Japan, 3Osaka University Graduate School of Medicine, Japan
Disclosures: Keiko Yamamoto, None

GENOMICS, TRANSCRIPTOMICS, PROTEOMICS AND METABOLICOMICS OF MUSCULOSKELETAL DISEASE: GENE EXPRESSION

SU0081 Femoral Geometry Parameters Correlate to Bone Bene Expression Levels and Differ Between Osteoporotic and Healthy Postmenopausal Women
Sjur Reppe*1, Yi-Hsiang Hsu2, Thomas Beck3, Ole K. Olstad1, Vigdis T. Gautvik4, David Karasik5, Kaare M. Gautvik6. 1Oslo University Hospital, Norway, 2Harvard Medical School, Institute of Aging research, United states, 3Beck Radiological Innovations, United states, 4University of Oslo, Institute of Basic Medical Sciences, Norway, 5Bar-Ilan University, Faculty of Medicine, Israel, 6University of Oslo, Norway
Disclosures: Sjur Reppe, None

SU0082 Unique transcriptomic signatures in the mouse skull vault
Yong Wan, Matthew Rogers, Brian Cusaek, Heather Szabo-Rogers*. University of Pittsburgh, United states
Disclosures: Heather Szabo-Rogers, None

GENOMICS, TRANSCRIPTOMICS, PROTEOMICS AND METABOLICOMICS OF MUSCULOSKELETAL DISEASE: GENETIC ASSOCIATION STUDIES

SU0083 A haplotype in the CYP19A1 gene is associated with variable musculoskeletal response to testosterone therapy in men with hypogonadism
Georgia Colleluori*1, Lina Aguirre2, Richard Dorins2, David Robbins2, Clifford Qualls3, Dean Blevins1, Dean Blevins2, Dennis Villareal4, Reina Villareal4, 1Baylor College of Medicine, United states, 2New Mexico VA Health Care System, United states, 3University of New Mexico School of Medicine, United states, 4Michael E. DeBakey VA Medical Center, United states
Disclosures: Georgia Colleluori, None

SU0084 Comparative Gene-based Analysis for Consecutive Studies of GEFOS
Wei Zhu*1, Hong-wen Deng1, Kehao Wu2, Hao He4, Lan Zhang1, Yong Zeng1. 1Tulane University, United states, 2Tulane, United states
Disclosures: Wei Zhu, None
The Human P2X7 Receptor Single-Nucleotide Polymorphism 853G>A Is Associated With Fracture Prevalence

Lars Kruse1, Maria Ellegaard1, Magnus Karlsson2, Björn Rosengren2, Mattias Lorentzon3, Claes Ohlsson2, Dan Mellström3, Peter Schwarz4, Niklas Rye Jørgensen5.

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Disclosures: Lars Kruse, None

Network Based Subcellular Proteomics in Monocyte Membrane Revealed Novel Candidate Genes Involved in Osteoporosis

Yong Zeng1, Lan Zhang2, Wei Zhu2, Hui Sheng2, Hao He2, Yu Zhou2, Qing Tian2, Fei-Yan Deng3, Li-Shu Zhang1, Hong-Gang Hu1, Hong-Wen Deng2, 1Beijing Jiaotong University, China, 2Tulane University, United states, 3Soochow University, China

Disclosures: Yong Zeng, None

FGF23 Neutralizing Antibody Ameliorates Hypophosphatemia and Impaired FGF Receptor Signaling in Kidneys of FGF2 High Molecular Weight Isoform Transgenic Mice

erxia du*, Liping Xiao, Marja Hurley. Uconn Health, United states

Disclosures: erxia du, None

Klotho Lacks a Fgf23 Independent Role in Mineral Homeostasis

Olena Andrukhova1, Jessica Bayer2, Ute Zeitz2, Sathish Kumar Murali2, Reinhold Gottfried Erben2, 1Department of Biomedical Sciences University of Veterinary Medicine, Austria, 2Department of Biomedical Sciences University of Veterinary Medicine, Austria

Disclosures: Olena Andrukhova, None

Regulation of FGF23 Production by Extra-Long Gsa Variant XLas in Acute Kidney Injury

Qing He1, Marc Wein1, Jordan Spatz1, Antonius Plagge2, Paola Divieti Pajevic3, Harald Jüppner1, Murat Bastepe1, 1Endocrine Unit, Department of Medicine, Massachusetts General Hospital & Harvard Medical School, Boston, MA, USA, 2Department of Cellular & Molecular Physiology, Institute of Translational Medicine University of Liverpool, Liverpool, United Kingdom, 3Department of Molecular & Cell Biology, Goldman School of Dental Medicine, Boston University, Boston, MA, USA, United states

Disclosures: Qing He, None

The Regulatory Mechanisms of FGF23 Activity via GALNT3 by Phosphate

Yuichi Takashi1, Yuka Kinoshita2, Nobuaki Ito2, Maria Tsoumpra1, Shun Sawatsubashi1, Toshio Matsumoto1, Seiji Fukumoto1, 1Tokushima University, Japan, 2The University of Tokyo Hospital, Japan

Disclosures: Yuichi Takashi, None

Does the lactation/low Ca model of induced bone remodeling affect circulating mineral metabolism markers?

Ryan Ross*, Brittany Wilson, Rick Sumner. Rush University Medical Center, United states

Disclosures: Ryan Ross, None
SU0092  H4(99-103) is an Endogenous Peptide that Signals via the CB2 Cannabinoid Receptor
Bitya Raphael*1, Natalya Kogan2, Malka Attar-Namdar3, mukesh Chourasia4, Avital
Shurki5, Roger G. Pertwee6, Maria G. Cascio7, Andreas Zimmer8, Itai Bab9, Yankel
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4Institute of Medical Sciences, University of Aberdeen, Aberdeen, Scotland, United
Kingdom, United Kingdom, 5Institute of Medical Sciences, University of Aberdeen, Aberdeen,
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Psychiatry, University of Bonn, Bonn, Germany, Germany
Disclosures: Bitya Raphael, None

HORMONAL REGULATORS: PARATHYROID HORMONE AND
CALCIUM SENSING RECEPTORS

SU0093  Calcium fluxes at the bone-plasma interface: effects of parathyroid hormone
Christopher Dedic1, Jacky T. Hung2, Alan M. Shipley3, Andrew L. Miller2, Joseph G.
Kunkel3, Paola Divieti Pajevic1, Alessandro Rubinacci5. 1Goldman School of Dental
Medicine, Boston University, United states, 2HKUST, Division of Life Science, China,
3Applicable Electronics LLC, United states, 4Marine Science Center, University of New
England, United states, 3Bone Metabolism Unit, Scientific Institute San Raffaele, Italy
Disclosures: Christopher Dedic, None

SU0094  Novel BAT precursor-derived cell lines with normal Gnas methylation maintain predominantly
maternal Gsa expression: new tools for studying paternal Gsa regulation
Olta Tafaj*1, Harald Jüppner1, Steven Hann2, Matthew Warman2, Lee S. Weinstein3.
1MGH, United states, 2Boston Children’s Hospital, United states, 3National Institutes of
Health, United states
Disclosures: Olta Tafaj, None

HORMONAL REGULATORS: SEX HORMONES AND
GLUCOCORTICOIDS

SU0095  Comparison of Frequency of Glucocorticoid-induced Osteoporosis and Osteonecrosis in Three
Different Mice Strains
Geetha Mohan*1, Kie Shidara1, Evan Lay1, Alexander Kot1, Hongliang Zhang1, Tara
Rogers1, Karl Jepsen2, Wei Yao1, Nancy Lane1, 1UC Davis Medical Center, United states,
2University of Michigan, United states
Disclosures: Geetha Mohan, None

SU0096  Opposing Actions of SHH and IHH Control Transition of Proliferating Immature
Chondrocytes into Mature Hypertrophic Chondrocytes during Secondary Center Ossification
Patrick Aghajanian*, Weirong Xing, Shaohong Cheng, Sheila Pourteymoor, Subburaman
Mohan. VA Loma Linda Healthcare System, United states
Disclosures: Patrick Aghajanian, None

HORMONAL REGULATORS: OTHER HORMONES

SU0097  Glucocorticoids suppress OPG expression in vivo and negatively affect cortical bone by acting
directly on osteoblast-lineage cells
Marilina Piemontese*, Yu Liu, Jinhu Xiong, Yuko Fujiwara, Priscilla Baltz, Charles
OBrien. University of Arkansas for Medical Sciences, United states
Disclosures: Marilina Piemontese, None

SU0098  Optimal dose of tamoxifen for inducible Cre recombinase technology in male mouse bone
Ferran Jardi*1, Michael Laurent1, Vanessa Dubois2, Rougin Khalil1, Ludo Deboel3,
Brigitte Decallonne1, Geert Carmeliet2, Ludo Van den Bosch3, Frank Claessens1, Dirk
Vanderschueren1. 1KU Leuven, Belgium, 2Institut Pasteur de Lille, France, 3VIB, Belgium
Disclosures: Ferran Jardi, None
**SU0099** Phosphorylation of S122 in ERα is Important for the Skeletal Response to Estrogen Treatment
Karin Gustafsson¹, Sofia Movérare-Skrtic*, Vikte Lionikaite¹, Helen Farman¹, Jianyao Wu¹, Petra Henning¹, Annica Andersson¹, Ulrika Islander¹, Angelina Bernardi¹, Sara Windahl¹, Klara Sjögren¹, Anti Keskela², Juhu Tuukkanen², Andree Krust³, Pierre Chambon³, Claes Ohlsson³, Marie Lagerquist¹. ¹Centre for Bone & Arthritis Research, Sahlgrenska Academy at University of Gothenburg, Sweden, ²Department of Anatomy & Cell Biology, University of Oulu, Finland, ³Institut de Génétique et de Biologie Moléculaire et Cellulaire (CNRS, INSERM, ULP, Collège de France), France

Disclosures: Sofia Movérare-Skrtic, None

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**SU0100** Sex Differences in the Regulation of Circadian Genes by Glucocorticoid Treatment
Tara Rogers*, Sidhartha Hazari, Evan Lay, Geetha Mohan, Aris Alexandrou, Wei Yao, Nancy Lane. UC Davis Medical Center, United states

Disclosures: Tara Rogers, None

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**SU0101** 1,25-dihydroxyvitamin D treatment leads to FGF23 resistance in the Hyp mouse model of XLH
Janaina Da Silva Martins*, Eva Liu, Marie Demay. Massachusetts General Hospital, United states

Disclosures: Janaina Da Silva Martins, None

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**SU0102** Automated ELISA For Direct Measurement of Free 25OH Vitamin-D
Ernst Lindhout*¹, Leon Swinkels¹, Marloes Geurts¹, Mike Martens¹, Nicolas Heureux². ¹Future Diagnostics, Netherlands, ²DIAsource Immunoassays, Belgium

Disclosures: Ernst Lindhout, None

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**SU0103** Vitamin D deficiency disrupts male gonadal function through extensive changes in both reproductive and hormone producing cells
Jiarong Li¹, Xiuying Bai², Andrew Karaplis², Richard Kremer¹. ¹MUHC, Canada, ²Lady Davis Institute, Canada

Disclosures: Jiarong Li, None

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**MECHANOBIOLOGY: CELLULAR AND MOLECULAR EFFECT OF MECHANICAL LOADING AND UNLOADING**

**SU0104** Ablation of proliferating osteoblasts reduces loading-induced bone formation
Heather Zannit*, Michael Brodt, Matthew Silva. Washington University in St. Louis, United states

Disclosures: Heather Zannit, None

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**SU0105** IL-17R and RANKL Expression Following In Vivo Fatigue Loading
Michael Turturro*¹, Travis McComb¹, John Billheimer², Mohammed Akhter², Diane Cullen¹. ¹Creighton University School of Medicine, United states, ²Creighton University, United states

Disclosures: Michael Turturro, None

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**SU0106** Unique Osteon Patterns Form in Response to Loading and Intermittent PTH Injections
Ke Wang*, Yuan Hui², Ymishi Ren³, Ying Liu⁴, Xianglong Han⁵, Jianquan Feng⁴. ¹Department of Biomedical Science, Texas A&M Health Science Center, Baylor College of Dentistry, United states, ²Department of Orthodontics, Fourth Military Medical University, China, ³Cellular, Developmental, & Genome Laboratories, Musculoskeletal Research Center, Duke University, United states, ⁴Department of Biomedical Science, Texas A&M Health Science Center, Baylor College of Dentistry, Dallas, United states, ⁵State Key Laboratory of Oral Diseases, West China Hospital of Stomatology, Sichuan University, China

Disclosures: Ke Wang, None
MECHANOBIOLOGY: CELLULAR AND MOLECULAR MECHANOSENSING

SU0107 Myosin Motors Direct mTORC2 Recruitment to the Cell Membrane to Regulate MSC Lineage Fate
William Thompson*1, Yong Li1, Gunes Uzer2, Janet Rubin2. 1Indiana University, United states, 2University of North Carolina, United states
Disclosures: William Thompson, None

SU0108 Taxol-induced stabilization of the microtubule network blunts the osteoblast/osteocyte response to fluid flow shear stress
James Lyons*, Jaclyn Kerr, Christopher Ward, Joseph Stains. University of Maryland Baltimore, United states
Disclosures: James Lyons, None

MECHANOBIOLOGY: GENERAL

SU0109 Collagen Fibers in Human Osteons are Visible by Green Polarization Interference Color Staining
Santiago Gomez*. Departamento de Anatomía Patológica, University of Cadiz, Spain
Disclosures: Santiago Gomez, None

MUSCLE BIOLOGY AND BONE-MUSCLE CROSSTALK: AGING MECHANISMS

SU0110 Prostaglandin E2 signaling through EP4 receptor interacts with Keap1/Nrf-2 pathway in myogenesis and aging
Chenglin Mo*1, Lynda Bonewald2, Marco Brotto1. 1University of Texas-Arlington, United states, 2University of Missouri-Kansas City, United states
Disclosures: Chenglin Mo, None

MUSCLE BIOLOGY AND BONE-MUSCLE CROSSTALK: CELLULAR AND MOLECULAR INTERACTIONS

SU0111 Differential Effects of the Muscle Factors, Irisin and BAIBA on Osteoblasts and Osteocytes
Tsutomu Matsumoto*1, Yukiko Kitase1, Bruce Spiegelman2, Lynda Bonewald1, Christiane Wrann3. 1University of Missouri-Kansas City School of Dentistry, Department of Oral & Craniofacial Science, United States, 2Dana-Farber Cancer Institute, Department of Cell Biology Harvard Medical School, United States
Disclosures: Tsutomu Matsumoto, None

SU0112 Therapeutic Effect of Alendronate on Skeletal Muscle Atrophy in vitro and in vivo
Shing-Hwa Liu*, Rong-Sen Yang, Chen-Yuan Chiu. National Taiwan University, Taiwan, Province of China
Disclosures: Shing-Hwa Liu, None

MUSCLE BIOLOGY AND BONE-MUSCLE CROSSTALK: GENERAL

SU0113 The Role of a Novel Gene, Fam210a (family with sequence similarity 210, member a) in Bone and Muscle
Ken-ichiro Tanaka*1, Yingben Xue1, J Brent Richards2, David Goltzman1. 1Calcium Research Laboratory, McGill University Health Centre, & Division of Endocrinology, Department of Medicine, McGill University, Montreal, Quebec, Canada, Canada, 2Departments of Medicine, Human Genetics, Epidemiology & Biostatistics, McGill University, Montreal, Quebec, Canada, Canada
Disclosures: Ken-ichiro Tanaka, None

MUSCULOSKELETAL AGING: BONE

SU0114 Age Affects Bone Regeneration in the Murine Rib Resection Model
Katelyn Malchester*, Peter Fung1, Cindy Choi1, Payal Verma1, Denise Liberton1, Murat Sincan1, Danielle Donahue1, Brenda Klaunberg1, Tina Kilts1, Marian Young1, Stephanie Kuwahara2, Francesca Mariani2, Janice Lee1. 1NIDCR, United States, 2USC, United States
Disclosures: Katelyn Malchester, None
SU0115 Association of Magnesium with Blood and Urinary Bone Biomarkers in Osteopenic Postmenopausal Women
Kelli George*, Neda Akhavan, Shirin Pourafshar, Negin Navaei, Elizabeth Foley, Elizabeth Clark, Bahram Arjmandi. Florida State University, United states
Disclosures: Kelli George, None

SU0116 Blood flow regulates function of endothelium in the skeletal system
Saravana Ramasamy*1, Anjali Kusumbe2, Ralf Adams1. 1Max Planck Institute for Molecular Biomedicine, Germany, 2Max Planck Institute for Molecular Biomedicine, India
Disclosures: Saravana Ramasamy

SU0117 Is Age-Related Bone Loss Microbiota Dependent?
Jing Yan*1, Jeremy Herzog2, Kelly Tsang1, Maureen Bower2, Balfour Sartor2, Antonios Aliprantis1, Julia Charles1. 1Brigham & Women’s Hospital, United states, 2University of North Carolina at Chapel Hill, United states
Disclosures: Jing Yan, None

SU0118 Loss of the Longevity Gene SirT1 Dysregulates Chondrocytes and Leads to an Arthritic Phenotype In Vivo, Via Impaired Autophagy
Pradeep Kumar Sacitharan*1, Tonia Vincent1, James R Edwards2. 1Kennedy Institute of Rheumatology, University of Oxford, United Kingdom, 2The Botnar Research Centre, University of Oxford, United Kingdom
Disclosures: Pradeep Kumar Sacitharan

SU0119 The intracortical accumulation of enlarged lacunae is a key contributor to the increased cortical porosity and trabecularization during aging
Christina Møller Andreasen*1, Jean-Marie Delaisse2, Bram C. J. van der Eerden3, Dorie Birkenhager-Frenkèl4, Johannes P. T. M. van Leeuwen3, Ming Ding1, Thomas Levin Andersen2. 1Orthopaedic Research Laboratory, Department of Orthopaedic Surgery & Traumatology, Odense University Hospital, Institute of Clinical Research, University of Southern Denmark, Denmark, 2Department of Clinical Cell Biology, Vejle Hospital/ Lillebaelt Hospital, Institute of Regional Health Research, University of Southern Denmark, Denmark, 3Laboratory for Calcium & Bone Metabolism, Department of Internal Medicine, Erasmus MC, Netherlands
Disclosures: Christina Møller Andreasen

MUSCULOSKELETAL AGING: BONE AND MUSCLE INTERACTIONS
SU0120 Body Composition Phenotype of Osteosarcopenia, Osteoporosis and Sarcopenia: SARCOS Study
Alberto Frisoli Jr*, Fabiola Martin, Sheila Ingham, Antonio Carlos Carvalho. Universidade Federal de São Paulo, Brazil
Disclosures: Alberto Frisoli Jr, None

SU0121 HISTORY OF FALLS, SUBJECTIVE WELL-BEING, HEALTH BEHAVIOR AND OTHER HEALTH FACTORS AS PREDICTORS OF FALLS IN POSTMENOPAUSAL WOMEN
Risto Honkanen1, Nadia Afrin*1, Pyry Lykkala1, Päivi Rauma1, Heikki Kröger2, Toni Rikkonen3, Lana Williams2, Heli Koivumaa-Honkanen4. 1University of Eastern Finland, Finland, 2University of Eastern Finland, Department of Surgery, Finland, 3Impact Research Centre, Deakin University, Australia, Australia, 4Department of Psychiatry, Kuopio University Hospital, 5Lapland Hospital District, Rovaniemi, Finland, Finland
Disclosures: Nadia Afrin

SU0122 Poor Physical Fitness is associated with Low Bone Material Strength in Older Adults with Type 2 Diabetes
Yoann Barnouni*, Sanjay Mediwalia, Alessandra Celli, John Wade, Georgia Colleluori, Dean Blevins, Reina Villareal, Dennis Villareal. Baylor College of Medicine/Center for Translational Research on Inflammatory Diseases at MEDVAMC, United states
Disclosures: Yoann Barnouni, None
SU0123 Silk fibroin nanoparticle enhances stability and sustained release of bone morphogenetic protein-2
Bong-soo Kim*, Woo-jin Kim, Won-jun Yoon, Hyun-mo Ryoo, Jung-hwa Baek, Kyung-mi Woo. Seoul National University, Korea, republic of
Disclosures: Bong-soo Kim, None

MUSCULOSKELETAL PROGENITOR CELLS AND LINEAGE DETERMINATION: ADIPOCYTES

SU0124 Adipose derived mesenchymal stem cells seeded on TiO2 granules increases osteoblast numbers in vivo
Morten Dahl*. PhD student, DDS, Denmark
Disclosures: Morten Dahl, None

MUSCULOSKELETAL PROGENITOR CELLS AND LINEAGE DETERMINATION: MULTI-LINEAGE

SU0125 Functional Engraftment of Murine Pre-Osteoblastic Cells in a Zebrafish Model of Epimorphic Bone Regeneration
Barrie Sugarman*, Brandon Douglass, Claire Watson, Christopher Allan, Ronald Kwon. University of Washington, United states
Disclosures: Barrie Sugarman, None

SU0126 Lin-/Lepr+ Cells are an Important Source of Osteoprogenitors in Adult Life
Joshua Farr*¹, Megan Weivoda¹, Elizabeth Atkinson², Sundeep Khosla¹, David Monroe¹. ¹Division of Endocrinology; Mayo Clinic College of Medicine, United states, ²Division of Biomedical Statistics & Informatics; Mayo Clinic College of Medicine, United states
Disclosures: Joshua Farr, None

SU0127 Multiple Populations of Progenitor Cells Contributes to Post-natal Bone Formation
Beth Bragdon*, Kyle Lybrand, Louis Gerstenfeld. Boston University School of Medicine, United states
Disclosures: Beth Bragdon, None

SU0128 Prx1 Ablation Results in Impaired Long Bone Fracture Healing
Lai Wang*¹, Alessandra Esposito¹, Ping Ye², Tieshi Li¹, Joseph Temple¹, Anna Spagnoli¹. ¹Rush University Medical Center, United states, ²The University of North Carolina at Chapel Hill, United states
Disclosures: Lai Wang, None

MUSCULOSKELETAL PROGENITOR CELLS AND LINEAGE DETERMINATION: MUSCLE, TENDON AND LIGAMENT

SU0129 Combining TGF-β Type II Receptor (Tgfbr2)-expressing Joint Progenitors and Degradable Scaffolds from PLLA Fibers for Tendon-Bone Junction Tissue-Engineering
Tieshi Li*¹, Harshini Ramakrishna², Ting He², Joseph Temple¹, Martin King², Anna Spagnoli¹. ¹Rush University Medical Center, United states, ²North Carolina State University, United states
Disclosures: Tieshi Li, None

MUSCULOSKELETAL PROGENITOR CELLS AND LINEAGE DETERMINATION: OSTEOBLASTS

SU0130 An In Vivo Histomorphometric Approach to Monitor Bone Apposition and Differentiation of Skeletal Progenitor Cells into Osteoblasts and Osteocytes
Shu-Chi A. Yeh*¹, Katarzyna Wilk¹, Charles P. Lin², Giuseppe Intini³. ¹Department of Oral Medicine, Infection, & Immunity, Harvard School of Dental Medicine, United states, ²Advanced Microscopy Program, Center for Systems Biology & Wellman Center for Photomedicine, Massachusetts General Hospital, Harvard Medical School, United states, ³Department of Oral Medicine, Infection, & Immunity, Harvard School of Dental Medicine., United states
Disclosures: Shu-Chi A. Yeh, None
SU0131 Differentiation of hiPSCs into Osteoblasts by Using Small Molecule Inducers Under Fully Defined Xeno-free Conditions
Denise C. Zujur1, Kosuke Kanke2, Ung-il Chung1, Shinsuke Ohba1. 1The University of Tokyo, Department of Bioengineering, Japan, 2The University of Tokyo, Japan
Disclosures: Denise C. Zujur, None

SU0132 Engineering MSC to Overexpress bFGF to Accelerate Fracture Healing
Hongliang Zhang, Evan Lay, Alexander Kot, Nancy Lane, Wei Yao*. UC Davis Medical Center, United states
Disclosures: Wei Yao, None

SU0133 Osthole promotes osteoporotic fracture repair by augmenting the recruitment, proliferation and differentiation of muscle-derived stem cells
Dezhi Tang*, Weiwei Da, Yongjian Zhao, Lin Chen, Hao Xu, Bing Shu, Qi Shi, Yongjun Wang. Spine Research Institute, Shanghai University of Traditional Chinese Medicine, Shanghai 200032, China, China
Disclosures: Dezhi Tang, None

SU0134 Articular cartilage calcification of the hip and knee is independent of age but associated with histological osteoarthritis: evidence for a systemic disorder
Thelonius Hawellek1, Jan Hubert1, Sandra Hischke1, Jessica Bertrand2, Thomas Pap2, Matthias Krause1, Klaus Püschel1, Wolfgang Ruether1, Andreas Niemeier1. 1University Medical Center Hamburg-Eppendorf, Germany, 2University Hospital Münster, Germany
Disclosures: Andreas Niemeier, None

SU0135 NBQX, an AMPA-kainate glutamate receptor antagonist, alleviates degeneration, bone remodelling and inflammation in a model of post-traumatic osteoarthritis
Cleo Bonnet1, Sophie Gilbert1, Anwen Williams2, Emma Blain1, Deborah Mason1. 1Arthritis Research UK Biomechanics & Bioengineering Centre, Pathophysiology & Repair Division, School of Biosciences, Cardiff University, United Kingdom, 2Institute of Infection & Immunity, School of Medicine, Cardiff University, United Kingdom
Disclosures: Deborah Mason, None

SU0136 Obesity and Overweight Exert Specific Effects on Subchondral Bone Structure and Vascularisation in a mouse model of Surgically-Induced Knee Osteoarthritis: Comparing High Fat Diet to Hypergravity
Damien Cleret1, Benoit Dechaumet1, Bernard Roche1, Arnaud Vanden Bossche1, Norbert Laroche1, Laurence Vico1, Xavier Houard2, Marie-Hélène Lafage-Proust1. 1INSERM U1059-Université de Lyon, France, 2INSERM UMRS938, France
Disclosures: Damien Cleret, None

SU0137 Osteonecrosis of the femoral head is associated with low bone mass: a controlled prospective study
Muhammad Soyfoo1, Valérie Gangji1, Audrey Heuschling1, Céline Gillet2, Joanne Rasschaert2, Rodrigo Moreno-Reyes1, Jean-Philippe Hauzuer1, Hôpital Erasme, Université Libre de Bruxelles, Belgium, 2Faculty of Medicine, Université Libre de Bruxelles, Belgium, 3CHU Sart Tilman, Belgium
Disclosures: Valérie Gangji, None

SU0138 Swedish Farmers Have Higher Risk for Knee and Hip Replacement than Other Occupations
Helena Johansson1, Cecilia Hongso Vala2, Anders Öden3, Mattias Lorentzon2, Eugene McCloskey3, John Kanis1, Nicholas C Harvey4, Stefan Lohmander1, Johan Kårholm6, Dan Mellström7. 1Centre for Bone & Arthritis Research (CBAR), Sahlgrenska Academy, University of Gothenburg, Sweden, 2Centre for Bone & Arthritis Research (CBAR), Sahlgrenska Academy, University of Gothenburg, Sweden, 3Centre for Metabolic Bone Diseases, University of Sheffield, United Kingdom, 4MRC Lifecourse Epidemiology Unit, University of Southampton, United Kingdom, 5Department of Orthopedics, Clinical Sciences Lund, Lund University, Sweden, 6Department of Orthopedics, Clinical Sciences, University of Gothenburg, Sweden
Disclosures: Helena Johansson, None
SU0139  Trabecular Rod and Plate Deficiencies are Distinctly Different in Subchondral Bone in Human Osteoarthritic Knees
Xingjian Zhang*1, Yan Chen2, Yizhong Hu1, Y. Eric Yu1, Ting Wang2, Frankie K. L. Leung*, Xu Cao3, William X. Lu4, X. Edward Guo5. 1Columbia University, United states, 2The University of Hong Kong, Hong kong, 3Johns Hopkins University School of Medicine, United states
Disclosures: Xingjian Zhang, None

OSTEOARTHRITIS AND OTHER JOINT DISORDERS: RHEUMATOID ARTHRITIS AND INFLAMMATORY ARTHRITIS

SU0140  A Novel Bisphosphonate 18F-PET Probe for Early Detection of Rheumatoid Arthritis
Shuting Sun*1, Zibo Li2, Eric Richard1, Mark Lundy1, Mengzhe Wang1, Hui Wang1, Charles McKenna3, Frank Ebetino1, 1BioVinc LLC, United states, 2Department of Radiology & Biomedical Research Imaging Center, University of North Carolina, Chapel Hill, United states, 3Department of Chemistry, USC Dornsife College of Letters, Arts & Sciences, United states
Disclosures: Shuting Sun, BioVinc, 16

OSTEOBLASTS – MATRIX PROTEINS AND FUNCTION: ADHESION, MOTILITY AND CELL-CELL COMMUNICATION

SU0141  Mechanisms of human mesenchymal stromal cells during bone regeneration are impacted by the associated biomaterial
Miryam Mebarki1, Laura Coquelin1, Marine Tossou2, Julie Leotot3, Philippe Hernigou4, Hélène Rouard1, Nathalie Chevallier*1, 1IMRB U955-E10, INSERM, Creteil, France, France, 2Faculty of Medicine, Paris Est University, Creteil, France, France, 3Engineering & cellular therapy unit, French Blood Service, Creteil, France, France, 4Orthopaedic Surgery Department, Henri-Mondor AP-HP Hospital, Creteil, France, France
Disclosures: Nathalie Chevallier, None

SU0142  The Mineral Component of Bone Controls Gene Expression in Migrating Osteoblasts
Johannes Wischmann*, Philipp Mayer-Kuckuk. Technical University Munich, Germany
Disclosures: Johannes Wischmann, None

OSTEOBLASTS – MATRIX PROTEINS AND FUNCTION: BONE FORMATION MECHANISMS

SU0143  Dispensability of Stabilin-1 to the Bone Development and Bone Cell Function
Seong-Hwan Kim*1, Soon-Young Kim1, Eun-Hye Lee1, Suk-Hee Lee1, Yeon-Ju Lee1, Yeo Hyang Kim2, Seung-Yoon Park3, Jung-Eun Kim1. 1Department of Molecular Medicine, CMRI, BK21 Plus KNU Biomedical Convergence Program, Kyungpook National University School of Medicine, Korea, republic of, 2Department of Pediatrics, Kyungpook National University Hospital, Korea, republic of, 3Department of Biochemistry, School of Medicine, Dongguk University, Korea, republic of
Disclosures: Seong-Hwan Kim, None

SU0144  Involvement of the Aryl hydrocarbon receptor in cigarette smoke-induced inhibition of bone regeneration
Chawon Yun, Michael Schallmo, Ryan Freshman, Andrew George, Joseph Weiner, Danielle Chun, Ralph Cook, Jonghwa Yun, Anjan Ghosh, Erin Hsu*, Wellington Hsu. Department of Orthopaedic Surgery, Northwestern University Feinberg School of Medicine, United states
Disclosures: Erin Hsu, None

SU0145  Jun N-terminal Kinases (JNKs) Act in Osteoblasts to Control Adolescent Bone Formation
Ren Xu*, Yeon Suk Yang2, Sarfaraz Lalani2, Na Li3, Roger Davis4, Jae-Hyuck Shim3, Matthew Greenblatt1. 1Dept of Medicine & Dept of Pathology, Weill Cornell Medical College, Cornell University, United states, 2Department of Medicine, Weill Cornell Medical College, Cornell University, United states, 3Department of Pathology & Laboratory Medicine, Weill Cornell Medical College, Cornell University, United states, 4Program in Molecular Medicine, University of Massachusetts Medical School, United states
Disclosures: Ren Xu, None
SU0146 Pathologic Minerals of Human Penile Tissues Resemble Alveolar Bone
Lynn Yang*,1, Ling Chen1, Feifei Yang1, Amanda Reed-Maldonado2, Ryan Hsi2, Marshall Stoller2, Tom Lue2, Sunita Ho1. 1Division of Biomaterials & Bioengineering, Department of Preventive & Restorative Dental Sciences, School of Dentistry, United states, 2Department of Urology, School of Medicine, United states
Disclosures: Lynn Yang, None

SU0147 Phosphate-Induced Formation of Mineralization-Competent Matrix Vesicles Is Enhanced by Ca2+ and Ca2+ in in vitro Models of Osteogenic and Vascular Mineralization
Sanddeep Chaudhary*,1, Maria Kuzynski1, Elia Beniash2, Massimo Bottini2, Callie Mobley1, Jose-Luis Millan1, Dobrawa Napierala1. 1Oral & Maxillofacial Surgery, Institute of Oral Health Research, School of Dentistry, University of Alabama at Birmingham, Birmingham, AL, USA, United states, 2Department of Oral Biology, University of Pittsburgh, Pittsburgh, PA, USA, United states
Disclosures: Sanddeep Chaudhary, None

SU0148 Transdifferentiation of MSC-derived osteoblasts following co-culture with MSC-derived adipocytes
Aline Clabaut*. PMOI lab, France
Disclosures: Aline Clabaut, None

SU0149 A gram positive bacteria membrane component derived lipoteichoic acid induces PGE2-mediated inflammatory periodontal bone resorption
Tsukasa Tominari*, Kenta Watanabe, Michiko Hirata, Chisato Miyaura, Masaki Inada. Tokyo university of agriculture & technology, Japan
Disclosures: Tsukasa Tominari, None

SU0150 Inhibition of Neuropeptide Y Y1 Receptor Induces Osteoblastic Differentiation in MC3T3-E1 Cells
Disclosures: Motoki Yahara, None

SU0151 Neuropeptide Y Induces Hematopoietic Stem/Progenitor Cell Mobilization by Regulating Matrix Metalloproteinase-9 Activity Through Y1 Receptor in Osteoblasts
Woo-Kie Min*,1, Jae-sung Bae2. 1Department of Orthopaedic Surgery, Kyungpook National University Hospital, Korea, republic of, 2Department of Physiology, Cell & Matrix Research Institute, School of Medicine, Kyungpook National University, Korea, republic of
Disclosures: Woo-Kie Min, None

SU0152 PTH-Stimulated Osteogenesis in Human Bone Marrow Stromal Cells Is Inhibited by SAA1 and SAA2 Secreted by Preosteoclasts in a Prostaglandin-Dependent Manner
Shilpa Choudhary*, Elizabeth Santone, Mary Beth McCarthy, Michael Francke, Augustus Mazzocca, Carol Pilbeam. UConn Musculoskeletal Institute, UConn Health, United states
Disclosures: Shilpa Choudhary, None

SU0153 Beneficial Effects of Low Doses of the Phytoestrogen Quercetin on Osteoblastic Cells
Virginia Lezcano*,1, Lilian I Plotkin2, Susana Morelli3. 1INBIOSUR UNS, Argentina, 2Department of Anatomy & Cell Biology, Indiana University School of Medicine, Indianapolis, IN, Roudebus Veterans Administration Medical Center, Indianapolis, IN., United states, 3INBIOSUR (UNS-CONICET) Departamento de Biol., Bioq. y Fcia., Universidad Nacional del Sur, Bahia Blanca, Argentina, Argentina
Disclosures: Virginia Lezcano, None
SU0154 Decreased bone density and osteoblast activity in Rad-null mice
Catherine Withers*, Jonathan Satin, Douglas Andres. University of Kentucky, United states
Disclosures: Catherine Withers, None

SU0155 Identification of a chemical compound that stimulates osteoblast differentiation and inhibits osteoclast differentiation
Ju Ang Kim*, Young-Ae Choi, Yong Chul Bae, Hong-In Shin, Eui Kyun Park. Kyungpook National University School of Dentistry, Korea, republic of
Disclosures: Ju Ang Kim, None

SU0156 Igfbp2, Inhbb and Sema4f are Wnt3a-inducible in Osteoblasts, Independent of Lrp5/6 receptors
Aimy Sebastian*, Nicholas R. Hum, Deepa K. Murugesh, Sarah Hatsell, Aris N. Economides, Gabriela G. Loots. UC Merced, School of Natural Sciences, United states, Lawrence Livermore National Laboratories, Physical & Life Sciences Directorate, United states, Regeneron Pharmaceuticals, United states
Disclosures: Aimy Sebastian, None

SU0157 Sexual Dimorphism in the Endothelin Signaling Axis in Bone
Michael Johnson*, Luisa Meyer, Heidi-lynn Ploeg, Everett Smith, Karen Hansen, Robert Blank. University of Wisconsin-Madison, United states, University of Wisconsin, United states, Medical College of Wisconsin, United states
Disclosures: Michael Johnson, None

SU0158 The plant-derived metabolite sulforaphane promotes osteoblastic differentiation by epigenetically reprogramming the phenotypic memory of human mesenchymal stromal cells
Roman Thaler*, Farzaneh Mohan, weirong xing. Musculoskeletal Disease Center, Jerry L .Pettis Memorial VA Medical Center, United states
Disclosures: Roman Thaler, None

SU0159 A Small Molecular Inhibitor of Lrrk1 Identified by Homology Modeling and Virtual Screening Suppresses Osteoclast Activity but Not Osteoclast Formation
Helen Goodluck*, Canjun Zeng, Subburaman Mohan, weirong xing. Musculoskeletal Disease Center, Jerry L .Pettis Memorial VA Medical Center, United states
Disclosures: Helen Goodluck, None

SU0160 Bone-Targeted Chloroquine Inhibits Osteoclastogenesis and Bone Resorption More Effectively Than Chloroquine
Zhenqiang Yao*, Xiaodong Hou, Wei Lei, Lifeng Xiao, Frank H. Ebetino, Robert K. Boeckman, Brendan Boyce. University of Rochester Medical Center, United states, Henan University First Affiliated Hospital, China, University of Rochester, United states, BioVinc LLC, United states
Disclosures: Zhenqiang Yao, None

SU0161 Osteoclasts from L-plastin Null Mice are Defective in Sealing Ring Formation and Bone Resorption
Meenakshi Chellaiah*, Tao Ma, Celeste Morley, Sunipa Majumdar. University of Maryland, Dental School, United states, Washington University School of Medicine, Pediatric Research, United states, University of Maryland Dental School, United states
Disclosures: Meenakshi Chellaiah, None

OSTEOCLASTS - FUNCTION: BONE RESORPTION MECHANISMS

SU0159 A Small Molecular Inhibitor of Lrrk1 Identified by Homology Modeling and Virtual Screening Suppresses Osteoclast Activity but Not Osteoclast Formation
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Disclosures: Helen Goodluck, None

SU0160 Bone-Targeted Chloroquine Inhibits Osteoclastogenesis and Bone Resorption More Effectively Than Chloroquine
Zhenqiang Yao*, Xiaodong Hou, Wei Lei, Lifeng Xiao, Frank H. Ebetino, Robert K. Boeckman, Brendan Boyce. University of Rochester Medical Center, United states, Henan University First Affiliated Hospital, China, University of Rochester, United states, BioVinc LLC, United states
Disclosures: Zhenqiang Yao, None

SU0161 Osteoclasts from L-plastin Null Mice are Defective in Sealing Ring Formation and Bone Resorption
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Disclosures: Meenakshi Chellaiah, None
SU0163  **Slow and Fast Bone Resorption Modes of Human Osteoclasts Revealed by Time-lapse Recording**  
Kent Soe*, Jean-Marie Delaisse. Vejle Hospital/University of Southern Denmark, Denmark  
Disclosures: Kent Soe, None

SU0164  **TGF-β1 Liberated through Osteoclast-mediated Bone Resorption Regulates Odontoblast Differentiation and Tooth Root Formation**  
Jue Wang*1, Li Cao2, Wei Chen3, Hongbing Jiang4, Zheng Zhu2, Zhihe Zhao3, Yi-Ping Li5.  
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Disclosures: Jue Wang, None

**OSTEOCLASTS - FUNCTION: SIGNAL TRANSDUCTION**

SU0165  **4-phenylbutyric Acid Decreases Osteoclastogenesis via Modulating Autophagy**  
Hs Choi*. University of Ulsan, Korea, republic of Korea  
Disclosures: Hs Choi, None

SU0166  **Follistatin-like 1 promotes osteoclast formation via RANKL-mediated NF-κB activation and M-CSF-induced precursor proliferation**  
Hyun-Ju Kim*1, Woo Youl Kang1, Sook Jin Seong1, Shin-Yoon Kim2, Young-Ran Yoon1.  
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Disclosures: Hyun-Ju Kim, None

SU0167  **Functional Role of Hedgehog Signaling in Osteoclast Lineage**  
Ryuma Haraguchi1, Riko Kitazawa2, Yuuki Imai3, Sohei Kitazawa1.  
1Ehime University Graduate School of Medicine, Japan, 2Ehime University Hospital, Japan, 3Ehime University Proteo-Science Center, Japan  
Disclosures: Ryuma Haraguchi, None

SU0168  **Integrin αvβ3 Signaling is not Required for TNF-α Mediated L-plastin Phosphorylation and Nascent Sealing Zones Formation in Osteoclasts**  
Sunipa Majumdar*, Meenakshi Chellaiah. University of Maryland, Dental School, United states  
Disclosures: Sunipa Majumdar, None

SU0169  **Role of CrkII Signaling in RANKL-Induced Osteoclast Differentiation and Function**  
Byung Chul Jeong1, Inyoung Kim2, Jung Ha Kim2, Kabsun Seong3, Nacksung Kim1.  
1Department of Pharmacology, Medical Research Center for Gene Regulation & BK21plus, Chonnam National University Medical School, Korea, republic of Korea, 2Department of Pharmacology, Medical Research Center for Gene Regulation, Chonnam National University Medical School, Korea, republic of Korea, 3Department of Biomedical Sciences, Chonnam National University Medical School, Korea, republic of Korea  
Disclosures: Byung Chul Jeong, None

SU0170  **The Role of the V-ATPases and Lysosomal Positioning in mTORC1 Signaling in Osteoclasts**  
Andrew Wang1, Danielle Johnson2, Luciene Lacroix3, Celeste Owen3, Bowen Gao4, Paul Corey5, John Brumell2, Irina Voronov*.  
1Faculty of Dentistry, University of Toronto, Canada, 2Cell Biology Program, Hospital for Sick Children, Canada, 3Mount Sinai Hospital, Canada, 4University of Toronto, Canada, 5Dalla Lana School of Public Health, University of Toronto, Canada  
Disclosures: Irina Voronov, None
**OSTEOCLASTS - FUNCTION: TRANSCRIPTIONAL REGULATION AND GENE EXPRESSION**

**SU0171** Functional analysis of Cadm1 gene, involved in epigenetic regulation during osteoclastogenesis
Shinya Nakamura*1, Naohiro Izawa1, Hiroyuki Aburatani2, Takeshi Miyamoto1, Sakae Tanaka1, 1Orthopaedic Surgery & Spinal Surgery, The University of Tokyo, Tokyo, Japan, Japan, 2Genome Science Division, Research Center for Advanced Science & Technology, The University of Tokyo, Tokyo, Japan, Japan

*Disclosures: Shinya Nakamura, None*

**SU0172** Osteoclasts are Deficient in the Expression of Osteogenic Coupling Factors Following Ischemic Osteonecrosis Of The Femoral Head
Naga Suresh Adapala*1, Harry K.W. Kim1, Ryosuke Yamaguchi1, Hicham Drissi2, 1Texas Scottish Rite Hospital for Children, United states, 2University of Connecticut Health Center, United states

*Disclosures: Naga Suresh Adapala, None*

**SU0173** Supportive Role of CD44-ICD in RUNX2- Mediated Transcriptional Regulations in Prostate Cancer Cells
Linda Senbanjo*, Meenakshi Chellaiah. University of Maryland Baltimore, United states

*Disclosures: Linda Senbanjo, None*

**OSTEOCLASTS - ORIGIN AND CELL FATE: APOPTOSIS**

**SU0174** Conditional Abrogation of Atm in Osteoclasts Leads to Reduced Bone Mass and Extended Osteoclast Lifespan
Toru Hirozane*, Takahide Tohmonda, Masaki Yoda, Masayuki Shimoda, Yae Kanai, Morio Matsumoto, Hideo Morioka, Masaya Nakamura, Keisuke Horiuchi. Keio University School of Medicine, Japan

*Disclosures: Toru Hirozane, None*

**SU0175** Changes in Wnt Receptor Expression Accompany Altered Canonical Wnt Signaling in Osteoclast Progenitors with Aging or Ovariectomy
Stephanie Youssef*, Ming Ruan, Christine Hachfeld, Glenda Evans, Joshua Farr, David Monroe, Sundeep Khosla, Jennifer Westendorf, Merry Jo Oursler, Megan Weivoda. Mayo Clinic, United states

*Disclosures: Stephanie Youssef, None*

**SU0176** TMEM178 is a novel negative regulator of store operated calcium entry in osteoclasts
Zhengfeng Yang*, Corrine Decker, Roberta Faccio. Department of Orthopaedic Surgery, Musculoskeletal Research Center, Washington University School of Medicine, United states

*Disclosures: Zhengfeng Yang, None*

**OSTEOCYTES: BONE REMODELING REGULATION**

**SU0177** 24-Hour Profile of Serum Sclerostin and Its Association With Bone Biomarkers in Men
Christine Swanson*1, Orfeu Buxton2, Steven Shea3, Sheila Markwardt3, Eric Orwoll3.
1University of Colorado, United states, 2Pennsylvania State University, United states, 3Oregon Health & Science University, United states

*Disclosures: Christine Swanson, None*

**SU0178** Activation of AMP-activated Protein Kinase Decreases RANKL Expression and Increases Sclerostin Expression by Inhibiting the Mevalonate Pathway in Osteocytic MLO-Y4 Cells
Ippei Kanazawa*, Maki Yokomoto-Umakoshi, Ayumu Takeno, Ken-ichiro Tanaka, Masakazu Notsu, Toshitsugu Sugimoto. Shimane University Faculty of Medicine, Japan

*Disclosures: Ippei Kanazawa, None*

**SU0179** Alternation in Gap-junctional Intercellular Communication Capacity During the Ex Vivo Transformation of Osteocytes in the Embryonic Chick Calvaria
Ziyi Wang, Naoya Odagaki, Tomoyo Tanaka, Mana Hashimoto, Hiroshi Kamioka*.
Okayama University Graduate School of Medicine, Dentistry & Pharmaceutical Sciences, Department of Orthodontics, Japan

*Disclosures: Hiroshi Kamioka, None*
SU0180 Analysis of Intracellular Ca^{2+} Mobilization by 3D Time-lapse Imaging in Bone
Tomoyo Tanaka*1, Mitsuhiro Hoshijima2, Junko Sunaga3, Takashi Nishida2, Taiji Adachi1, Hiroshi Kamioka1. 1Department of Orthodontics, Graduate School of Medicine, Dentistry & Pharmaceutical Sciences, Okayama University, Japan, 2Advanced Research Center for Oral & Craniofacial Sciences, Dental School, Okayama University, Japan, 3Department of Biomechanics, Institute for Frontier Medical Sciences, Kyoto University, Japan
Disclosures: Tomoyo Tanaka, None

SU0181 Elevated Bone Resorption and Pro-Inflammatory Cytokines are Mitigated by a Soy Protein Diet in a Rodent Model of Inflammatory Bowel Disease
Corinne Metzger*1, Anand Narayanan2, David Zawieja2, Susan Bloomfield1. 1Texas A&M University, United states, 2Texas A&M Health Science Center, United states
Disclosures: Corinne Metzger, None

SU0182 How the European eel (Anguilla anguilla) loses its skeletal framework across lifetime
Tim Rolvien*1, Florian Nagel2, Petar Milovanovic3, Sven Wuertz4, Robert Percy Marshall1, Felix N. Schmidt1, Michael Hahn1, Paul Eckhard Witten5, Michael Amling1, Bjorn Busse1. 1Department of Osteology & Biomechanics, University Medical Center Hamburg-Eppendorf, Germany, 2Gesellschaft für Marine Aquakultur mbH, Germany, 3Laboratory for Anthropology, Institute of Anatomy, School of Medicine, University of Belgrade, Serbia, 4Leibnitz Institute Freshwater Ecology & Inland Fisheries, Germany, 5Department of Biology, Research Group Evolutionary Developmental Biology, Ghent University, Germany
Disclosures: Tim Rolvien, None

SU0183 Mineral matrix carbonate ion substitution returns to baseline levels in both HYP and wild-type mice one month after lactation
Kunal Agarwal*1, Carolyn Macica2, Steven Tommasini1. 1Yale University, United states, 2Frank H. Netter, M.D., School of Medicine at Quinnipiac University, United states
Disclosures: Kunal Agarwal, None

SU0184 RNA Sequencing Reveals Common Gene Expression Patterns in Osteocyte-Enriched Bone of Two Osteogenesis Imperfecta Mouse Models
Sarah Zimmerman*, Melissa Heard, Milena Dimori, Roy Morello. University of Arkansas for Medical Sciences, United states
Disclosures: Sarah Zimmerman, None

OSTEOCYTES: ORIGIN, CELL CYCLE AND APOPTOSIS

SU0185 The Osteocyte Network Formation is Influenced by the Thick Collagen Bundle Formation during Bone Modeling
Mana Hashimoto*1, Noriyuki Nagaoka2, Tadahiro Iimura3, Toru Hara4, Hiroshi Kamioka1. 1Okayama University Graduate School of Medicine, Dentistry & Pharmaceutical Sciences, Department of Orthodontics, Japan, 2Okayama University Dental School, Advanced Research Center for Oral & Craniofacial Sciences, Japan, 3Proteo-Science Center, Ehime University, Japan, 4National Institute for Materials Science, Japan
Disclosures: Mana Hashimoto, None

OSTEOCYTES: PARACRINE AND ENDOCRINE FUNCTION

SU0186 Induced Sclerostin Expression in Human Dermal Fibroblasts is Positively Regulated by Prostaglandin E2 via EP1 Receptor
Makoto Fujiwara*1, Shinji Takeyari1, Mohammad Saiful Islam1, Chiho Nakano2, Kenichi Yamamoto1, Hirofumi Nakayama1, Satoshi Takakuwa1, Taichi Kitaoka1, Takuo Kubota1, Keiichi Ozono1. 1Department of Pediatrics, Osaka University Graduate School of Medicine, Japan, 2The First Department of Oral & Maxillofacial Surgery, Osaka University Graduate School of Dentistry, Japan
Disclosures: Makoto Fujiwara, None
SU0187 Association of Circulating Dipeptidyl-peptidase 4 Levels with Osteoporotic Fracture in Postmenopausal Women
Hyeonmok Kim*1, Ki Hyun Baek2, Sun-Young Lee3, Seong Hee Ahn4, Seung Hun Lee1, Jung-Min Koh1, Yumie Rhee5, Chong Hwa Kim6, Deog-Yoon Kim7, Moo-Il Kang2, Beom-Jun Kim8, Yong-Ki Min8. 1Asan Medical Center, University of Ulsan College of Medicine, Korea, republic of, 2Seoul St. Mary’s Hospital, The Catholic University of Korea College of Medicine, Korea, republic of, 3Asan Institute for Life Science, Korea, republic of, 4Inha University School of Medicine, Korea, republic of, 5Severance Hospital, Yonsei University College of Medicine, Korea, republic of, 6Sejong General Hospital, Korea, republic of, 7Kyunghee University School of Medicine, Korea, republic of, 8Sungkyunkwan University School of Medicine, Korea, republic of.
Disclosures: Hyeonmok Kim, None

SU0188 High Prevalence (64%) of Mutations in the LRP5 and/or COL1A1 Genes in Male & Juvenile Female Patients with Osteoporosis
Christian Wüster*1, Susanne Thomezyk2, Wolfgang Höppner3, Klaus Edgar Roth2, Philipp Drees2, 1Center for Hormones & Metabolism Prof. Wüster, Germany, 2Orthopaedics, Orthopaedic & Rheumatoid Surgery, University Mainz, Germany, 3Bioglobe GmbH Hamburg, Germany
Disclosures: Christian Wüster, None

SU0189 ASBMR 2016 Annual Meeting Young Investigator Award
Serum Carboxy-terminal Telopeptide of Type 1 Collagen (1CTP) is the Strongest Predictor of Survival Among Bone Turnover Markers in a Cohort of Japanese Subjects Undergoing Coronary Angiography: CHIBA (Coronary Heart Disease of Ischemia and Bone Association) Study
Nobuyuki Tai*, Reiko Watanabe, Junko Hirano, Toshihiro Amaki, Fumitaka Nakamura, Ryo Okazaki, Daisuke Inoue. Teikyo University Chiba Medical Center, Japan
Disclosures: Nobuyuki Tai, None

SU0190 Validation of a Novel, Rapid, High Precision Sclerostin Assay Which is Not Confounded by Sclerostin Fragments
Matthew Drake*, Sundeep Khosla. Mayo Clinic College of Medicine, United states
Disclosures: Matthew Drake, None

SU0191 Assessment of Mineral Micro-Structure Related Cortical Bone Quality - A Clinical Study in Post-Menopausal Women and Dialysis Patients Using Ultrasounds
Kosei Yoh*1, Ryoichi Suetoshi2, Tatsuo Arai3, Dorian Cretin3, Akira Okayama4, Hiroyuki Ogura5, Shotaro Tsuji6, 1Faculty of Health Science, Aino University, Japan, 2Furuno Electric Co., Ltd., Japan, 3Furuno Electric Co., Ltd., Japan, 4Sasayama Medical Center, Hyogo College Of Medicine, Japan
Disclosures: Kosei Yoh, None

SU0192 Early Cortical, but not Trabecular, Microarchitectural Changes by HRpQCT Identify Postmenopausal Women at Risk for Rapid Bone Loss at the hip or Spine
Sundeep Khosla*, Kristy Nicks1, Andrew Burghardt2, Elizabeth Atkinson1, Louise McCready3, Matthew Drake1, Shreyasee Amin1. 1Mayo Clinic College of Medicine, United states, 2University of California, San Francisco, United states, 3Mayo Clinic College of Medicine, United states
Disclosures: Sundeep Khosla, None

SU0193 Longitudinal changes of bone microstructure in men with osteopenia and osteoporosis
Kiyoshi Sada*, Andrew Burghardt, Anne Schafer2, Galateia Kazakia3, Ko Chiba3, Narihiro Okazaki3, Sharmila Majumdar3. 1Musculoskeletal Quantitative Imaging Research Group, Department of Radiology & Biomedical Imaging, University of California, San Francisco, United states, 2Endocrine Research Unit, San Francisco Veterans Affairs Medical Center, San Francisco, United states, 3Department of Orthopaedic Surgery, Nagasaki University Hospital, Japan
Disclosures: Kiyoshi Sada, None
SU0194 Peri- and Post- Menopause Bone Microarchitecture: Accelerated Changes are Marked by Increasing Cortical Porosity
Jennifer Bhatla*, 1, Lauren Burt, 1, David Hanley, 2, Steven Boyd, 1. 1McCaig Institute for Bone & Joint Health, Department of Radiology, Cumming School of Medicine, University of Calgary, Calgary, Canada, Canada, 2McCaig Institute for Bone & Joint Health, Departments of Community Health Sciences & Oncology, Cumming School of Medicine, University of Calgary, Calgary, Canada, Canada
Disclosures: Jennifer Bhatla, None

SU0195 Reproducibility of Bone Mineral Density and Microstructural Parameters Measured by Second Generation HR-pQCT
Ko Chiba*, 1, Narihiro Okazaki, 1, Ayako Kurogi, 2, Shuntaro Sato, 3, Kiyoshi Sada, 1, Makoto Osaki, 1. 1Department of Orthopedic Surgery, Nagasaki University Hospital, Japan, 2Department of Orthopedic Surgery, Nagasaki University Hospital, Japan, 3Department of Radiology & Biomedical Imaging, University of California, San Francisco, Japan, 4Department of Orthopedic Surgery, Nagasaki University Hospital, Japan
Disclosures: Ko Chiba, None

OSTEOPOROSIS - ASSESSMENT: DXA

SU0196 A Population-Based Assessment of the Performance of FRAX in Celiac Disease: The Manitoba BMD Cohort
William Leslie*, 1, Donald Duerksen, 1, Lisa Lix, 1, Suzanne Morin, 3, Sumit Majumdar, 3, Helena Johansson, 1, Anders Oden, 1, Eugene McCloskey, 1, John Kanis, 1. 1University of Manitoba, Canada, 2McGill University, Canada, 3University of Alberta, Canada, 4Centre for Metabolic Bone Diseases, University of Sheffield Medical School, United Kingdom
Disclosures: William Leslie, None

SU0197 The Effect of White vs Asian Ethnicity on the Performance of FRAX in Canadian Women: The Manitoba BMD Cohort
William Leslie*, 1, Sumit Majumdar, 2, Suzanne Morin, 3, Lisa Lix, 1, Helena Johansson, 4, Anders Oden, 1, Eugene McCloskey, 1, John Kanis, 1. 1University of Manitoba, Canada, 2University of Alberta, Canada, 3McGill University, Canada, 4Centre for Metabolic Bone Diseases, University of Sheffield Medical School, United Kingdom
Disclosures: William Leslie, None

SU0198 FRAX and the Confounding Effect of Hip Area in Canadian Women: The Manitoba BMD Cohort
William Leslie*, 1, Sumit Majumdar, 2, Suzanne Morin, 3, Lisa Lix, 1, Helena Johansson, 4, Anders Oden, 1, Eugene McCloskey, 1, John Kanis, 1. 1University of Manitoba, Canada, 2University of Alberta, Canada, 3McGill University, Canada, 4Centre for Metabolic Bone Diseases, University of Sheffield Medical School, United Kingdom
Disclosures: William Leslie, None

SU0199 Genetic Determinant of Trabecular Bone Score (TBS)
Lan T Ho-Pham*, 1, Didier Hans, 2, Linh D Mai, 3, Minh C Doan, 3, Tuan V Nguyen, 4. 1Bone & Muscle Research Division, Ton Duc Thang University, Vietnam, 2Center of Bone disease, Lausanne University Hospital, Switzerland, 3Department of Internal Medicine, Pham Ngoc Thach University of Medicine, Vietnam, 4Osteoporosis & Bone Biology Program, Garvan Institute of Medical Research; School of Public Health & Community Medicine, University of New South Wales; Centre for Health Technologies, University of Technology Sydney, Australia
Disclosures: Lan T Ho-Pham, None

SU0200 Increased Trabecular Bone Score in Kidney Transplant Recipients
Murtaza Bharmal*, 1, Sahithi Jarugula, 2, Renaud Winzenrieth, 3, Edward Leib, 1. 1University of Vermont College of Medicine, United states, 2University of Vermont Medical Center, United states, 3Med-Imaps, France
Disclosures: Murtaza Bharmal, None
SU0201 Longitudinal Assessment of Bone Mineral Density in Diabetes and Non-diabetes Subjects: The Chungju Metabolic Disease Cohort (CMC) Study
Kwanhoon Jo1, Ki-Hyun Baek*2, Je-ho Han3, Mooil Kang4. 1Seoul St. Mary Hospital, Korea, republic of, 2Yeouido St. Mary Hospital, Korea, republic of, 3Incheon St. Mary Hospital, Korea, republic of, 4Seoul St.Mary Hospital, Korea, republic of
Disclosures: Ki-Hyun Baek, None

SU0202 Preliminary Comparison Between Normative Spine TBS Data for Moroccans Men and Women
Abdellah El Maghraoui1, Doris Tran2, Renaud Winzenrieth*2, Aziza Mounach1, 1Rheumatology Department, Military Hospital Mohammed V, Rabat, Morocco, Morocco, 2R & D Department, Med-Imaps, Bordeaux, France, France
Disclosures: Renaud Winzenrieth, None

SU0203 TBS Measurements May be Less Impacted by Differences in Age, BMI and Body Composition than BMD
Diane Krueger1, Jessie Libber1, Renaud Winzenrieth*2, Neil Binkely1. 1University of Wisconsin, United states, 2Medimaps Group, France
Disclosures: Renaud Winzenrieth, None

SU0204 African American Men and Women have lower TBS than Caucasians
Rajesh Jain*, Tamara Vokes. University of Chicago Department of Endocrinology, Diabetes, & Metabolism, United states
Disclosures: Rajesh Jain, None

OSTEOPOROSIS - ASSESSMENT: OTHER IMAGING TECHNIQUES

SU0205 3D-DXA analysis of the changes in cortical and trabecular bone in patients with celiac disease after 1-year on gluten-free diet
Maria Belen Zanchetta*1, Ludovic Humbert2, Martelli Yves2, Vanesa Longobardi1, Mariela Sesta3, cesar bogado4, Jose Zanchetta1. 1MD, Argentina, 2MD, Spain, 3PH, Argentina, 4PHD, Argentina
Disclosures: Maria Belen Zanchetta, None

SU0206 Analysis of the Change in the Superior and Inferior Cortical Structure of the Female Femoral Neck Between 19 and 97 Years
Benjamin Khoo*1, Keenan Brown2, Richard Prince3. 1Medical Technology & Physics, Sir Charles Gairdner Hospital, Australia, 2Mindways Software Inc, United states, 3School of Medicine & Pharmacology, University of Western Australia, Australia
Disclosures: Benjamin Khoo, None

SU0207 Comparison of the bone geometry, volumetric density, and microstructure between the standard fixed offset and the relative offset method of HR-pQCT
Narihiro Okazaki*1, Ko Chiba1, Ayako Kurogi1, Yusaku Isebo2, Shuntaro Sato3, Kiyoshi Sada4, Makoto Osaki1. 1Department of Orthopaedic Surgery, Nagasaki University Hospital, Japan, 2Nagasaki University School of Medicine, Japan, 3Clinical Research Center, Nagasaki University Hospital, Japan, 4Department of Radiology & Biomedical Imaging, University of California, San Francisco, United states
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SU0208 Estimation of cortical thickness: the effect of two reconstruction kernels on two different segmentation methods
Oleg Museyko, Klaus Engelke*. IMP, University of Erlangen-Nuremberg, Germany
Disclosures: Klaus Engelke, None

SU0209 In Vivo Bone Microstructure Analysis of Fracture Healing by HR-pQCT
Kazuaki Yokota*, Ko Chiba1, Narihiro Okazaki1, Ayako Kurogi1, Makoto Era2, Yuichiro Nishino3, Takashi Miyamoto4, Makoto Osaki1. 1Department of Orthopedic Surgery, Nagasaki University Hospital, Japan, 2Department of Orthopedic Surgery, Mitsubishi Nagasaki University Hospital, Japan, 3Department of Orthopedic Surgery, Saiseikai Nagasaki Hospital, Japan, 4Trauma Center, Nagasaki University Hospital, Japan
Disclosures: Kazuaki Yokota, None
SU0210  In Vivo Evaluations of MRI Bound and Pore Water Measures of Cortical Bone in Osteoporotic Patients
Mary Kate Manhard*, S. Bobo Tanner, Jeffry Nyman, Mark Does. Vanderbilt University, United states
Disclosures: Mary Kate Manhard, None

SU0211  Poor Trabecular Microarchitecture at Distal Radius Predicts Fractures in Older men – the Prospective STRAMBO Study
Pawel Szule*, Stéphanie Boutroy, Roland Chapurlat. INSERM UMR 1033, University of Lyon, Hôpital Edouard Herriot, France
Disclosures: Pawel Szule, None

SU0212  Sensitivity and specificity of osteoporosis diagnostics at primary healthcare with Bindex
Janne Karjalainen*, Ossi Riekkinen1, John Schousboe2, Heikki Kröger3. 1Bone Index Finland, Finland, 2Park Nicollet Institute, United states, 3Kuopio University Hospital, Finland
Disclosures: Janne Karjalainen, Bone Index Finland, 16

SU0213  Sexual and Racial Dimorphism in bone microarchitecture requires adjustment of the region of interest for skeleton dimensions
Ali Ghasem-Zadeh*, XiaoFang Wang, Roger Zebaze, Ego Seeman. Austin Health, University of Melbourne, Australia
Disclosures: Ali Ghasem-Zadeh, None

SU0214  Spinal Bone Density Assessment on Virtual Non-contrast images
James Leake, MD*1, Xinhui Duan1, Keenan Brown2, Orhan Oz1. 1UT Southwestern Medical Center, United states, 2MIndways Software, United states
Disclosures: James Leake, MD, None

SU0215  Three-dimension Assessment of Spinal and Pelvic Parameters in Patients with Vertebral Fractures and High Risk of Falls
Marie Fechtenbaum*, Jacques Fechtenbaum2, Adrien Etcheto2, Antoine Feydy3, Christian Roux4, Karine Briot5. 1Rehabilitation department, Cochin hospital, Paris, France, 2Rheumatology department, Cochin hospital, Paris, France, France, 3Radiology Department, Cochin Hospital, Paris, France, France
Disclosures: Marie Fechtenbaum, None

SU0216  Trabecular Bone Score in Type 2 Diabetes Mellitus: Preliminary Data of Cross-sectional Case-control Study
Disclosures: Manuel Muñoz Torres, None

OSTEOPOROSIS - EPIDEMIOLOGY: BONE MINERAL DENSITY
SU0217  Complications and Skeletal Health in Long Duration Type 1 Diabetes
Hillary Keenan*, Ernesto Maddaloni2, Varant Kupelian3, Liane Tinsley1, Maya Khatri1. 1Joslin Diabetes Center, United states, 2University Bio-Medica Roma, Italy, 3Alexion Pharmaceuticals, United states
Disclosures: Hillary Keenan, None

SU0218  Estimating the Prevalence of Osteoporosis Among Adults in the United States Using the National Bone Health Alliance Diagnostic Criteria
Nicole Wright*, Kenneth Saag, Bess Dawson-Hughes3, Sundeep Khosla4, Ethel Siris5. 1Department of Epidemiology, University of Alabama at Birmingham, United states, 2Division of Clinical Immunology & Rheumatology, University of Alabama at Birmingham, United states, 3USDA Human Nutrition Research Center at Tufts University, United states, 4Division of Endocrinology, Metabolism, Diabetes, Nutrition, & Internal Medicine, Mayo Clinic, United states, 5Division of Endocrinology, Columbia University Medical Center, United states
Disclosures: Nicole Wright, Amgen, 13
SU0219 Prevalence of Osteoporosis and Low Bone Mass among Puerto Rican Adults: Results from the Boston Puerto Rican Osteoporosis Study
Sabrina E. Noel1, John L. Griffith2, Nicole C. Wright3, Bess Dawson-Hughes4, Katherine L. Tucker1. 1University of Massachusetts Lowell, United states, 2Northeastern University, United states, 3University of Alabama at Birmingham, United states, 4Jean Mayer USDA Human Nutrition Research Center on Aging, Tufts University, United states
Disclosures: Sabrina E. Noel, None

SU0220 The Cross-Sectional Survey Study of Osteoporosis in Shanghai Middle-Aged and Elderly People of China
Jing Wang1, Bing Shu*2, Chen-guang Li1, Xiao-feng Qi2, Liang Qiao2, Lin Chen2, Qiang Wang2, Xue-jun Cui1, Yong-jun Wang2. 1Longhua Hospital, Shanghai University of Traditional Chinese Medicine, China, 2Spine Research Institute, Shanghai University of Traditional Chinese Medicine, China
Disclosures: Bing Shu, None

OSTEOPOROSIS - EPIDEMIOLOGY: ENVIRONMENTAL AND LIFESTYLE FACTORS

SU0221 Impact of Body Weight Dynamics Following Intentional Weight Loss on Fracture Risk: Results from The Action for Health in Diabetes Study
Kristen Beavers*1, Rebecca Neiberg2, Karen Johnson3, Ramon Casanova2, Ann Schwartz4, Carolyn Crandall5, Cora Lewis6, Xavier Pi-Sunyer7, Stephen Kritchevsky2. 1Wake Forest University, United states, 2Wake Forest School of Medicine, United states, 3University of Tennessee, United states, 4UCSF School of Medicine, United states, 5David Geffen School of Medicine at UCLA, United states, 6University of Alabama School of Medicine, United states, 7Columbia University, United states
Disclosures: Kristen Beavers, None

SU0222 Achieving Freedom from Glucocorticoids Use might Decrease the Risk of Clinical Fractures in Patients with Rheumatoid Arthritis: Five-Year Results of the TOMORROW Study
Tatsuya Koike*1, Kenji Mamoto2, Yuko Sugioka3, Masahiro Tada2, Tadashi Okano2, Kentaro Inui4. 1Search Institute for Bone & Arthritis Disease (SINBAD), Shirahama Foundation for Health & Welfare, Japan, 2Department of Orthopedic Surgery, Osaka City University Medical School, Japan, 3Center for Senile Degenerative Disorders (CSDD), Osaka City University Medical School, Japan, 4Department of Rheumatosurgery, Osaka City University Medical School, Osaka, Japan
Disclosures: Tatsuya Koike, None

SU0223 EPIDEMIOLOGICAL CHARACTERISTICS OF FEMORAL FRACTURES IN SERGIPE, 2010 - 2015, BRAZIL
PRISCILA SOARES PEREIRA, FRANCISCO DE ASSIS PEREIRA*, CARLOS UMBERTO PEREIRA, ANNA KLARA BOHLAND, PATRICIA MONIQUE PEREIRA, LARISSA TIZIANE PEREIRA. UNIVERSIDADE FEDERAL DE SERGIPE, Brazil
Disclosures: FRANCISCO DE ASSIS PEREIRA, None

SU0224 Incident Fracture is Associated with a Period of Accelerated Loss of Hip BMD: The Study of Osteoporotic Fractures
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Disclosures: Blaine Christiansen, None

SU0225 Metabolic Syndrome and Risk of Incident Fall Injury in Community-Dwelling Older Adults: the Health, Aging, and Body Composition Study
Naoko Sagawa*1, Brian C. Callaghan2, Robert M. Boudreau1, Aaron I. Vinik3, Ann V. Schwartz4, Teresa M. Waters5, Jane A. Cauley1, Elsa S. Strotmeyer1. 1University of Pittsburgh, United states, 2University of Michigan, United states, 3Eastern Virginia Medical School, United states, 4University of California San Francisco, United states, 5University of Tennessee, United states
Disclosures: Naoko Sagawa, None
SU0226  Overall Pediatric Fracture Incidence is Declining and Fracture Etiology is Changing - Trends over Six Decades  
Vasileios Lempesis*1, Björn Rosengren1, Jan-Åke Nilsson1, Lennart Landin1, Carl-Johan Tiderius1, Magnus Karlsson2. 1Department of Orthopedics & Clinical Sciences, Skåne University Hospital, Lund University, Sweden, 2Department of Orthopedics & Clinical Sciences, Skåne University Hospital, Lund University, Sweden  
Disclosures: Vasileios Lempesis, None

SU0227  Predictors of imminent fracture risk in Medicare-enrolled men and women  
Akeem Yusuf*1, Yan Hu1, David Chandler2, Barry Crittenden2, Richard Barron2. 1Chronic Disease Research Group, United states, 2Amgen Inc., United states  
Disclosures: Akeem Yusuf, None

SU0228  Rate of Bone Loss Is Not Different Between Females Who Fracture and Those Who Do Not Fracture  
Lauren Burt*1, Sarah Manske1, David Hanley2, Steven Boyd1, 1McCaig Institute for Bone & Joint Health, Department of Radiology, Cumming School of Medicine, University of Calgary, Canada, 2McCaig Institute for Bone & Joint Health, Departments of Community Health Sciences & Oncology, Cumming School of Medicine, University of Calgary, Canada  
Disclosures: Lauren Burt, Osteoporosis Canada, 13

SU0229  A Prospective Study of Gout and Risk of Fracture in Women  
Julie M Paik*1, Seoyoung C Kim1, Diane Feskanich1, Hyon K Choi2, Daniel H Solomon1, Gary C Curhan1. 1Brigham & Women’s Hospital, Harvard Medical School, United states, 2Massachusetts General Hospital, Harvard Medical School, United states  
Disclosures: Julie M Paik, None

SU0230  Associations of Parity and Breast-feeding with Hip Fracture Incidence in the Women’s Health Initiative  
Carolyn Crandall*1, Jane Cauley2, Jingmin Liu3, Polly Newcomb3, Kelli Ryckman4, Lisette Jacobson5, Marcia Stefanick6, Mara Vitolins7, JoAnn Manson1. 1University of California, Los Angeles, United states, 2University of Pittsburgh, United states, 3Fred Hutchinson Cancer Research Center, United states, 4The University of Iowa, United states, 5University of Kansas School of Medicine-Wichita, United states, 6Stanford University School of Medicine, Stanford University, United states, 7Wake Forest School of Medicine, United states, 8Brigham & Women’s Hospital, Harvard Medical School, United states  
Disclosures: Carolyn Crandall, None

SU0231  Demographic and clinical patterns in primary fracture prevention  
Annette Adams*1, David Yi1, Fang Niu2, Rita Hui2, Joan Lo2. 1Dept of Research & Evaluation, Kaiser Permanente Southern California, United states, 2Pharmacy Outcomes Research Group, Kaiser Permanente California, United states, 3Division of Research, Kaiser Permanente Northern California, United states  
Disclosures: Annette Adams, Merck, 13; Otsuka, 13; Amgen Inc, 13

SU0232  Effects of Insulin Resistance on Bone Microarchitecture in Non-Diabetic, Older Adults: Framingham HR-pQCT Study  
Elizabeth Samelson*1, L. Adrienne Cupples2, Kerry Broe3, Robert Mcelernie3, Marian Hannan3, Serkalem Demissie2, Ching-ti Liu6, Douglas Kiel3, Mary Bouxsein7. 1Hebrew SeniorLife Harvard Medical School, United states, 2Boston University, United states, 3hebrew seniorlife, United states, 4hebrewseniorlife, United states, 5hewbrew seniorlife, United states, 6boston univeristy, United states, 7Beth Israel Deaconess Medical Center, United states  
Disclosures: Elizabeth Samelson, None

SU0233  Fracture Risk Indices from DXA-Based Finite Element Analysis Stratify Hip Fracture Better Than Femoral Neck BMD: A Cross-Sectional Validation Study  
Disclosures: Shuman Yang, None
SU0234  Parathyroid tumors and hypertension-epidemiology of a neuroendocrine link?
Carmen Gabriela Barbu1, Suzana Florea2, Amalia Arhire2, Luminita Cima1, Anca Sirbu1, T Radu3, Alice Albu2, Olteaa Ionescu2, Sorina Martin1, Crina Filisan2, Simona Fica1.
1Carol Davila University, Elias Hospital Endocrine Department Hospital, Bucharest, Romania, 2Elias University Hospital, Bucharest, Romania, 3Elias University Emergency Hospital, Bucharest, Romania
Disclosures: Carmen Gabriela Barbu, None

SU0235  Performance of Predictive Tools to Identify Individuals at Risk of Osteoporotic Fractures: a Systematic Review and Meta-analysis
Claudia Beaudoin*1, Lynne Moore1, Mathieu Gagné2, Louis Bessette3, Louis-Georges Ste-Marie4, Jacques P. Brown5, Sonia Jean2. 1Université Laval, Canada, 2Institut national de santé publique du Québec, Canada, 3CHU de Québec Research Centre, Canada, 4Université de Montréal, Canada
Disclosures: Claudia Beaudoin, None

SU0236  Prior Fragility Fracture Predicts Cardiovascular Events in Men: Results from UK Biobank
Julien Paccou*1, Stefania D’Angelo1, Mark Edwards1, Cyrus Cooper1, Steffen Petersen2, Nick Harvey1. 1MRC Lifecourse Epidemiology Unit, University of Southampton, United Kingdom, 2NIHR Cardiovascular Biomedical Research Unit at Barts, William Harvey Research Institute, Queen Mary University of London, United Kingdom
Disclosures: Julien Paccou, None

SU0237  Serum Adiponectin Levels and Bone Strength According to Metabolic Health in Korean Adults: The KoGES- ARIRANG Study
Jung Soo Lim*1, EunHee Choi2, Sang Baek Koh3, Song Vogue Ahn3. 1Department of Internal Medicine, Yonsei University Wonju College of Medicine, Korea, republic of, 2Institute of Lifestyle Medicine, Yonsei University Wonju College of Medicine, Korea, republic of, 3Department of Preventive Medicine, Yonsei University Wonju College of Medicine, Korea, republic of
Disclosures: Jung Soo Lim, None

SU0238  Short-Term Subsequent Fracture Risk in Patients with a Recent History of Low-Trauma Non-Vertebral Fracture
Aude Deloumeau*, Anna Molto, Maxime Dougados, Christian Roux, Karine Briot. Paris Descartes University, Cochin Hospital, Department of Rheumatology, Paris, France
Disclosures: Aude Deloumeau, None

OSTEOPOROSIS - HEALTH CARE DELIVERY: GENERAL

SU0239  A Demonstration Study of the Fracture Liaison Service (FLS) Model of Care for Patients with Osteoporotic Fractures
Susan Greenspan1, Andrea Singer*2, Robert Recker3, David Lee2, Simone Karp2, Brian Marchand4, Debbie Zeldow4, Larry Stern1. 1UPMC, United states, 2MedStar Georgetown University Hospital, United states, 3Creighton University, United states, 4NBHA, United states, 5CECity, United states, 5CECity, Inc., United states, 7Merck, United states
Disclosures: Andrea Singer, Merck, 13

SU0240  Bone Health ECHO: An Innovative Strategy of Telementoring to Improve Osteoporosis Care in Underserved Communities
E. Michael Lewiecki*1, Matthew F. Bouchonville II2, David H. Chafey2, Sanjeev Arora2. 1New Mexico Clinical Research & Osteoporosis Center, United states, 2University of New Mexico School of Medicine, United states
Disclosures: E. Michael Lewiecki, Amgen, 13; Lilly, 13; Merck, 13

SU0241  Capture the Fracture by SMS
Robert Theiler1, Gregor Freystaetter*4, Heike Bischoff-Ferrari1, Christian Meier2, Andreas Platz2, Hans-Ulrich Mellinghoff4. 1University Hospital Zurich, Switzerland, 2Universität Basel, Switzerland, 3Triemli Spital, Switzerland, 4Kantonsspital St. Gallen, Switzerland
Disclosures: Gregor Freystaetter, None
SU0242 Closing the Treatment Gap: Establishment of a Fracture Liaison Service in Germany
Markus Rossmann*1, Jonas Pomerening1, Wanja Wolters4, Georg Dahmen2, Andreas Schüsseler1, Catharina Bullmann2, Wolfgang Lehmann1, Johannes Rüeger1, Eric Hesse1.
1Department of Trauma, Hand & Reconstructive Surgery, University Medical Center Hamburg-Eppendorf, Germany, 2Osteoporosis-Network Hamburg, Germany

Disclosures: Markus Rossmann, None

SU0243 Influence of Gastrointestinal Events on Non-treatment of Asia-Pacific Women with Osteoporosis: Perspectives from Physicians in the MUSIC OS-AP Study
Ankita Modi1, Peter Ebeling2, Mel Lee3, Yong-Ki Min4, Ambrish Mithal5, Xiaqin Yang6, Santwona Baidya6, Shuvayu Sen6, Shiva Sajjan1, Merck & Co., Inc., United states, 2Monash University, Australia, 3Chang Gung Memorial Hospital, Taiwan, province of china, 4Sungkyunkwan University, Korea, republic of, 5Medanta the Medicity, India, 6Optum, Australia

Disclosures: Xiaqin Yang, Merck & Co., Inc., 17

SU0244 Secondary Prevention Gap After a Hip Fracture: the SPARE-HIP Prospective Cohort Anti-Osteoporosis Treatment Rates During Hospital Admission and at 1 and 4 Months Post-Fracture
Daniel Prieto-Alhambra*1, Ignacio Andrés Cano2, María Asenjo Cambrá3, Antonio Balfagon Ferrer4, Alejandro Bañuelos Díaz5, Fátima Brañas Bztán6, Manuel Francisco Bravo Bardaji7, José Ramón Caeiro Rey8, Vicent Climent-Peris9, Jose Carlos Díaz Miñarro9, Ángel Díez Rodríguez10, Emma Escudero Martínez11, María Teresa Espallargas Doñate2, Inigo Etxebarria-Foronda11, Laura Ezquerra Herrando12, Jesús Fernandez-Lombardía13, Lara Guardado14, Miguel Martínez Ros15, Damían Mifsut Miedes16, Sarah Mills Gañán17, José Manuel Olmos Martínez18, Pilar Sáez López19, Mónica Salomó Doménech18, Miguel Sanz Sainz20, Jorge Juan Sierra Serrano21, Jordi Teixidor Serra22, Oscar Tendero Tendero Gómez23, Óscar Torregrosa Suau24, Antonio Herrara25, Ángel Díez-Pérez26, 1NDORMS, University of Oxford, United Kingdom, 2Orthopaedic Surgery, Traumatology & Rheumatology Department, Hospital Puerta del Mar, Spain, 3Geriatric Medicine Department, Hospital Universitario de Getafe, Spain, 4Orthopaedic Surgery & Traumatology Unit, Hospital Universitario y Politécnico La Fe de Valencia, Spain, 5Department of Orthopaedic Surgery, Hospital Universitario del Río Horta, Spain, 6Geriatric & Internal Medicine Department, Hospital Universitario Infanta Leonor, Spain, 7Department of Orthopaedic Surgery, Hospital Regional Universitario Carlos Haya, Spain, 8Department of Orthopaedic Surgery, Complejo Hospitalario Universitario de Santiago de Compostela, Spain, 9Orthopaedics & Traumatology Department, Hospital Lluís Alcanyís, Spain, 10Hospital Universitario Reina Sofia, Spain, 11Orthopaedic Surgery & Traumatology Service, Hospital Virgen del Puerto, Spain, 12Department of Orthopaedic Surgery, Complejo Hospitalario Universitario de Pontevedra, Spain, 13Department of Orthopaedic Surgery, Hospital Obispo Polanco, Spain, 14Department of Orthopaedic Surgery, Alto Deba Hospital, Spain, 15Orthopaedic Surgery & Traumatology Service, Hospital Clínico Universitario de, Spain, 16Department of Orthopaedic Surgery, Hospital Universitario San Agustín, Spain, 17Geriatric Medicine Department, Hospital Universitario San Carlos, Spain, 18Orthogeriatric Unit, Hospital Virgen de la Arrixaca, Spain, 19Hospital Clínico de Valencia, Spain, 20Department of Orthopaedic Surgery, Hospital Universitario La Paz, Spain, 21Internal Medicine Service, RETICEF, IDIVAL, Universidad de Cantanbria, Spain, 22Geriatric Medicine Department, Hospital Nuestra Señora de Sonsoles, Spain, 23Orthopaedic Surgery & Traumatology Department, Hospital Universitario Parc Taulí, Spain, 24Orthopaedic Surgery & Traumatology Service, Hospital Universitario Miguel Servet, Spain, 25Orthopaedic Surgery & Traumatology Service, Hospital San Pedro, Spain, 26Trauma Unit, Hospital Vall d Hebrón Barcelona, Universitat Autònoma de Barcelona, Spain, 27Department of Orthopaedic Surgery, Hospital Universitario Son Espases, Spain, 28Bone Metabolism Unit, Internal Medicine Service, Hospital General Universitario de Elche, Spain, 29Department of Surgery, Medicine School, University of Zaragoza, Spain, 30Department of Internal Medicine, Hospital del Mar-IMIM & Autonomous University of Barcelona, Spain

Disclosures: Daniel Prieto-Alhambra, Amgen, 101; Servier, 13

SU0245 Treatment gaps in osteoporosis are more prevalent in patients less than 65 years old in a regional general hospital setting in Singapore
Linsey Gani*, Rayan Alsuwaigh, Thomas King, Joan Khoo. Changi General Hospital, Singapore

Disclosures: Linsey Gani, None
OSTEOPOROSIS - HEALTH CARE DELIVERY: OUTCOME STUDIES

SU0246 Fracture Risk Specific Treatment Initiation Rates in an Orthopaedic Fracture Liaison Service
Earl Bogoch, Victoria Elliot-Gibson*, Dorcas Beaton, Robert Josse, Joanna Sale, Erin Norris. St. Michael’s Hospital, Canada
Disclosures: Victoria Elliot-Gibson, Procter and Gamble Pharmaceuticals Inc, 13; Martin Family Foundation, 13; Helen McCrea Peacock Foundation, 13; Warner Chilcott, 13; Novartis Canada Ltd, 13; Alliance for Better Bone Health, 13; Mr. and Mrs. W. Sauderson, 13; Mr. Clifford Martin, 13; Merck Frosst Canada Inc, 13; Agen Canada Inc, 13

OSTEOPOROSIS – NUTRITION, DIETARY SUPPLEMENTS AND PHYSICAL ACTIVITY: CALCIUM AND VITAMIN D

SU0247 Age-specific thresholds for sufficient 25(OH)-vitamin D serum levels in patients with clinical risk factors for osteoporosis and fractures
Oliver Bock*, Susanne Pyttel, Ute Dostmann. MVZ Promedio GmbH - Integrated Medicine, Laboratory Medicine, Germany
Disclosures: Oliver Bock, None

SU0248 Comparative effects of high-dose vitamin D2 versus vitamin D3 on serum total and free 25-hydroxyvitamin D and markers of calcium homeostasis
Albert Shieh*, Rene Chun, Christina Ma, Martin Hewison, John Adams. 1UCLA, United states. 2The University of Birmingham, United Kingdom
Disclosures: Albert Shieh, None

SU0249 Musculoskeletal form and function in Chinese postmenopausal women are influenced by both calcium intake and vitamin D status
Feitong Wu*, Laura Laslett1, Qian Zhang1, Xiaosi Hu2, Hui Pan2, Feng Pan1, Jing Tian1, Gongbu Pan1, Kun Zhu1, Richard Prince1, 1Menzies Institute for Medical Research, University of Tasmania, Australia, 2National Institute for Nutrition & Health, Chinese Centre for Disease Control & Prevention, China, China, 3Department of Endocrinology & Diabetes, Sir Charles Gairdner Hospital, Perth, Australia, Australia
Disclosures: Feitong Wu, None

SU0250 Predictors of Maternal Response to Gestational Vitamin D Supplementation: Findings from the MAVIDOS Trial
Rebecca Moon1, M Kassim Javaid2, Stefania D’Angelo1, Sarah Crozier1, Inez Schoenmakers1, Nicholas Bishop4, Stephen Kennedy5, Aris Papageorghiou5, Robert Fraser6, Saurabh Gandhi6, Ann Prentice3, Cyrus Cooper1, Nicholas Harvey*, MAVIDOS Trial Group1. 1MRC Lifecourse Epidemiology Unit, University of Southampton, United Kingdom, 2NIHR Oxford Musculoskeletal Biomedical Research Unit, University of Oxford, United Kingdom, 3MRC Human Nutrition Research, United Kingdom, 4Academic Unit of Child Health, Sheffield Children’s Hospital, University of Sheffield, United Kingdom, 5Nuffield Department of Obstetrics & Gynaecology, John Radcliffe Hospital, University of Oxford, United Kingdom, 6Sheffield Hospitals NHS Trust (University of Sheffield), United Kingdom
Disclosures: Nicholas Harvey, None

OSTEOPOROSIS – NUTRITION, DIETARY SUPPLEMENTS AND PHYSICAL ACTIVITY: EXERCISE

SU0251 3D-DXA analysis showed that moderate to high-magnitude whole body vibration training over one year increased femoral cortical thickness in low-active postmenopausal women
Marion Pasqualini1, Ludovic Humbert*, Hervé Locrelle1, Hubert Marotte1, Marie-Hélène Lafage-Proust1, Thierry Thomas1, Laurence Vico1, 1INSERM 1059, University of Lyon, France, 2GALGO Medical, Spain
Disclosures: Ludovic Humbert, None

SU0252 Influence of Physical Activity on Proximal Femoral Bone Density Distribution, Structural Patterns and Estimated Strength: A Within-Subject Controlled Study
Stuart Warden*, Julio Carballido-Gamio, Joyce Keyak1, Alyssa Weatherholt1, Mariana Kersh1, Divya Shah1, Thomas Lang1, Robyn Fuchs1, 1Indiana University, United States, 2University of California San Francisco, United States, 3University of California Irvine, United States, 4University of Illinois Urbana-Champaign, United States
Disclosures: Stuart Warden, None
SU0253 Integrated Care Management Programs for Osteoporosis, Sarcopenia, Fall Prevention, Frailty Indices and Quality of Sleep with Multiple Interventions for High Risk Elderly Population in Taiwan
Rong-Sen Yang*. Department of Orthopedics, National Taiwan University Hospital, Taiwan, province of china
Disclosures: Rong-Sen Yang, None

SU0254 Using behaviour change theory and user perspectives to design patient education materials to enhance uptake of Too Fit To Fracture recommendations
Christina Ziebart1, Caitlin McArthur1, Alexandra Papioannou2, Angela Cheung3, Judi Laprade4, Ravi Jain2, Linda Lee6, Jeffrey Templeton1, Lora Giangregorio*1. 1University of Waterloo, Canada, 2McMaster University & Geriatric Education & Research in Aging Sciences Centre, Canada, 3University Health Network & University of Toronto, Canada, 4University of Toronto, Canada, 5Osteoporosis Canada, Canada, 6McMaster University & Centre for Family Medicine, Canada
Disclosures: Lora Giangregorio, None

OSTEOPOROSIS – NUTRITION, DIETARY SUPPLEMENTS AND PHYSICAL ACTIVITY: GENERAL

SU0255 Anti-Inflammatory and Possible Bone-Protective Effects of Dried Plum Polyphenols In Vitro
Neda Akhavan*1, Lili Kamkar1, Shirin Hooshmand2, Sarah Johnson3, Bahram Arjmandi1.
1Florida State University, United states, 2San Deigo State University, United states, 3Colorado State University, United states
Disclosures: Neda Akhavan, None

OSTEOPOROSIS – NUTRITION, DIETARY SUPPLEMENTS AND PHYSICAL ACTIVITY: OTHER NUTRIENTS

SU0256 Melatonin-micronutrients Osteopenia Treatment Study (MOTS)
SIfat Maria*1, Dr. Paula Witt-enderby1, Dr. Mark Swanson2, Dr. Frank D’Amico3, Larry Enderby4, Brianna Enderby5, Dr. Holly Lassila1. 1Duquesne University, United states, 2Naturopath, Heart Preventics, LLC, United states, 3Duquesne University, United states, 4Enderby Healthcare/Legal Consulting, LLC, United states, 5Pharm. D, Duquesne University, United states
Disclosures: SIfat Maria, None

OSTEOPOROSIS - PATHOPHYSIOLOGY: BONE AND THE MICROBIOME, BONE INFECTIONS

SU0257 Mandibular Periodontitis and Osteonecrosis of the Jaw-Like Lesions in Rice Rats (Oryzomys palustris) fed a High Sucrose-Casein Diet and treated with Zoledronic Acid
Donald Kimmel*1, Jonathan Messer1, Hung-Yuan Chen1, Jessica Jiron1, Jorge Mendieta Calle1, Evelyn Castillo1, Cathy van Poznak2, Jose Aguirre1. 1University of Florida, United states, 2University of Michigan, United states
Disclosures: Donald Kimmel, None

OSTEOPOROSIS - PATHOPHYSIOLOGY: BONE MODELING AND REMODELING

SU0258 Effects of glycemic control on bone turnover in older Mexican Americans with type 2 diabetes: data from the Cameron County Hispanic Cohort in Texas
Nahid Rianon*1, Scott M Smith2, MinJae Lee1, Paul Musgrave1, Gordon P Watt3, Shahla Nader1, Sundee Khosla4, Catherine G Ambrose1, Joseph B McCormick5, Fisher-Hoch Susan5. 1University of Texas Medical School at Houston, United states, 2NASA JSC, United states, 3Brownsville Campus of UT School of Public Health, United states, 4Mayo Clinic College of Medicine, United states, 5Brownsville Campus of the UT School of Public Health, United states
Disclosures: Nahid Rianon, None

SU0259 GATA-3 Participates in Bone Healing Through Transcriptionally Upregulating bcl-xL Gene Expression
Mei-Hsiu Liao*, Pei-I Lin, Ruei-Ming Chen. Graduate Institute of Medical Sciences, College of Medicine, Taipei Medical University, Taiwan, province of china
Disclosures: Mei-Hsiu Liao, None
SU0260 The Effect of Bariatric Surgery on Serum 25-OH Vitamin D Levels: A Systematic Review and Meta-Analysis
Herman Bami*, Aashish Kalani, Jonathan Adachi, Arthur Lau. McMaster University, Canada
Disclosures: Herman Bami, None

OSTEOPOROSIS - PATHOPHYSIOLOGY: GENERAL

SU0261 Analgesic Effects of Minodronate in a Rat Model of Chronic Pain
Department of Orthopaedic Surgery, Japan
Disclosures: Masazumi Suzuki, None

SU0262 Establishment of autoinflammatory disease model in mice
Takatsugu Oike*, Takeshi Miyamoto, Hiroya Kanagawa, Yasuo Niki, Morio Matsumoto, Masaya Nakamura. Department of Orthopaedic Surgery, Keio University School of Medicine, Japan
Disclosures: Takatsugu Oike, None

SU0263 Negative Effects of Repetitive Mild Traumatic Brain Injury (TBI) on Trabecular BMD, Microarchitecture, and Mechanical Properties
Chandrasekhar Kesavan*, Heather Watt, Subburaman Mohan. VA Loma Linda Healthcare System, United states
Disclosures: Chandrasekhar Kesavan, None

SU0264 Progesterone and Women’s Bone Formation—this is a Causal Relationship
Jerilynn C. Prior*. University of British Columbia–CeMCOR, Canada
Disclosures: Jerilynn C. Prior, None

SU0265 The Control of Regulatory T cells Influx by CCL22 is a Critical Determinant of Resident and Inflammatory Cells Pro-Reparative Phenotype in Chronic Inflammatory Osteolytic Lesions
Andreia Espindola Vieira1, Priscila Colavite1, Angelica Fonseca1, Carolina Favaro Francescom1, Ana Paula Trombone2, Charles S Sfeir3, Steven R Little3, Gustavo Garlet*4. 1FOB/USP, Brazil, 2USC, Brazil, 3University of Pittsburgh, United states, 4Sao Paulo University, Brazil
Disclosures: Gustavo Garlet, None

OSTEOPOROSIS - PATHOPHYSIOLOGY: GLUCOCORTICOIDS AND OTHER DRUGS

SU0266 Temporal Sequence of Molecular, Cellular, Vascular and Anatomical Changes Leading to Glucocorticoid-induced Osteonecrosis of the Femoral Head in Mice
Robert S Weinstein*1, Erin A Hogan1, Marilina Piemontese1, Michael J Borrelli3, Serguei Liachenko3, Charles A O’Brien1, Stavros C Manolagas1. 1Center for Osteoporosis & Metabolic Bone Diseases, Division of Endocrinology & Metabolism, Central Arkansas Veterans Healthcare System & the University of Arkansas for Medical Sciences, United states, 2Department of Radiology, Central Arkansas Veterans Healthcare System & the University of Arkansas for Medical Sciences, United states, 3National Center for Toxicological Research/Food & Drug Administration, United states
Disclosures: Robert S Weinstein, None
OSTEOPOROSIS - SECONDARY OSTEOPOROSIS: DIABETES

SU0267  The Effect of Metformin on Bone Assessed by Bone Mineral Density and Trabecular Bone Score
Azra Karahasanovic*1, Thomas Peter Almdal2, Peter Vestergaard3, Louise Lundby Christensen4, Cimt Trial group (coordinating member: Thomas Peter Almdal)5, Pia Eiken6.
1Department of Cardiology, Nephrology & Endocrinology, Nordsjaellands Hospital, Hillerod & Faculty of Health & Medical Sciences, University of Copenhagen, Copenhagen, Denmark, Denmark, 2Department of Endocrinology, Rigshospitalet, Copenhagen, Denmark, Denmark, 3Departments of Clinical Medicine & Endocrinology, Aalborg University Hospital, Aalborg, Denmark, Denmark, 4Department of Paediatrics & Adolescent Medicine, Nordsjaellands Hospital, Hillerod, Denmark, Denmark, 5Department of Cardiology, Nephrology & Endocrinology, Nordsjaellands Hospital, Hillerod & Faculty of Health & Medical Sciences, University of Copenhagen, Copenhagen, Denmark, Denmark
Disclosures: Azra Karahasanovic, None

SU0268  The Association Between Type 2 Diabetes Mellitus and Bone Quality as Measured with HR-pQCT – The Maastricht Study
Ellis AC de Waard*1, Joost JA de Jong1, Hans HCM Savelberg2, Tineke A van Geel3, Boy JHM Houben4, Ronald MA Henry5, Miranda T Schram6, Pieter C Dagnelie7, Carla J van der Kallen8, Simone JS Sep9, Coen DA Stehouwer4, Nicolaas C Schaper10, Tos TJM Berendschot11, Jan SAG Schouten12, Piet PMM Geusens13, Annemarie Koster14, Joop PW van den Bergh15. 1Maastricht University, Department of Internal Medicine, Subdivision of Rheumatology, Maastricht, the Netherlands & NUTRIM School for Nutrition & Translational Research in Metabolism, Maastricht University, Maastricht, the Netherlands, Netherlands, 2Maastricht University, Department of Human Movement Science, Maastricht, the Netherlands & NUTRIM School for Nutrition & Translational Research in Metabolism, Maastricht University, Maastricht, the Netherlands, Netherlands, 3Maastricht University, Department of Family Medicine, Maastricht, the Netherlands & NUTRIM/CAPHRI, Maastricht University, Maastricht, the Netherlands, Netherlands, 4Maastricht University Medical Center, Department of Internal Medicine, Maastricht, the Netherlands & CARIM School for Cardiovascular diseases, Maastricht University, Maastricht, the Netherlands, Netherlands, 5Maastricht University, Department of Epidemiology, Maastricht, the Netherlands & CAPHRI/CARIM, Maastricht University, Maastricht, the Netherlands, Netherlands, 6Maastricht University Medical Center, Department of Social Medicine, Maastricht, the Netherlands & CAPHRI/CARIM, Maastricht University, Maastricht, the Netherlands, Netherlands, 7University Eye Clinic Maastricht, Maastricht, the Netherlands, Netherlands, 8University Eye Clinic Maastricht, Maastricht, The Netherlands, Netherlands, 9Maastricht University Medical Centre/CAPHRI, Department of Internal Medicine, Subdivision of Rheumatology, Maastricht, the Netherlands & University of Hasselt, Biomedical Research Institute, Hasselt, Belgium, Netherlands, 10Maastricht University Medical Centre, Department of Internal Medicine, Subdivision of Rheumatology, Maastricht, the Netherlands & VieCuri Medical Center, Department of Internal Medicine, Subdivision of Endocrinology, Venlo, the Netherlands, Netherlands
Disclosures: Ellis AC de Waard, None

OSTEOPOROSIS - SECONDARY OSTEOPOROSIS: DRUGS, OTHER THAN GLUCOCORTICOIDS

SU0269  Annual change in fracture load of vertebra estimated by CT-based 3-dimensional finite element modeling in breast cancer patients with aromatase inhibitor therapy
Koshi Kishimoto*1, Eiji Itoi2. 1Tohoku Kosai Hospital, Japan, 2Department of Orthopaedic Surgery, Tohoku University, Japan
Disclosures: Koshi Kishimoto, None

SU0270  Sad bones: Serotonin Reuptake Inhibitors and Bone Health in an Irish Population
James Mahon*, Richard M Duffy, Clodagh Power, Nessa Fallon, Georgina Steen, Joseph Browne, Mc Casey, Jb Walsh, Kevin McCarroll. St James’s Hospital, Ireland
Disclosures: James Mahon, None
OSTEOPOROSIS - SECONDARY OSTEOPOROSIS: HIV

SU0271 Bone density and microarchitecture in Hepatitis C and HIV coinfected postmenopausal minority women
Michael Yin1, Zhang Chengchen1, Kyle Nishiyama1, Jayesh Shah1, Susan Olender1,
David Ferris2, Mariana Bucovsky1, Ivelisse Colon1, Donald McMahon1, Cosmina Zeana2,
Elizabeth Shane1. 1Columbia University Medical Center, United states, 2Bronx Lebanon
Hospital Center, United states
Disclosures: Michael Yin, None

OSTEOPOROSIS - SECONDARY OSTEOPOROSIS: MOBILITY

SU0272 Testosterone Plus Finasteride Prevents Bone Loss and Inhibits Androgen-Mediated Prostate
Enlargement in a Rodent Spinal Cord Injury Model
Ean Phillips*, Joshua Yarrow, Christine Conover, Andrea Vasconez, Jonathan Alerte,
Taylor Bassett, Stephen Borst, Fan Ye. North Florida/South Georgia Veterans Health
System, United states
Disclosures: Ean Phillips, None

OSTEOPOROSIS - SECONDARY OSTEOPOROSIS: OTHER

SU0273 Adenine Dose Study Modeling Chronic Kidney Disease for One Month in Older Male and
Female BALB/c Mice
Kelly Crane*, William Schroeder, Ryan Clark, Karen King. University of Colorado School
of Medicine, United states
Disclosures: Kelly Crane, None

SU0274 ASBMR 2016 Annual Meeting Young Investigator Award
Anemia is Associated with Fractures Independent of BMD in Elderly Men
Rodrigo Valderrabano*, Jennifer Lee2, Li-Yung Lui3, Andrew R Hoffman2, Steven R.
Cummings3, Eric Orwell1, Joy Y Wu1. 1Division of Endocrinology, Stanford University
School of Medicine, United states, 2Division of Endocrinology, Stanford University School
of Medicine / Palo Alto Veterans Affairs Health Care System, United states, 3San Francisco
Coordinating Center, California Pacific Medical Center, United states, 4Department of
Medicine, Bone & Mineral Unit, Oregon Health & Science University, United states
Disclosures: Rodrigo Valderrabano, None

SU0275 Cortical Thinning in Patients with Primary Sclerosing Cholangitis
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Biomechanics, University Medical Center Hamburg Eppendorf, Germany, Germany,
2Department of Osteology & Biomechanics, University Medical Center Hamburg
Eppendorf, Germany, Germany
Disclosures: Tobias Schmidt, None

SU0276 Disrupted Trabecular Microarchitecture at Both Distal Radius and Tibia in Patients with
Monoclonal Gammapathy of Undetermined Significance
Emily Stein*, Mariana Bucovsky, Jennifer Mosby, Jing Fu, Chengchen Zhang, Kyle
Nishiyama, X Guo, Suzanne Lentzsch, Elizabeth Shane. Columbia University, United
states
Disclosures: Emily Stein, None

SU0277 Effects of Roux-En-Y Gastric Bypass and Sleeve Gastrectomy on Bone Mineral Density and
Marrow Adipose Tissue
Miriam Bredella1, Logan Greenblatt2, Alireza Eajazi2, Martin Torriani1, Elaine Yu2. 1Musculoskeletal Radiology, Massachusetts General Hospital, United states, 2Endocrine
Unit, Massachusetts General Hospital, United states
Disclosures: Elaine Yu, None

SU0278 Endocrine Manifestations of Systemic Mastocytosis in Bone
Kamyar Asadipooya*. Fellow in Endocrinology & Metabolism, NYU School of Medicine,
United states
Disclosures: Kamyar Asadipooya, None
SU0279 Gene Expression Profiling of Osteoblastic Cells Cultured with Lithocholic Acid or Bilirubin. Implications in the Pathogenesis of Osteoporosis in Liver Diseases
Silvia Ruiz-Gaspa`, Albert Parés1, Marta Dubreuil1, Andrés Combalia1, Pilar Peris1, Ana Monegal1, Nuria Guañabens1. 1Metabolic Bone Diseases Unit, Department of Rheumatology, Hospital Clinic, University of Barcelona, IDIBAPS, CIBERehd, Barcelona, Spain, Spain, 2Liver Unit, Hospital Clinic, University of Barcelona, IDIBAPS, CIBERehd, Barcelona, Spain., Spain
Disclosures: Silvia Ruiz-Gaspa`, None

SU0280 Increase in Bone Mineral Density and Trabecular Bone Score in Graves’ Disease After Anti-thyroid Medical Therapy
So Young Ock1, Yong Jun Choi2, Yoon-Sok Chung*2. 1Kosin University, Korea, republic of, 2Ajou University, Korea, republic of
Disclosures: Yoon-Sok Chung, None

OSTEOPOROSIS - SECONDARY OSTEOPOROSIS: TRANSPLANTATION

SU0281 Trabecular Bone score (TBS) and Bone Mineral Density in Recent Kidney Transplantation Patients
Shogo Nakayama*, Eisuke Tomatsu¹, Yasumasa Yoshino¹, Izumi Hiratsuka¹, Sahoko Sekiguchi-Ueda¹, Megumi Shibata¹, Taihei Itoh¹, Hitomi Sasaki¹, Midori Hasegawa¹, Mamoru Kusaka¹, Ryoeichi Shiroki¹, Takashi Kenmochi¹, Yukiyo Yuzawa¹, Kiyotaka Hoshinaga², Atsushi Suzuki¹. ¹Division of Endocrinology & Metabolism, Fujita Health University, Japan, ²Department of Organ Transplant Surgery, Fujita Health University, Japan, ³Department of Urology, Fujita Health University, Japan, ⁴Division of Nephrology, Fujita Health University, Japan
Disclosures: Shogo Nakayama, None

OSTEOPOROSIS - TREATMENT: ANABOLIC AGENTS

SU0282 Abaloparatide-SC has Minimal Effects in Subjects with Mild or Moderate Renal Impairment: Results from the ACTIVE Trial
John P Bilezikian*, Gary Hattersley², Gregory Williams², Ming-Yi Hu², Lorraine A Fitzpatrick², Socrates Papapoulos³. ¹Columbia University College of Physicians & Surgeons, United states, ²Radius Health, Inc., United states, ³Leiden University Medical Center, Netherlands
Disclosures: John P Bilezikian, Merck, 14; Shire, 14; Radius Health, Inc, 14; Amgen, 14; Shire, 13

SU0283 Effect of Recent Fracture on the PINP Response to Teriparatide in Postmenopausal Osteoporosis
Richard Eastell*, John Krege², Damon Disch², Fernando Marin². 1University of Sheffield, England, United Kingdom, ²Eli Lilly & Company, United states
Disclosures: Richard Eastell, Eli Lilly & Company, 13

SU0284 Fracture Incidence and Changes in Back Pain and Quality of Life in Patients with Osteoporosis Treated with Teriparatide: Results from the European Extended Forsteo Observational Study (ExFOS)
Bente Langdahl*, Østen Ljunggren³, Eric Lespessailles³, George Kapetanos⁴, Tomaz Kocjan⁵, Nicola Napoli⁶, Tatjana Nikolić⁷, Pia Eiken⁸, Helmut Petto⁹, Thomas Moll¹⁰, Erik Lindh¹¹, Fernando Marin¹². ¹University Hospital, Aarhus, Denmark, ²University Hospital, Uppsala, Sweden, ³Orléans Hospital, France, ⁴Papageorgiou General Hospital, Thessaloniki, Greece, ⁵University Medical Centre, Ljubljana, Slovenia, ⁶University Campus Bio-Medico, Rome, Italy, ⁷University Hospital, Zagreb, Croatia, ⁸University of Copenhagen, Denmark, ⁹Eli Lilly, Europe, Austria, ¹⁰Eli Lilly, Europe, Switzerland, ¹¹Eli Lilly, Europe, Sweden, ¹²Eli Lilly, Europe, Spain
Disclosures: Bente Langdahl, Eli Lilly, Merck, Amgen and UCB, 15; Eli Lilly, Novo Nordisk, and Orkla Health, 13
OSTEOPOROSIS - TREATMENT: ANTIRESORPTIVE AGENTS

**SU0285** Bone Microarchitecture After Discontinuation of Denosumab in Postmenopausal Women with Low Bone Mass
E Seeman*1, R Zebaze1, JR Zanchetta2, DA Hanley3, A Wang4, C Libanati5, RB Wagman4, 1Austin Health, University of Melbourne, Australia, 2Instituto de Investigaciones Metabólicas, Argentina, 3University of Calgary, Health Sciences Centre, Canada, 4Amgen Inc., United states, 5UCB Pharma, Belgium

Disclosures: E Seeman, Amgen, Allergan, Asahi, Merck Sharp & Dohme, Sanofi, and StraxCorp, 17; Amgen, Asahi, Genzyme, and Warner-Chilcott, 13

**SU0286** Denosumab (DMAb) and Total Lean body Mass: Exploratory Analyses from the FREEDOM Study
Yves Rolland*1, Philippe de Souto Baretto1, Matteo Cesari1, Lisa Hamilton2, Michel Réglađe3, Nico Panacculli4, Lama Kalouche-Khalil5, 1Gerontopôle, Centre Hospitalier Universitaire de Toulouse (Pr Bruno Vellas), France, 2Amgen Ltd., United Kingdom, 3Amgen France, France, 4Amgen Inc, United states, 5Amgen (Europe) GmbH, Switzerland

Disclosures: Yves Rolland, Amgen, Pfizer, 17; Lectalis, Nestlé, Nutricia, Lilly, 13

**SU0287** Influence of glucocorticoids on effect of denosumab on osteoporosis in patients with Japanese rheumatoid arthritis; 12 months of follow-up ~a Multicenter Registry Study~
Yasuhide Kanayama*1, Yuji Hirano2, Nobunori Takahashi3, Shuji Asai3, Naoki Ishiguro3, Toshihisa Kojima3, 1Toyota Kosei Hospital, Japan, 2Toyohashi Municipal Hospital, Japan, 3Nagoya University Hospital, Japan

Disclosures: Yasuhide Kanayama, None

**SU0288** Monthly Oral Ibandronate 100mg Is as Effective as Monthly Intravenous Ibandronate 1mg in Patient Subgroups of the MOVEST Study
Masako Ito*1, Toshitaka Nakamura2, Hiroshi Hagino3, Junko Hashimoto4, Yoshihiro Asao5, Masao Yamamoto6, Koichi Endo7, Kyoko Katsumata7, Rumiko Matsumoto5, Tetsuo Nakano6, Hideki Mizunuma7, 1Nagasaki University, Japan, 2National Center for Global Health & Medicine, Japan, 3Tottori University Faculty of Medicine, Japan, 4Chugai Pharmaceutical Co. Ltd., Japan, 5Taisho Pharmaceutical Co. Ltd., Japan, 6Tamana Central Hospital, Japan, 7Hiroasaki University, Japan

Disclosures: Masako Ito, Chugai Pharmaceutical Co. Ltd., 14; Daiichi Sankyo Inc., 14; Chugai Pharmaceutical Co. Ltd., 14; Astellas Pharma Inc., 14; Ono Pharmaceutical Co. Ltd., 14

**SU0289** Relationship Between Suppression of Bone Turnover Markers and Future Increase in Bone Mineral Density in Risedronate Treatment
Taro Mawatari*1, Ryoichi Muraoka2, Yukihide Iwamoto3, 1Hamanomachi Hospital, Japan, 2EA Pharma Co., Ltd., Japan, 3Department of Orthopaedic Surgery, Kyushu University, Japan

Disclosures: Taro Mawatari, None

**SU0290** Safety, Pharmacokinetics, and Changes in Bone Metabolism Associated with Zoledronic Acid Treatment in Japanese Patients with Primary Osteoporosis
Satoshi Tanaka1, Masatake Shiraki2, Hiroaki Suzuki3, Satoko Ueda4, Toshitaka Nakamura3, 1Asahi Kasei Pharma corporation, Japan, 2Research Institute & Practice for Involutional Diseases, Japan, 3Gotanda Rehabilitation Hospital, Japan

Disclosures: Satoko Ueda, Asahi Kasei Pharma Corporation, 17

**SU0291** The Incidence and Predictors of Acute Phase Response to Zoledronic Acid in Asian compared to Non-Asian Women in the HORIZON Pivotal Fracture Trial
Dennis M. Black*1, Anne Schafer2, Tiffany Kim3, Jane A. Cauley4, Satoko Ueda5, Ian R. Reid6, 1Department of Epidemiology & Biostatistics, University of California San Francisco, United states, 2University of California, San Francisco & the San Francisco VA Medical Center, United states, 3VA Medical Center San Francisco, United states, 4Department of Epidemiology, University of Pittsburgh, United states, 5Asahi-Kasei, Japan, 6Department of Medicine, University of Auckland, New Zealand, New zealand

Disclosures: Dennis M. Black, Asahi-Kasei, 13
SU0292 Adherence to Osteoporosis Treatment in Patients with Lifestyle Related Diseases
Satoshi Sasaki*, Naohisa Miyakoshi, Michio Hongo, Yuji Kasukawa, Yoichi Shimada. 1Higashinaruse national health insurance clinic, Japan, 2Akita University Graduate School of Medicine, Japan
Disclosures: Satoshi Sasaki, None

SU0293 Long-Term Persistence with Osteoporosis Therapies among Postmenopausal Women in a Commercially-Insured Population in the United States
Emily Durden, Lionel Pinto*, Lorena Lopez-Gonzalez, Paul Juneau, Richard Barron. 1Truven Health Analytics, United states, 2Amgen Inc., United states, 3Amgen Inc, United states
Disclosures: Lionel Pinto, Amgen, 13

SU0294 Optimal conditions to increase Bone mineral density by the combination therapy of bisphosphonates and active vitamin D3 analog is site specifically different between lumbar spine and femoral neck
Mayuko Kinoshita*, Muneaki Ishijima, Haruka kaneko, Liu Liz, Shinnosuke Hada, Hitoshi Arita, Jun Shiozawa, Anwar Yusup, Hidetoshi Nojiri, Yuko Sakamoto, Kazuo Kaneko. 1Department of Orthopaedics & Motor Organ, Juntendo University Graduate School of Medicine, Japan, 2Sportology Center, Juntendo University Graduate School of Medicine, Japan, 3Department of Orthopaedics, Juntendo Tokyo Koto Geriatric Medical Center, Japan, 4Department of Orthopaedics, Juntendo Nerima Hospital, Japan
Disclosures: Mayuko Kinoshita, None

SU0295 Additional use of VitaminD and Intra-venous Ibandronate could be a Solution of Insufficient Effect of Solitary use of Oral Bisphosphonates or SERM for Osteoporosis Patients in Japan
yoichi kishikawa*. affiliated, Japan
Disclosures: yoichi kishikawa, None

SU0296 Persistence with Osteoporosis Therapies in Postmenopausal Women in a Large US National Health Plan
Benjamin Chastek*, Lung-I Cheng, John white, Leslie Spangler, Darshan Mehta, Rich Barron. 1Optum, United states, 2Amgen, United states, 3University of Southern California, United states
Disclosures: Benjamin Chastek, Optum, 13

SU0297 Utility of 18-Fluoride PET in Medication-Related Osteonecrosis of the Jaw
Ie-Wen Sim*, Michael Hofman, Claudine Tsao, Gelsomina Borromeo, John Seymour, Peter Ebeling. 1Melbourne Medical School, University of Melbourne, Australia, 2Centre for Cancer Imaging, Peter MacCallum Cancer Centre, Australia, 3Melbourne Dental School, University of Melbourne, Australia, 4Department of Haematology, Peter MacCallum Cancer Centre, Australia, 5Department of Medicine, Monash University, Australia
Disclosures: Ie-Wen Sim, None

PARACRINE REGULATORS: CYTOKINES AND IMMUNOMODULATORS

SU0298 Activation of the adapter protein ShcA allows Oncostatin M to induce RANKL expression and osteoclast formation more effectively than other gp130 cytokines
Pedro Paulo Chaves Souza*, Emma Persson, Petra Henning, Howard Herschel Conaway, Ulf H. Lerner. 1Faculty of Dentistry at Araraquara, Department of Physiology & Pathology, UNESP, Brazil, 2Department of Radiation Sciences, Oncology, Umeå University, Sweden, 3Centre for Bone & Arthritis Research at the Sahlgrenska Academy, University of Gothenburg, Sweden, 4Department of Physiology & Biophysics, University of Arkansas for Medical Sciences, United states
Disclosures: Pedro Paulo Chaves Souza, None
SU0299  Enhancing therapeutic potential of macrophages for bone regeneration: Effect of Ca$^{2+}$ loaded poly-lactic acid (PLLA) microspheres
Xiaobing Jin*1, Ming Dang2, Amy Koh3, Peter Ma4, Laurie McCauley1. 1Department of Periodontics & Oral Medicine, University of Michigan, United states, 2Macromolecular Science & Engineering Center, University of Michigan, United states, 3Department of Periodontics & Oral Medicine, University of Michigan, United states, 4Department of Biologic & Material Sciences, University of Michigan, United states
Disclosures: Xiaobing Jin, None

SU0300  Reduced microRNA21 and Enhanced HMGB1 Release: a Mechanistic Explanation for Increased Osteocyte Apoptosis and Resorption in the Absence of Cx43 and with Aging
Hannah Davis*1, Rafael Pacheco-Costa1, Emily Atkinson1, Mircea Ivan1, Angela Bruzzone1, Teresita Bellido1, Lilian Plotkin1. 1Indiana University School of Medicine, United states, 2Indiana University School of Dentistry, United states
Disclosures: Hannah Davis, None

PARACRINE REGULATORS: RANK, RANKL AND OPG

SU0301  Colonic Osteoprotegerin (OPG) participates in Innate Immune Responses to Luminal Bacteria
Anu Maharjan*1, Raghunath Ramanaraisinha2, Anthony Vella2, Francisco Sylvestre1. 1University of North Carolina, United states, 2University of Connecticut, United states
Disclosures: Anu Maharjan, None

PARACRINE REGULATORS: WNT SIGNALING

SU0302  Oncostatin M robustly increases Wnt16 expression in osteoblasts limiting oncostatin M-induced osteoclastogenesis
Petra Henning*1, Sofia Movére-Skrtec1, Pedro P. C. Souza2, Anna Westerlund3, Claes Ohlsson1, Ulf H. Lerner1. 1Centre for Bone & Arthritis Research at the Sahlgrenska Academy, University of Gothenburg, Sweden, 2Department of Physiology & Pathology, Araraquara School of Dentistry, University Estudual Paulista (UNESP), Brazil
Disclosures: Petra Henning, None

PRECLINICAL MODELS – NUTRITION: GENERAL

SU0303  Effect of Dried Plum Supplementation on Partial Geometrical Changes of Bone in Ovariectomy-induced Sprague-Dawley Rats
Shirin Pourafshar*, Negin Navaei, Neda Akhavan, Elizabeth Foley, Kelli George, Bahram Arjmandi. Department of Nutrition, Food & Exercise Sciences, Florida State University, Tallahassee, FL; Center for Advancing Exercise & Nutrition Research on Aging (CAENRA), Florida State University, Tallahassee, FL, United states
Disclosures: Shirin Pourafshar, None

SU0304  Healthy Dietary Pattern During Adolescence in Females Is Positively Associated with Bone Strength in Adulthood
Elham Movassagh*1, Saija Kontulainen2, Adam Baxter-Jones3, Susan Whiting1, Hassan Vatanparast1. 1College of Pharmacy & Nutrition, University of Saskatchewan, Canada, 2College of Kinesiology, University of Saskatchewan, Canada, 3College of Graduate Studies & Research, University of Saskatchewan, Canada
Disclosures: Elham Movassagh, None

PRECLINICAL MODELS – NUTRITION: MACRONUTRIENTS

SU0305  Antioxidant Avenanthramides Prevent Osteoblast and Osteocyte Apoptosis and Induce Osteoclast Apoptosis by Nrf2-Independent Mechanisms
Gretel G Pellegrini*1, Cynthia C Morales2, Taylor C Wallace3, Lilian I Plotkin1, Teresita Bellido1. 1Indiana University School of Medicine, Roudebush Veterans Administration Medical Center, Indianapolis, United states, 2Indiana University School of Medicine, United states, 3National Osteoporosis Foundation, United states
Disclosures: Gretel G Pellegrini, None

PRECLINICAL MODELS – NUTRITION: MICRONUTRIENTS

SU0306  Gene Expression of Bone MMP9, MMP13, and VEGF in the Hypovitaminosis D Kyphotic Pig Model
Laura Amundson*, Thomas Crenshaw. UW-Madison, United states
Disclosures: Laura Amundson, None
SU0307  Effects of pre-existing inflammatory conditions on development of tooth extraction-induced BRONJ and DRONJ lesions in mice
Teresa Kim, Minju Song, Sol Kim, Cindy Lee, Drake Williams, Ki-Kyuk Shin, Mo Kang, No-Hee Park, Reuben Kim*. UCLA, United states
Disclosures: Reuben Kim, None

SU0308  Intermittent Ibandronate Maintains Bone Mass and Bone Biomechanical Strength after Parathyroid Hormone Treatment in Ovariectomized Rats
Satoshi Takeda*, Sadaoki Sakai1, Keisuke Tanaka1, Haruna Tomizawa1, Kenichi Serizawa1, Kenji Yogo1, Koji Urayama2, Koichi Endo1, Junko Hashimoto1, Yoshihiro Matsumoto1, 1Chugai Pharmaceutical Co., Ltd., Japan, 2Taisho Toyama Pharmaceutical Co., Ltd., Japan
Disclosures: Satoshi Takeda, Chugai Pharmaceutical Co., Ltd., 17

SU0309  Morphological Changes in Osteoclasts by Condensed Minodronic Acid: The Estimated Concentration at Bone Resorption Sites Reach the Antagonistic Activity against Purinergic P2X2/3 Receptors
Makoto Tanaka*, Akihiro Hosoya2, Hiroshi Mori3, Ryoji Kayasuga3, Hiroaki Nakamura2, Hidehiro Ozawa2. 1Research headquarters, Ono Pharmaceutical Co., Ltd., Japan, 2Department of Oral Histology, Matsumoto Dental University, Japan, 3Research headquarters, Ono Pharmaceutical Co., Ltd., Japan
Disclosures: Makoto Tanaka, None

SU0310  CaMKK2 inhibition as a therapeutic strategy to accelerate bone fracture repair
Justin Williams*, Yinghua Cheng, Yong Li, Roshni Patel, Anuradha Valiya Kambrath, Uma Sankar. Indiana University School of Medicine, United states
Disclosures: Justin Williams, None

SU0311  Sclerostin Blockade and Zoledronic Acid Improve Bone Mass and Strength in Mice with Exogenous Hyperthyroidism
Elena Tsourdi*, Franziska Lademann1, Michael Ominsky2, Lorenz Hofbauer1, Martina Rauner1. 1TU Dresden Medical Center, Germany, 2Center Metabolic Disorders, Amgen, Inc., United states
Disclosures: Elena Tsourdi, None

SU0312  Skeletal Responses to the Discontinuation of Intermittent Parathyroid Hormone (PTH) Treatment in Intact and Ovariectomized Rats
Wei-Ju Tseng*, Wonsae Lee, Wei Tong, Luqiang Wang, Xiaoyuan Ma, Hongbo Zhao, Yihan Li, Chih-Chiang Chang, Chantal de Bakker, Ling Qin, X. Sherry Liu. University of Pennsylvania, United states
Disclosures: Wei-Ju Tseng, None

SU0313  Tanshinol-loaded Bone-targeting Liposome Accelerates Delayed Fracture Healing in Mice
Yanzhi Liu*, Zhenshan Jia1, Xiang Gao2, Xiaoyan Wang2, Xiaobei Wang2, Liao Cui1, Dong Wang2. 1Guangdong Key laboratory for Research & Development of Natural Drugs, Guangdong Medical University, China, 2Nebraska Medical Center, United states, 3Stem Cell research & Cellular Therapy Center, Affiliated Hospital of Guangdong Medical University, China
Disclosures: Yanzhi Liu, None

SU0314  Calcitonin alleviates hyperalgesia in osteoporotic rats by modulating serotonin transporter activity
Jia-Fwu Shyu*, Chin-Bin Yeh2, Tzu-Hui Chu1, Jung-Tzu Cheng1, Ni-Ko Wei1, Wei-Yu Chen1, Tien-Hua Chen3. 1Department of Biology & Anatomy, National Defense Medical Center, Taiwan, province of china, 2Department of Psychiatry, National Defense Medical Center, Tri-Service General Hospital, Taiwan, province of china, 3Institute of Anatomy & Cell Biology, School of Medicine, National Yang Ming University, Taiwan, province of china
Disclosures: Jia-Fwu Shyu, None
SU0315 Collagen-Induced Arthritis: Densitometry and TRACP-5b Assessments in Rats
Aurore Varela*1, Gabrielle Boyd1, Dominique Poulin1, Rana Samadfam1, Jacquelin Jolette1, Rogely Boyce2, Kathrin Locher2, Marina Stolina2. 1Charles River Laboratories, Canada, 2AMGEN Inc., United States
Disclosures: Aurore Varela, None

SU0316 Purinergic P2Y12 Receptor Antagonists Inhibit Bone Cell Function In Vitro and Affect Bone Turnover in Adult Female Rats
Maria Ellegaard*1, Isabel R Orriss2, Jessal J Patel2, Solveig Petersen1, Ming Ding3, Saba Hamza4, Niklas Rye Jorgensen1. 1Research Centre for Ageing & Osteoporosis, Dep. of Clinical Biochemistry & Endocrinology, Rigshospitalet, Denmark, 2Comparative Biomedical Sciences, Royal Veterinary College, United Kingdom, 3Department of Orthopaedic Surgery & Traumatology, Odense University Hospital, University of Southern Denmark, Denmark
Disclosures: Maria Ellegaard, None

SU0317 The Effects of Intra-Articular Treatment with Recombinant Human Bone Morphogenetic Protein 7 (rhBMP-7) on the Development of Post-Traumatic Osteoarthritis in Surgically Induced Rat Models
Jukka Morko*, ZhiQi Peng, Katja M Fagerlund, Yvonne Konkol, Jukka P Rissanen, Jenni Bernoulli, Jussi M Halleen. Pharmatest Services Ltd, Finland
Disclosures: Jukka Morko, None

SU0318 The role of sclerostin in bone metabolism in the hypoxic brain damage mice model
Sun Yong Song1, Da Hea Seo*1, Yoon-Kyum Shin2, Sung Rae Cho2, Yumie Rhee1. 1Department of Internal Medicine, Endocrine Research Institute, Yonsei University College of Medicine, Korea, republic of, 2Department & Research Institute of Rehabilitation Medicine, Yonsei University College of Medicine, Korea, republic of
Disclosures: Da Hea Seo, None

RARE BONE DISEASES: FIBROUS DYSPLASIA

SU0319 Hearing Loss and Otologic Outcomes in Fibrous Dysplasia
Alison Boyce*1, Carmen Brewer2, Timothy DeKlotz3, Christopher Zalewski2, Kelly King2, Michael Collins1, H. Jeffrey Kim1. 1Section on Skeletal Disorders & Mineral Homeostasis, Craniofacial & Skeletal Diseases Branch, National Institute of Dental & Craniofacial Research, National Institutes of Health, United States, 2Otolaryngology Branch, National Institute of Deafness & Other Communication Disorders, National Institutes of Health, United States, 3Department of Otolaryngology-Head & Neck Surgery, Georgetown University Hospital, United States
Disclosures: Alison Boyce, None

SU0320 Newly formed heterotopic bone in Fibrodysplasia Ossificans Progressive still requires Activin A for maintenance and expansion
LiQin Xie*, Lily Huang, Nanditha Das, Xialing Wen, Lili Wang, Genevieve Makhoul, Andrew Murphy, Viincent Idone, Aris Economides, Sarah Hatsell. Regeneron, United States
Disclosures: LiQin Xie, None

RARE BONE DISEASES: HYPOPHOSPHATASIA

SU0321 Denosumab-related Atypical Femoral Fracture in an Elderly Woman with Childhood-onset Hypophosphatasia Due to a Novel Mutation (p.Val121Met)
Michaël R Laurent*1, Evelien Gielen1, Etienne Mornet2. 1Center for Metabolic Bone Diseases, University Hospitals Leuven, Belgium, 2Unité de Génétique Constitutionnelle, CHU Versailles, France
Disclosures: Michaël R Laurent, Novartis, 14; Alexion, 14
SU0322 Chiari 1 Malformation in Three Consecutive Generations in a Family with X-Linked Hypophosphatemic Rickets
Gary S. Gottesman*, Ghada A. Otaify2, Valerie A. Wollberg3, Vinieth N. Bijanki1, Shenghui Duan1, Margaret Huskey4, C. Charles Gu5, William H. McAlister6, Katherine L. Madson7, Steven Mumm4. 1Center for Metabolic Bone Disease & Molecular Research, Shriners Hospital for Children, United states, 2Department of Clinical Genetics, Division of Human Genetics & Genome Research, Center of Excellence for Human Genetics, National Research Centre, Egypt, 3Center for Metabolic Bone Disease & Molecular Reserach, Shriners Hospital for Children, United states, 4Division of Bone & Mineral Diseases, Department of Internal Medicine, Washington University School of Medicine at Barnes-Jewish Hospital, United states, 5Division of Biostatistics, Washington University School of Medicine at Barnes-Jewish Hospital, United states, 6Department of Pediatric Radiology, Mallinckrodt Institute of Radiology, Washington University School of Medicine at St. Louis Children’s Hospital, United states, 7Center for Metabolic Bone Disease & Molecular Research Shriners Hospitals for CHildren - St. Louis, United states
Disclosures: Gary S. Gottesman, None

SU0323 Significant Impairments in Joint Mobility and Range of Function in Adult Patients with XLH
Erika J. Parisi*, Richard Feinn1, Samantha Ferraro2, Marie Frey3, Juan C. Garbalosa4, Ramon Gonzalez5, Tania Grugurich2, Flavia Muchemi3, Keith Steigbigel1, Steven M. Tommasini4, Carolyn M. Macica1, 1Quinnipiac University, Frank H. Netter School of Medicine, United states, 2Quinnipiac University, School of Health Sciences, Department of Diagnostic Imaging, United states, 3Quinnipiac University, School of Health Sciences, Department of Physical Therapy, United states, 4Yale University School of Medicine, Department of Orthopaedics & Rehabilitation, United states
Disclosures: Erika J. Parisi, None

RARE BONE DISEASES: OSTEOGENESIS IMPERFECTA

SU0324 Bone Robusticity in Osteogenesis Imperfecta Diverges from Established Patterns
Kate Citron1, Cosmo Veneziale1, Josephine Marino1, Erin Carter1, Karl Jepsen2, Cathleen Raggio*1. 1Hospital for Special Surgery, United states, 2University of Michigan, United states
Disclosures: Cathleen Raggio, None

SU0325 Efficacy of Monthly Alendronate Infusion for Osteogenesis Imperfecta
Ikuma Fujiwara*1, Chisumi Sogi2, Sayaka Kawashima1, Miki Kamimura1, Junko Kanno1. 1Tohoku University Hospital, Japan, 2Tohoku University Hospitala, Japan
Disclosures: Ikuma Fujiwara, None

SU0326 Long Term Follow-up in Children with Osteogenesis Imperfecta type VI
Pamela Trejo*, Kathleen Montpetit1, Telma Palomo2, Francis Glorieux3, Frank Rauch1. 1Shriners Hospital for Children Canada, Canada, 2Universidade Federal De Sao Paulo (UNIFESP), Brazil
Disclosures: Pamela Trejo, None

SU0327 Response of human osteogenesis imperfecta bone tissue to sclerostin antibody in immunodeficient mouse xenograft model
Rachel Surowiec*, Basma Khoury2, Michelle Caird2, Kenneth Kozloff1. 1Department of Orthopaedic Surgery, Department of Biomedical Engineering, University of Michigan, United states, 2Department of Orthopaedic Surgery, University of Michigan, United states
Disclosures: Rachel Surowiec, None

RARE BONE DISEASES: OTHER RARE BONE DISEASES

SU0328 Atypical Femur Fractures in an Adolescent with X-linked Osteoporosis Based On PLS3 Mutation
Denise van de Laarschot1, M.Carola Zillikens*2. 1Erasmus MC department of Internal Medicine, Netherlands, 2Erasmus MC, Department of Internal Medicine, Netherlands
Disclosures: M.Carola Zillikens, None
SU0329 Changes in Bone Micro-Architecture During the Development of Complex Regional Pain Syndrome After a Distal Radius Fracture: a Case Report
Frans Heyer, Joost de Jong, Paul Willems, Rob Smeets, Jacobus Arts, Martijn Poeze, Piet Geusens, Bert van Rietbergen, Joop van den Bergh.
1NUTRIM & Department of General Surgery, MUMC+, Netherlands, 2NUTRIM & Department of Rheumatology, MUMC+, Netherlands, 3Department of Orthopedic Surgery, MUMC+, Netherlands, 4CAPHRI Department of Rehabilitation Medicine, Maastricht University, Netherlands, 5CAPHRI & Department of Orthopedic Surgery, MUMC+, Netherlands, 6CAPHRI & Department of Rheumatology, MUMC+, Netherlands, 7Eindhoven University of Technology, Netherlands, 8Department of Internal Medicine, VieCuri MC & MUMC+, Netherlands
Disclosures: Frans Heyer, None

SU0330 Description of a novel variant in SMAD3 presenting in a patient with osteoporotic fractures and arterial dissection
Laura Ryan, Dawn Allain. The Ohio State University Wexner Medical Center, United states
Disclosures: Laura Ryan, None

SU0331 Effect of Gnathodiaphyseal Dysplasia (GDD) Mutations on Osteoblast Differentiation
Lingling Jin, Yi Liu, Fanyue Sun, I-Ping Chen, Michael T Collins, Keith Blackwell, Albert S Woo, Ying Hu, Ernst J Reichenberger.
1Beijing Institute of Dental Research, Beijing Stomatological Hospital, Capital Medical University, China, 2Department of Maxillofacial Surgery, Beijing Stomatological Hospital, Capital Medical University, China, 3Center for Regenerative Medicine & Skeletal Development, Department of Reconstructive Sciences, University of Connecticut Health, United states, 4Department of Oral Health & Diagnostic Sciences, University of Connecticut Health, United states, 5National Institute of Dental & Craniofacial Research, United states, 6Department of Head & Neck Surgery, UCLA, United states, 7Division of Plastic Craniofacial & Pediatric Surgery, Brown University Warren Alpert Medical School, United states, 8Beijing Institute of Dental Research, Beijing Stomatological Hospital, Capital Medical University, Beijing, China
Disclosures: Ernst J Reichenberger, None

SU0332 Hypoparathyroidism Caused by Autoimmune Polyendocrine Syndrome type 1 (APS1): Relationship Between Anti-cytokines Autoantibodies and Clinical and Molecular Features in a Brazilian Set of Patients
Fernanda Weiler, Part Peterson, Magnus Dias-da-Silva, Marise Lazaretti-Castro.
1Federal University of Sao Paulo - UNIFESP, Brazil, 2University of Taru, Estonia
Disclosures: Fernanda Weiler, None

SU0333 Improvement of Giant Cell Tumors of the Jaw Treated with Denosumab: A Case Series
Tara Kim, Gianina Usera, Stuart Weinerman. Northwell, United states
Disclosures: Tara Kim, None

SU0334 Regulation of BMP Receptor Dynamics and Signaling by Cell Surface Heparan Sulfate Proteoglycans
Christina Mundy, Paul Billings, Maurizio Pacifici. Children’s Hospital of Philadelphia, United states
Disclosures: Christina Mundy, None

SU0335 Using the RUDY Study Platform to Capture Quality of Life of Adults with Rare Diseases of the Bone
1Nuffield Department of Orthopaedics, Rheumatology & Musculoskeletal Sciences, University of Oxford, United Kingdom, 2Centre for Health, Law & Emerging Technologies (HeLEX), University of Oxford, United Kingdom
Disclosures: Lydia Forestier-Zhang, None
SARCOPENIA, MUSCLE AND FALLS: FALLS ASSESSMENT AND EPIDEMIOLOGY

SU0336 Poor Agreement of Self-reported Fall Injuries and Medicare Claims: the Health, Aging and Body Composition (Health ABC) Study  
Elsa S. Strotmeyer*1, Mary E. Winger1, Naoko Sagawa1, Diane G. Ives1, Robert M. Boudreau1, Julie M. Donohue1, Steven M. Albert1, Ann V. Schwartz2, Michael Nevitt2, Tamara B. Harris3, Teresa M. Waters4, Jane A. Cauley1. 1University of Pittsburgh, United states, 2University of California, United states, 3National Institute on Aging, United states, 4University of Tennessee, United states  
Disclosures: Elsa S. Strotmeyer, None

SU0337 Variability in Prevalence of Low Skeletal Muscle Mass in Mexican Women Depending on How It is Defined  
Jose Francisco Torres-Naranjo*1, Roberto Gabriel Gonzalez-Mendoza2, Juan R Lopez y Taylor3, Alejandro Gaytan2, Noe Albino Gonzalez-Gallegos3, Douglas Solorzano2. 1Centro Universitario del Norte, Universidad de Guadalajara, Mexico, 2Instituto de Ciencias Aplicadas a la Actividad Fisica y al Deporte, Universidad de Guadalajara, Mexico  
Disclosures: Jose Francisco Torres-Naranjo, None

SARCOPENIA, MUSCLE AND FALLS: GENERAL

SU0338 Muscle Function but Not Mass is Correlated with the AM-PAC TM Mobility Score  
Bjoern Buehring*1, Ellen Siglinsky1, Yosuke Yamada2, Diane Krueger1, Mahalakshmi Shankaran3, Scott Turner4, Greg Czerwieniec2, Marc Hellerstein1, William Evans1, Dale Schoeller4, Neil Binkely1. 1Osteoporosis Clinical Research Program, University of Wisconsin-Madison, United states, 2National Institutes of Biomedical Innovation, Health & Nutrition, Japan, Japan, 3KineMed, Inc., United states, 4Nutritional Sciences, University of Wisconsin-Madison, United states  
Disclosures: Bjoern Buehring, GE/Lunar, 100; Kinemed, 100

SU0339 Muscle Strength and Cognition: An Association In Older Women  
Julie Pasco*, Amanda Stuart, Sharon Brennan-Olsen, Kara Holloway, Lana Williams, Mark Kotowicz. Deakin University, Australia  
Disclosures: Julie Pasco, None

SU0340 Prevalence of Sarcopenia and Osteosarcopenia  
Katerina Trajanoska*1, Josje Schoufour1, Sirwan L. Darweesh1, Carolina Medina-Gomez2, Carola M.C. Zillikens3, Andre G. Uitterlinden4, Arfan M. Ikram1, Oscar H. Franco1, Fernando Rivadeneira3. 1Department of Epidemiology, Erasmus Medical Center, Rotterdam, the Netherlands, Netherlands, 2The Generation R Study Group, Erasmus Medical Centre, Rotterdam, The Netherlands, Netherlands, 3Department of Internal Medicine, Erasmus Medical Center, Rotterdam, the Netherlands, Netherlands, 4Department of Internal Medicine, Erasmus Medical Center, Rotterdam, the Netherlands, Netherlands  
Disclosures: Katerina Trajanoska, None

SU0341 Use of jumping mechanography to predict physical function in older women  
Kimberly Hannam, Jon Tobias, Avan Aihie Sayer, Emma Clark, Celia Gregson*. University of Bristol, United Kingdom  
Disclosures: Celia Gregson, None

SARCOPENIA, MUSCLE AND FALLS: SARCOPENIA DEFINITION, ASSESSMENT AND EPIDEMIOLOGY

SU0342 DXA Body Composition (BC) Should be Assessed in all Geriatric Patients Referred for DXA Bone Mineral Density (BMD) Assessment  
Angela Juby*, Christopher Davis, Suglo Minimaana. University of Alberta, Canada  
Disclosures: Angela Juby, None

SU0343 Identification and Diagnostic Criteria for Osteosarcopenic Obesity Syndrome in Older Women  
Jasminka Ilich*1, Owen Kelly2. 1Florida State University, United states, 2Abbott Nutrition, United states  
Disclosures: Jasminka Ilich, None
SU0344 Semi-automated quantification of inter- and intra-muscular fat in magnetic resonance images of the mid-leg: validity & reliability
Andy Kin On Wong*, Eva Szabo1, Marta Erlandson2, Marshall S. Sussman3, Sravani Duggina4, Shannon Reitsma4, Hana Gillick4, Lesley Beaumont5, Jonathan D. Adachi4, Angela M. Cheung1. 1University Health Network, Canada, 2University of Saskatchewan, Canada, 3University of Toronto, Canada, 4McMaster University, Canada
Disclosures: Andy Kin On Wong, None

SKELETAL DEVELOPMENT: GROWTH AND DEVELOPMENT

SU0345 Brittleness in BMP2 Knockout Bones - Relation to Porosity, Cellularity, and Woven Bone Content
Zacharie Toth1, Simon Tang2, Sarah McBride-Gagyi3. 1Saint Louis University, United states, 2Washington University, United states
Disclosures: Sarah McBride-Gagyi, None

SU0346 Exercise Prior to and During Pregnancy Ameliorates Bone Deficits During Late Gestation in Female Rats Born Small Without Adverse Effects from Consuming a High Fat Diet
Kristina Anevska*, Dayana Mahizir3, Andrew Jefferies4, John Wark5, Mary Wlodek2, Tania Romano4. 1Department of Physiology, Anatomy & Microbiology, La Trobe University & Department of Physiology, The University of Melbourne, Australia, 2Department of Physiology, The University of Melbourne, Australia, 3Department of Medicine, The University of Melbourne & Bone & Mineral Medicine, Royal Melbourne Hospital, Australia, 4Department of Physiology, Anatomy & Microbiology, La Trobe University, Australia
Disclosures: Kristina Anevska, None

SU0347 Gene Regulatory Network via BRCA1 and BRCA2 Is Critical for Craniofacial Bone Development
Kohei Kitami*, Megumi Kitami, Yoshihiro Komatsu. The University of Texas Medical School at Houston, United states
Disclosures: Kohei Kitami, None

SU0348 Methylphenidate affects cortical bone microstructure via osteoclast regulation
Sardar Uddin*, Dennis Fricke2, Abisha Vijayashanthan3, Courtney Lowinger2, Liam Jermyn1, Panayotis Thanos2, Michael Hadjiargyrou Hadjiargyrou4, David Komatsu1. 1Stony Brook University, United states, 2SUNY University at Buffalo, United states, 3SUNY University of Buffalo, United states, 4New York Institute of Technology, United states
Disclosures: Sardar Uddin, None

SU0349 Role of Grip Strength, Physical Activity, and Neuromuscular Performance in Predicting Bone Properties and Strength at the Radius and Tibia in Children
Kelsey Bjorkman*, Joel Lanovaz1, Chantal Kawalilak2, Whitney Duff3, Jd Johnston3, Saija Kontulainen1. 1University of Saskatchewan, College of Kinesiology, Canada, 2University of Saskatchewan, College of Engineering, Department of Mechanical Engineering, Canada, 3University of Saskatchewan, College of Medicine, Department of Gastroenterology, Canada
Disclosures: Kelsey Bjorkman, None

SU0350 Role of Sperm-Associated Antigen-17 Gene in Skeletal Dysplasia
Maria Teves*, Sharon L Hzy2, Zvi Schwartzz, Barbara D Boyan3, Jerome F Strauss III1. 1School of Medicine, Virginia Commonwealth University, United states, 2School of Engineering, Virginia Commonwealth University, United states
Disclosures: Maria Teves, None

SU0351 Teriparatide Effects on Mast Cells During Critical Defect Healing in a Murine Cranial Window Model
Longze Zhang*, Xinping Zhang, Edward Schwarz. URMC, University of Rochester, United states
Disclosures: Longze Zhang, None
ADULT METABOLIC BONE DISORDERS: OTHER ADULT METABOLIC BONE DISORDERS

LB-SU0352 Severe Hypophosphatemia in Adulthood Associated with PHEX 3'-UTR Mutation C.*231A>G Near the Polyadenylation Signal
Beatrix Ramirez*1, Fiona Cook1, Steven Mummm2, Gary Gottesman2, Katherine Madson2, Michael Whyte2. 1Division of Endocrinology, Brody School of Medicine, United states, 2Center for Metabolic Bone Disease & Molecular Research, Shriners Hospital for Children, United states

Disclosures: Beatrix Ramirez, None

BIOMECHANICS AND BONE QUALITY: GENERAL

LB-SU0353 Novel ELISA for the measurement of human Periostin
Manfred Tesarz, Elisabeth Gadermaier*, Gabriela Berg, Gottfried Himmler. The Antibody Lab GmbH, Vienna, Austria, Austria

Disclosures: Elisabeth Gadermaier, None

BONE TUMORS AND METASTASIS: MECHANISMS OF BONE METASTASIS

LB-SU0354 Knock-down of the vitamin D receptor in human breast cancer cells increases metastatic potential to bone via a Wnt/ E-cadherin signaling pathway
Konstantin Horas1, Yu Zheng1, Collette Fong-Yee1, Yunzhao Chen1, Jeremy Qiao1, Mingxuan Gao1, Nancy Mourad2, Michelle McDonald2, Peter Croucher2, Hong Zhou1, Markus Seibel*1. 1Bone Research Program, ANZAC Research Institute, The University of Sydney, Australia, 2Garvan Inst of Med Research, Australia

Disclosures: Markus Seibel, None

CHONDROCYTES AND CARTILAGE MATRIX: GENERAL

LB-SU0355 Tamoxifen-Induced Deletion of the Glucocorticoid Receptor in Chondrocytes Enhances K/BxN Serum–Induced Arthritis in Mice
Jinwen Tu*1, Shihani Stoner1, Yaqing Zhang1, Di Chen2, Jan Tuckermann3, Mark S Cooper4, Markus J Seibel5, Hong Zhou1. 1Bone Research Program, ANZAC Research Institute, University of Sydney, Australia, 2Tissue Department of Biochemistry, Rush University Medical Center, United states, 3Institute of General Zoology & Endocrinology, University of Ulm, Germany, 4Adrenal Steroid Laboratory, ANZAC Research Institute, University of Sydney, Australia, 5Bone Research Program, ANZAC Research Institute, University of Sydney; 5Department of Endocrinology & Metabolism, Concord Hospital, Australia

Disclosures: Jinwen Tu, None

LB-SU0356 The role of DICAM in endochondral ossification
Min-Su Han*, Yoon-Kwan Jung, Seung-Woo Han, Hye-Ri Park, Eun-Ju Lee, Ji-Ae Jang, Gun-Woo kim. Daegu Fatima Hospital, Korea, republic of

Disclosures: Min-Su Han, None
ENERGY METABOLISM AND BONE: FAT AND BONE

LB-SU0357 Osteoblast-specific deletion of Tsc1 leads to reduced osteoblastogenesis and enhanced bone marrow adipogenesis in vivo
Qi Han*1, Kai Liu2, Yuqiao Zhou3, Qianming Chen3, Hong-Jiao Ouyang4, 1Department of Oral Biology, School of Dental Medicine, University of Pittsburgh; State Key Laboratory of Oral Diseases, West China School of Stomatology, Sichuan University, United states, 2Department of Oral Biology, School of Dental Medicine, University of Pittsburgh, United states, 3State Key Laboratory of Oral Diseases, West China School of Stomatology, Sichuan University, China, 4Departments of Endodontics & Oral Biology, School of Dental Medicine, University of Pittsburgh Cancer Institute, McGowan Institute for Regenerative Medicine, University of Pittsburgh, United states
Disclosures: Qi Han, None

GENOMICS, TRANSCRIPTOMICS, PROTEOMICS AND METABOLOMICS OF MUSCULOSKELETAL DISEASE: PROTEOMICS

LB-SU0358 Maternal Obesity and Trabecular Bone Microarchitecture in C57BL Mice
Lauren Coheley*, Richard Lewis. The University of Georgia, United states
Disclosures: Lauren Coheley, None

LB-SU0359 Identification of hip BMD loss and fracture risk markers through population-based serum proteomic analyses
Carrie Nielson*1, Jack Wiedrick1, Jon Jacobs2, Doug Bauer3, Nancy Lane4, Peggy Cawthon5, Vlad Petyuk6, Erin Baker7, Richard Smith2, Jodi Lapidus1, Eric Orwoll1, 1Oregon Health & Science University, United states, 2Pacific North West National Laboratory, United states, 3University of California, San Francisco, United states, 4UC Davis Health System, United states, 5California Pacific Medical Center Research Institute, United states
Disclosures: Carrie Nielson, None

HORMONAL REGULATORS: VITAMIN D AND ANALOGS

LB-SU0360 Evidence for a key role of histone methylation in the control of the biological function of vitamin D: aberrant regulation with aging
Vaishali Veldurthy*1, Ki-in Kim2, Puneet Dhawan2, Leila Oz2, Leila Mady2, Sylvia Christakos3, 1Rutgers- New Jersey Medical School, United states, 2Rutgers-New Jersey Medical School, United states, 3Rutgers - New Jersey Medical School, United states
Disclosures: Vaishali Veldurthy, None

MECHANOBIOLOGY: GENERAL

LB-SU0361 Effects of Muscle Stretching on Hindlimb Bone Blood Flow
Payal Ghosh*1, Judy Muller-Delp1, Kazuki Hotta1, Michael Delp1, Bradley Behnke2, Bei Chen3, Rahul Verma3, 1Florida State University, United states, 2Kansas State University, United states, 3University of Florida, United states
Disclosures: Payal Ghosh, None

MUSCULOSKELETAL PROGENITOR CELLS AND LINEAGE DETERMINATION: OSTEOBLASTS

LB-SU0362 Parathyroid hormone administration regulates osteoprogenitor numbers by direct signaling via PTH/PTHrP receptor in vivo
Deepak Balani*1, Noriaki Ono2, Henry Kronenberg1, 1Endocrine Unit, Massachusetts General Hospital & Harvard Medical School, Boston, MA, United states, 2University of Michigan, School of Dentistry, United states
Disclosures: Deepak Balani, None

OSTEOARTHRITIS AND OTHER JOINT DISORDERS: GENERAL

LB-SU0363 PTH1R anti-hypertrophic signaling is essential for articular cartilage maintenance and protection post trauma
Fadia Kamal*, Eric Schott, Reyad Elbarbary, Jennifer Jonason, Michael Zuscik. University of Rochester, United states
Disclosures: Fadia Kamal, None
OSTEOBLASTS – MATRIX PROTEINS AND FUNCTION: BONE FORMATION MECHANISMS

LB-SU0364 Live Cell Imaging of Procollagen Trafficking in Osteoblasts
Shakib Omari1, Laura Gorrell1*, Elena Makareeva2, Lynn Mirigian2, Anna Roberts-Pilgrim1, Jennifer Lippincott-Schwartz3, Sergey Leikin1. 1NICHD, NIH, United states, 2NICHD, NIH, United states, 3HHMI Janelia Research Campus, United states
Disclosures: Laura Gorrell, None

OSTEOCLASTS - FUNCTION: BONE RESORPTION MECHANISMS

LB-SU0365 PGC1β stimulates osteoclast function but not formation via mitochondrial biogenesis and activation
Yan Zhang1, Nidhi Rohatgi1, Joel Schilling2, Steven L. Teitelbaum3, Wei Zou1. 1Department of Pathology & Immunology, Washington University School of Medicine, United states, 2Cardiovascular Division, Department of Medicine, Washington University School of Medicine, United states, 3Department of Pathology & Immunology; Division of Bone & Mineral Diseases, Department of Medicine, Washington University School of Medicine, United states
Disclosures: Yan Zhang, None

LB-SU0366 A Novel Regulatory Role of TRAPPC9 in L-Plastin-mediated Actin Ring Formation and Osteoclast Function
Nazar Hussein*, Thomas Mbima, Mohammad Ansari, Zhicheng Jin, Takhar Kasumov, Fayez Safadi. Northeast Ohio Medical University (NEOMED), United states
Disclosures: Nazar Hussein, None

OSTEOCLASTS - ORIGIN AND CELL FATE: GENERAL

LB-SU0367 Translational profiling to identify novel cytokines and biomarkers expressed in osteoclasts during skeletal injury
In Kyoung Mah, Nikita Tripuraneni, Brian Lee, Francesca Mariani*. University of Southern California, United states
Disclosures: Francesca Mariani, None

OSTEOPOROSIS - ASSESSMENT: BONE QUALITY

LB-SU0368 Predictors of TBS Change are Different from Predictors of Bone Mineral Density Change: Results from the Osteoporotic Fractures in Men (MrOS) study
Tien Vo1, Lisa Langsetmo2, Allyson Kats3, Ann Schwartz4, Douglas Bauer4, Jane Cauley5, Brent Taylor6, Kristine Ensrud7, John Schousboe*8. 1Division of Epidemiology, University of Minnesota, United states, 2Division of Epidemiology, United states, 3Department of Epidemiology & Biostatistics, United states, 4Department of Medicine & Department of Epidemiology & Biostatistics, United states, 5University of Pittsburgh Graduate School of Public Health, United states, 6Division of Epidemiology & Department of Medicine, University of Minnesota; Center for Chronic Disease Research, Minneapolis VAMC, United states, 7Division of Epidemiology & Department of Medicine, University of Minnesota; Center for Chronic Disease Research, Minneapolis VAMC, United states, 8Park Nicollet Osteoporosis Center & HealthPartners Institute, HealthPartners; Division of Health Policy & Management, University of Minnesota, United states
Disclosures: John Schousboe, None

OSTEOPOROSIS – NUTRITION, DIETARY SUPPLEMENTS AND PHYSICAL ACTIVITY: OTHER NUTRIENTS

LB-SU0369 Influence of Alkali Supplementation on Circulating microRNA Expression
Lee Margolis, Bess Dawson-Hughes, Donato Rivas, Yassine Ezzyat, Roger Fielding, Lisa Ceglia*. Tufts University, United states
Disclosures: Lisa Ceglia, None
**OSTEOPOROSIS - PATHOPHYSIOLOGY: BONE MODELING AND REMODELING**

**LB-SU0370** Periostin is Correlated with Cortical Bone Measures and Bone Turnover During Consolidation
Jennifer S Walsh*, Fatma Gossiel, Jess Scott, Margaret A Paggiosi, Richard Eastell.
University of Sheffield, United Kingdom

*Disclosures: Jennifer S Walsh, None*

**OSTEOPOROSIS - TREATMENT: ANABOLIC AGENTS**

**LB-SU0371** Low Variability of Oral PTH1-34 in Man
Gregory Burshien1, Ariel Rothern1, Hillel Galitzer*1, Ehud Arbut1, Youseph Caraco2.
1Entera Bio Ltd., Israel, 2Hebrew University Medical School - Hadassah Medical Center, Israel

*Disclosures: Hillel Galitzer, None*

**OSTEOPOROSIS - TREATMENT: OTHER THERAPEUTIC AGENTS**

**LB-SU0372** Safety of Denosumab in Postmenopausal Osteoporosis and in Cancer and Bone Metastase Treatment: A Systematic Review and Meta-Analysis
Marlène Aubailly*, Thomas Barntech, Bernard Combe1, Cécile Gaujoux-Viala3, Cédric Lukas1, Jacques Morel1, Hélène Che1. 1CHU Lapeyronie, France, 2CHU Bordeaux, France, 3CHU Nîmes, France

*Disclosures: Marlène Aubailly, None*

**PARACRINE REGULATORS: PTHrP AND OTHER PARACRINE REGULATORS**

**LB-SU0373** PTHrP Activates Stat5 Signaling in Mammary Epithelium and Affects Breast Cancer Initiation and Progression
Farzin Takyar*, Kata Boras-Granic, Wonnam Kim, Pamela Dann, John Wysolmerski.
Yale School of Medicine, United states

*Disclosures: Farzin Takyar, None*

**PRECLINICAL MODELS – PHARMACOLOGY: BONE-FORMING AGENTS**

**LB-SU0374** Bispecific Antibodies Targeting Sclerostin and DKK1 Promote Bone Mass Accrual and Bone Repair of Closed Femoral Fractures and Gap Defects
Monica Florio*, Xiaodong Li, Marina Stolina1, Kannan Gunasekaran1, Ling Liu1, Hossein Salimi-Moosavi1, Franklin Asuncion1, Banghua Sun1, Hong Lin Tan1, Li Zhang1, Chun-Ya Han1, Ryan Case1, Qing-Tian Niu1, James Pretorius1, Efrain Pacheco1, Qing Chen1, Mei-Shu Shih2, William G. Richards1, Hua Zhu Ke1, Michael S. Ominskey1, Amgen Inc, United states, 2PharmaLegacy Laboratories, China, 3UCB, United Kingdom

*Disclosures: Monica Florio, Amgen, 104*

**RARE BONE DISEASES: FIBROUS DYSPLASIA**

**LB-SU0375** Transgenic mice for studying fibrous dysplasia of bone, McCune-Albright Syndrome, and tumors caused by activating GNAS mutations
Vijayram Reddy Malladi*, Yan Zhu, olla tafaj, Murat Bastepe. Endocrine Unit, Department of Medicine, Massachusetts General Hospital & Harvard Medical School, United states

*Disclosures: Vijayram Reddy Malladi, None*

**RARE BONE DISEASES: OSTEOGENESIS IMPERFECTA**

**LB-SU0376** Postural control in mild Osteogenesis Imperfecta
Louis-Nicolas Veilleux*, Annie Pouliot-Laforte2, Frank Rauch1, Martin Lemay3.
1Shriners Hospital for Children-Canada, Canada, 2Département des Sciences de l’Activité Physique, Université du Québec à Montréal, Canada, 3Université de Québec à Montréal; Centre de Réadaptation Marie Enfant, Canada

*Disclosures: Louis-Nicolas Veilleux, None*
RARE BONE DISEASES: OTHER RARE BONE DISEASES

LB-SU0377 Assessing the General Population Frequency of Rare Coding Variants in EXT1 and EXT2 Previously Implicated in Hereditary Multiple Exostoses
Diana Cousminer*1, Alexandre Arkader1, Benjamin Voight2, Maurizio Pacifici1, Struan Grant2. 1Children’s Hospital of Philadelphia, United states, 2University of Pennsylvania, United states
Disclosures: Diana Cousminer, None

SARCOPENIA, MUSCLE AND FALLS: SARCOPENIA DEFINITION, ASSESSMENT AND EPIDEMIOLOGY

LB-SU0378 Greater Peri-aortic Adipose Tissue Volume is associated with Increased Trunk Muscle Fat Content in Middle-aged and Older Men and Women: The Framingham Study
Robert R. McLean*1, Elizabeth J. Samelson1, Amanda L. Lorbergs1, Xiaochun Zhang1, Kerry E. Broe3, Dennis E. Anderson1, Udo Hoffmann1, Carolinne 5, Maria L. Bouxsein3, Douglas P. Kiel1. 1Hebrew SeniorLife Institute for Aging Research, Harvard Medical School, Beth Israel Deaconess Medical Center, United states, 2Hebrew SeniorLife Institute for Aging Research, United states, 3Harvard Medical School, Beth Israel Deaconess Medical Center, United states, 4Massachusetts General Hospital, Harvard Medical School, United states, 5Merck Research Laboratories, United states
Disclosures: Robert R. McLean, None

SKELETAL DEVELOPMENT: GROWTH AND DEVELOPMENT

LB-SU0379 Reliable assessment of bone size, composition, and strength in the midtibia of children using magnetic resonance imaging
Benjamin Conner*1, Harshvardhan Singh1, Daniel Whitney1, Freeman Miller2, Christopher Modlesky1. 1University of Delaware, United states, 2A.I. duPont Hospital for Children, United states
Disclosures: Benjamin Conner, None

LB-SU0380 Conditional Targeting Of Important Developmental Signal, Shh, In The Adult Mouse Nucleus Pulposus Causes Premature Intervertebral Disc Degeneration
Sarthak Mohanty*, Elfie De Jesus, Chitra Dahia. Hospital for Special Surgery, United states
Disclosures: Sarthak Mohanty, None

CONCURRENT ORALS: BONE TUMORS AND METASTASIS II

2:30 pm - 4:00 pm Georgia World Congress Center
Room A412

Moderators:
Jesus Delgado-Calle, Ph.D.
Indiana University School of Medicine, USA
Disclosures: Jesus Delgado-Calle, None

Gregory Clines, M.D., Ph.D.
University of Michigan, USA
Disclosures: Gregory Clines, None

2:30 pm 1101 Blockade of C5aR Impairs Bone Metastases by Decreasing Osteoclastic Activity
Daniel Ajona*1, Carolina Zandueta2, Leticia Corrales2, Maria Jose Pajares2, Elena Martinez-Terroba1, Fernando De Miguel1, Jaceline Agorreta3, Naiara Perurena2, Luis M Montuenga3, Ruben Pio1, Fernando Lecanda2. 1Program in Solid Tumors & Biomarkers, Center for Applied Medical Research (CIMA), Pamplona, Spain; Department of Biochemistry & Genetics, School of Sciences, University of Navarra, Pamplona, Spain, Spain, 2Program in Solid Tumors & Biomarkers, Center for Applied Medical Research (CIMA), Pamplona, Spain, Spain, 3Program in Solid Tumors & Biomarkers, Center for Applied Medical Research (CIMA), Pamplona, Spain; Department of Histology & Pathology, School of Medicine, University of Navarra, Pamplona, Spain, Spain
Disclosures: Daniel Ajona, None
2:45 pm  
**Apoptotic Cell Clearance Drives CXCL5, Accelerates Inflammatory Cell Infiltration, and Supports Prostate Cancer Tumor Growth in Bone**  
Hernan Roca*, Marta Purica, Savannah Weidner, Amy Koh, Robert Kuo, Jacques Nör, Lonnie Shea, Laurie McCauley. University of Michigan, United states  
*Disclosures: Hernan Roca, None*

3:00 pm  
**Nanoparticle Delivery of Gli Inhibitor Blocks Tumor-Induced Bone Disease**  
Kristin Kwakwa*1, Joseph Vanderburgh2, Alyssa Merkel3, Thomas Werfel4, Craig Duvall4, Scott Guelcher5, Julie Sterling6. 1Department of Cancer Biology, Vanderbilt University; Center for Bone Biology, Vanderbilt University Medical Center, United states, 2Department of Chemical & Biomolecular Engineering, Vanderbilt University; Center for Bone Biology, Vanderbilt University Medical Center, United states, 3Department of Veterans Affairs, Tennessee Valley Healthcare System; Center for Bone Biology, Vanderbilt University Medical Center; Division of Clinical Pharmacology, Department of Medicine, Vanderbilt University Medical Center, United states, 4Department of Biomedical Engineering, Vanderbilt University, United states, 5Department of Chemical & Biomolecular Engineering, Vanderbilt University; Department of Biomedical Engineering, Vanderbilt University; Center for Bone Biology, Vanderbilt University Medical Center, United states, 6Department of Veterans Affairs, Tennessee Valley Healthcare System; Center for Bone Biology, Vanderbilt University Medical Center; Division of Clinical Pharmacology, Department of Medicine, VUMC; Department of Cancer Biology, Vanderbilt University, United states  
*Disclosures: Kristin Kwakwa, None*

3:15 pm  
**TAK-1 Inhibition Disrupts Pim-2-associated and Pim-2-independent key Signaling Pathways to Effectively Suppress Tumor Growth and Restore Bone Formation in Myeloma**  
Jumpei Teramachi*1, Masahiro Hiasa1, Asuka Oda1, Hirofumi Tenshin1, Ryota Amachi1, Takeshi Harada1, Shingen Nakamura1, Kiyoie Kurashiki1, Tokeshi Kondo1, Hirokazu Miki1, Itsuro Endo1, Tosho Matsumoto1, Masahiro Abe1. 1Tokushima University, Japan, 2Tokushima University, Guinea  
*Disclosures: Jumpei Teramachi, None*

3:30 pm  
**Decreased JMJD3 Expression in Mesenchymal Stem Cells Contributes to Long-term Suppression of Osteoblast Differentiation in Multiple Myeloma**  
Wei Zhao*1, Rebecca Silbermann2, Juraj Adamik3, Deborah Galson3, G. David Roodman4. 1Department of Biochemistry & Molecular Biology, Indiana University, United states, 2Department of Medicine, Hematology Oncology, Indiana University, United states, 3University of Pittsburgh School of Medicine, United states, 4Department of Medicine, Hematology Oncology, Indiana University. Department of Medicine, Richard L. Roudebush VA Medical Center, Indianapolis, IN, United states  
*Disclosures: Wei Zhao, None*

3:45 pm  
**Transforming growth factor beta inhibitor (1D11) combined with Bortezomib improves bone quality in a mouse model of myeloma-induced bone disease**  
Alyssa Merkel*1, Sasidhar Uppuganti2, Barbara Rowland3, Babatunde Oyajobi4, Jeffry Nyman1, Julie Sterling1. 1Vanderbilt University Medical Center; Tennessee Valley Healthcare System, Nashville VA, United states, 2Vanderbilt University Medical Center, United states, 3Tennessee Valley Healthcare System, Nashville VA, United states, 4University of Texas Health Science Center San Antonio, United states  
*Disclosures: Alyssa Merkel, None*

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**CONCURRENT ORALS: NUTRITION, EXERCISE AND FALLS**

2:30 pm - 4:00 pm  
**Georgia World Congress Center**  
**Sidney Marcus Auditorium - Building A**

**Moderators:**  
Marian Hannan, DSc, MPH  
HSL Institute for Aging Research and Harvard Medical School, USA  
*Disclosures: Marian Hannan, None*

Rene Rizzoli, M.D.  
Geneva University Hospitals and Faculty of Medicine, Switzerland  
*Disclosures: Rene Rizzoli, None*
2:30 pm Low Protein Intake Among Older Men is Associated with an Increased Risk of Fracture
1107 Lisa Langsetmo1, James Shikany2, Peggy Crawton3, John Schousboe4, Brent Taylor5, Tien Vo6, Jane Cauley6, Doug Bauer3, Eric Orwoll7, Kristine Ensrud3, 1University of Minnesota, United states, 2University of Alabama, Birmingham, United states, 3University of California, San Francisco, United states, 4University of Minnesota, Health Partners Institute, United states, 5University of Pittsburgh, United states, 6University of Minnesota, Veterans Affairs Medical Center, United states, 7Oregon Health & Science University, United states
Disclosures: Lisa Langsetmo, None

2:45 pm Calcium and/ or Vitamin D Supplementation are not Associated with Ischaemic Heart Disease: Findings from the UK Biobank Cohort
1108 Disease: Findings from the UK Biobank Cohort Nicholas Harvey1, Stefania D’Angelo1, Julien Paccou2, Mark Edwards3, Steffen Petersen4, Cyrus Cooper5, 1MRC Lifecourse Epidemiology Unit, University of Southampton, United Kingdom, 2Université Lille Nord-de-France, United Kingdom, 3NIHR Cardiovascular Biomedical Research Unit at Barts, William Harvey Research Institute, Queen Mary University of London, United Kingdom
Disclosures: Nicholas Harvey, None

3:00 pm ASBMR 2016 Annual Meeting Young Investigator Award Incidence of Hip Fracture after Treatment with B Vitamins (Folic acid, B12 and B6): Extended Follow-up of Two Large Randomized Controlled Trials
1109 Maria Garcia Lopez1, Kaare Bønna2, Marta Ebbing3, Erik F. Eriksen4, Clara G. Gjesdal5, Ottar K. Nygård5, Grete Tell5, Haakon E. Meyer6, 1Department of Community Medicine, Institute of Health & Society, University of Oslo, Norway; Department of Clinical Endocrinology, Morbid Obesity & Preventive Medicine, Oslo University Hospital, Norway, 2Department of Public Health & General Practice, Norwegian University of Science & Technology, Trondheim; Clinic for Heart Disease, St. Olav’s University Hospital, Trondheim; Department of Community Medicine, UiT The Arctic University of Norway, Norway, 3Norwegian Institute of Public Health, Bergen, Norway, Norway, 4Department of Clinical Endocrinology, Morbid Obesity & Preventive Medicine, Oslo University Hospital, Norway, Norway, 5Department of Rheumatology, Haukeland University Hospital, Bergen, Norway, Norway, 6Department of Global Public Health & Primary Care, University of Bergen, Bergen, Norway, Norway, 7Department of Community Medicine, Institute of Health & Society, University of Oslo, Norway; Norwegian Institute of Public Health, Oslo, Norway, Norway
Disclosures: Maria Garcia Lopez, None

3:15 pm Long-Term Effects of Vitamin D and Multimodal Exercise on Prevention of Injurious Falls in Older Women. A 2-year follow-up after intervention
1110 KIRSTI UUSI-RASI1, RADIKA PATIL1, SAIJA KARINKANTA1, KARI TOKOLA1, PEKKA KANNUSS1, CHRISTEL LAMBERG-ALLARDET2, HARRI SIEVÄNEN1, 1The UKK Institute for Health Promotion Research, Finland, 2University of Helsinki, Finland
Disclosures: Kirsti Uusi-Rasi, None

3:30 pm ASBMR 2016 Annual Meeting Young Investigator Award The Risk of Fracture among Women with Sarcopenia, Low Bone Mass or Both
1111 Rebekah Harris1, Yuefang Chang1, Kristen Beavers2, Deepika Laddu3, Jennifer Bea4, Karen Johnson5, Meryl LeBoff6, Catherine Womack5, Robert Wallace7, Wenjun Li8, Carolyn Crandall9, Jane Cauley1, 1University of Pittsburgh, United states, 2Wake Forest University, United states, 3Stanford University, United states, 4University of Arizona Cancer Center, United states, 5University of Tennessee Health Science Center, United states, 6Brigham & Women’s Hospital, United states, 7University of Iowa, United states, 8University of Massachusetts Medical School, United states, 9University of California Los Angeles David Geffen School of Medicine, United states
Disclosures: Rebekah Harris, None
Yogurt consumption is associated with attenuated cortical bone loss independently of total calcium and protein intakes and physical activity in postmenopausal women

Emmanuel BIVER*, Claire DUROSIER-IZART, Fanny MERMINOD, Thierry CHEVALLEY, Serge FERRARI, René RIZZOLI. Department of Bone Diseases, Geneva University Hospitals & Faculty of Medicine, Switzerland

Disclosures: Emmanuel BIVER, YINI research award supported by Danone Institute International in collaboration with the American Society for Nutrition and the International Osteoporosis Foundation, 100

CONCURRENT ORALS: OSTEOPOROSIS PATHOPHYSIOLOGY I

2:30 pm - 4:00 pm
Georgia World Congress Center
Room A404/405

2:30 pm ASBMR 2016 Annual Meeting Young Investigator Award
1113 Reproduction-Induced Changes in Maternal Trabecular Bone Microarchitecture Confer Protective Effects against Estrogen Deficiency
Chantal de Bakker*, Laurel Leavitt, Wei-Ju Tseng, Tiao Lin, Wei Tong, Ling Qin, X. Sherry Liu. University of Pennsylvania, United states
Disclosures: Chantal de Bakker, None

2:45 pm ASBMR 2016 Annual Meeting Young Investigator Award
1114 Pyk2 Deficiency Protects from Glucocorticoid-Induced Bone Resorption and Osteoblast and Osteocyte Apoptosis, but not from the Decrease in Bone Formation
Amy Sato*, Meloney Cregor, Keith Condon, Lilian Plotkin, Teresita Bellido. Indiana University School of Medicine, United states
Disclosures: Amy Sato, None

3:00 pm ASBMR 2016 Annual Meeting Young Investigator Award
1115 The Antioxidant Endogenous Response in Bone is Regulated by Nrf2 in a Gender Specific Manner
Gretel G Pellegrini*, Meloney Cregor2, Cynthya C Morales2, Kevin McAndrews2, Lilian I Plotkin1, David Burr2, Connie M Weaver2, Teresita Bellido1. 1Indiana University School of Medicine, Roudebush Veterans Administration Medical Center, Indianapolis, United states, 2Indiana University School of Medicine, United states, 3Purdue University, United states
Disclosures: Gretel G Pellegrini, None

3:15 pm ASBMR 2016 Annual Meeting Young Investigator Award
1116 Abnormalities in pre B cells impair adult bone homeostasis
Mohamed Khass*, Harunur Rashid, Peter Burrows, S. Louis Bridges, Amjad Javed, Harry Schroeder. University of Alabama at Birmingham, United states
Disclosures: Mohamed Khass, None

3:30 pm ASBMR 2016 Annual Meeting Young Investigator Award
1117 Connexin43 Deficiency Results in a Lean Phenotype in Mice
Manuela Fortunato*, Marcus Watkins, Francesca Fontana, Roberto Civitelli. Washington University School of Medicine, United states
Disclosures: Manuela Fortunato, None

3:45 pm ASBMR 2016 Annual Meeting Young Investigator Award
1118 CD169+ Osteal Macrophages Promote Osteoblast Maintenance and Bone Healing
Lena Batoon1, Martin Wullschleger3, Susan Millard1, Corina Preda3, Andy Wu1, Cameron Sunderland1, Simranpreet Kaur1, Jean-Pierre Levesque1, Liza-Jane Raggatt1, Allison Pettit1. 1Mater Research Institute - The University of Queensland, Australia, 2Gold Coast University Hospital - Griffith University, Australia, 3Queensland Health, Australia
Disclosures: Allison Pettit, None
2:30 pm  ASBMR 2016 Annual Meeting Young Investigator Award
1119  Novel Roles of RANK in Osteocytes During Bone Remodeling
Min Jin*, Yinshi Ren*, Ke Wang, Yuan Hui, Chaoqun Li, Xiaohua Liu, Haibo Zhao, Lin Chen, Jianquan Feng. 1Department of Biomedical Sciences, Texas A&M Baylor College of Dentistry, Dallas, United States, 2Cellular, Developmental & Genome Laboratories, Duke University Musculoskeletal Research center, United States, 3Department of Orthodontics, Fourth Military Medical University, China, 4Department of Biomedical Sciences, Texas A&M Baylor College of Dentistry, United States, 5Center for Metabolic Bone Diseases, University of Arkansas for Medicical Sciences, United States, 6Center of Bone Metabolism & Repair, State Key Laboratory of Trauma, Burns & Combined Injury, Trauma Center, Institute of Surgery Research, China
Disclosures: Min Jin, None

2:45 pm  Cathepsin K is Directly Involved in Osteocyte Lacunae Remodeling and in the Osteocyte-dependent Skeletal Responses to Mechanical Loading and Unloading
Yoshihito Ishihara*, Martin M. Fu, Frank C. Ko, Daniel J. Brooks, Liang Yang, Kenichi Nagano, Riku Kiviranta, Mary L. Boussein, Francesca Gori, Roland Baron. 1Division of Bone & Mineral Research, Department of Oral Medicine, Infection & Immunity, Harvard School of Dental Medicine, United States, 2Harvard Medical School, Endocrine Unit, Massachusetts General Hospital, United States, 3Center for Advanced Orthopedic Studies, Beth Israel Deaconess Medical Center, United States, 4Department of Medical Biochemistry & Molecular Biology, University of Turku, Finland, 5Center for Advanced Orthopedic Studies, Beth Israel Deaconess Medical Center & Harvard Medical School, Endocrine Unit, Massachusetts General Hospital, United States, 6Division of Bone & Mineral Research, Department of Oral Medicine, Infection & Immunity, Harvard School of Dental Medicine & Harvard Medical School, Endocrine Unit, Massachusetts General Hospital, United States
Disclosures: Yoshihito Ishihara, None

3:00 pm  MicroRNA miR-23a Cluster Promotes Osteocyte Differentiation by Regulating Prdm16/TGF-β Signaling in Osteoblasts
Huan-Chang Zeng, Yangjin Bae, Brian Dawson, Yuqing Chen, Philippe Campeau, Jianning Tao, Brendan Lee. 1Baylor College of Medicine, United States, 2Sainte-Justine Hospital, Canada, 3Sanford School of Medicine of the University of South Dakota, United States
Disclosures: Huan-Chang Zeng, None

3:15 pm  Role of FGF9 in Promotion of Early Osteocyte Differentiation and as a Potent Inducer of FGF23 Expression in Osteocytes
Lora A. McCormick*, Kun Wang, LeAnn M. Tiede-Lewis, Hong Zhao, Yixia Xie, Samantha Neuburg, Aline Martin, Lynda F. Bonewald, Sarah L. Dallas. 1University of Missouri-Kansas City, USA, United States, 2University of Missouri-Kansas City, United States, 3Northwestern University Feinberg School of Medicine, United States
Disclosures: Lora A. McCormick, None

3:30 pm  Alterations in perilacunar and canalicular remodeling in the Hyp mouse model of XLH
Janaina deSilva Martins, Marie Demay, Eva Liu. 1Massachusetts General Hospital, United States, 2Massachusetts General Hospital, Harvard Medical School, United States, 3Brigham & Women’s Hospital, Massachusetts General Hospital, United States
Disclosures: Eva Liu, None
Osteocytes Mediate Bone Pain Through Cell-Cell Communication with Sensory Neurons via Connexin 43
Masahiro Hiasa*1, Tatsuo Okui1, Jesús Delgado-Calle2, Teresita Bellido2, G David Roodman1, Fletcher White3, Lilian Plotkin2, Toshiyuki Yoneda1. 1Department of Medicine, Hematology Oncology, Indiana University School of Medicine, United states, 2Department Anatomy & Cell Biology, Indiana University School of Medicine, United states, 3Department of Anesthesia, Paul & Carole Stark Neurosciences Research Institute, United states
Disclosures: Masahiro Hiasa, None

NETWORKING BREAK
4:00 pm - 4:30 pm Georgia World Congress Center
ASBMR Discovery Hall - Expo Hall A1

SYMPOSIUM-BMPS IN DEVELOPMENT AND DISEASE
Supported by an Educational Grant from Lilly
4:30 pm - 5:45 pm Georgia World Congress Center
Sidney Marcus Auditorium - Building A

Co-Chairs
Eileen Shore, Ph.D.
University of Pennsylvania, USA
Disclosures: Eileen Shore, None

A. Hari Reddi, Ph.D.
University of California, Davis Medical Center, USA
Disclosures: A. Hari Reddi, None

4:30 pm BMP Receptors and Bone Development
Karen Lyons, Ph.D.
University of California, Los Angeles, USA
Disclosures: Karen Lyons, None

4:55 pm BMPs and Periosteal Bone Growth
Vicki Rosen, Ph.D.
Harvard School of Dental Medicine, USA
Disclosures: Vicki Rosen, None

5:20 pm Activin and FOP
Aris Economides, Ph.D.
Regeneron Pharmaceuticals, Inc., USA
Disclosures: Aris Economides, Regeneron Pharmaceuticals, Inc. 16

GREG MUNDY SYMPOSIUM: NEW MECHANISMS ON CANCER AND BONE
4:30 pm - 5:45 pm Georgia World Congress Center
Thomas B. Murphy Ballroom - Building B Level 5

Co-Chairs
Robert Gagel, M.D.
University of Texas M.D. Anderson Cancer Center, USA
Disclosures: Robert Gagel, None

Claire Edwards, Ph.D.
University of Oxford, United Kingdom
Disclosures: Claire Edwards, None
4:30 pm  Bone Metastasis in the Hypoxia
Amato Giaccia, Ph.D.
Stanford Medicine, USA
Disclosures: Amato Giaccia, None

4:55 pm  miRNAs and Cancer Metastasis in Bone
Philippe A.R. Clezardin, Ph.D., DSc
INSERM and University of Lyon, France
Disclosures: Philippe A.R. Clezardin, None

5:20 pm  Chondroblastomas
Zhiguo Zhang, Ph.D.
Columbia University, USA
Disclosures: Zhiguo Zhang, None

ASBMR ANNUAL TOWN HALL MEETING AND RECEPTION
6:00 pm - 7:00 pm  Georgia World Congress Center
Room A402/403

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. The ASBMR Town Hall Meeting will be held at the Convention Center. Come learn more about ASBMR, meet with ASBMR leadership, ask questions during an “open-mic” time and enjoy a wine and cheese reception.

ADULT BONE AND MINERAL WORKING GROUP
Supported by an educational grant from Merck & Co., Inc.
7:15 pm - 10:00 pm  Georgia World Congress Center
Room A305

7:15 pm  Opening Remarks and Dinner
Introduction of Co-Chairs
Natalie E. Cusano, MD, MS, Columbia University Medical Center, USA
Michael Mannstadt, MD, Massachusetts General Hospital, USA
Ann Kearns, MD, PhD, Mayo Clinic, USA

7:30 pm  Historical Vignette: An Unusual Patient with Very Dense Bones
Sundeep Khosla, MD
Mayo Clinic, USA

7:55 pm  FGFR Inhibition by NVP-BGJ398 in the Treatment of a Case of Tumor-Induced Osteomalacia
Sri Harsha Tella, MD
National Institutes of Health, USA

8:10 pm  Familial Hyponatremia: A Rare Cause of Secondary Osteoporosis and Vertebral Compression Fractures
Jad G. Sfeir, MD
Mayo Clinic, USA

8:25 pm  Recurrent Persistent Primary Hyperparathyroidism Due to Benign Parathyromatosis
Sanjay Kumar Bhadada, DM
Postgraduate Institute of Medical Education and Research, India

8:40 pm  Locating the Indefinable Metastatic Parathyroid Carcinoma by Whole Body Parathyroid Hormone Venous Sampling
Namki Hong, MD
Yonsei University College of Medicine, South Korea
8:55 pm  Osteoporosis of Systemic Mastocytosis Might Have to be Treated Differently
Kamyar Asadipooya, MD
New York University School of Medicine, USA

9:10 pm  Successful Treatment of Calciphylaxis and Severe Hypocalcemia After Renal Transplant
Sharleen Sidhu, MD, MPH
Georgetown University Hospital, USA

9:25 pm  Anorexia Nervosa with Severe Hyperphosphatemia as a Consequence of High Bone Turnover and Functional FGF23 Resistance
Malachi McKenna, MD
University College Dublin, Ireland

9:40 pm  Presentation of the Boy Frame Award to Dr. Sundeep Khosla

10:00 pm  Adjourn

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**BONE STRENGTH WORKING GROUP**

*Sponsored by the Canadian Bone Strength Working Group
Supported by Unrestricted Educational Grants from Amgen Canada & Eli Lilly Canada*

7:15 pm - 9:45 pm  Georgia World Congress Center
Room A302

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7:15 pm  Registration and Buffet Dinner

7:45 pm  Welcome and Overview of program
  Introduction of Co-Chairs
    – Shawn Davison PhD, University of Victoria
    – Andy Kin On Wong PhD, University Health Network

**Oral Abstracts**

7:50 pm  Session 1: High Quality Abstracts Related to Bone strength – TBA

8:15 pm  Session 2: High Quality Abstracts Related to Bone strength – TBA

**Keynote Talk**

Co-Chairs:
  – Jonathan D. Adachi MD, McMaster University
  – Andy Kin On Wong, PhD, University Health Network

8:30 pm  The Science of Skeletal Self-Repair
  – TBA

9:30 pm  Panel Discussion

9:40 pm  Concluding remarks

**Organizers:**  Angela Cheung, M.D., Ph.D., FRCPC
Department of Medicine and Medical Imaging
University of Toronto
Toronto, Ontario, Canada

Andy Kin On Wong, Ph.D
Osteoporosis Program, University Health Network
Toronto, Ontario, Canada
PEDIATRIC BONE AND MINERAL WORKING GROUP

Supported by an educational grant from Ultragenyx Pharmaceuticals

7:15 pm - 9:30 pm Georgia World Congress Center
Room A314

Moderators: Clemens Bergwitz, M.D. and Madhusmita Misra, M.D., M.P.H.
Speakers: Leanne Ward, M.D. and Eric Hoffman, M.D.

7:15 pm Dinner

7:40 pm Opening remarks

7:45 pm Osteoporosis in Boys with Duchenne Muscular Dystrophy: Manifestations, Mechanisms and Management
Leanne M. Ward, M.D., FRCPC., FAAP
University of Ottawa, Canada

8:05 pm Vamorolone - a Potential Bone Sparing Corticosteroid for Children with Muscular Dystrophy
Eric Hoffman Ph.D.,
SUNY Binghamton School of Pharmacy, CEO of RiveraGen

8:25 pm Panel Discussion

8:30 pm Abstract 1: The Muscle-Dependent Link between IGF-I and Cortical Bone is Suppressed in Children with Insulin Resistance. Kindler JM et al.


8:50 pm Abstract 3: SLC34A1/NPT2a Mutations cause Hereditary Hypophosphatemic Rickets with Hypercalciuria. Chen et al.

9:00 pm Abstract 4: PLS3 Sequencing in Childhood-onset Primary Osteoporosis Identifies Two Novel Mutations. Kämpe AJ et al.

9:15 pm Closing remarks

DIVERSITY RECEPTION
Supported in part by a donation from Paula H. Stern, Ph.D.
Sponsored by the ASBMR Membership Engagement and Education Committee and Diversity Subcommittee

7:30 pm - 8:30 pm Omni Atlanta Hotel at CNN Center
International Ballroom A

The ASBMR Diversity Subcommittee looks forward to connecting with attendees and members to celebrate racial and ethnic diversity within the Society. Food and drink will be provided.
# Monday, September 19, 2016

## Day-At-A-Glance

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<th>Time/Event/Location</th>
<th>All locations in the Georgia World Congress Center unless otherwise noted</th>
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Registration Hall - Main Entrance |
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| 8:00 am - 9:30 am | 184 | **Concurrent Orals: Musculoskeletal Crosstalk and Hormonal Regulation**  
Room A402/403 |
| 9:30 am - 3:00 pm | 187 | **Concurrent Orals: Osteoblasts: Transcription, Epigenetics and Autophagy**  
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| **9:30 am - 9:45 am** | 187 | **Networking Break**  
ASBMR Discovery Hall - Expo Hall A1 |
| 9:30 am - 9:45 am | 187 | **Discovery Hall Open**  
ASBMR Discovery Hall - Expo Hall A1 |
| **9:45 am - 11:00 am** | 188 | **Plenary Orals: Musculoskeletal Progenitors in Bone Formation and Repair**  
Room A411 |
| 9:45 am - 11:00 am | 188 | **Plenary Orals: Osteoporosis Treatment III**  
Room A412 |
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Room A302 |
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| **Networking Break** | 192 | **ASBMR Discovery Hall - Expo Hall A1** |
Poster Session III & Poster Tours
*ASBMR Discovery Hall - Expo Hall A1*

12:30 pm - 2:30 pm

Late-Breaking Posters III
*ASBMR Discovery Hall - Expo Hall A1*

2:30 pm - 4:00 pm

Plenary Symposium-Determinants of Skeletal Aging
*Sidney Marcus Auditorium - Building A*

4:00 pm - 5:00 pm

Closing Reception

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12:30 pm - 2:30 pm

Poster Session III & Poster Tours
*ASBMR Discovery Hall - Expo Hall A1*

12:30 pm - 2:30 pm

Late-Breaking Posters III
*ASBMR Discovery Hall - Expo Hall A1*

2:30 pm - 4:00 pm

Plenary Symposium-Determinants of Skeletal Aging
*Sidney Marcus Auditorium - Building A*

4:00 pm - 5:00 pm

Closing Reception
Monday

ASBMR REGISTRATION OPEN
7:30 am - 4:00 pm
Georgia World Congress Center
Registration Hall - Main Entrance

CONCURRENT ORALS: FRACTURES, FRAILTY AND FALLS
8:00 am - 9:30 am
Georgia World Congress Center
Room A411

Moderators:
Bess Dawson-Hughes, M.D.
Tufts University, USA
Disclosures: Bess Dawson-Hughes, None

Jacqueline Center, Ph.D.
Garvan Institute of Medical Research, Australia
Disclosures: Jacqueline Center, None

8:00 am
Screening based on FRAX fracture risk assessment reduces the incidence of hip fractures in older community-dwelling women – results from the SCOOP study in the UK
Ev McCloskey*1, E Lenaghan2, S Clarke3, C Cooper4, R Fordham2, N Gittoes5, I Harvey2, R Holland2, A Howe2, T Marshall6, T Peters7, Ja Kanis1, Tw O’Neill8, D Torgerson9, L Shepstone2, & the SCOOP Trial Group10. 1University of Sheffield, United Kingdom, 2University of East Anglia, United Kingdom, 3University of Bristol, United Kingdom, 4MRC Lifecourse Epidemiology Unit, University of Southampton, United Kingdom, 5University Hospitals Birmingham NHS Trust, United Kingdom, 6Norfolk & Norwich University Hospital, United Kingdom, 7University of Bristol, United Kingdom, 8University of Manchester, United Kingdom, 9University of York, United Kingdom, 10UK, United Kingdom
Disclosures: Ev McCloskey, None

8:15 am
ASBMR 2016 Annual Meeting Young Investigator Award
Baseline Obesity is Predictive of More Rapid Frailty Onset: A 10-year Analysis of the Canadian Multicentre Osteoporosis Study (CaMOS)
Kennedy Courtney*1, Olga Gajic-Veljanoski1, George Ioannidis1, Jonathan D. Adachi2, Claudia Berger3, Andy Kin On Wong4, Kenneth Rockwood5, Susan Kirkland5, Parminder Raina5, Lehana Thabane6, Alexandra Papaioannou7, 1Hamilton Health Sciences – St. Peter’s Hospital – GERAS Centre, Canada, 2McMaster University, Canada, 3Camos – McGill University, Montreal, Canada, 4University Health Network, Toronto, Canada, 5Dalhousie University, Canada
Disclosures: Kennedy Courtney, None

8:30 am
Low Testosterone, but not Estradiol, Predicts Incident Falls in Older Men - the International MrOS Study
Liesbeth Vandenput1, Dan Mellström1, Gail Laughlin2, Peggy Cawthon3, Jane Cauley4, Andrew Hoffman5, Magnus Karlsson6, Björn Rosengren6, Östen Ljunggren7, Maria Netherland1, Mattias Lorentzon1, Jason Leung8, Timothy Kwok9, Eric Orwoll9, Claes Ohlsson*1. 1University of Gothenburg, Sweden, 2University of California San Diego, United states, 3California Pacific Medical Center, United states, 4University of Pittsburgh, United states, 5Stanford University, United states, 6Lund University, Sweden, 7University of Uppsala, Sweden, 8Chinese University of Hong Kong, Hong kong, 9Oregon Health & Science University, United states
Disclosures: Claes Ohlsson, None
8:45 am A Single Assessment of BMD Can Strongly Predict Fracture Risk Over 25 years in Post-Menopausal Women: The Study of Osteoporotic Fractures
1Washington University School of Medicine, St Louis Mo. Universita’ Campus Bio-Medico, Rome, Italy, United states, 2Department of Epidemiology, University of Pittsburgh, United states, 3Amen, United states, 4VA Medical Center, Minneapolis. University of Minnesota, Minneapolis, United states, 5Kaiser Permanente Center of Health Research, Portland, United states, 6California Pacific Medical Center, San Francisco, United states, 7Park Nicollet Clinic, St. Louis Park, MN. Division of Health Policy & Management, University of Minnesota, Minneapolis, MN, United states, 8Department of Epidemiology & Biostatistics, University of California San Francisco, United states
Disclosures: Nicola Napoli, None

9:00 am ASBMR 2016 Annual Meeting Young Investigator Award
Light intensity physical activity measured by accelerometer is associated with favorable bone microarchitecture and strength: The Framingham Study
Amanda Lorbergs*1, Nicole Spartano2, Kerry Broe3, Xiaochun Zhang4, Robert McLean1, Serkalem Demissie4, L. Adrienne Cupples4, Joanne Murabito5, Vasan Ramachandran6, Douglas Kiel7, Marian Hannan1, Steven Boyd8, Mary Bouxsein9, Elizabeth Samelson1.
1Institute for Aging Research, Hebrew Senior Life & Harvard Medical School, United states, 2Section of Preventative Medicine & Epidemiology, Boston University School of Medicine, United states, 3Institute for Aging Research, Hebrew Senior Life, United states, 4Department of Biostatistics, Boston University School of Public Health, United states, 5Boston University School of Medicine & Framingham Heart Study, United states, 6Section of Preventive Medicine & Epidemiology, Medicine, Boston University School of Medicine & Framingham Heart Study, United states, 7Institute for Aging Research, Hebrew Senior Life, Department of Medicine BIDMC, & Harvard Medical School, United states, 8McCaig Institute for Bone & Joint Health, University of Calgary, Canada, 9Center for Advanced Orthopedic Studies, Beth Israel Deaconess Medical Center & Harvard Medical School, United states
Disclosures: Amanda Lorbergs, None

9:15 am Functional Performances on Admission Predict Elderly Patients In-hospital Falls
Marie-Claude Audet1, Mélanie Hars1, François Herrmann1, Alessandro de Sire1, Jean-Luc Reny5, Gabriel Gold3, René Rizzoli1, Serge Ferrari1, Andrea Trombetti*1. 1Division of Bone Diseases, Department of Internal Medicine Specialties, Geneva University Hospitals & Faculty of Medicine, Switzerland, 2Division of Rehabilitation & Internal Medicine, Department of Internal Medicine, Rehabilitation & Geriatrics, Geneva University Hospitals & Faculty of Medicine, Switzerland, 3Division of Geriatrics, Department of Internal Medicine, Rehabilitation & Geriatrics, Geneva University Hospitals & Faculty of Medicine, Switzerland
Disclosures: Andrea Trombetti, None

CONCURRENT ORALS: MUSCULOSKELETAL CROSSTALK AND HORMONAL REGULATION
8:00 am - 9:30 am Georgia World Congress Center Room A402/403
Moderators:
Ulf Lerner, D.D.S., Ph.D.
Sahlgrenska Univesity Hospital, Sweden
Disclosures: Ulf Lerner, None
Leticia Brotto, M.D.
University of Missouri-kansas City, USA
Disclosures: Leticia Brotto, None

8:00 am ASBMR 2016 Annual Meeting Young Investigator Award
A crosstalk between bone and muscle endocrine functions favors adaptation to exercise
Paula Mera*, Gerard Karsenty. Columbia University, United states
Disclosures: Paula Mera, None
8:15 am  Intermittent PTH Treatment Induces Bone Anabolism Through Bone Marrow-Resident Regulatory Cells  
Mingcan Yu*, Abdul Malik Tyagi, Chiara Vaccaro, Jonathan Adams, Emory Hsu, Roberto Pacifici. Emory University, United states  
Disclosures: Mingcan Yu, None

8:30 am  Augmented Fgf23 Secretion in Bone Locally Contributes to Impaired Bone Mineralization in Chronic Kidney Disease in Mice  
Olena Andrukhova1, Sibel Ada1, Sathish Kumar Murali1, Jessica Bayer1, William G Richards2, Reinhold G Erben1, 1Department of Biomedical Sciences University of Veterinary Medicine, Austria, 2Amen Inc., United states  
Disclosures: Olena Andrukhova, None

8:45 am  ASBMR 2016 Annual Meeting Young Investigator Award  
Proximal Tubule-Specific Ablation of aKlotho Reproduces the Abnormalities of Mineral Metabolism Caused by Systemic aKlotho KO  
Ai Takeshita1, Kazuki Kawakami1, Jin Nakamura2, Kenryo Furushima1, Masayasu Miyajima3, Motoko Yanagita2, Kazushige Sakaguchi1. 1Department of Molecular Cell Biology & Molecular Medicine, Institute of Advanced Medicine, Wakayama Medical University, Japan, 2Department of Nephrology, Kyoto University Graduate School of Medicine, Japan, 3Laboratory Animal Center, Wakayama Medical University, Japan  
Disclosures: Ai Takeshita, None

9:00 am  TGFF-Induced Wnt1 Secretion by Osteoclasts Promotes Osteocyte Viability In Vivo  
Megan Weivoda1, Stephanie Youssufi2, Ming Ruan1, Christine Hachfeld1, Glenda Evans1, Rachel Davey2, Jeffrey Zajac2, Brendan Lee1, Mark Johnson1, Lynda Bonevald5, Jennifer Westendorf1, Sundeept Khosla1, Merry Jo Oursler1, 1Mayo Clinic, United states, 2University of Melbourne, Australia, 3Baylor College of Medicine, United states, 4University of Missouri Kansas City, United states, 5UMKC, United states  
Disclosures: Megan Weivoda, None

9:15 am  Sensory Nerve Block Accelerates Bone Loss Induced by Peripheral Nerve Injury  
Allison Dawson1, Brandon Ausk1, Philippe Huber2, Edith Gardiner1, Leah Wortom1, Dewayne Threet1, Sundar Srinivasan1, Ted Gross1, Steven Bain1. 1Department of Orthopaedics, University of Washington, United states, 2Department of Orthopaedics, University of Washingtons, United states  
Disclosures: Allison Davison, None

CONCURRENT ORALS: OSTEOBLASTS: TRANSCRIPTION, EPIGENETICS AND AUTOPHAGY  
8:00 am - 9:30 am Georgia World Congress Center Room A404/405

Moderators:  
Valerie Geoffroy, Ph.D.  
INSERM, France  
Disclosures: Valerie Geoffroy, None

Hiroshi Takayanagi, M.D., Ph.D.  
The University of Tokyo, Department of Immunology, Japan  
Disclosures: Hiroshi Takayanagi, None

8:00 am  ASBMR 2016 Annual Meeting Young Investigator Award  
Alternative NF-kB Activation in the Mesenchymal Lineage Increases Bone Mass and Drives a Subcutaneous Sarcoma  
Jennifer Davis*, Deborah Novack. Washington University School of Medicine, United states  
Disclosures: Jennifer Davis, None
ASBMR 2016 Annual Meeting Young Investigator Award

HYPOXIA-INDUCIBLE FACTOR 2a IS A NEGATIVE REGULATOR OF OSTEOBLASTOGENESIS
Disclosures: Kavitha Ranganathan, None

Control of skeletal development by the histone methyltransferase Ezh2 in mesenchymal progenitor cells, osteoblasts and chondrocytes
Amel Dudakovic*, Emily Camilleri, Meghan McGee-Lawrence, Elizabeth Bradley, Christopher Paradise, Martina Gluscevic, Roman Thuler, Gary Stein, Martin Montecino, Jennifer Westendorf, Andre van Wijnen. Mayo Clinic, United states, Augusta University, United states, University of Vermont College of Medicine, United states, Universidad Andres Bello, Chile
Disclosures: Amel Dudakovic, None

MiR-23a-cluster Regulates BAF45a to Control a Tissue-specific Epigenetic Mechanism for Bone Formation
Mohammad Hassan*, Tanner Godfrey, Harunur Rashid, Amjad Javed. School of Dentistry, University of Alabama, United states
Disclosures: Mohammad Hassan, None

RCOR2/LSD1 Regulatory Node in the Epigenetic Control of Osteoblast Differentiation
Kati Tarkkonen*, Rana Al Majidi, Cristina Valensisi, Petri Rummukainen, Lauri Saastamoinen, David Hawkins, Riku Kiviranta. Department of Medical Biochemistry & Genetics, University of Turku, Turku, Finland, Finland, Division of Medical Genetics, Department of Medicine, Institute for Stem Cell & Regenerative Medicine, University of Washington School of Medicine, Seattle, USA, United states, Division of Medical Genetics, Department of Medicine, Institute for Stem Cell & Regenerative Medicine, University of Washington School of Medicine, Seattle, USA, Turku, Finland & Division of Endocrinology, Turku University Hospital, Turku, Finland, Finland
Disclosures: Kati Tarkkonen, None

Gpnmb/Osteoactivin Plays a Novel Role in Autophagy-Mediated Osteoblast Differentiation and Function
Fatima Jaber*, Gregory Sondag, Mohammad Ansari, Fouad Moussa, Asaad Al-Adlaan, Fayez Safadi. Kent State University, United states, Northeast Ohio Medical University, United states
Disclosures: Fatima Jaber, None

CONCURRENT ORALS: OSTEOPOROSIS PATHOPHYSIOLOGY II
8:00 am - 9:30 am Georgia World Congress Center Room A412

Moderators:
Eric Hesse, M.D., Ph.D.
University Medical Center Hamburg-Eppendorf, Germany
Disclosures: Eric Hesse, None

Lilian Plotkin, Ph.D.
Indiana University School of Medicine, USA
Disclosures: Lilian Plotkin, None
8:00 am  Blockade of the Activity of the Osteocytic PTH Receptor Target Gene MMP14: a Therapeutic Tool to Prevent Bone Loss and Potentiate Bone Gain Induced by PTH
Jesus Delgado-Calle*, Benjamin Hancock, Kevin McAndrews, Lilian I Plotkin, Teresita Bellido. Department of Anatomy & Cell Biology, Indiana University School of Medicine, United states
Disclosures: Jesus Delgado-Calle, None

8:15 am  Rorβ Deletion Stimulates Bone Formation and Inhibits Bone Resorption in Aged Mice by Activating Wnt Signaling and Increasing Opg Expression
Joshua Farr*, Kristy Nicks, Megan Weivoda, Elizabeth Atkinson, Sundeep Khosla, David Monroe. 1Division of Endocrinology, Mayo Clinic College of Medicine, United states, 2Division of Biomedical Statistics & Informatics, Mayo Clinic College of Medicine, United states
Disclosures: Joshua Farr, None

8:30 am  Impaired Fracture Healing in Fgf2 Heterozygous and Homozygous Knockout Mice
Marja Hurley*, Kimberly Pontoja, Liping Xiao. UConn Health, United states
Disclosures: Marja Hurley, None

8:45 am  Bortezomib rescues radiation-induced osteoporosis by promoting DNA repair and cell survival in osteoblasts
Abhishek Chandra*, Tiffany Young, Ling Qin. University of Pennsylvania, United states
Disclosures: Abhishek Chandra, None

9:00 am  Natural Antibodies Against Oxidized LDL Cause Bone Anabolism
Elena Ambrogini*, Xuchu Que, Shuling Wang, Fumihiro Yamaguchi, Annick Deloose, Michela Palmieri, Stuart B Berryhill, Robert S Weinstein, Sotirios Tsimikas, Stavros C Manolagas, Joseph L Witztum, Robert L Jilka. 1University of Arkansas for Medical Sciences, United states, 2University of California, San Diego, United states
Disclosures: Elena Ambrogini, None

9:15 am  Short-term Antibiotic-induced Bone loss is preventable by microbial transfer
Jonathan Schepper*, Fraser Collins, Regina Irwin, Nara Parameswaran, Laura McCabe. Michigan State University, United states
Disclosures: Jonathan Schepper, None

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**POSTERS OPEN**

9:30 am - 3:00 pm  Georgia World Congress Center
ASBMR Discovery Hall - Expo Hall A1

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**NETWORKING BREAK**

9:30 am - 9:45 am  Georgia World Congress Center
ASBMR Discovery Hall - Expo Hall A1

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**DISCOVERY HALL OPEN**

9:30 am - 3:00 pm  Georgia World Congress Center
ASBMR Discovery Hall - Expo Hall A1

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**PLENARY ORALS: MUSCULOSKELETAL PROGENITORS IN BONE FORMATION AND REPAIR**

9:45 am - 11:00 am  Georgia World Congress Center
Room A411
ASBMR 2016 Annual Meeting Young Investigator Award

Identification and localization of a key skeletal stem cell population with high regenerative potential in the periosteum of growing and adult bones

Oriane Duchamp de Lageneste*, Anais Julien, Rana Abou-Khalil, Caroline Carvalho, Giulia Frangi, Céline Colnot. INSERM UMR1163, Imagine Institute, Paris Descartes University, France

Disclosures: Oriane Duchamp de Lageneste, None

Bone lining cells are an alternative to MSCs as a source of osteoblasts in adult bone

Brya G Matthews*, Igor Matic1, Xi Wang1, Nathaniel A Dyment1, Danka Grcevic2, Ivo Kalajzic1. 1UConn Health, United states, 2University of Zagreb, Croatia

Disclosures: Brya G Matthews, None

Improved Mobilization of Exogenous Mesenchymal Stem Cells to Bone for Fracture Healing

Wei Yao*, Evan Lay, Alexander Kot, Hongliang Zhang, Nancy Lane. UC Davis Medical Center, United states

Disclosures: Wei Yao, None

FAK Promotes Osteoprogenitor Cell Proliferation and Differentiation by Enhancing Wnt Signaling

Chunhui Sun*, Hebao Yuan2, Xiaoxi Wei3, Li Wang3, Linford Williams2, Paul Krebsbach3, Jun-Lin Guan4, Fei Liu3. 1School of Life Science, Jiangsu Normal University, China, 2University of Michigan, United states, 3University of Michigan School of Dentistry, United states, 4University of Cincinnati College of Medicine, United states

Disclosures: Chunhui Sun, None

N-cadherin Modulation of Bone Mass Acquisition is Osteolineage Stage- and Age-Specific

Francesca Fontana*, Cynthia Brecks, Leila Revollo, Grazia Abu-Ezzi, Manuela Fortunato, Yael Alippe, Gabriel Mbalaviele, Roberto Civitelli. Washington University School of Medicine, United states

Disclosures: Francesca Fontana, None

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PLENARY ORALS: OSTEOPOROSIS TREATMENT III

9:45 am - 11:00 am

Georgia World Congress Center

Room A412

Moderators:
Jonathan Adachi, M.D.
St. Joseph’s Hospital/McMaster University, Canada

Disclosures: Jonathan Adachi, None
A Randomized, Open-label Phase 2 Study of KRN23, a Fully Human Anti-FGF23 Monoclonal Antibody, in 52 Children with X-linked Hypophosphatemia (XLH): 40-Week Results
Thomas Carpenter*, 1 Erik Imel², Annemieke Boot³, Wolfgang Högler⁴, Agnès Linglart⁵, Raja Padidela⁶, William van’t Hoff⁷, Michael Whyte⁸, Chao-Yin Chen⁹, Alison Skrinar⁹, Sunil Agarwal⁹, Emil Kakkis⁹, Javier San Martín⁹, Anthony Portale⁹, 10 Yale University School of Medicine, United states, 2Indiana University School of Medicine, United states, 3University of Groningen, Netherlands, 4Birmingham Children’s Hospital, United Kingdom, 5Hôpital Bicêtre, France, 6Royal Manchester Children’s Hospital, United Kingdom, 7Great Ormond Street Hospital, United Kingdom, 8Shriners Hospital for Children, United states, 9Ultragenyx Pharmaceutical Inc., United states, 10University of California, United states

Disclosures: Thomas Carpenter, Ultragenyx Pharmaceuticals Inc., 17, Ultragenyx Pharmaceuticals Inc., 13

The Long-Term Odanacatib Fracture Trial (LOFT): Cardiovascular Safety Results
Michelle O’Donoghue*, Illaria Cavallari, Marc Bonaca, Stephen Wiviott, Abby Cange, Laura Grip, Naveen Deenadayalu, KyungAh Im, Sabina Murphy, Marc Sabatine. Brigham & Women’s Hospital, United states

Disclosures: Michelle O’Donoghue, Merck, 13

Safety of Odanacatib in Postmenopausal Women with Osteoporosis: 5-Year Data from the Extension of the Phase 3 Long-Term Odanacatib Fracture Trial (LOFT)
Socrates Papapoulos*, 1 Michael R. McClung², Bente Langdahl³, Kenneth G. Saag⁴, Henry Bone⁵, Douglas P. Kiel⁶, Kurt Lippuner⁷, Toshihika Nakamura⁸, Ian Reid⁹, Norman Heyden¹⁰, Carolyn DaSilva¹⁰, Boyd B. Scott¹⁰, Rachid Massaad¹¹, Corinne Jamoul¹², Keith D. Kaufman¹³, S. Aubrey Stoch¹⁰, Arthur Santorni¹⁰, Antonio Lombardi¹⁰, Deborah Gunner¹⁰, 1 Leiden University Medical Center, Netherlands, 2Oregon Osteoporosis Center, United states, 3Aarhus University Hospital, Denmark, 4University of Alabama at Birmingham, United states, 5Michigan Bone & Mineral Clinic & The Osteoporosis Center at St. Luke’s Hospital, United states, 6Institute for Aging Research, Hebrew Senior Life, Harvard Medical School, United states, 7Bern University Hospital, Switzerland, 8University of Occupational & Environmental Health, Japan, 9University of Auckland, New Zealand, 10Merck & Co., Inc., United states, 11MSD Europe Inc., Belgium, 12Formerly MSD Europe Inc., Belgium

Disclosures: Socrates Papapoulos, Amgen, Axxome, Merck, Mereo Biopharma, Novartis, UCB, 14

Longitudinal Changes in Modeling- and Remodeling-Based Bone Formation with an Anabolic vs. an Antiresorptive Agent in the AVA Osteoporosis Study
David Dempster*, 1 Hua Zhou², Robert Recker³, Jacques Brown⁴, Christopher Recknor⁵, E. Michael Lewiecki⁶, Paul Miller⁷, Sudhaker Rao⁸, David Kendler⁹, Robert Lindsay¹⁰, Krege John¹¹, Jahangir Alam¹², Kathleen Taylor¹³, Valerie Ruff¹³, 1Regional Bone Center, Helen Hayes Hospital, W Haverstraw, & Department of Pathology & Cell Biology, College of Physicians & Surgeons of Columbia University, NY, United states, 2Regional Bone Center, Helen Hayes Hospital, United states, 3Department of Medicine, Division of Endocrinology, School of Medicine, Creighton University, United states, 4Rheumatology & Bone Diseases Research Group, CHU de Quebec (CHUL) Research Centre & Department of Medicine, Laval University, Canada, 5United Osteoporosis Centers, United states, 6New Mexico Clinical Research & Osteoporosis Center, United states, 7Department of Medicine, CO Center for Bone Research, United states, 8Bone & Mineral Research Laboratory, Henry Ford Hospital, United states, 9Department of Medicine (Endocrinology), University of British Columbia, Canada, 10Regional Bone Center, Helen Hayes Hospital, W Haverstraw, & Department of Medicine, College of Physicians & Surgeons of Columbia University, NY, United states, 11Eli Lilly & Company, United states, 12Lilly Research Laboratories, Eli Lilly & Company, United states, 13Musculoskeletal & Men’s Health, Lilly USA, LLC, United states

Disclosures: David Dempster, Merck, 14, Amgen, 15, Eli Lilly and Company, 15, Amgen, 14, Eli Lilly and Company, 14
Bisphosphonate-related Changes in Bone Turnover are Associated with Vertebral, but not Non-vertebral, Fracture Risk Reduction: A Meta-Regression
Douglas Bauer*1, Richard Eastell2, Mary Bouxsein3, Jane Cauley4, Steven Cummings5, Anne dePapp6, Victor Dishy7, Sanya Fanous-Whitaker8, Sundeep Khosla9, Charles McCulloch1, Dennis Black1. 1University of California, San Francisco, United states, 2University of Sheffield, United Kingdom, 3Harvard Medical School, United states, 4University of Pittsburgh, United states, 5San Francisco Coordinating Center, California Pacific Medical Center, United states, 6Merck & Co., Inc., Kenilworth, NJ, USA, United states, 7Daiichi Sankyo, Inc., United states, 8Foundation for the National Institutes of Health, United states, 9Mayo Clinic College of Medicine, United states
Disclosures: Douglas Bauer, None

MEET-THE-PROFESSOR SESSIONS
11:00 am - 12:00 pm Georgia World Congress Center Rooms A311-316

Meet the Professor: Imaging Techniques to Measure Bone Marrow Adipocytes
Room 311
Mark Horowitz, Ph.D.
Yale School of Medicine, USA
Disclosures: Mark Horowitz, None

Meet the Professor: Osteogenesis Imperfecta: Novel Therapeutic Approaches
Room A312
Joan Marini, M.D., Ph.D.
National Institute of Child Health and Human Development, USA
Disclosures: Joan Marini, None

Kenneth Kozloff, Ph.D.
University of Michigan Department of Orthopaedic Surgery, USA
Disclosures: Kenneth Kozloff, None

Meet the Professor: Skeletal Regeneration and Fracture Repair
Room A315
Susan Bukata, M.D.
UCLA, USA
Disclosures: Susan Bukata, None

Meet the Professor: miRs and Bone Homeostasis
Room A313
Anne Delany, Ph.D.
UConn Health, USA
Disclosures: Anne Delany, None

Meet the Professor: What Is the Optimal Dose and Administration of Vitamin D Supplement in Falls and Fractures Preventions?
Room A314
Kerrie Sanders, Ph.D.
Australian Catholic University, Australia
Disclosures: Kerrie Sanders, None

CAREER DEVELOPMENT SESSION: NEGOTIATING FOR SUCCESS
Sponsored by the ASBMR Membership Engagement and Education Committee and the Women in Bone and Mineral Research Committee
11:00 am - 12:30 pm Georgia World Congress Center Room A302

Investigators at any stage will eventually be faced with the opportunity for negotiation. This session will provide the chance to learn and understand strategies that can optimize effectiveness in
negotiation settings, and to hear about the experiences described by other academic medical faculty regarding negotiation. Michael Silverman, the Chief Legal Officer at SmithBucklin, will offer his expertise in negotiation, along with tactics that will work in any given scenario: salary, promotion, research space, clinical load, etc. Participants will then have the opportunity to debrief and discuss negotiation strategies with experienced leaders in the field for a specific topic, along with a chance to practice these strategies with their neighbor.

Co-Chairs
Roberta Faccio, Ph.D.
Washington University in St Louis School of Medicine, USA
Disclosures: Roberta Faccio, None

Melissa Kacena, Ph.D.
Indiana University School of Medicine, USA
Disclosures: Melissa Kacena, None

Stavroula Kousteni, Ph.D.
Columbia University Medical Center, USA
Disclosures: Stavroula Kousteni, None

Speaker
Michael Silverman
Smithbucklin Corporation, USA
Disclosures: Michael Silverman, None

LATE-BREAKING ABSTRACT PRESENTATIONS
11:00 am - 12:00 pm
Georgia World Congress Center
Room A404/405

11:00 am
LB-1159 Mutations in Geranylgeranyl Diphosphate Synthase (GGPS1) Identified by Whole-Exome Sequencing in Three Sisters who Sustained Atypical Femoral Fractures during Treatment with Bisphosphonates
Neus Roca-Ayats*1, Natalia Garcia-Giralt2, Maite Falco3, Nuria Martinez-Gil3, Josep Francesc Abril4, Roser Urreizti5, Joaquim Dopazo6, Jose Manuel Quesada Gomez7, Xavier Nogues2, Leonardo Mellibovsky2, Daniel Prieto-Alhambra8, Muhammad K Javaid8, James E Dunford8, R Graham Russell9, Daniel Grinberg3, Susana Balcells3, Adolfo Diez-Perez2. 1Department of Genetics, Microbiology & Statistics, Centro de Investigación Biomédica en Red de Enfermedades Raras (CIBERER), ISCIII, Universitat de Barcelona, IBUB, Spain, 2Musculoskeletal Research Group, IMIM (Hospital del Mar Medical Research Institute), Red Temática de Investigación Cooperativa en Envejecimiento y Fragilidad (RETICEF), ISCIII, Spain, 3Department of Genetics, Microbiology & Statistics, Centro de Investigación Biomédica en Red de Enfermedades Raras (CIBERER), ISCIII, Universitat de Barcelona, IBUB, Spain, 4Department of Genetics, Microbiology & Statistics, Facultat de Biologia, Universitat de Barcelona, IBUB, Spain, 5Department of Genetics, Microbiology & Statistics, Centro de Investigación Biomédica en Red de Enfermedades Raras (CIBERER), ISCIII, Spain, 6Department of Computational Genomics, Centro Investigacion Principe Felipe, BIER, CIBERER, Spain, 7Mineral Metabolism Unit, Instituto Maimónides de Investigación Biomédica de Córdoba (IMIBIC), Hospital Universitario Reina Sofia. RETICEF, ISCIII, Spain, 8NIHR Musculoskeletal BRU & Botnar Research Centre, Nuffield Department of Orthopaedics, Rheumatology & Musculoskeletal Sciences, University of Oxford, United Kingdom
Disclosures: Neus Roca-Ayats, None
11:12 am  LB-1160 Genome-wide association study of bone mineral density in the UK Biobank Study identifies over 376 loci associated with osteoporosis
John P. Kemp*1, John A. Morris*, Carolina Medina-Gómez2, Celia L. Gregson3, Vincenzo Forgetta4, Katerina Trajanoska5, Nicole M. Warrington6, Jie Zheng6, Celia M.T. Greenwood7, Stephen K. Kaptoge8, Jonathan H. Tobias9, Cheryl L. Ackert-Bicknell10, J. Brent Richards10, David M. Evans1. 1University of Queensland Diamantina Institute, Translational Research Institute, Brisbane, Queensland, Australia & MRC Integrative Epidemiology Unit, University of Bristol, Bristol, UK., United Kingdom, 2Department of Medicine, Human Genetics, Epidemiology & Biostatistics, Lady Davis Institute, McGill University, Montréal, Canada, Canada, 3Department of Epidemiology, Erasmus Medical Center Rotterdam, Rotterdam, The Netherlands, Netherlands, 4School of Clinical Sciences, University of Bristol, Bristol, UK, United Kingdom, 5University of Queensland Diamantina Institute, Translational Research Institute, Brisbane, Queensland, Australia, Australia, 6MRC Integrative Epidemiology Unit, University of Bristol, Bristol, UK., United Kingdom, 7Lady Davis Institute for Medical Research, Jewish General Hospital, Montreal, QC, Canada, 8Department of Public Health & Primary Care, University of Cambridge, Cambridge, UK, United Kingdom, 9Center for Musculoskeletal Research, University of Rochester, Rochester, New York, USA., United states, 10Departments of Medicine, Human Genetics, Epidemiology & Biostatistics, Lady Davis Institute, McGill University, Montréal, Canada & Department of Twin Research, King’s College London, London, UK., United Kingdom
Disclosures: John P. Kemp, None

11:24 am  LB-1161 Histone methyltransferases EZH1 and 2 promote skeletal growth by repressing inhibitors of chondrocyte proliferation and hypertrophy
Julian Lui*, Presley Garrison, Quang Nguyen, Michal Ad, Ola Nilsson, Kevin Barnes, Jeffrey Baron. 1Section on Growth & Development, NICHD, United states, 2Department of Women’s & Children’s Health, Karolinska Institute, Sweden
Disclosures: Julian Lui, None

11:36 am  LB-1162 Clinical Development of an Optimized Abaloparatide Transdermal Patch
Jamal Saeh*, David Pais, Ehab Hamad, Joan Moseman, David Wirtanen, Ken Brown, Lisa Dick, Gary Hattersley. 1Radius Health, United states, 23M Drug Delivery Systems, United states
Disclosures: Jamal Saeh, Radius Health, 17

11:48 am  LB-1163 Effects of Up to 10 Years of Denosumab Treatment on Bone Matrix Mineralization: Results From the FREEDOM Extension
DW Dempster*, JP Brown, S Yue, S Rizzo, D Farlay, RB Wagman, A Wang, X Yin, G Boivin. 1Columbia University, United states, 2Laval University & CHU de Quebec-(CHUL) Research Centre, Canada, 3Amgen Inc., United states, 4INSERM, UMR 1033, Univ Lyon, Université Claude Bernard Lyon 1, France
Disclosures: DW Dempster, Amgen Inc., Eli Lilly & Co., Regeneron, and Tarsa, 14; Amgen Inc. and Eli Lilly & Co., 15; Amgen Inc. and Eli Lilly & Co., 13

NETWORKING BREAK
12:00 pm - 12:30 pm George World Congress Center
ASBMR Discovery Hall - Expo Hall A1

POSTER SESSION III & POSTER TOURS
12:30 pm - 2:30 pm George World Congress Center
ASBMR Discovery Hall - Expo Hall A1

Odd # Posters will present from 12:30 pm - 1:30 pm
Even # Posters will present from 1:30 pm - 2:30 pm
ADULT METABOLIC BONE DISORDERS: CHRONIC KIDNEY DISEASE — METABOLIC BONE DISORDER

MO0001 FGF23 and Vitamin D metabolism in chronic kidney disease
Isabelle Piec*1, Allison Chipchase2, Holly Nicholls1, Christopher Washbourne1, Jonathan Tang1, William Fraser1, 1University of East Anglia, United Kingdom, 2Norwich & Norfolk University Hospital, United Kingdom

Disclosures: Isabelle Piec, None

MO0002 Hip Fracture Admissions are Increasingly Complicated by Advanced Chronic Kidney Disease in England
Celia Gregson*1, Arti Bhimijyani1, Shona Methven2, Fergus Caskey3, Jenny Neuberger4, Yoav Ben-Shlomo5, 1Musculoskeletal Research Unit, School of Clinical Sciences, University of Bristol, Bristol, UK, United Kingdom, 2UK Renal Registry, Bristol, & School of Clinical Sciences, University of Bristol, UK, United Kingdom, 3UK Renal Registry, Bristol, & School of Social & Community Based Medicine, University of Bristol, University of Bristol, UK, United Kingdom, 4The Nuffield Trust, London, UK, United Kingdom, 5School of Social & Community Based Medicine, University of Bristol, Bristol, UK, United Kingdom

Disclosures: Celia Gregson, None

ADULT METABOLIC BONE DISORDERS: OTHER ADULT METABOLIC BONE DISORDERS

MO0003 Alkaline phosphatase substrates are elevated in many adults with persistent hypophosphatasemia
Indira Rai*,1, Richard Berg2, Erica Scotty2, Fergus McKiernan3, 1Marshfield Clinic, United states, 2Center for Biomedical Informatics, Marshfield Medical Research Foundation, United states, 3Marshfield Medical Research Foundation, United states

Disclosures: Indira Rai, None

MO0004 Cobalt Ion Release Alters Skeletal Metabolism: A Mechanism for Bone Loss in Metal-on-Metal Orthopaedic Implants
Andrew Clark*, tzong-jen sheu, J. Edward Puzas. University of Rochester, United states

Disclosures: Andrew Clark, None

MO0005 RANK-L is upregulated in Erdheim Chester disease, a new therapeutic target?
Natasha M. Appelman-Dijkstra*,1, Huib van Essen*, Nathalie Bravenboer*, Neveen A.T. Hamdy1, 1Center for Bone Quality Leiden University Medical Center, Netherlands, 2Department Clinical Chemistry, VU University Medical Center, Netherlands, 3Department Clinical Chemistry, VU University Medical Center, Research institute MOVE & Center for Bone Quality Leiden University Medical Center, Netherlands

Disclosures: Natasha M. Appelman-Dijkstra, None

ADULT METABOLIC BONE DISORDERS: PAGET'S DISEASE

MO0006 Micro-RNA Expression Profiling in Paget's Disease of Bone and Osteoporosis and their Modulation by Intravenous Bisphosphonates
Simone Bianciardi1, DANIELA MERLOTTI2, Guido Sebastiani1, Marco Valentini1, Stefano Gonnelli1, Carla Caffarelli1, Isabella Anna Evangelista1, Simone Cenci1, Ranuccio Nuti1, Francesca Dotta1, Luigi Gennari*,1 1Department of Medicine, Surgery & Neurosciences, University of Siena, Italy, 1Department of Medicine, Surgery & Neurosciences, University of Siena, Italy; 2Division of Genetics & Cell Biology, San Raffaele Scientific Institute, Milan, Italy, Italy, 3Division of Genetics & Cell Biology, San Raffaele Scientific Institute, Milan, Italy

Disclosures: Luigi Gennari, None

ADULT METABOLIC BONE DISORDERS: PARATHYROID DISORDERS

MO0007 Conventional Treatment Of Hypoparathyroidism Is Not Sufficient To Prevent Hyperphosphatemia And Hypercalciuria
Camilla Amaral1, Gabriela Andrade1, Maria Marta Sarquis Soares1, Maria Regina Calsonari1, Angelica Tiburcio1, Barbara Silva*,3, 1Santa Casa de Belo Horizonte, Brazil, 2Universidade Federal de Minas Gerais, Brazil, 3Santa Casa de Belo Horizonte & UNI-BH, Brazil

Disclosures: Barbara Silva, None
MO0008 HYDROGEN SULFIDE PROTECTS FROM PTH INDUCED BONE LOSS BY INCREASING WNT10B PRODUCTION BY T CELLS
Abdul Malik*, John Calvert, Chiara Vaccaro, Mingcan Yu, Jau Li, Jonathan Adams, Roberto Pacifici. Emory University, United states
Disclosures: Abdul Malik, None

MO0009 Intrathyroidal Parathyroid Carcinoma
Monica Therese Cating-Cabral*, Pamela Ann Aribon, Brian Michael Cabral. St. Luke’s Medical Center Global City, Philippines
Disclosures: Monica Therese Cating-Cabral, None

MO0010 Normocalcaemic Hyperparathyroidism: Prevalence in a UK Referral Population
Marian Schini*1, Richard Jacques1, Nicola Peel2, Jennifer Walsh1, Richard Eastell1.
1University of Sheffield, United Kingdom, 2Sheffield Teaching Hospitals, United Kingdom
Disclosures: Marian Schini, None

MO0011 Primary Hyperparathyroidism: Role of Impaired Cerebrovascular Function in Cognitive Symptoms
Sum Melissa, Yunglin Gazes, Diane Cozadd, Mariana Bucovsky, Kevin Slane, Chengchen Zhang, Randolph Marshall, Ronald Lazar, Shonni Silverberg, Marcella Walker*.
Columbia University Medical Center, United states
Disclosures: Marcella Walker, None

MO0012 PTH in Elderly Women: Change over Time and Association with Mortality in the Longitudinal OPRA Study
1Department of Internal Medicine, Halmstad County Hospital, Halmstad, Sweden, 2Clinical & Molecular Osteoporosis Research Unit, Department of Clinical Science Malmö, Lund University, Sweden, Sweden
Disclosures: David Buchebner, None

BIOMECHANICS AND BONE QUALITY: ASSESSMENT OF BONE QUALITY AND STRENGTH

MO0013 3D Analysis of Osteocyte Lacunae Using Confocal Microscopy
Adam Rauff1, Chelsea Heveran2, Virginia Ferguson2, R. Dana Carpenter*1. 1University of Colorado Denver, United states, 2University of Colorado Boulder, United states
Disclosures: R. Dana Carpenter, None

MO0014 Comparison of Cortical and Trabecular Bone Micro-architecture and Finite-Element-Derived Strength in Postmenopausal Women With and Without Recent Distal Radius Fracture
Chantal Kawalilak*1, Saija Kontulainen2, Morteza Amini1, Cathy Arnold3, James D Johnston1. 1Mechanical Engineering; University of Saskatchewan, Canada, 2College of Kinesiology; University of Saskatchewan, Canada, 3School of Physical Therapy; University of Saskatchewan, Canada
Disclosures: Chantal Kawalilak, None

MO0015 Dynamic Versus Quasi-Static Mechanical Analysis of Bisphosphonate Treated Bone
Joseph Geissler*, J. Christopher Fritton. Rutgers University / NJ Medical School / Orthopaedics, United states
Disclosures: Joseph Geissler, None

MO0016 In Vivo Measures of Trabecular Bone Micro-Architecture Computed from Two Multirow Detector CT Scanners with Different Spatial Resolution Show High Correlation
Punam Saha*, Cheng Chen, Xiaoliu Zhang, Elena Letuchy, Kathleen Janz, Eric Hoffman, Trudy Burns, James Torner, Steven Levy. University of Iowa, United states
Disclosures: Punam Saha, None

MO0017 Mechanical Competence of the Proximal Femur from X-Ray Analysis
Volker Kuhn*, Kerstin Simon. Medical University Innsbruck, Austria
Disclosures: Volker Kuhn, None
MO0018 Microindentation Testing of Human Trabecular Bone
Drew Jones*, 1, Connie Wood2, David Pleinowski3, Hartmut Malluche3. 1Department of Biomedical Engineering, University of Kentucky, United states, 2Department of Statistics, University of Kentucky, United states, 3Division of Nephrology, Bone & Mineral Metabolism, University of Kentucky, United states
Disclosures: Drew Jones, None

MO0019 Ovariectomized Rats with a Healed Fracture Have an Increased Propensity to Subsequent Fracture
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Disclosures: Elizabeth Foley, None

MO0020 Variation in Bone Strength-Strain Index (SSI) of the Distal Radius in Non-Osteoporotic Males: Implications for Differential Response to Traumatic Loading
Randee Hunter*, 1, Karen Briley2, James Ellis2, Amanda Agnew1, 2Skeletal Biology Research Laboratory, The Ohio State University, United states, 2Wright Center of Innovation in Biomedical Imaging, The Ohio State University, United states

BIOMECHANICS AND BONE QUALITY: DISUSE OSTEOPOROSIS – ANIMAL MODELS

MO0021 Influence of bone morphology over the bone mechanical properties of Osteoporotic rat models
Juan-Marcelo Rosales*, 1, Masaru Kaku1, Kosuke Nozaki2, Takako Ida1, Katsumi Uoshima1. 1Division of Bio-prosthodontics, Graduate School of Medical & Dental Science, Niigata University, Japan, 2Department of Material Biofunctions, Institute of Biomaterials & Bioengineering, Tokyo Medical & Dental University, Japan

MO0022 Original Evidence of a Different Adaptation of Proximal and Distal Cortical Shell of the Human Fibula to the Bone's Mechanical Environment
Gustavo Roberto Cointry*, 1, Laura Nocciolino2, Alex Ireland3, Nicolas Hall4, Andreas Kriechbaum4, José Luis Ferretti2, Joern Rittweger4, Ricardo Francisco Capozza2. 1Center of P-Ca Metabolism (CEMFoC), Argentina, 2Center of P-Ca Metabolism Studies (CEMFoC), Argentina, 3School of Healthcare Science, Manchester Metropolitan University, United Kingdom, 4Division of Space Physiology, Institute of Aerospace Medicine, German Aerospace Center, Germany

BIOMECHANICS AND BONE QUALITY: GENERAL

MO0023 Age, Grip Strength, and Handedness are Related to Distal Radius Microstructure: a Cross-Sectional, HR-pQCT study in Premenopausal Females
Megan Mancuso*, Karen Troy. Worcester Polytechnic Institute, United states
Disclosures: Megan Mancuso, None

MO0024 High-resolution quantitative preclinical bone analysis in micro-computed tomography (microCT)
Ali Behrooz*, Jeff Meganck, Jen-Chieh Tseng, Jeff Peterson, Josh Kempner. PerkinElmer, United states
Disclosures: Ali Behrooz, PerkinElmer, 17

MO0025 Low intensity vibration mitigates the detrimental effect of chronic heavy alcohol consumption on bone quality, in actively growing rats
Tee Pamon*, 1, Qiaqi Qian1, Dandi Zhang1, Chun Ho Cheung1, Jason Abraham1, Russell Turner1, Clinton Rubin1, M. Ete Chan1. 1Stony Brook University, United states, 2Oregon State University, United states
Disclosures: Tee Pamon, None

MO0026 Raman and FTIR bone quality parameters correlate with physical chemical properties of chemical standards and native tissue
Erik Taylor*, 1, Ashley Lloyd1, Carolina Salazar2, Eve Donnelly1. 1Cornell University, United states, 2University of Los Andes, Colombia
Disclosures: Erik Taylor, None
MO0027 Remnant Woven Bone and Calcified Cartilage in Mouse Bone: Differences Between Ages/Sex and Effects on Bone Strength
Victoria Ip, Zacharie Toth, John Chibnall, Sara McBride-Gagyi*. Saint Louis University, United states
Disclosures: Sara McBride-Gagyi, None

MO0028 Sertraline alters bone wound healing in murine, critical-sized, calvarial defects
R. Nicole Howie*1, Samuel Herberg2, Emily Durham1, Gracie Bennfors3, Mohammed Elsalanty4, Amanda Larue1, William Hill1, James Cray1. 1MUSC, United states, 2Case Western, United states, 3College of Charleston, United states, 4Augusta University, United states
Disclosures: R. Nicole Howie, None

MO0029 Variables Reflecting the Mineralization of Bone Tissue from Fracturing versus Non-fracturing Postmenopausal Women
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Disclosures: Sébastien RIZZO, None

BIOMECHANICS AND BONE QUALITY: MECHANICAL LOADING EFFECTS IN INTACT ANIMALS

MO0030 Initial Results for a New Positive Reinforcement Voluntary Jumping Exercise in Rats Show Enhanced Bone Parameters
Scott Lenfest*1, Jennifer Kosniewski1, Amelia Looper2, Jessica Brezicha3, Jeremy Black1, Susan Bloomfield4, Jim Fluckey4, Harry Hogan1. 1Texas A&M University Department of Mechanical Engineering, United states, 2Texas A&M University College of Veterinary Medicine, United states, 3Texas A&M University Department of Biomedical Engineering, United states, 4Texas A&M University Department of Health & Kinesiology, United states
Disclosures: Scott Lenfest, None

BONE ACQUISITION AND PEDIATRIC BONE DISORDERS: ASSESSMENT OF BONE DISEASE IN CHILDREN

MO0031 Renal Compromise and Recovery in a Boy with the PHEX 3'-UTR c.*231A>G Variant of X-linked Hypophosphatemia
Gary S. Gottesman*1, Randa Razzouk2, Keefe Davis3, Valerie A. Wollberg4, Katherine L Madson1, William H. McAlister5, Steven Mumm6, 1Center for Metabolic Bone Disease & Molecular Research Shriners Hospitals for Children - St. Louis, United states, 2Kidney & HTN. Department OU School of Community Medicine, United states, 3Division of Pediatric Nephrology. Department of Pediatrics, Washington University School of Medicine at St. Louis Children's Hospital, United states, 4Center for Metabolic Bone Disease & Molecular Research Shriners Hospitals for Children - St. Louis, United states, 5Department of Pediatric Radiology. Mallinckrodt Institute of Radiology, Washington University School of Medicine at St. Louis Children's Hospital, United states, 6Division of Bone & Mineral Diseases, Department of Internal Medicine, Washington University School of Medicine at Bernes-Jewish Hospital, United states
Disclosures: Gary S. Gottesman, None

MO0032 Withdrawn

BONE ACQUISITION AND PEDIATRIC BONE DISORDERS: BONE DEVELOPMENT AND BONE MASS ACCRUAL

MO0033 Are there Gender Differences in Abdominal Fat Distribution in Healthy Teenagers?
Francois Duboeuf*1, Stéphanie Boutroy1, Tiphanie Ginhoux2, Jean Paul Roux1, Roland Chapurlat1, Justine Bacchetta1. 1INSERM 1033, France, 2EPICIME, France
Disclosures: Francois Duboeuf, None

MO0034 Feasibility and Reproducibility using HRpQCTII in Children and Adolescents
Kyla Kent*1, Jessica Whalen1, Ariana Strickland1, Mary Leonard1, Andrew J. Burghardt2. 1Stanford School of Medicine, Dept Pediatrics, United states, 2University of California, San Francisco, United states
Disclosures: Kyla Kent, None
MO0035 Relations between Dietary And Lifestyle Factors and Bone Mass in the adolescents in Taiwan
Yi-Chin Lin*,1, Wen-Harn Pan*.1 School of Nutrition, Chung Shan Medical University, Taiwan, province of china, 2Institute of Biomedical Sciences, Academia Sinica, Taiwan, province of china
Disclosures: Yi-Chin Lin, None

BONE ACQUISITION AND PEDIATRIC BONE DISORDERS: BONE LOSS IN PEDIATRICS

MO0036 Calcemic Response to Burns Differences between Children and Adolescents
Gordon L Klein*,1, David N Herndon*,2, Clark R Andersen*,2, Debra Benjamin*,2, Celeste C Finnerty*.2 1Dept Orthopaedic Surgery, University of Texas Medical Branch & Shriners Burns Hospital, United states, 2Department of Surgery, University of Texas Medical Branch & Shriners Burns Hospital, United states
Disclosures: Gordon L Klein, None

BONE ACQUISITION AND PEDIATRIC BONE DISORDERS: EFFECTS OF BONE ACTIVE DRUGS IN CHILDREN

MO0037 Effect of Bisphosphonates and Denosumab on trabecular bone: Results of a pilot study in children with Osteogenesis imperfecta
Mirko Rehberg*,1, Oliver Semler*.1, Heike Hoyer-Kuhn*,1, Eckard Schöna*,1, Renaud Winzenrieth*.2 1Children’s Hospital, University of Cologne, Germany, 2R&D department, Med-Imaps SASU, France
Disclosures: Renaud Winzenrieth, None

BONE MARROW MICROENVIRONMENT AND NICHES: BONE AND VASCULATURE

MO0038 Fibrogenesis Imperfecta Ossium and Response to human growth hormone: A potential novel therapy
Sanjay Bhadada*,1, Vandana Dhiman*,1, Soham Mukherjee*,1, Sameer Aggarwal*,1, Amanjit Baj*,1, N khandelwal*,1, Anil bhansali*,1, D. Sudhaker Rao*,1 1PGIMER, Chandigarh, India, 2Henry Ford Hospital, USA, United states
Disclosures: Sanjay Bhadada, None

MO0039 Discovery of a Novel, Bone-like Blood Particle: Identification and Characterization of Ossified Particles in the Peripheral Circulation of Humans
Rhonda Prisby*,1, Lynn Opdenaker*,2, Mary Ann McLane*,1, Sophie Guderian*.1 1University of Delaware, United states, 2Helen F. Graham Cancer Center & Research Institute, United states
Disclosures: Rhonda Prisby, None

MO0040 Novel, Bone-like Ossified Particles in the Peripheral Circulation of Male Fischer-344 Rats
Sophie Guderian*,1, Seunyong Lee, Rhonda Prisby. University of Delaware, United states
Disclosures: Sophie Guderian, None

MO0041 Transcriptomic Analysis of Mouse Calvarial Cells Stimulated by Megakaryocytes Reveals Changes in Macrophage Activity and Angiogenic Gene Networks
Paul Childress*,1, Nabarun Chakraborty*,1, Marta Alvarez*,1, Evan Himes*,1, Angela Bruzganit*,1, Edward Srou*,1, Duncan Donohue*,1, Rasha Hammamieh*,1, Melissa Kacena*.1 1Department of Orthopaedic Surgery, Indiana University School of Medicine, United states, 2US Army Center for Environmental Health Research, United states, 3Department of Biomedical & Applied Sciences, Indiana University School of Dentistry, United states, 4Department of Medicine, Indiana University School of Medicine, United states
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MO0042 Osteal Macrophages are Strategically Distributed within Activated Periosteum to Support Bone Regenerative Mechanisms
Kylie Alexander1, Liza-Jane Raggatt2, Andy Wu1, Ming-Kang Chang3, Lena Batoon2, Susan Millard2, David Hume4, Allison Pettit*2, 1The University of Queensland - Centre for Clinical Research, Australia, 2Mater Research Institute - The University of Queensland, Australia, 3Institute for Molecular Bioscience, The University of Queensland, Australia, 4The Roslin Institute & University of Edinburgh, United Kingdom
Disclosures: Allison Pettit, None

MO0043 DPP4-Cleaved SDF-1 inhibits CXCR4 mediated Migration of BMSCs
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Disclosures: Alexandra Aguilar-Perez, None

MO0044 Dysregulated Runx2 expression, Extra cellular Membrane Vesicles and Vitamin D Deficiency Drive the Vicious Cycle in Osteosarcoma Bone Microenvironment and Increase Tumor Burden
Rama Garimella*, John Keighley2, Sumedha Gunewardena3, Osama Tawfik4, Peter Rowe5, Peter Van Veldhuizen6. 1Midwest Biomedical Research Foundation, United states, 2Biostatistics, The University of Kansas Medical Center, United states, 3Molecular & Integrative Physiology, The University of Kansas Medical Center, United states, 4Pathology & Laboratory Medicine, The University of Kansas Medical Center, United states, 5The Kidney Institute, The University of Kansas Medical Center, United states, 6Sarah Cannon HCA Midwest Health Cancer Network, United states
Disclosures: Rama Garimella, None

MO0045 Increased TAF12 in Myeloma Cells and Bone Marrow Stromal Cells Enhances Myeloma Growth and Osteoclast Formation in Response to Physiologic Levels of 1,25-dihydroxy Vitamin D
Yasuhisa Ohata*, Yuki Nagata1, John Chirgwin2, David Roodman3, Noriyoshi Kurihara4, 1Medicine / Hematology-Oncology, Indiana University, United states, 2Medical / Endocrinology, Indiana University; Roudebush VA Medical Center, United states, 3Medicine / Hematology-Oncology, Indiana University; Roudebush VA Medical Center, United states
Disclosures: Yasuhisa Ohata, None

MO0046 Protective Role of Paget's Disease of Bone Against Skeletal Metastasization from Solid Tumors: Clinical and Experimental Evidences
DANIELA MERLOTTI*, Nadia Rucci2, Marco Di Stefano3, Domenico Rendina4, Simone Bianchi5, Isabella Anna Evangelista4, Antonio Criasia6, Argia Ucci5, Stefano Rotatori3, Simone Cenci7, Pasquale Strazzullo4, Giancarlo Isaiu6, Ranuccio Nuti5, Anna Tett5, Luigi Gennari7. 1Division of Genetics & Cell Biology, San Raffaele Scientific Institute - 2Department of Medicine, Surgery & Neurosciences, University of Siena, Italy, 3Department of Biotechnological & Applied Clinical Sciences, University of L'Aquila, Italy, 4Gerontology Section Department of Medical Sciences, University of Turin, Italy, 5Department of Clinical & Experimental Medicine, Federico II University, Naples, Italy, 6Department of Medicine, Surgery & Neurosciences, University of Siena, Italy, 7Division of Genetics & Cell Biology, San Raffaele Scientific Institute, Milan, Italy
Disclosures: DANIELA MERLOTTI, None
MO0047  MIF Stimulates Osteoclastic Bone Resorption in Breast Cancer Bone Metastasis
Jessica Grunda1, Charlotte Cialek2, Katrina Clines2, Renee Desmond1, Rosa Serra1, Janet Cross3, Gregory Clines*2. 1University of Alabama at Birmingham, United states, 2University of Michigan, United states, 3University of Virginia, United states
Disclosures: Gregory Clines, None

MO0048  Runx2-mediated autophagy promotes survival of bone metastatic breast cancer cells
Ahmad Othman*, Manish Tandon, Jitesh Pratap. Rush University Medical Center, United states
Disclosures: Ahmad Othman, None

BONE TUMORS AND METASTASIS: MECHANISMS OF BONE METASTASIS

MO0049  Is Canine Osteosarcoma a Good Model for Human Osteosarcoma?
Awf Al-Khan*1, Judith Nimmo2, Michael Day3, Stewart Ryan4, Barbara Bacci4, Samantha Richardson1, Janine Danks1. 1School of Health & Biomedical Sciences, RMIT University, Australia, 2Australian Specialised Animal Pathology Laboratory, Australia, 3Comparative Pathology Laboratory, School of Veterinary Sciences, Bristol University, United Kingdom, 4The University of Melbourne, School of Veterinary Sciences, Australia
Disclosures: Awf Al-Khan, None

MO0050  Runx1 is Obligatory for Mammary Epithelial Cell Morphology and Phenotype
Deli Hong*1, Terri Messier1, Andrew Fritz1, Jason Dobson2, Gillian Browne1, Janet Stein3, Jane Lian4, Gary Stein1. 1University of Vermont, United states, 2UMASS Medical School-Cell Biology, United states, 3University of Vermont, United states, 4University of Vermont, United states
Disclosures: Deli Hong, None

MO0051  TBK1/IKK-Signaling Is a Novel Therapeutic Target In Multiple Myeloma-Induced Bone Disease
Quanhong Sun*1, Peng Zhang1, Deidra Balchak2, Juraj Adamik1, Valentina Marchica3, Nicola Giuliani4, Rebecca Silbermann5, G. David Roodman6, Deborah Galson1. 1Department of Medicine, Hematology-Oncology Division, University of Pittsburgh Cancer Institute, McGowan Institute for Regenerative Medicine, University of Pittsburgh, PA, USA, United states, 2Department of Medicine, Hematology-Oncology Division, University of Pittsburgh Cancer Institute, McGowan Institute for Regenerative Medicine, University of Pittsburgh, PA, USA; Carlow University, PA, USA, United states, 3Myeloma Unit, Department of Clinical & Experimental Medicine, University of Parma, Italy, Italy, 4Myeloma Unit, Department of Clinical & Experimental Medicine, University of Parma, Italy, United states, 5Department of Medicine, Hematology-Oncology Division, Indiana University, Indianapolis, IN, USA, United states, 6Department of Medicine, Hematology-Oncology Division, Indiana University, Indianapolis, IN, USA; Veterans Administration Medical Center, Indianapolis, IN, United states
Disclosures: Quanhong Sun, None

CHONDROCYTES AND CARTILAGE MATRIX: ARTICULAR CARTILAGE

MO0052  Bimodal NOTCH/HES1 Signaling Mediates Cartilage Catabolism and OA Progression via the JAK/STAT Pathway
Yinshi Ren*1, Jianquan Chen1, Zhaoyang Liu2, anthony Miranda1, Matthew Hilton1. 1duke university, United states, 2University of Rochester Medical Center, United states
Disclosures: Yinshi Ren, None

MO0053  Cbß Cartilage-Deficient Mice Develop Spontaneous Osteoarthritis and Cbß Overexpression Prevents Osteoarthritis
Yun Lu*, Yi-Ping Li, Guochun Zhu, Mengrui Wu, Wei Chen. Department of Pathology, University of Alabama at Birmingham, United states
Disclosures: Yun Lu, None
MO0054 Post-traumatic osteoarthritis initiates with a rapid decline in the nanoindentation modulus of cartilage surface caused by matrix breakdown
Wei Tong*, Doyran Basak, Qing Li, Haoruo Jia, Xinrong Zhang, Chider Chen, Enomoto-Iwamoto Motomi, X. Lucas Lu, Lin Han, Ling Qin.
University of Pennsylvania, United States, Drexel University, United States, Wuhan University, China, The Children's Hospital of Philadelphia, United States, University of Delaware, United States
Disclosures: Wei Tong, None

MO0055 TGFβ Regulates the Stability of Sox9
George Coricor*, Rosa Serra. University of Alabama at Birmingham, United States
Disclosures: George Coricor, None

MO0056 Wnt Signaling Contributes to Osteoarthritis in Mice Overexpressing the High Molecular Weight Isoforms of Fibroblast Growth Factor 2
Patience Meo Burt, Liping Xiao, Marja Hurley. UCONN Health, United States
Disclosures: Patience Meo Burt, None

CHONDROCYTES AND CARTILAGE MATRIX: GENERAL

MO0057 FGFR3-dependent Activation of a Novel PKC Isoform Causes Dephosphorylation and Inactivation of Guanylyl Cyclase-B in Rat Chondrosarcoma Cells
Jerid Robinson*, Lincoln Potter. University of Minnesota, United States
Disclosures: Jerid Robinson, None

MO0058 MicroRNA-23c Maintains Cartilage Function and Prevents Osteoarthritis Phenotype by Suppressing Runx2
Indira Prasadam*, Ross Crawford, Yin Xiao. Institute of Health & Biomedical Innovation & Queensland University of Technology, Australia
Disclosures: Indira Prasadam, None

MO0059 TGF-beta Type II Receptor (TBRII)/IL36alpha Axis in Destabilization Medial Meniscus (DMM) Surgery Induced Post-traumatic Osteoarthritis (PTOA) Progression
Tieshi Li*, Joseph Temple, Alessandra Esposito, Lai Wang, JiEun Han, Arnavaz Hakimiyan, Susan Chubinskaya, Anna Spagnoli. Rush University Medical Center, United States
Disclosures: Tieshi Li, None

CHONDROCYTES AND CARTILAGE MATRIX: TRANSCRIPTIONAL REGULATION AND GENE EXPRESSION

MO0060 P2Y2 Purinergic Receptor Regulates Cyclic Tension Strain-induced Aggrecan Synthesis in Chondrogenic ATDC5 cells
Di Liu*, Natsuko Tanabe, Minqi Li, Takayuki Kawato, Masao Maeno.
Shandong Provincial Key Laboratory of Oral Biomedicine, Department of Prosthodontics, School of Stomatology, Shandong University, China, Division of Functional Morphology, Dental Research Center, Department of Biochemistry, Nihon University School of Dentistry, Japan, Shandong Provincial Key Laboratory of Oral Biomedicine, Shandong University, China, Division of Functional Morphology, Dental Research Center, Department of Periodontology, Nihon University School of Dentistry, Japan, Division of Functional Morphology, Dental Research Center, Department of Oral Health Sciences, Nihon University School of Dentistry, Japan
Disclosures: Di Liu, None

ENERGY METABOLISM AND BONE: DIABETES AND BONE (ANIMAL MODELS)

MO0061 Diabetic Bone is Stronger but More Brittle in the TallyHO Mouse Model of Juvenile Type 2 Diabetes
Vanderbilt University, VA Tennessee Health Valley Healthcare System, United States, Vanderbilt University, VA Tennessee Health Valley Healthcare System, United States
Disclosures: Amy Creecy, None
MO0062 Effects of Denosumab on fat and basal metabolism in postmenopausal women with type 2 diabetes
Makiko Ogata*, Risa Ide, Miho Takizawa, Naoko Iwasaki, Yasuko Uchigata. Diabetes Center, Tokyo Women’s Medical University, Japan
Disclosures: Makiko Ogata, None

ENERGY METABOLISM AND BONE: FAT AND BONE

MO0063 Characterization of Brown Adipose within Trauma-Induced Heterotopic Ossification in Human Tissues
Elizabeth Salisbury*1, Thomas Davis2, Jonathan Forsberg2, Alan Davis3, Elizabeth Davis3. 
1University of Texas Medical Branch, United states, 2Naval Medical Research Center, United states, 3Baylor College of Medicine, United states
Disclosures: Elizabeth Salisbury, None

MO0064 Chronic cold stress decreases skeletal acquisition and alters UCP1 expression and energy metabolism in young, growing male C57Bl/6J mice
Maureen Devlin*, Amy Robbins, Miranda Cosman, Lillian Shipp, Katarina Aljabegovic. University of Michigan, United states
Disclosures: Maureen Devlin, None

MO0065 Impaired Adipose Tissue Inflammation Results in High Bone Mass in Mice
Louise Grahnemo*1, Karin Gustafsson1, Ingrid Wernstedt Asterholm2, Marie Lagerquist1. 
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Disclosures: Louise Grahnemo, None

MO0066 Relationship between Body Adiposity with Marrow Adipose Tissue and Bone Mass in Human Type 1 Diabetes Mellitus
Adriana Carvalho*1, Bianca Massaro1, Luciana Silva1, Marcello Nogueira-Barbosa1, Carlos Salmon1, Belinda Simões1, Maria Carolina Rodrigues1, Clifford Rosen2, Francisco De Paula1. 1University of Sao Paulo, Brazil, 2Maine Medical Center Research Institute, Brazil
Disclosures: Adriana Carvalho, None

ENERGY METABOLISM AND BONE: GENERAL

MO0067 Bone Density, Bone Geometry and Bone Turnover in Hypogonadal Men with Type 2 Diabetes after Testosterone Therapy
Georgia Colleluori*1, Lina Aguirre2, Richard Dorin2, David Robbins2, Clifford Qualls3, Dean Blevins1, Dennis Villareal4, Reina Villareal1, 1Baylor College of Medicine, United states, 2New Mexico VA Health Care System, United states, 3University of New Mexico School of Medicine, United states, 4Michael E. DeBakey VA Medical Center, United states
Disclosures: Georgia Colleluori, None

MO0068 Energy and protein intake above recommendations inversely correlate with lean mass indices in 2-8 y olds
Neil R. Brett*, Kristina E Parsons, Catherine A. Vanstone, Hope A. Weiler. McGill University, Canada
Disclosures: Neil R. Brett, None

MO0069 Withdrawn

MO0070 Novel Indications of the Disruption of VEGF signaling and Remodeling in Diabetic Bone
Roberto Fajardo*1, Jesus Hernandez1, Brandon May1, Nandini Ghosh-Choudhury1, Zachary Child1. 1The University of Texas Health Science Center at San Antonio, United states, 2University of Texas at San Antonio, United states
Disclosures: Roberto Fajardo, None
MO0071 High Bone Turnover in Mice Carrying a Pathogenic Notch2-mutation Causing Hajdu-Cheney Syndrome
Nele Vollersen*, Timur Yorgan, Michael Amling, Thorsten Schinke. Department of Osteology & Biomechanics, University Medical Center Hamburg-Eppendorf, Germany
Disclosures: Nele Vollersen, None

MO0072 High Throughput Bone Phenotyping: Rigor and Transparency
Douglas Adams1, Renata Rydzik1, Li Chen1, Zhihua Wu1, Seung-Hyun Hong1, Pujan Joshi1, Caibin Zhang1, John Sundberg2, Gaven Garland2, Dong-Guk Shin1, David Rowe1, Cheryl Ackert-Bicknell1, 1University of Connecticut, United states, 2The Jackson Laboratory, United states, 3University of Rochester, United States
Disclosures: Douglas Adams, None

MO0073 Identifying Genetic Mediators of Periodontitis in Mice
Sarah Hiyari*, Azadi Naghibi, Sotiris Tetrades, Flavia Pirih1, 1University of California, Los Angeles School of Dentistry, United States, 2UCLA School of Dentistry, United States
Disclosures: Sarah Hiyari, None

MO0074 Modulation of autophagy alters osteogenesis imperfecta severity in mice with Gly610 to Cys substitution in the triple helical region of the α2(I) collagen chain
Elena Makareeva1, Shakib Omari1, Anna Roberts-Pilgrim1, Edward Mertz2, Laura Gorrell1, Lynn Mirigian1, Sergey Leikin1, 1SPB, NICHD, NIH, United States, 2SPB, NICHD, NIH, United States
Disclosures: Sergey Leikin, None

MO0075 NF-κB Regulator Bcl-3 – A Novel Modulator of Skeletal Architecture
Hussain Jaffery1, Carl S Goodyear1, Ruaidhri J Carmody1, James Doonan2, Moed Akbar1, Carmen Huesa1, Lynette Dunning1, William Ferrell2, John Lockhart2, Rob van’t Hof2. 1Institute of Infection, Immunity & Inflammation, University of Glasgow, United Kingdom, 2Strathclyde Institute of Pharmacy & Biomedical Sciences, University of Strathclyde, United Kingdom, 3Institute of Biomedical & Environmental Health Research, University of the West of Scotland, United Kingdom, 4Institute of Infection Immunity & Inflammation, University of Glasgow, United Kingdom, 5Institute of Ageing & Chronic Disease, University of Liverpool, United Kingdom
Disclosures: Hussain Jaffery, None

MO0076 Osteocyte Specific Cx43 Overexpression Improves Cortical Bone Mass and Strength, but Reduces Cancellous Bone in old Mice
Hannah Davis*, Emily Atkinson1, Rafael Pacheco-Costa1, David Lopez1, Mohammad Aref1, Drew Brown1, Marie Harris2, Stephen Harris2, Matthew Allen1, Teresita Bellido1, Lilian Plotkin1. 1Indiana University School of Medicine, United States, 2The University of Texas at San Antonio, United States
Disclosures: Hannah Davis, None

MO0077 Withdrawn

MO0078 Transgenic Mouse Model for Reducing Oxidative Damage in Bone
Ann-Sofie Schreurs*, Eric Moyer1, Akilesh Kumar1, Samantha Torres1, Tiffany Truong1, Candice Tahmic1, Joshua Alwood1, Charlie Limoli1, Ruth Globus1. 1NASA ARC, United States, 2UC Irvine, United States
Disclosures: Ann-Sofie Schreurs, None

GENETIC MODELS OF MUSCULOSKELETAL DISEASES: GENE THERAPY

MO0079 Use of OI iPSC In Vivo Bone Formation Model to Study Disease Mechanisms and Potential Therapies
Xiaonan Xin, Mark Kronenberg, Li Chen, Shalini Gohil, Liping Wang, Xi Jiang, Lakshmi Nair, David Rowe, Alexander Lichtler*. UConn Health, United States
Disclosures: Alexander Lichtler, None
Circulating MicroRNAs Expression Profile in Patients with Osteoporosis-Osteoporotic Fracture
Mengge Sun*1, William Lu1, Songlin Peng2. 1The University of Hong Kong, Hong kong, 2Department of Spine Surgery, Shenzhen People’s Hospital, Jinan University School of Medicine, China
Disclosures: Mengge Sun, None

Network-Based Transcriptome-Wide Expression Study for Postmenopausal Osteoporosis
lan zhang*, Hongwen Deng. Tulane University, United states
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Bone Strength Estimated by Failure Load Shares Genetic Composition with Areal BMD: The Framingham Study Families
David Karasik*1, Serkalem Demissie2, Mary L. Bouxsein3, Ching-Ti Liu2, Steven K. Boyd2, Elise Lim2, Kerry E. Broe1, L. Adrienne Cupples2, Douglas P. Kiel1. 1Institute for Aging Research Hebrew SeniorLife, United states, 2Biostatistics, BU School of Public Health, United states, 3BIDMC, Harvard MS, United states, 4University of Calgary, Canada
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Heritability of Bone Mineral Density and Content in Childhood and Adolescence
Diana Cousminer*1, Alessandra Chesi1, Jonathan Mitchell1, Sani Roy1, Heidi Kalkwarf2, Joan Lappe3, Vicente Gilsanz4, Sharon Oberfield5, John Shepherd6, Andrea Kelly1, Shana McCormack1, Benjamin Voight7, Babette Zemel1, Struan Grant1. 1Children’s Hospital of Philadelphia, United states, 2Cincinnati Children’s Hospital Medical Center, United states, 3Creighton University, United states, 4Children’s Hospital of Los Angeles, United states, 5Columbia University Medical Center, United states, 6University of California San Francisco, United states, 7University of Pennsylvania, United states
Disclosures: Diana Cousminer, None

Heritability of Thoracic Kyphosis and Genetic Correlations with Other Spine Traits: Framingham QCT Study
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Disclosures: Michelle S. Yau, None

Identification of Novel Osteoporosis Risk Biomarkers: A Proteome-wide Discovery Study with Osteoporotic Fracture Patients in Chinese
Xu Zhou*1, Pei He1, Zhen-Huan Jiang2, Yun-Hong Zhang3, Jian-Nong Jiang2, Hong-Qing Gao3, Ding-Hua Jiang4, Xin Lu1, Shu-Feng Lei1, Fei-Yan Deng1. 1Center for Genetic Epidemiology & Genomics, School of Public Health, Soochow University, China, 2Municiple People’s Hospital at Yixin, China, 3Shishan Street Community Health Service Center at High-tech District, China, 4The 1st Affiliated Hospital of Soochow University, China
Disclosures: Xu Zhou, None
MO0086  FGF23 Enhances CYP24A1 Transcription in Klotho-dependent way via ERK Pathway
Maria K Tsoumpra*, Shun Sawatsubashi, Yuichi Takashi, Toshio Matsumoto, Seiji Fukumoto. Fujii Memorial Institute of Medical Sciences, Japan
Disclosures: Maria K Tsoumpra, None

MO0087  FGF23 Exerts its Effects on Phosphorus Metabolism Starting 12 Hours After Birth, but not During Fetal Development
Yue Ma*,1, Beth J. Kirby1, Beate Lanske2, Andrew C. Karaplis3, Christopher S. Kovacs1.  
1Memorial University, Canada, 2Harvard School of Dental Medicine, United states, 3McGill University, Canada
Disclosures: Yue Ma, None

MO0088  FGF23 responds to alterations of iron metabolism in a murine model of CKD-MBD
Erica Clinkenbeard*, Hitesh N. Appaiah2, Keith Stayrook3, Taryn Cass2, Julia Hum2,  
Yves Sabbagh4, Susan Schiavi4, Kenneth White2.  
1Department of Medical & Molecular Genetics Indiana University School of Medicine, United states, 2Department of Medical & Molecular Genetics, Indiana University School of Medicine, United states, 3Department of Pharmacology & Toxicology, Indiana University School of Medicine, United states,  
4Genzyme, United states, 5PreciThera, Inc., United states
Disclosures: Erica Clinkenbeard, None

MO0089  Vitamin D metabolism and action in human mesenchymal stem cells: Effects of fibroblast growth factor 23
Fangang Meng*, Jing Li, Julie Glowacki, Meryl LeBoff, Shuanhu Zhou. Brigham & Women’s Hospital, United states
Disclosures: Fangang Meng, None

HORMONAL REGULATORS: OTHER HORMONES

MO0090  IGFBP4 regulates adipogenesis and osteogenesis
David Maridas*, Victoria DeMambrbo1, Phuong Le1, Subburaman Mohan2, Clifford Rosen1.  
1MMCRI, United states, 2Loma Linda University, United states
Disclosures: David Maridas, None

HORMONAL REGULATORS: PARATHYROID HORMONE AND CALCIUM SENSING RECEPTORS

MO0091  Elongation of primary trabecular bone due to poorly calcified bones around the trabecular bone after continuous PTH infusion
1Ratoc System Engineering Co., LTD., Japan, 2Institute of Multidisciplinary Research for Advanced Materials, Tohoku University, Japan, 3Research Center for Industry Alliance, Tokyo Medical & Dental University, Japan, 4Laboratory of Cell & Tissue Biology, Keio University School Of Medicine, Japan
Disclosures: Nobuhito Nango, None

MO0092  Osseous Consolidation of a Nonunion Fracture of the Lower Leg Under Parathyroid Hormone Therapy
1Institute of Diagnostic & Interventional Radiology/Neuroradiology, Westkuestenklinikum Heide, Teaching Hospital of the Universities of Kiel, Lübeck & Hamburg, Germany, Germany,  
2Department of Internal Medicine I, Municipal Hospital Suedstadt Rostock, Academic Teaching Hospital of the University of Rostock, Germany, Germany, 3Centre of Orthopaedics, Berlin, Germany, Germany, 4Clinic of Trauma Surgery, Orthopaedics & Hand Surgery, Municipal Hospital Suedstadt Rostock, Academic Teaching Hospital of the University of Rostock, Germany, Germany, 5Clinic of Trauma-, Hand- & Restoration Surgery, Universitätsmedizin Rostock, Germany, Germany
Disclosures: Ilko Kastirr, None
MO0093 Thymus-Derived Parathyroid Hormone Secretion Increases after Parathyroidectomy in C57BL6/KaLwRij Mice
Maurizio Zangari1, Hanna Yoo1, Bumjun Kim2, Ricky Edmonson1, Larry Suva3, Donghoon Yoon*1. 1UAMS, United states, 2Baylor College of Medicine, United states, 3Texas A&M Univ., United states
Disclosures: Donghoon Yoon, Onyx, Millennium, and Norvatis, 13

MO0094 Anti-FSH Polyclonal Antibody Decreases Fat Accumulation and Partially Protects Bone from the Deleterious Effects of Diet-Induced Obesity
Elizabeth Rendina-Ruedy*1, Victoria DeMambro1, Tony Yuen2, Peng Liu2, Yaoting Ji2, Ping Lu2, Li Sun2, Mone Zaidi2, Clifford Rosen3, 1Maine Medical Center Research Institute, United states, 2Mount Sinai Bone Program, Department of Medicine, Icahn School of Medicine at Mount Sinai, United states
Disclosures: Elizabeth Rendina-Ruedy, None

MO0095 Genomic High Content Screening in primary osteoblasts uncover novel druggable targets to improve osteoblast differentiation and alleviate deleterious effects of glucocorticoids
Mubashir Ahmad1, Thorsten Kroll2, Jeanette Knoll2, Aspasia Ploubidou2, Jan Tuckermann*2. 1Institute for Comparative Molecular Endocrinology (CME), University of Ulm, Germany, 2Leibniz Institute for Age Research – Fritz Lipmann Institute (FLI), Beutenbergstrasse 11, D-07745 Jena, Germany, 3Leibniz Institute for Age Research – Fritz Lipmann Institute (FLI), Beutenbergstrasse 11, D-07745 Jena, Germany, Germany, 4Institute for Comparative Molecular Endocrinology (CME), University of Ulm, Helmholtzstrasse 8/1, 89081 Ulm, Germany
Disclosures: Jan Tuckermann, None

MO0096 Loss of TIEG expression alters the miRNAome and transcriptome of cortical and trabecular bone resulting in impaired estrogen signaling in the mouse skeleton
Malayannan Subramaniam*1, Kevin Pitel1, Russell Turner1, Urszula Iwaniec2, Andre van Wijnen1, John Hawse1. 1Mayo Clinic, United states, 2Oregon State University, United states
Disclosures: Malayannan Subramaniam, None

MO0097 Testosterone regulation of physical activity behavior: mechanisms of action
Ferran Jardi*1, Michael Laurent1, Lawrence Vanhelleputte2, Vanessa Dubois3, Ludo Deboel1, Rougin Khalil1, Brigitte Decallone1, Geert Carmeliet1, Ludo Van den Bosch2, Rudi D’Hooge1, Frank Claessens1, Dirk Vanderschueren1. 1KU Leuven, Belgium, 2VIB, Belgium, 3Institut Pasteur de Lille, France
Disclosures: Ferran Jardi, None

MO0098 The Role of Membrane ERα Signaling in Bone and Other Major Estrogen Responsive Tissues
Karin Gustafsson*1, Helen Farman1, Petra Henning1, Vikte Lionikaite1, Sofia Movére-Skr tic1, Jianyao Wu1, Henrik Ryberg1, Antti Koskela1, Jan-Ake Gustafsson1, Juha Tuukkanen2, Ellis Levin2, Claes Ohlsson1, Marie Lagerquist1. 1Centre for Bone & Arthritis Research at Institute of Medicine, Sahlgrenska Academy at University of Gothenburg, Sweden, 2Unit of Cancer Research & Translational Medicine, MRC Oulu & Department of Anatomy & Cell Biology, University of Oulu, FI-90014 Oulu, Finland, Finland, 3Center for Nuclear Receptors & Cell Signaling, Department of Biology & Biochemistry, University of Houston, Houston, Texas, 77204-5056, United States of America., United states, 4Division of Endocrinology, Departments of Medicine & Biochemistry, University of California, Irvine, Irvine, California, & the Long Beach VA Medical Center, Long Beach, CA, USA, United states
Disclosures: Karin Gustafsson, None

HORMONAL REGULATORS: VITAMIN D AND ANALOGS

MO0099 CYP27B1 ablation modulates breast cancer cells epithelial-to-mesenchymal transition (EMT) and promotes lung metastasis in the MMTV-PymT mouse model
Jiarong Li*, Richard Kremer. MUHC, Canada
Disclosures: Jiarong Li, None

MO0100 Withdrawn
Obesity is associated with lower total, free and bioavailable 25OHD and higher vitamin D binding protein (DBP) and PTH concentrations as well as different genotype distribution of the DBP coding gene leading to possible negative influence on bone in women

Elisa Saarnio*, Minna Pekkinen*, Suvi T Itkonen*, Virpi Kemi*, Heini Karp1, Merja Karkkainen1, Harri Sievänen2, Outi Mäkitie*, Christel Lamberg-Allardt1. 1Calcium Research Unit, Department of Food & Environmental Sciences, University of Helsinki, Finland, Finland, 2Folkhälsan Institute of Genetics, Folkhälsan Research Center, Helsinki, Finland, Finland, 3Bone Research Group, UKK Institute for Health Promotion Research, Tampere, Finland, Finland, 4Children’s Hospital, Helsinki University Central Hospital & University of Helsinki, Finland, Finland

Disclosures: Elisa Saarnio, None

Does the Ability of Cells to Sense and Respond to Low Intensity Vibrations Differ Between 2D and 3D Cell Culture?

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Disclosures: Stefan Judex, None

Interleukin 1β (IL1β), Nitric Oxide Synthase 2 (NOS2), Lipocalin 2 (LCN2) and Vascular Endothelial Growth Factor (VEGF) Orchestrate the Coupled Mechanoresponse of Skeletal Angiogenesis and Osteogenesis

Vimal Veeriah*, Mattia Capulli1, Angelo Zanniti1, Supvo Chatterjee2, Nadia Rucci1, Anna Teti1. 1University of L’Aquila, Italy, 2Anna University, India

Disclosures: Vimal Veeriah, None

LaminA/C knock down enhances adipogenesis but does not eliminate mechanical response in MSCs

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Disclosures: Melis Olcum, None

Temporal transcriptome analysis of osteocytes exposed to microgravity during spaceflight

Yuhei Uda*, Amira Hussein2, Jordan Spatz1, Keertik Fulzele1, Forest Lai1, Chris Dedic1, Chao Shi1, Sean Dougherty2, Margaret Eberle4, Chris Adamson2, Lowell Misener4, Louis Gerstenfeld2, Paola Divieti Pajevic4. 1Molecular & Cell Biology, GSDM, Boston University, United states, 2Orthopaedic Surgery, BUSM, Boston University, United states, 3Endocrine Unit, Massachusetts General Hospital, United states, 4CALM Technologies Inc., Canada, 5Molecular & Cell Biology, GSDM, Boston University; Endocrine Unit, Massachusetts General Hospital, United states

Disclosures: Yuhei Uda, None

Impact of Cell Substrate Shape on Matrix Deposition and Osteoblast Differentiation

Laura Juignet*, Baptiste Charbonnier1, Virginie Dumas2, Mireille Thomas3, Coralie Laurent1, Laurence Vico1, David Marchat1, Nathalie Douard1, Luc Malaval1, 1INSERM U1059-SAINBIOSE, Université de Lyon, France, 2Ecole Nationale d’Ingénieurs de Saint Etienne, Université de Lyon, France

Disclosures: Laura Juignet, None

Targeted Deletion of Src from Osteocytes Increases Trabecular Bone Mass in Mice

Whitney A Bullock*, Kathleen H Day, Alexander G Robling, Frederik M Pavalko. Indiana University, United states

Disclosures: Whitney A Bullock, None
MUSCLE BIOLOGY AND BONE-MUSCLE CROSSTALK: AGING MECHANISMS

MO0108 Is Leptin an Age-related Paracrine/Autocrine Factor for Muscle?
Jeffrey P.; Gorski*1, Marco Broatto2, 1University of Missouri-Kansas City, United states, 2Bone-Muscle Collaborative Sciences, College of Nursing & Health Innovation, University of Texas at Arlington, Arlington, United states
Disclosures: Jeffrey P.; Gorski, None

MUSCLE BIOLOGY AND BONE-MUSCLE CROSSTALK: CELLULAR AND MOLECULAR INTERACTIONS

MO0109 Reduced Exercise Capacity of Mice with Skeletal Muscle Specific Ablation of Pit1
Daniel Caballero*, Dominik Pesta1, Ali Nasiri1, Michael Jurczack1, Gerald Schulman1, Clemens Bergwitz1, 1Yale School of Medicine, United states, 2German Diabetes Center, Germany, 3University of Pittsburgh, United states
Disclosures: Daniel Caballero, None

MO0110 The Osteopenia in Dystrophin/Utrophin Double Knockout Mice is Attributed to Down Regulation of Osteoclastogenesis in Postnatal Skeletal Development
Xueqin Gao*, Ying Tang2, Bing Wang2, Sarah Amra1, Johnny Huard1, 1University of Texas Health Science Center at Houston, United states, 2University of Pittsburgh, United states
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MUSCLE BIOLOGY AND BONE-MUSCLE CROSSTALK: GENERAL

MO0111 Inhibition of mTOR signaling reduces Bmp-induced inflammation while preserving regenerative Smad signaling
Shailesh Agarwal*, David Cholok, Shawn Loder, James Drake, John Li, Charles Hwang, Kavitha Ranganathan, Hsiao Hsin Sung, Christopher Breuler, Oluwatobi Eboda, Caitlin Priest, Joshua Peterson, Shuli Li, Ernestina Schipani, Yuji Mishina, Benjamin Levi. University of Michigan, United states
Disclosures: Shailesh Agarwal, None

MUSCULOSKELETAL AGING: BONE

MO0112 Cortical bone resorption is elevated in aged mice and is associated with markers of cellular senescence in osteocyte-enriched bone
Marilina Piemontese*, Maria Almeida, Ha-neui Kim, Robert Jilka, Charles OBrien. University of Arkansas for Medical Sciences, United states
Disclosures: Marilina Piemontese, None

MO0113 Effects of age-related chronic inflammation on osteoprogenitor cells
Anna Josephson, Vivian Bradaschia Correa, Philipp Leucht*. New York University School of Medicine, United states
Disclosures: Philipp Leucht, None

MO0114 Global deletion of the β2-adrenergic receptor does not protect against age-related or cold temperature-induced bone loss in female mice
Kathleen Bishop*, Katherine Motyl, Phuong Le, Clifford Rosen. Maine Medical Center, United states
Disclosures: Kathleen Bishop, None

MO0115 Loss of BMPR2 expression in skeletal progenitor cells reduces age-related bone loss
Michael Eaton*, Aaron Hudnall1, Jordan Newby2, Vicki Rosen1, Jonathan Lowery1, 1Marian University College of Osteopathic Medicine, United states, 2Freed-Hardeman University, United states, 3Harvard School of Dental Medicine, United states
Disclosures: Michael Eaton, None

MO0116 PTH, CTX, and Calcium Responses to Treadmill Walking Under Different Thermal Conditions in Older Adults
Sarah Wherry*, Christine Swanson, Toby Wellington, Rebecca Boxer, Jane Quick, Robert Schwartz, Wendy Kohrt. University of Colorado Anschutz Medical Campus, United states
Disclosures: Sarah Wherry, None
The radial distribution of the intracortical porosity within the fibula diaphysis
Jesper Skovhus Thomsen1, Christina Møller Andreasen2, Lyda Peteva Bakalova3, Anne-Marie Brüel1, Ellen Margrethe Hauge4, Geête Ester Toft Eschen5, Birgitte Jul Kiil5, Jean-Marie Delaissé6, Marianna Elizabeth Kersh7, Thomas Levin Andersen*6, 1Department of Biomedicine, Aarhus University, Denmark, 2Orthopaedic Research Laboratory, Department of Orthopaedic Surgery & Traumatology, Odense University Hospital, Institute of Clinical Research, University of Southern Denmark, Denmark, 3Department of Mechanical Science & Engineering, University of Illinois at Urbana-Champaign, United states, 4Department of Rheumatology, Aarhus University Hospital, Denmark, 5Department of Plastic Surgery, Aarhus University Hospital, Denmark, 6Department of Clinical Cell Biology, Vejle Hospital/Lillebaelt Hospital, Institute of Regional Health Research, University of Southern Denmark, Denmark, 7Department of Mechanical Science & Engineering, University of Illinois at Urbana-Champaign, Denmark
Disclosures: Thomas Levin Andersen, None

MO0118 MicroRNA-183 promotes an aging phenotype in the muscle-bone unit by targeting heme oxygenase-1 (HO-1)
Sadanand Fulzele, Bharati Mendhe, Meghan McGee-Lawrence, Xingming Shi, William Hill, Carlos Isales, Mark Hamrick*. Medical College of Georgia, United states
Disclosures: Mark Hamrick, None

MO0119 Sex-specific Associations Between Bone Density and Lean Mass in the VITAL Bone Health Study
Amy Yue*, Sarah Zaheer1, Trisha Copeland2, Nancy Cook3, JoAnn Manson3, Julie Buring3, Meryl LeBoff1. 1Division of Endocrinology, Diabetes & Hypertension, Brigham & Women’s Hospital (BWH), Harvard Medical School, United states, 2Division of Preventive Medicine, Department of Medicine, BWH, Harvard Medical School, United states, 3Division of Preventive Medicine, Department of Medicine, BWH, Harvard Medical School, Department of Epidemiology, Harvard T.H. Chan School of Public Health, United states
Disclosures: Amy Yue, None

MO0120 TEI-SARM2, an Oral Non-steroidal Selective Androgen Receptor Modulator, Prevents Muscle Atrophy and Bone Loss
Disclosures: Akito Makino, Teijin Pharma Limited, 100

MUSCULOSKELETAL DEVELOPMENT: BONE MODELING

MO0121 Assessment of Novel Stem-cell Based Therapies for Repair of Alveolar Clefts Using a Juvenile Swine Model
Montserrat Caballero, Donna Jones*, Zhengyuan Shan, Jacob Knorr, John van Aalst. Cincinnati Children’s Hospital Medical Center, United states
Disclosures: Donna Jones, None

MUSCULOSKELETAL PROGENITOR CELLS AND LINEAGE DETERMINATION: ADIPOCYTES

MO0122 Differential regulation of glycolysis during osteoblast and adipocyte differentiation
Anyonya Guntur*, Phuong Le, Clifford Rosen. MMCRI, United states
Disclosures: Anyonya Guntur, None

MUSCULOSKELETAL PROGENITOR CELLS AND LINEAGE DETERMINATION: MULTI-LINEAGE

MO0123 microRNA-433 Dampens TGFβ Signaling and Restrains Osteoblastic and Chondrogenic Differentiation
Spenser Smith*, Neha Dole*, Rosa Guzzo1, Anne Delany1. 1UConn Health, United states, 2UCSF School of Medicine, United states
Disclosures: Spenser Smith, None
WNT16 is enriched among perivascular progenitor cells, inducing stem cell proliferation and osteogenic differentiation
Jia Shen*, Carolyn Meyers, Greg Asatrian, Winters Hardy, Xinli Zhang, Kang Ting, Bruno Peault, Chia Soo, Aaron James. UCLA, United states

Disclosures: Jia Shen, None

MUSCULOSKELETAL PROGENITOR CELLS AND LINEAGE DETERMINATION: MUSCLE, TENDON AND LIGAMENT
MO0124 In Vitro Analysis of Hormonal Receptor Genes During Myogenesis of Human Skeletal Muscle-Derived Cells
Cecilia Romagnoli*, Roberto Zonefrati, Carmelo Mavilia, Alessandra Aldinucci, Gianna Galli, Marco Innocenti, Annalisa Tanini, Laura Masi, Luisella Cianferotti, Maria Luisa Brandi. University of Florence, Italy

Disclosures: Cecilia Romagnoli, None

MO0126 Mechanism of TGFβ function on annulus fibrosus differentiation in intervertebral disc
Ga I Ban*, Rosa Serra. University of Alabama at Birmingham, United states

Disclosures: Ga I Ban, None

MUSCULOSKELETAL PROGENITOR CELLS AND LINEAGE DETERMINATION: OSTEOBLASTS
MO0127 Hematopoietic Stem Cell-Derived Bone Marrow Cells Give Rise to Osteogenic Colonies
Ryan Kelly*, Amanda LaRue. Medical University of South Carolina, United states

Disclosures: Ryan Kelly, None

MO0128 Osteogenic Differentiation of Human Adipose Stem Cells Treated with Pro-Inflammatory Cytokines TNF-α, IL-6, IL-8, and IL-17F or Anti-Inflammatory Cytokine IL-4
Angela P Bastidas Coral*, Astrid D Bakker1, Ces J Kleverlaan2, Nathalie Bravenboer3, Behrouz Zandieh-Doulabi1, Tim Forouzanfar2, Jenneke Klein-Nulend4. 1Department of Oral Cell Biology, Academic Centre for Dentistry Amsterdam (ACTA), University of Amsterdam & Vrije Universiteit Amsterdam, MOVE Research Institute Amsterdam, Netherlands, 2Department of Dental Materials Science, Academic Centre for Dentistry Amsterdam (ACTA), University of Amsterdam & Vrije Universiteit Amsterdam, MOVE Research Institute Amsterdam, Netherlands, 3Department of Clinical Chemistry, VU University Medical Center, MOVE Research Institute Amsterdam, Netherlands, 4Department of Oral & Maxillofacial Surgery, VU University Medical Center, MOVE Research Institute Amsterdam, Netherlands

Disclosures: Angela P Bastidas Coral, None

MO0129 Promoting Osteogenic Differentiation of Dental MSCs by Estrogen
Justin Lee, Christine Hong*, Cun-Yu Wang. UCLA School of Dentistry, United states

Disclosures: Christine Hong, None

MO0130 Site-specific bone types during fracture healing: Effect of chondrocyte specific ephrin B2 deletion
Ling Chen*, Feifei Yang, Yongmei Wang, Daniel Bikle3, Sunita Ho. 1School of Dentistry, UCSF, United states, 2VA Medical Center, Department of Medicine, UCSF, United states, 3VA Medical Center, Dept of Medicine, UCSF, United states

Disclosures: Ling Chen, None

MO0131 Three Dimensional Differentiation of Mouse Pluripotent Stem Cells into Osteogenic Cells under Defined Conditions
Denise C. Zujur1, Kosuke Kanke2, Ung-il Chung1, Shinsuke Ohba1. 1Department of Bioengineering, The University of Tokyo, Graduate School of Engineering, Japan, 2Department of Oral & Maxillofacial Surgery, The University of Tokyo, Graduate School of Medicine, Japan

Disclosures: Denise C. Zujur, None
Assessing the Effect of Anterior Cruciate Ligament Tears on Bone Microarchitecture in Human Knees In Vivo

Andres Kroker*, Sarah Manske1, Ying Zhu1, Rhamona Barber2, Denise Chan2, Nicholas Mohtadi3, Steven Boyd1, I1. McCaig Institute for Bone & Joint Health 3. Department of Radiology, Cumming School of Medicine, University of Calgary, Calgary, AB, Canada, 2. Acute Knee Injury Clinic, Sports Medicine Centre, University of Calgary, Calgary, AB, Canada, 3. Acute Knee Injury Clinic, Sports Medicine Centre, University of Calgary 4. Department of Surgery, Cumming School of Medicine, University of Calgary, Calgary, AB, Canada, Canada

Disclosures: Andres Kroker, None

Autologous Osteoblastic Cells (PREOB®) Versus Concentrated Bone Marrow Implantation in Osteonecrosis of the Femoral Head: A Randomized Controlled Study

Valerie Gangji*, Michel Toungouz1, Chantal Lechanteur3, Yves Beguin4, Etienne Baudoux3, Viviane De Maertelaer5, Sanjia Pather6, Raphael Katz7, Julia Ino7, Dominique Egrisse8, Michel Malaise9, Jean-Philippe Hauzeur9, 1Hôpital Erasme, Rheumatology & Physical Medicine Dept, Université Libre de Bruxelles, Belgium, 2Hôpital Erasme, Université Libre de Bruxelles, Belgium, 3CHU Sart Tilman, Haematology & Laboratory of Cell Therapy, Belgium, 4CHU Sart Tilman;Haematology & Laboratory of Cell Therapy, Belgium, 5Université Libre de Bruxelles, Belgium, 6Hôpital Erasme, Radiology Dept, Université Libre de Bruxelles, Belgium, 7Bone Therapeutics, Belgium, 8Hôpital Erasme, Nuclear Medicine, Université Libre de Bruxelles, Belgium, 9CHU Sart Tilman, Rheumatology Dept, Belgium

Disclosures: Valerie Gangji, Bone Therapeutics, 14

Bone Marrow Lesions in Knee Osteoarthritis Represent a Localized Osteochondral Tissue Response to Mechanical Injury

Dzenita Muratovic1, David Findlay1, Flavia Cicuttini2, Anita Wluka3, Yuanyuan Wang3, Sophia Otto4, David Taylor5, Yea-Rin Lee6, Julia Kuliwaba*, 1The University of Adelaide, Australia, 2Monash University, Australia, 3SA Pathology, Australia, 4Royal Adelaide Hospital, Australia

Disclosures: Julia Kuliwaba, None

Condylar Osteoporosis is Associated with Temporomandibular Joint Arthritis: A Cross sectional study

Jiayu Shi*, Soonchul Lee2, Hsin Chuan Pan1, Wenhao Guo3, Andy Lin4, Chia Soo5, Jin Hee Kwak1. 1Division of Growth & Development & Section of Orthodontics, School of Dentistry, University of California, Los Angeles, United states, 2Department of Orthopaedic Surgery, CHA Bundang Medical Center, CHA University, School of Medicine, United states, 3Department of Oral Radiology, West China Hospital of Stomatology, Sichuan University, China, 4Institute for Digital Research & Education Statistical Consulting Group, University of California, Los Angeles, United states, 5Department of Orthopaedic Surgery & the Orthopaedic Hospital Research Center, University of California, Los Angeles, United states

Disclosures: Jiayu Shi, None

Differential Regulation of Post-traumatic Osteoarthritis Associated Genes in Str/ort, MRL/MpJ and C57BL/6 Mice

Aimy Sebastian*, Jiun C. Chang1, Deepa K. Murugesh2, Sarah Hatsell3, Aris N. Economides3, Blaine A. Christiansen4, Gabriela G. Loots2. 1UC Merced, School of Natural Sciences, United states, 2Lawrence Livermore National Laboratories, Physical & Life Sciences Directorate, United states, 3Regeneron Pharmaceuticals, United states, 4UC Davis Medical Center, Department of Orthopedic Surgery, United states

Disclosures: Aimy Sebastian, None

Increased incidence of bone fractures in elderly osteoarthritic patients with persistent opioid use

Farah Salahuddin*, Owais Gilani2, Meika Fang3, Roy Altman3, Faisal Mirza1. 1OrthoSynthesis Inc., United states, 2University of Michigan, United states, 3UCLA, United states

Disclosures: Farah Salahuddin, None
**OSTEOARTHRITIS AND OTHER JOINT DISORDERS: RHEUMATOID ARTHRITIS AND INFLAMMATORY ARTHRITIS**

**MO0138 Prediction of Response to Intra-articular Injections of Hyaluronic Acid for Knee Osteoarthritis**

Abeer Hegazy*1, Abdulhafez Selim², Paula Karabelas³. ¹REHABILITATION CENTER - DAMMAM MEDICAL COMPLEX KSA, SAUDI ARABIA, Saudi arabia, ²PCOM, United states, ³AEBM, United states

Disclosures: Abeer Hegazy, None

**OSTEOBLASTS – MATRIX PROTEINS AND FUNCTION: ADHESION, MOTILITY AND CELL-CELL COMMUNICATION**

**MO0139 Exposure to Non-Thermal Near Infrared Light Alters Maturation Pathways in Osteoblasts**

Mac Weninger*, Joshua Kolz, Janine Struve, Dorothee Weihrauch, James Ninomiya. Medical College of Wisconsin, United states

Disclosures: Mac Weninger, None

**OSTEOBLASTS – MATRIX PROTEINS AND FUNCTION: BONE FORMATION MECHANISMS**

**MO0140 Sce65-null mice provide evidence for a novel endoplasmic reticulum complex regulating collagen lysyl hydroxylation**

Melissa Heard*¹, Roberta Besio², Mary Ann Weis³, Jyoti Rai³, David Hudson³, Milena Dimoril, Sarah Zimmerman¹, Jeffery Kamykowski¹, William Hogue¹, Francis Swain¹, Larry Suva¹, Marie Burdine¹, Samuel Mackintosh¹, Alan Tackett¹, David Eyre¹, Roy Morell³. ¹University of Arkansas for Medical Sciences, United states, ²Universita’ di Pavia, Italy, ³University of Washington, United states, ⁴Texas A&M University, United states

Disclosures: Melissa Heard, None

**MO0141 Activation of Protein Kinase A in Mature Osteoblasts Causes Sexually Dimorphic and Site Specific Changes in the Skeleton**

Liana Tascau¹, Hussein Anan², Daniel Oh¹, Francis Lee¹, Christopher Cardozo³, William Bauman³, Hesham Tawfeek*³. ¹Medical College of Wisconsin, United states, ²Sacred Heart Hospital/Temple University, United states, ³James J. Peters VA Medical Center & Icahn School of Medicine at Mount Sinai, United states

Disclosures: Hesham Tawfeek, None

**MO0142 Collagen Cross-linking is Modulated by Transforming Growth Factor β1 in Bone**

Masahiko Terajima*¹, Hideaki Nagaoka¹, Noriko Sumida¹, Oliver Smithies², Masao Kakoki², Mitsuo Yamauchi³. ¹Oral & Craniofacial Health Sciences, School of Dentistry, University of North Carolina, Chapel Hill, United states, ²Department of Pathology & Laboratory Medicine, University of North Carolina, Chapel Hill, United states

Disclosures: Masahiko Terajima, None

**MO0143 Functional validation of a key bone mineral density locus determined by genome-wide association studies**

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Disclosures: Robert D Maynard, None

**MO0144 Novel transport mechanisms drive vectorial mineral packing in bone**

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 Disclosures: Quitterie C Larrouture, None
MO0145 Osteogenic effects of nanoparticles are composition, size, and surface dependent
Shin-Woo Ha1, Mark Habib2, Neile Weitzmann3, George Beck*3. 1Emory University, United states, 2Atlanta VA Medical Center, United states, 3Atlanta VA Medical Center & Emory University, United states
Disclosures: George Beck, None

MO0146 Pigment Epithelium Derived Factor Promotes Bone Formation in Hydroxyapatite/Tricalcium Phosphosmaltie Ceramics Implanted in Mice
Christopher Niyibizi*, Feng Li, Stephen Leung, Joyce Tombran-Tink. Penn State College of Medicine, United states
Disclosures: Christopher Niyibizi, None

MO0147 The effects of trkA agonist, gambogic amide, on osteoblasts and bone fracture healing
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OSTEOBLASTS – MATRIX PROTEINS AND FUNCTION: HORMONAL AND LOCAL REGULATION

MO0148 Hyperglycemic Conditions Inhibit Osteogenic Differentiation by Promoting Protein O-GlcNAcylation in C2C12 Cells
Hanna Gu*1, Kanitsak Boonanantanasarn1, Jeong-Hwa Baek1, Kyunghwa Baek2. 1Seoul National University School of Dentistry, Korea, republic of, 2College of Dentistry, Gangneung-Wonju National University, Korea, republic of
Disclosures: Hanna Gu, None

MO0149 Morinda Citrifolia Leaf Extract Enhances Osteogenic Differentiation Under LPS-induced Inflammatory Condition
Jae-Ran Seo*, Kanitsak Boonanantanasarn, Hanna Gu, Jeong-Hwa Baek. Seoul National University School of Dentistry, Korea, republic of
Disclosures: Jae-Ran Seo, None

MO0150 Pre-osteoblast maturation failure is associated with chronic kidney disease
Renata Pereira*1, Earl Freymiller2, Richard Bowen1, Isidro Salusky1, Katherine Wesseling-Perry1, David Geffen School of Medicine at UCLA, United states, 2UCLA School of Dentistry, United states
Disclosures: Renata Pereira, None

OSTEOBLASTS – MATRIX PROTEINS AND FUNCTION: SIGNAL TRANSDUCTION AND TRANSCRIPTIONAL REGULATION

MO0151 Biological Response of Human Mesenchymal Stromal Cells to Orthopedic Implant Nanoparticles
Eric Lewallen*1, Roman Thaler1, Christopher Paradise1, Amel Dudakovic1, Martina Gluscevic1, Endre Soreide1, Janet Denbeigh1, Dakota Jones1, Rebekah Samsonraj1, William Trousdale1, Hilal Kremers1, Matthew Abdel1, David Leong2, David Lewallen1, Andre van Wijnen1. 1Mayo Clinic, United states, 2National University of Singapore, Singapore
Disclosures: Eric Lewallen, None

MO0152 Cytochalasin D improves the osteogenic potential of human adipose-derived mesenchymal stem cells concomitant with repression of EZH2 and heterochromatin-related H3K27me3 marks
Rebekah Samsonraj1, Amel Dudakovic1, Roman Thaler1, Allan Dietz1, Buer Sen2, Janet Rubin2, Andre van Wijnen1. 1Mayo Clinic, United states, 2University of North Carolina, United states
Disclosures: Amel Dudakovic, None

MO0153 Identification of Epigenomic Regulators of Osteoblast Function
Carole LE HENAFF1, Nicola PARTRIDGE2, Frederic JEHAN1, Valerie GEOFFROY*. 1Inserm U1132, France, 2New York University, United states
Disclosures: Valerie GEOFFROY, None
MO0154 Inhibition of alphaNAC Post-translational Modifications Affects Osteoblast Function
Theresa Farhat*1, Amel Dudakovic2, Andre van Wijnen3, René St-Arnaud1. 1Shriners Hospitals for Children - Canada, Canada, 2Dept. of Orthopedic Surgery, Mayo Clinic, United states, 3Mayo Clinic, United states
Disclosures: Theresa Farhat, None

MO0155 MEK5 Suppresses the Osteoblast Differentiation
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Disclosures: Shoichi Kaneshiro, None

MO0156 mTORC1 Prevents Preosteoblast Differentiation Through the Notch Signaling Pathway
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Disclosures: Bin Huang, None

OSTEOCLASTS - FUNCTION: BONE RESORPTION MECHANISMS

MO0157 A slight inhibition of cathepsin K paradoxically stimulates the resorptive activity of osteoclasts in culture
Dimisha C Pirapaharan*1, Kent Soe1, Preety Panwar2, Marianne Bergmann3, Anne V Schmedes1, Jonna S Madsen1, Dieter Bromme2, Jean-Marie Delaisse1. 1Vejle Hospital (University of Southern Denmark), Denmark, 2University of British Columbia, Canada, 3Vejle Hospital, Denmark
Disclosures: Dimisha C Pirapaharan, None

MO0158 Bisphosphonate inhibits expression and maturation of Cathepsin K in osteoclasts
Sol Kim*, Ki-Hyuk Shin, Mo Kang, No-Hee Park, Reuben Kim. UCLA School of Dentistry, United states
Disclosures: Sol Kim, None

MO0159 Cbl-mediated Regulation of PI3K Activity Regulates Bone Resorption by Modulating Secretion of Cathepsin K
Jungeun Yu*, Naga Suresh Adapala, Archana Sanjay. UConn Musculoskeletal Institute, UConn Health, United states
Disclosures: Jungeun Yu, None

MO0160 Inflammation-Induced Osteolysis Caused by Particles Released from Scaling of Titanium Implants
Michal Eger*1, Tamar Liron1, Nir Sterer2, David Kohavi2, Yankel Gabet1. 1Department of Anatomy & Anthropology, Sackler Faculty of Medicine, Tel Aviv University, Israel, Israel, 2Department of Prosthodontics, Goldschleger School of Dental Medicine, Sackler Faculty of Medicine, Tel Aviv University, Israel, Israel
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MO0161 Septin 9 - a critical player in osteoclast resorption
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Disclosures: Anais MJ Moller, None

MO0162 Serum CTX levels and histomorphometric analysis in Src versus RANKL knockout mice
Sunao Takeshita*1, Toshio Fumoto2, Masako Ito3, Kyoji Ikeda1. 1National Center for Geriatrics & Gerontology, Japan, 2Hirosaki University School of Medicine, Japan, 3Nagasaki University Hospital, Japan
Disclosures: Sunao Takeshita, None
MO0163  The Synergistic Action of Lysosomal and Tartrate-resistant Acid Phosphatase is Required for Resorptive Activity of Osteoclasts
Timur Yorgan*1, Georgia Makrypidi2, Sonja Kühn1, Till Köhne1, Michaela Schweizer3, Jan Peska1, Michael Amling1, Paul Saftig4, Thomas Braunke2, Thorsten Schinke1.
1Department of Osteology & Biomechanics, University Medical Center Hamburg Eppendorf, Germany, 2Department of Biochemistry, Childrens Hospital, University Medical Center Hamburg Eppendorf, Germany, 3Center of Molecular Neurobiology, University Medical Center Hamburg Eppendorf, Germany, 4Institute of Biochemistry, Christian-Albrechts-University Kiel, Germany
Disclosures: Timur Yorgan, None

MO0164  Treatment of cathepsin K inhibitor in osteoprotegerin-deficient mice inhibits bone resorption and stimulates bone formation
Midori Nakamura*1, Yuko Nakamichi1, Toshihide Mizoguchi2, Yasuhiro Kobayashi2, Naoyuki Takahashi3, Nobuyuki Udagawa1. 1Department of Biochemistry, Institute for Oral Science, Matsumoto Dental University, Japan, 2Institute for Oral Science, Matsumoto Dental University, Japan
Disclosures: Midori Nakamura, None

OSTEOCLASTS - FUNCTION: SIGNAL TRANSDUCTION

MO0165  Estrogens attenuate RANKL-induced oxidative phosphorylation and ATP production in osteoclast precursors via direct ERα signaling
Ha-Neui Kim*1, Li Han1, Srividhya Iyer1, Aaron Warren1, Kimberly Krager2, Nukhet Aykin-Burns2, Stavros Manolagas3, Maria Almeida1. 1Center for Research in FOP & Related Disorders, Department of Orthopedic Surgery, Perelman School of Medicine at the University of Pennsylvania, United states, 2Department of Pathology & Laboratory Medicine, Perelman School of Medicine at the University of Pennsylvania, United states, 3Division of Endocrinology, Stanford University School of Medicine, United states
Disclosures: Ha-Neui Kim, None

MO0166  Gαs Controls Cortical Bone Quality by Regulating Osteoclast Differentiation via pCREB and β-Catenin Pathways
Girish Ramaswamy*1, Hyunsoo Kim2, Deyu Zhang2, Vitali Lounev1, Joy Wu3, Yongwon Choi2, Frederick S Kaplan1, Robert J Pignolo1, Eileen M Shore1. 1Center for Research in FOP & Related Disorders, Department of Orthopedic Surgery, Perelman School of Medicine at the University of Pennsylvania, United states, 2Department of Pathology & Laboratory Medicine, Perelman School of Medicine at the University of Pennsylvania, United states, 3Division of Endocrinology, Stanford University School of Medicine, United states
Disclosures: Girish Ramaswamy, None

MO0167  p110a Catalytic Subunit Isoform of PI3K Regulates Osteoclast Differentiation and Function through Enhanced Wnt Production
Jugeun Yu*, Bhavita Walia, Archana Sanjay. U Conn Health, United states
Disclosures: Jugeun Yu, None

MO0168  Phlp1 Deletion Reduces Bone Mineral Density and Increases Osteoclast Differentiation through Enhanced Wnt Production
Elizabeth Bradley*, Jennifer Westendorf, Lomeli Carpio, Soyun M. Hwang, Merry Jo Oursler. Mayo Clinic, United states
Disclosures: Elizabeth Bradley, None

MO0169  Regulation of adhesion signaling in osteoclasts by tetraspanin CD82
Alexis Bergsma*1, Cindy Miranti2, 1Van Andel Institute Graduate School, United states, 2Van Andel Institute, United states
Disclosures: Alexis Bergsma, None

MO0170  The Cytotoxic Anti-cancer Agent Melphalan Causes Bone Loss by Increasing Osteoclast Formation
Ryan Chai*, Michelle McDonald1, Rachael Terry1, Jessica Pettitt1, Sindhu Mohanty1, Shruti Shah1, Gholamreza Haffari2, Jiakxu3, Matthew Gillespie4, John Price4, Peter Croucher1, Julian Quinn1. 1Garvan Institute of Medical Research, Australia, 2Monash University, Australia, 3University of Western Australia, Australia, 4Victoria University, Australia
Disclosures: Ryan Chai, None
**OSTEOCLASTS - FUNCTION: TRANSCRIPTIONAL REGULATION AND GENE EXPRESSION**

MO0171 Amino terminus of HDAC7 Is Sufficient to Inhibit Osteoclast Differentiation  
Nicholas Blixt*, Rajaram Gopalakrishnan, Eric Jensen, Kim Mansky. University of Minnesota, United states  
Disclosures: Nicholas Blixt, None

**OSTEOCLASTS - ORIGIN AND CELL FATE: GENERAL**

MO0172 B lymphocytes do not differentiate into osteoclasts in estrogen-replete or estrogen-deficient mice  
Yuko Fujiwara*, Marlina Piemontese, Jinhu Xiong, Yu Liu, Priscilla Baltz, Charles OBrien. University of Arkansas for Medical Sciences, United states  
Disclosures: Yuko Fujiwara, None

MO0173 Enhanced responsiveness of Bone Marrow Macrophages to M-CSF signaling results in increased Osteoclast Precursors in the absence of Cbl-P13K interaction  
Bhavita Walia*, Jungeun Yu, Archana Sanjay. UConn Health, United states  
Disclosures: Bhavita Walia, None

**OSTEOCLASTS - ORIGIN AND CELL FATE: GENERAL**

MO0174 Identification of the TRAF family members interacting with RANK cytoplasmic motifs involved in osteoclastogenesis  
Ke Hu*, Zhenqi Shi, Xu Feng. 1Department of Pathology, University of Alabama at Birmingham, Birmingham, AL 35294, USA; Department of Gynecology & Obstetrics, Renji Hospital, School of Medicine, Shanghai Jiao Tong University, Shanghai 200127, PR China., United states, 2Department of Pathology, University of Alabama at Birmingham, Birmingham, AL 35294, USA, United states  
Disclosures: Ke Hu, None

MO0175 Rgs12 Inhibits Nrf2-dependent Antioxidant Proteins to Promote the Generation of Reactive Oxygen Species and Osteoclast Differentiation  
Andrew Ng*, Chengjian Tu, Megan Jones, Shichen Shen, Jun Li, Jun Qu, Shuying Yang. University at Buffalo, United states  
Disclosures: Andrew Ng, None

**OSTEOCYTES: BONE REMODELING REGULATION**

MO0176 In Vivo Osteocytic Ca2+ Pathway and Oscillations in Response to Acoustic Radiation Force in a Specific Bone Cell Ca2+ Fluorescence Ai38/Dmp1-Cre Mice  
Minyi Hu*, Jian Jiao, Daniel Gibbons, Xiaofei Li, Guowei Tian, Yi-Xian Qin. Stony Brook University, United states  
Disclosures: Minyi Hu, None

MO0177 A new multiplexed 3D confocal microscopy method to simultaneously measure changes in osteocyte cell body volume, lacunar volume and lacunar fluid space with age  
LeAnn Tiede-Lewis*, Yixia Xie, Hong Zhao, Sarah Dallas. University of Missouri - Kansas City, USA, United states  
Disclosures: LeAnn Tiede-Lewis, None

MO0178 Difference in osteocyte viability between patients with and without atypical femoral fracture after prolonged bisphosphonate treatment  
Shijing Qiu*, George Divine, Mahalakshki Honasoge, Pooja Kulkarni, Elizabeth Warner, Saroj Palnitkar, D. Sudhaker Rao. 1Henry Ford Hospital, United states, 2Henry Ford Hospital, United states  
Disclosures: Shijing Qiu, None

MO0179 Lactation-Induced Changes in the Volume of the Osteocyte Lacunar-Canalicular Space Alters Local Mechanical Properties in Cortical Bone  
A. Serra Kaya*, Jelena Basta-Pljakic, Zeynep Seref-Ferlengez, Robert Majeska, Shoshana Yakar, Mitchell Schaffler. 1City College of New York, United states, 2New York University College of Dentistry, United states  
Disclosures: A. Serra Kaya, None
MO0180 The Role of Carbonic Anhydrase 3 in Osteocytes
Chao Shi*1, Christopher Dedic2, Yuhei Uda2, Forest Lai2, Ningyuan Sun2, Marc Wein3, Keertik Fulzele4, Kunzheng Wang4, Paola Divieti Pajevic5. 1Department of Molecular & Cell Biology, Goldman School of Dental Medicine, Boston University 2.Department of Orthopaedics, The Second Affiliated Hospital of Xi’an Jiaotong University, Xi’an, 710004, Shaanxi Province, P.R. China, United states, 3Department of Molecular & Cell Biology, Goldman School of Dental Medicine, Boston University, United states, 4Endocrine Unit, Massachusetts General Hospital & Harvard Medical School, United states, 5Department of Orthopaedics, The Second Affiliated Hospital of Xi’an Jiaotong University, Xi’an, 710004, Shaanxi Province, P.R. China, China.

Disclosures: Chao Shi, None

OSTEOCYTES: ORIGIN, CELL CYCLE AND APOPTOSIS

MO0181 MLO-Y4 Osteocytic Cell Sub-clones Express Distinct Gene Expression Patterns Characteristic of Different Stages of Osteocyte Differentiation
Emily Atkinson*1, Zuleima Sanchez1, Christian Porter2, Teresita Bellido1, Lilian Plotkin1. 1IU School of Medicine, United states, 2School of dentistry, United states

Disclosures: Emily Atkinson, None

MO0182 Role of Mitochondria in Protection of Osteocytes Against Acute Oxidative Stress
Lynda Bonewald1, Jianxun Yi*2. 1UMKC, school of Dentistry, United states, 2School of medicine, United states

Disclosures: Jianxun Yi, None

MO0183 Simvastatin rescues Homocysteine-Induced Apoptosis of Osteocytic MLO-Y4 Cells by Decreasing the Expressions of NADPH oxidase 1 and 2
Ayumu Takeno*, Ippei Kanazawa, Ken-ichiro Tanaka, Masakazu Notsu, Maki Yokomoto-Umakoshi, Toshitsugu Sugimoto. Internal Medicine 1, Shimane University Faculty of Medicine, Japan

Disclosures: Ayumu Takeno, None

OSTEOCYTES: PARACRINE AND ENDOCRINE FUNCTION

MO0184 High Expression of Osteocyte Specific Markers in Human Bone Chips Cultures
Nathalie Bravenboer*1, Huib van essen2, Janak Pathak3, Jenneke Klein Nulend4, Astrid Bakker4. 1Department of Clinical Chemistry, VU university Medical Center, Research Institute Move, Netherlands, 2Department of Clinical Chemistry, VU university Medical Center, Research Institute Move, Netherlands, 3Department of Molecular & Cellular Pharmacology, School of Pharmaceutical Science & Technology, China, 4Department of Oral Cell Biology, ACTA, Research Institute Move, Netherlands

Disclosures: Nathalie Bravenboer, None

OSTEOPOROSIS - ASSESSMENT: BIOCHEMICAL TESTS

MO0185 Correct pre-analytical handling of plasma samples for bone turnover markers improves the stability of the markers
Jens Romlund Halgreen*1, Nadia Quardon1, Marijan Milenkovski1, Alperen Køse2, Niklas Rye Jørgensen3. 1Dept. of Clinical Biochemistry, Copenhagen University Hospital Rigshospitalet, Denmark, 2Copenhagen University Hospital Rigshospitalet, Denmark, 3Dept. of Clinical Biochemistry, Copenhagen University Hospital Rigshospitalet & University of Southern Denmark, Denmark

Disclosures: Jens Romlund Halgreen, None

MO0186 The Association Of Circulating miRNAs With Bone Mineral Density, Microarchitecture And Prevalent Fracture In The OFELY Cohort
Elodie Feurer*, Casina Kan, Martine Croset, Elisabeth Sornay-Rendu, Roland Chapurlat. INSERM UMR 1033, France

Disclosures: Elodie Feurer, None
MO0187 Therapeutic Target for Plasma P1NP in Bisphosphonate Treated Osteoporosis Patients: the Health In Men Study
Paul Chubb1, Elizabeth Byrne2, Bu Yeap3, Laurens Manning3, Leon Flicker3, Jonathan Golledge4, Samuel Vasikaran5. 1School of Medicine & Pharmacology & School of Pathology & Laboratory Medicine, University of Western Australia, Australia, 2PathWest - Queen Elizabeth II Medical Centre, Australia, 3School of Medicine & Pharmacology, University of Western Australia, Australia, 4School of Medicine & Dentistry, James Cook University, Australia, 5PathWest - Royal Perth & Fiona Stanley Hospitals, Perth, Australia, Australia
Disclosures: Samuel Vasikaran, None

OSTEOPOROSIS - ASSESSMENT: BONE QUALITY

MO0188 Changes in Trabecular Bone Score After Parathyroidectomy in Primary Hyperparathyroidism
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Disclosures: Federico Hawkins, None

MO0189 Ethnic Differences in Femoral Neck Geometry as Assessed by HSA of QCT Between Elderly Caucasian and Chinese Populations: a Perth-Beijing Group Study
Benjamin Khoo1, Richard Prince2, Xiaoguang Cheng3, Keenan Brown4, Ling Wang5. 1Medical Technology & Physics, Sir Charles Gairdner Hospital, Australia, 2Medical Technology & Physics, Sir Charles Gairdner Hospital, Perth, Australia, Australia, 3Department of Radiology, Beijing Jishuitan Hospital, Beijing, China, China, 4Mindways Software, Austin, USA, United States, 5Department of Radiology, Beijing Jishuitan Hospital, Beijing, China, China
Disclosures: Ling Wang, None

MO0190 Fracture Risk Estimation with Statistical Multi-Parametric Modeling
Julio Carballido-Gamio1, Aihong Yu2, Ling Wang2, Yongbin Su2, Thomas F. Lang1, Xiaoguang Cheng1. 1Department of Radiology & Biomedical Imaging, University of California, San Francisco, United States, 2Department of Radiology, Beijing Ji Shui Tan Hospital, China
Disclosures: Julio Carballido-Gamio, None

MO0191 Histomorphometric and Osteocytic Characteristics of Cortical Bone in Male Subtrochanteric Femoral Shaft
Xiaoyu Tong1, Heikki Kroeger2. 1Kuopio Musculoskeletal Research Unit (KMRU), Institute of Clinical Medicine, University of Eastern Finland, Finland, 2Department of Orthopaedics, Traumatology, & Hand Surgery, Kuopio University Hospital, Finland
Disclosures: Xiaoyu Tong, None

MO0192 Trabecular Bone Microstructure is Impaired in the Proximal Femur of HIV-Infected Men with Normal Bone Mineral Density
Galateia Kazakia, Julio Carballido-Gamio, Misung Han, Andrew Lai, Lorenzo Nardo, Luca Facchetti, Courtney Pasco, Amy Zhang, Amanda Hutton Parrott, Phyllis Tien, Roland Krug*. UCSF, United states
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OSTEOPOROSIS - ASSESSMENT: DXA

MO0193 Trabecular Bone Score (TBS) in Fracturing Elite Athletes
Disclosures: Elliott N. Schwartz, M.D., None

MO0194 3D-DXA Spine: Modelling the Lumbar Spine in 3D from DXA Images
Mirella Lopez Picazo1, Ludovic Humbert1, Alba Magallón Baro1, Luis del Río Barquero2, Silvana Di Gregorio2, Miguel Angel Gonzalez Ballester3, Galgo Medical, Spain, 2CETIR Grup Mèdic, Spain, 3Universitat Pompeu Fabra - ICREA, Spain
Disclosures: Mirella Lopez Picazo, None
MO0195 Bone component analysis with 3D-DXA and vitamin D levels in patients with Type 2 Diabetes, Latent Autoimmune Diabetes in Adults (LADA) compared to healthy controls
Patricia Clark*, Miguel Angel Guagnelli, Rita Gomez-Diaz, Geraldine Gonzalez-Castelan, Yves Martelli, Ludovic Humbert, Neils Wacher. 1Clinical Epidemiology Unit, Hospital Infantil de México, Mexico, 2Clinical Epidemiology Unit, Hospital de Especialidades, Centro Medico Nacional Siglo XXI, Mexico, 3Galgo Medical, Spain

Disclosures: Patricia Clark, None

MO0196 DXA Errors are Common and Likely Adversely Affect Clinical Care: DXA Quality Improvement is Needed

Disclosures: Karen Hansen, None

MO0197 Effect of Varying Tissue Thickness in Total Body DXA Studies in the Norland Elite Scanner
Tom Sanchez*, Patrick Cunniff, Chad Dudzek, Joe Joyce, Jingmei Wang. 1Norland at Swissray, United states, 2Norland at Swissray, China

Disclosures: Tom Sanchez, None

MO0198 i-Gyne: A tablet, web-based tool for integrating osteoporosis research and health care delivery in a gynecological clinic
Win Pa Pa Thu*, Susan Jane Sinclair Logan, Lay Wai Khin, Saw Myat Sabai, Yue Luna Wang, Yeant Ling Mayvien Teo, Stephen Fearsan Smagula, Jane A. Cauley, Eu-Leong Yong. 1Department of Obstetrics & Gynaecology, National University of Singapore (NUS), Singapore, Singapore, 2Department of Obstetrics & Gynaecology, National University Hospital (NUH), Singapore, Singapore, 3Singapore Institute for Clinical Sciences - A*STAR, Singapore, Singapore, 4Department of Obstetrics & Gynaecology, National University of Singapore (NUS), Singapore, Singapore, 5Department of Psychiatry, Western Psychiatric Institute & Clinic, University of Pittsburgh Medical Center (Pennsylvania), United States of America, United states, 6Department of Epidemiology, University of Pittsburgh (Pennsylvania) Graduate School of Public Health (GSPH), United States of America, United states

Disclosures: Win Pa Pa Thu, None

MO0199 Is spine L1-L4 TBS the best vertebrae combination to predict major Osteoporotic Fracture? The OsteoLaus Cohort Study
Hanza Mraihi*, Olivier Lamy, Marie Metzger, Berengere Aubry-Rozi, Delphine Stoll, Didier Hans. Center of Bone disease - Lausanne University Hospital, Switzerland

Disclosures: Hanza Mraihi, None

MO0200 Is vBMD from 3D Hip analysis of a standard proximal femur DXA scan related to aBMD at the hip?
Belinda Beck*, Amy Harding, Benjamin Weeks, Steven Watson. Griffith University, Australia

Disclosures: Belinda Beck, None

MO0201 The Clinical Use of Trabecular Bone Score for Major Osteoporotic Fracture Prediction in Chinese Older People: The Mr. OS and Ms. OS Cohort Study in Hong Kong
Yi Su*, Jason Leung, Timothy Kwok. 1Department of Medicine & Therapeutics, Prince of Wales Hospital, The Chinese University of Hong Kong, Hong kong, 2Jockey Club Centre for Osteoporosis Care & Control, The Chinese University of Hong Kong, Hong kong

Disclosures: Timothy Kwok, None

MO0202 The Effect of Rotation, when Positioning the Head, on DXA Measured Bone Mineral in the Mandible
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Disclosures: Jingmei Wang, None

OSTEOPOROSIS - ASSESSMENT: OTHER IMAGING TECHNIQUES

MO0203 Adding VFA to DXA Produces Unique Information Not Duplicated by other Measures
Jay Ginther*. Cedar Valley Bone Health Institute of Iowa, United states

Disclosures: Jay Ginther, None
MO0204 Bone Microstructure of Baseball Pitchers’ Elbow Analyzed by HR-pQCT
Kiyoshi Sada*1, Ko Chiba1, Shiro Kajiyama1, Narihiro Okazaki1, Ayako Kurogi1, Yusaku Isobe2, Makoto Era1, Makoto Osaki1. 1Department of Orthopaedic Surgery, Nagasaki University Hospital, Japan, 2Nagasaki University School of Medicine, Japan
Disclosures: Kiyoshi Sada, None

MO0205 Calcaneal BMD Estimation with Foot-Size Dependent Ultrasound Measurements
Emily Stein1, Fernando Rosette1, Gangming Luo2, Mariana Bucovsky1, Jonathan Kaufman2, Elizabeth Shane3, Robert Siffert1. 1Columbia University College of Physicians & Surgeons, United states, 2CyberLogic, Inc., United states, 3The Mount Sinai School of Medicine, United states
Disclosures: Emily Stein, None

MO0206 Clinical Application of Bone Quality Assessment Using Scanning Confocal Acoustic Navigation (SCAN)
Jian Jiao*1, Marie Gelato2, Wei Lin1, Xiaofei Li1, Yi-Xian Qin1. 1Biomedical Engineering, Stony Brook University, United states, 2Department of Endocrinology, Stony Brook University, United states
Disclosures: Jian Jiao, None

MO0207 Comparative value of Vertebral Fracture Assessment and conventional spine radiography in the evaluation of vertebral fractures: a meta-analysis
Frank Malgo*1, Natasha Appelman-Dijkstra1, Olaf Dekkers2, Nevene Hamdy1. 1Center for Bone Quality & Department of Medicine; Division Endocrinology, Leiden University Medical Center, Netherlands, 2Department of Medicine; Division Endocrinology & Department of Clinical Epidemiology, Leiden University Medical Center & Department of Clinical Epidemiology, Aarhus University Hospital, Netherlands
Disclosures: Frank Malgo, None

MO0208 Differences in Trabecular Microstructure Between African American and Caucasian Women
Melissa S. Putman*1, Elaine W. Yu1, David Lin1, Karin Darakananda1, Joel S. Finkelstein1, Mary L. Bouxsein2, 1Massachusetts General Hospital, United states, 2Beth Israel Deaconess Medical Center, United states
Disclosures: Melissa S. Putman, None

MO0209 Hidden in Plain Sight: DXA vs Plain Film X-ray in Diagnosis of Osteopenia
Oisin Hannigan*1, Niamh Garry1, Maria Smyth1, Aoife Dillon1, Brendan McCarthy2, Mc Casey3, Kevin McCarroll1, James Mahon4, Joe Browne1, James Bernard Walsh2, Rosaleen Lannon1. 1Department of Medicine for the Elderly, St James Hospital, Ireland, 2Mercers Institute for Research on Aging, St James Hospital, Ireland, 3Department of Medicine for the Elderly, St James Hospital, Ireland, 4Mercers Institute for Research on Aging, St James Hospital, Ireland
Disclosures: Oisin Hannigan, None

MO0210 In the Heel of the Hunt: How Good is Quantitative Ultrasound in the Diagnosis of Osteoporosis?
James Mahon*, David Moloney, Angelina Farrellly, Deirdre Smith, Laura Mulkerrins, Maire Rafferty, Caoimhe McManus, Oisin Hannigan, Nessar Fallon, Georgina Steen, Rosaleen Lannon, Mc Casey, Jb Walsh, Kevin McCarroll. St James’s Hospital, Ireland
Disclosures: James Mahon, None

MO0211 Prevalence, incidence and future fracture prediction ability of vertebral fractures differs by radiological scoring method
Fjorda Koromani*1, Ling Oei2, Katerina Trajanoska1, Carola Ziliakens M.C.3, Arfan Ikram M.A.3, Andre G. Uitterlinden2, Edwin Oei4, Fernando Rivadeneira5. 1Department of Internal Medicine & Epidemiology, Erasmus MC., Netherlands, 2Department of Internal Medicine, Erasmus MC., Netherlands, 3MD., PhD., Netherlands, 4Department of Radiology & Nuclear Medicine, Erasmus MC., Netherlands
Disclosures: Fjorda Koromani, None

MO0212 Transitioning to Second Generation HR-pQCT: Can Cross-Calibration Improve Agreement Between HR-pQCT Systems?
Sarah L Manske*, Erin M Hildebrandt, Lauren A Burt, Duncan Raymond, Steven K Boyd. University of Calgary, Canada
Disclosures: Sarah L Manske, None
MO0213 Value of Transiliac Bone Biopsies Obtained in Women with Advanced Osteoporosis to Predict Prevalent Fractures and Alteration of Micro-architecture
Patrick Ammann*, 1, Francois Herrmann2. 1Division of Bone Diseases, Department of Internal Medicine Specialties, Switzerland, 2Department of Internal Medicine, Rehabilitation & Geriatrics, Switzerland
Disclosures: Patrick Ammann, None

MO0214 Vertebral Fracture is Associated with Decreased Size and Increased Volumetric BMD in Females and with Increased Size and Decreased Volumetric BMD in Males
Jessica Coogan1, Travis Eliason2, Elizabeth Atkinson2, Eric Orwoll1, Ellen Quillen4, Daniel Nicoletta1, Sundee Khosla2, Todd Bredbenner4. 1Southwest Research Institute, United states, 2Cincinnati Children’s Hospital Medical Center, United states, 3Mayo Clinic, United states, 4Oregon Health & Science University, United states, 5Texas Biomedical Research Institute, United states
Disclosures: Todd Bredbenner, None

OSTEOPOROSIS - EPIDEMIOLOGY: BONE MINERAL DENSITY

MO0215 A Genome-wide Association Study Identifies Gender Specific Loci Influencing aBMD and BMC at Multiple Skeletal Sites in Children of European Descent
Alessandra Chesi*, 1, Jonathan Mitchell2, Heidi Kalkwarf3, Jonathan Bradfield1, Joan Lappe1, Shana McCormack1, Vicente Gilsanz4, Sharon Oberfield5, Hakon Hakonarson1, John Shepherd6, Andrea Kelly1, Babette Zemel1, Straun Grant1. 1Children’s Hospital of Philadelphia, United states, 2Cincinnati Children’s Hospital Medical Center, United states, 3Creighton University, United states, 4Children’s Hospital of Los Angeles, United states, 5Columbia University, United states, 6UCSF, United states
Disclosures: Alessandra Chesi, None

MO0216 Association of Plasma SDF-1 with Bone Mineral Density, Body Composition and Incident Hip Fracture in Older Adults: Findings From the Cardiovascular Health Study
Monique Bethel1, Petra Búžková2, Laura Carbone1, John Robbins3, Howard Fink4, Mark Hamrick1, William Hill4. 1Augusta University, United states, 2University of Washington, United states, 3University of California – Davis, United states, 4University of Minnesota, Veterans Affairs Health Care System, United states
Disclosures: William Hill, None

MO0217 Bone Mineral Density In Diabetes And Impaired Fasting Glucose
Natalie Marijanovic*, 1, Kara Holloway2, Julie Pasco3, Mark Kotowicz3. 1Barwon Health, Australia, 2Deakin University, Australia, 3Deakin University, Barwon Health, Australia
Disclosures: Natalie Marijanovic, None

MO0218 Changes in Hip Structural Analysis Parameters in Relation to the Final Menstrual Period: Study of Women’s Health Across the Nation (SWAN)
Nayana Nagaraj*, 1, Robert Boudreau4, Michelle Danielson1, Gail Greendale2, Arun Karlamangla2, Thomas Beck3, Jane Cauley1. 1University of Pittsburgh, United states, 2University of California, United states, 3Beck Radiological Innovations Inc., United states
Disclosures: Nayana Nagaraj, None

OSTEOPOROSIS - EPIDEMIOLOGY: ENVIRONMENTAL AND LIFESTYLE FACTORS

MO0219 Poor Nutrition Status of Vitamin D: A Survey from Area with the Lowest Sunshine in China
Pianpian Fan1, Qin Wang4, Chunyan Lu1, Yong Xu2, Hongyi Cao3, Xiaohua Xie4, Xueyan Wu1, Yan Chen1, Ting Liu1, Yanhong Guo1, Jing Li3, Decai Chen1. 1West China Hospital of Sichuan University, China, 2The Affiliated Hospital of Southwest Medical University, China, 3Chengdu Fifth People’s Hospital, China, 4First people’s Hospital of Liangshan, China, 5Guangyuan Central Hospital, China
Disclosures: Qin Wang, None
MO0220  A Case-control Study of Atypical Femur Fractures (AFF) and Control Femur Fractures
Erik Imel*1, George Eckert2, Katie Allen4, Joel Martin3, Joseph Hostetler1, Siu Hui3, C. Conrad Johnston1, Anne de Papp4, Arthur Santora4, Robert Choplin1, Trenton Roth1, Ziyue Liu2. 1Indiana University School of Medicine, United states, 2Indiana University Fairbanks School of Public Health, United states, 3Regenstrief Institute, Inc., United states, 4Merck, Sharp & Dhome, United states
Disclosures: Erik Imel, Merck, Sharp & Dhome, 100

MO0221  A Comprehensive Assessment of Comorbidities to Predict Hip Fracture Using a Population-Based Cohort
Shreyasee Amin*, Elizabeth Atkinson, Sara Achenbach, Terry Therneau, Sundee Khosla. Mayo Clinic, United states
Disclosures: Shreyasee Amin, None

MO0222  Association of Albuminuria with Risk of Incident Fracture and Rate of Hip Bone Loss: the Osteoporotic Fractures in Men (MrOS) Study
Howard Fink*1, Tien Vo2, Lisa Langsetmo2, Joshua Barzilay3, Areef Ishani1, Jane Cauley4, John Schousboe5, Nancy Lane6, Eric Orwoll7, Yelena Slinin1, Kristine Ensrud1. 1Veterans Affairs Health Care System, United states, 2Division of Epidemiology, University of Minnesota School of Public Health, United states, 3Kaiser Permanente, United states, 4University of Pittsburgh, United states, 5Park Nicollet Clinic, United states, 6University of California, Davis, United states, 7Oregon Health Sciences University, United states
Disclosures: Howard Fink, None

MO0223  Characteristics of patients at high one-year fracture risk
Akeem Yusuf*1, Yan Hu1, David Chandler2, Barry Crittenden2, Richard Barron2. 1Chronic Disease Research Group, United states, 2Amgen Inc., United states
Disclosures: Akeem Yusuf, None

MO0224  Epidemiology and Time Trends of Distal Forearm Fractures in Adults - A Study of 11.2 Million Person-years in Skåne County, Sweden
Bjorn Rosengren*1, Daniel Jerrhag1, Bo Abrahamsen2, Magnus Karlsson1. 1Clinical & Molecular Osteoporosis Research Unit, Departments of Clinical Sciences & Orthopedics, Malmö, Skåne University Hospital, Lund University, Sweden, 2Odense Patient Data Explorative Network, Institute of Clinical Research, University of Southern Denmark, Odense, Denmark
Disclosures: Bjorn Rosengren, None

MO0225  The Rationale for Using a Composite Score when Designing Future Randomized Controlled Trials in the Post-menopausal Osteoporosis Population: A Systematic Review
Arthur Lau*1, Herman Bami2, Alexandra Papaioannou3, Jonathan Adachi1. 1Division of Rheumatology, Department of Medicine, McMaster University, Canada, 2McMaster University, Canada, 3Division of Geriatrics, Department of Medicine, McMaster University, Canada
Disclosures: Arthur Lau, Eli Lilly, 14; Amgen, 15

OSTEOPOROSIS - EPIDEMIOLOGY: MENOPAUSE AND SEX HORMONES

MO0226  Hormone Replacement Therapy has Favorable Effects on Bone Microarchitecture, Bone Mineral Density and Body fat Mass that Persist after his Withdrawal, without Affecting Lean Mass: the OsteoLaus Cohort
Gergios Papadakis*1, Didier Hans2, Elena Gonzalez-Rodriguez1, peter vollenweider1, Martin Preisig1, Gerard Waerber1, Pedro-Manuel Marques-Vidal1, Olivier Lamy1. 1internal medicine department, Switzerland, 2Bone Unit, Switzerland, 1psychiatry department, Switzerland
Disclosures: Gergios Papadakis, None
OSTEOPOROSIS - EPIDEMIOLOGY: RISK FACTORS

MO0227 Abdominal aortic calcification identified on images from bone densitometers and long-term cardiovascular outcomes in elderly women
Joshua Lewis1, John Schousboe2, Wai Lim3, Germaine Wong4, Kevin Wilson4, Douglas Kiel5, Richard Prince3, 1Centre for Kidney Research, Children’s Hospital at Westmead School of Public Health, Sydney Medical School, The University of Sydney, Australia, 2Park Nicollet Osteoporosis Center & Institute for Research & Education, Minneapolis, Division of Health Policy & Management, University of Minnesota, United states, 3University of Western Australia School of Medicine & Pharmacology, Sir Charles Gairdner Hospital Unit, Australia, 4Skeletal Health, Hologic, Inc., United states, 5Institute for Aging Research, Hebrew SeniorLife, Beth Israel Deaconess Medical Center, Harvard Medical School, United states
Disclosures: Joshua Lewis, None

MO0228 Chronic hyponatremia and association with osteoporosis in a large ethnically-diverse population
Annette Adams1, Bonnie Li1, Shirin Sundar2, Holly Krasa3, Joseph Chiodo2, Siddhesh Kamat4, John Sim1, 1Kaiser Permanente Southern California, United states, 2Otsuka Pharmaceutical Development & Commercialization, Inc, United states
Disclosures: Annette Adams, Amgen Inc, 13; Otsuka, 13; Merck, 13

MO0229 Correlates of Osteoporotic Fractures Among Type 2 Diabetic Patients
Inbal Goldshtein1, Julie Chandler2, Ann DePapp2, Sophia Ish-Shalom1, Gabriel Chodick3, Allison, martin Nguyen2, 1Maccabi Healthcare Services, Israel, 2Merck, research laboratories, United states, 3Elisha hospital, haifa, Israel
Disclosures: Inbal Goldshtein, None

MO0230 Determinants of fracture risk among older men with diabetes
Richard Lee*, Richard Sloane, Carl Pieper, Cathleen Colon-Emeric. Duke University, United states
Disclosures: Richard Lee, None

MO0231 High Incidence of Fractures in Older Cancer Patients are associated with Vitamin D Insufficiency
Xiaotao Zhang1, Sun Ming2, Nizar Bhulani1, Meghan Karuthuri3, Peter Khalil1, Gabriel Hortobagyi1, Debashish Tripathy2, Vicente Valero1, Carlos Barcenas1, Colin Dinney4, Jay Shah1, John Stroehlein3, Holly Holmes6, Beatrice Edwards*, 1Department of General Internal Medicine, MD Anderson Cancer Center, United states, 2MD Anderson Cancer Center, United states, 3Department of Breast Medical Oncology, MD Anderson Cancer Center, United states, 4Department of Urology, MD Anderson Cancer Center, United states, 5Department of Gastroenterology, MD Anderson Cancer Center, United states, 6Department of Internal Medicine, University of Texas Health Science Center, United states, 7Department of General Internal Medicine, MD Anderson Cancer Center, United states
Disclosures: Beatrice Edwards, None

MO0232 Predictors of Imminent Risk of Non-Vertebral Fracture in Older Women: The Framingham Osteoporosis Study
Marian Hannan1, Derek Weycker2, Robert McLean1, Shivani Sahni1, Thomas Travison1, Rebecca Bornheimer1, Alyssa Dubour1, Rich Barron3, Douglas Kiel1, 1HSL Institute for Aging Research, United states, 2Policy Analysis Inc. (PAI), United states, 3Global Health Economics-Amgen, United states
Disclosures: Marian Hannan, Policy Analysis Inc, 13; Merck Sharp & Dohme research grant to institution, 13

MO0233 Risk Factors and Time Interval of Fracture Cascade Among Patients with Osteoporosis in China
Xinling Liu1, Ke Wang2, Yu Chen2, Peita Graham-Clarke1, Jing Wu1, Tianjin University, China, 2Lilly Suzhou Pharmaceutical Company, China, 3Eli Lilly Australia Pty Ltd, Australia, 4School of Pharmaceutical Science & Technology Tianjin University, China
Disclosures: Peita Graham-Clarke, None
MO0234  The Dynamic Nature of Frailty in Community Dwelling Men and Women across Canada: The Canadian Multicentre Osteoporosis Study (CaMos)
George Ioannidis*, Olga Gajic-Veljanoski1, Courtney Kennedy1, Jonathan D. Adachi2, Claudie Berger3, Andy Kin On Wong4, Kenneth Rockwood5, Parminder Raina6, Lehana Thabane7, Alexandra Papaioannou1, The CaMos Research Group1.
1McMaster University & Hamilton Health Sciences – St. Peter’s Hospital – GERAS Centre, Canada, 2McMaster University & Hamilton Health Sciences – St. Joseph’s Hospital, Canada, 3Camos – McGill University, Canada, 4McMaster University & University Health Network, Canada, 5Dalhousie University, Canada, 6McMaster University, Canada
Disclosures: George Ioannidis, None

MO0235  The Effect of Latitude on the Risk of Hip Fractures in Chile
Pablo Riedemann*, Luis Bustos1, Oscar Neira2, Eugene McCloskey3, Helena Johansson4, Daniela Riedemann1, John Kanis5. 1Universidad de la Frontera, Chile, 2Clinica Alemana, Chile, 3Centre for Metabolic Bone Diseases, University of Sheffield, United Kingdom, 4Centre for Metabolic Bone Diseases, United Kingdom, 5Centre for Metabolic Bone Disease, United Kingdom
Disclosures: Pablo Riedemann, None

OSTEOPOROSIS - HEALTH CARE DELIVERY: GENERAL

MO0236  Determinants of Osteoporosis Screening in Men
Cathleen Colon-Emeric*, Joanne LaFleur2, Kenneth Lyles3, Robert Adler3, Courtney VanHoutven4, Carl Pieper1. 1Duke University, United States, 2University of Utah, United States, 3Richmond VAMC, United States, 4Durham VAMC, United States
Disclosures: Cathleen Colon-Emeric, None

MO0237  Gastrointestinal Events and Association with Adherence to Osteoporosis Medication Among Postmenopausal Osteoporotic Patients: 3 Month Observations from the Medication Use Patterns, Treatment Satisfaction, and Inadequate Control of Osteoporosis Study in Asia Pacific (MUSIC-OS-AP)
Ankita Modi1, Peter Ebeling2, Mel Lee3, Yong-Ki Min4, Ambrish Mithal5, Xiaoqin Yang*, Santwona Baidya6, Shuvayu Sen1, Shiva Sajjan1. 1Merck & Co., Inc., United States, 2Monash University, Australia, 3Kaohsiung Chang Gung Memorial Hospital, Taiwan, province of china, 4Samsung Medical Center, Korea, republic of, 5Medanta the Medicity, India, 6Optum, Australia
Disclosures: Xiaoqin Yang, Merck & Co., Inc., 17

MO0238  General Practitioners’ Views on Osteoporosis Management and Their Views on FRAX: A Qualitative Study
Paivi Piispanen1, Eva Toth-Pal2, Helena Salminen*, 1Academic Healthcare Centre, Sweden, 2Department of Neurobiology, Care Sciences & Society, Sweden, 3Department of Neurobiology, Care Sciences & Society, Karolinska Institutet, Sweden
Disclosures: Helena Salminen, None
Impact of Hip Fracture on Health-Related Quality of Life at Hospital Admission and Up to 4 Months Follow-Up: the SPARE-HIP Prospective Cohort

MO0239


1NDORMS, University of Oxford, United Kingdom, 2Department of Orthopaedic Surgery, Hospital Universitario del Río Hortega, Spain, 3Orthopaedic Surgery, Traumatology & Rheumatology Department, Hospital Puerta del Mar, Spain, 4Orthopaedic Surgery & Traumatology Unit, Hospital Universitario La Fe de Valencia, Spain, 5Geriatric & Internal Medicine Department, Infanta Leonor University Hospital, Spain, 6Department of Orthopaedic Surgery, Hospital Regional Universitario Carlos Haya, Spain, 7Department of Orthopaedic Surgery, Complejo Hospitalario Universitario de Santiago de Compostela, Spain, 8Hospital Universitario Reina Sofia, Spain, 9Orthogeriatric Unit, Hospital Virgen de la Arrixaca, Spain, 10Department of Geriatrics, Orthogeriatric Unit, Hospital Obispo Polanco, Spain, 11Department of Orthopaedic Surgery, Alto Deba Hospital, Spain, 12Orthopaedic Surgery & Traumatology Service, Hospital Clínico Universitario de Zaragoza, Spain, 13Geriatric Medicine Department, Hospital Universitario de Getafe, Spain, 14Orthopaedics & Traumatology Department, Hospital Lluis Alcanyís, Spain, 15Orthopaedic Surgery & Traumatology Service, Hospital Virgen del Puerto, Spain, 16Orthopaedic Surgery & Traumatology Service, Hospital Universitario Miguel Servet, Spain, 17Hospital Clínico de Valencia, Spain, 18Department of Orthopaedic Surgery, Hospital Universitario La Paz, Spain, 19Internal Medicine Service, RETICEF, IDIVAL, Universidad de Cantanbria, Spain, 20Department of Orthopaedic Surgery, Hospital Universitario San Agustín, Spain, 21Geriatric Medicine Department, Hospital Universitario San Carlos, Spain, 22Department of Orthopaedic Surgery, Complejo Hospitalario Universitario de Pontevedra, Spain, 23Orthopaedic Surgery & Traumatology Department, Hospital Universitario Parc Tauli, Spain, 24Trauma Unit, Hospital Vall d Hebron Barcelona, Universitat Autónoma de Barcelona, Spain, 25Orthopaedic Surgery & Traumatology Unit, Hospital San Pedro, Spain, 26Department of Orthopaedic Surgery, Hospital Universitario Son Espases, Spain, 27Bone Metabolism Unit, Internal Medicine Service, Hospital General Universitario de Elche, Spain, 28Orthopaedic Surgery & Traumatology Department, Hospital Nuestra Señora de Sonsoles, Spain, 29Department of Surgery, Medicine School, University of Zaragoza, Spain, 30Department of Internal Medicine, Hospital del Mar-IMIM & Autonomous University of Barcelona, Spain

Disclosures: Daniel Prieto-Alhambra, Servier, 13; Amgen, 14

Fracture Liaison Service Return on Investment (cost off-set) Calculator

MO0242

David Lee1, Arnie Aldridge2.

1National Bone Health Alliance, United states, 2RTI, United states

Disclosures: David Lee, Amgen, 13
MO0243 Estimating the Long-Term Functional Burden of Osteoporosis-Related Fractures
Andrew Mulcahy1, Shira Fischer1, Lionel Pinto2, Orla Hayden1, Rich Barron2. 1RAND Corporation, United states, 2Amgen Inc., United states
Disclosures: Lionel Pinto, Amgen Inc, 13

MO0244 The rate of self-reported gastrointestinal events among osteoporotic women: Month 12 Results of the Medication Use Patterns, Treatment Satisfaction and Inadequate Control of Osteoporosis Study (MUSIC-OS)
Ankita Modi1, Shuvayu Sen2, Jonathan Adachi3, Silvano Adami4, Bernard Cortet5, Alun Cooper6, Piet Geusens7, Dan Mellström8, Joop van den Bergh9, Paul Keown10, Jessica Weaver1, Shiva Sajjan1. 1Center for Observational & Real-World Evidence, Merck & Co., Inc., United states, 2Center for Observational & Real-World Evidence, Merck & Co., Inc, United states, 3St Joseph’s Healthcare & McMaster University, Canada, 4Department of Medicine, University of Verona, Italy, 5Department of Rheumatology, University Hospital of Lille, France, 6Bridge Medical Center, United Kingdom, 7Department of Rheumatology, Maastricht University Medical Center, Netherlands, 8Department of Internal Medicine & Geriatrics, Gothenburg University, Sweden, 9Department of Rheumatology, Maastricht University Medical Center, Maastricht & Department of Internal Medicine, VieCuri Medical Center, Venlo, Netherlands, 10Syreon Corporation, Canada
Disclosures: Ankita Modi, Employee of Merck and Co., Inc., 17

MO0245 Cut-points for Associations Between Vitamin D Status and Multiple Musculoskeletal Outcomes in Middle-aged Women
Feitong Wu1, Karen Wills1, Laura Laslett1, Brian Oldenburg1, Markus Seibel1, Graeme Jones2, Tania Winzenberg3, 1Menzies Institute for Medical Research, University of Tasmania, Hobart, Tasmania, Australia, Australia, 2School of Population & Global Health, University of Melbourne, Australia, 3Bone Research Program, ANZAC Research Institute, The University of Sydney, Australia, 4Menzies Institute for Medical Research, University of Tasmania, Australia
Disclosures: Feitong Wu, None

MO0246 Influences of Dietary Vitamin D Restriction on Bone Strength, Body Composition, and Muscle in Rats Fed a High-fat Diet
Yuno Oku1, Rieko Tanabe1, Kanae Nakaoka1, Asako Yamada1, Seiko Noda1, Ayumi Hoshino1, Mayu Haraikawa1, Masae Goseki-Sone1, 1Japan Women’s University, Japan, 2Seitoku University, Japan
Disclosures: Yuno Oku, None

MO0247 Milk and alternatives intervention and bone mineral acquisition in 14 to 18 y postmenarcheal girls: Preliminary results at 12 months from a 2-year randomized controlled trial
May Slim1, Catherine Vanstone1, Suzanne Morin2, Elham Rahme1, Hope Weiler1. 1McGill University, Canada, 2McGill University Health Center, Canada
Disclosures: May Slim, None

MO0248 Optimal vitamin D status and its relationship with bone and mineral metabolism in Hong Kong Chinese
Raymond YH LEUNG1, Bernard MY CHEUNG1, Uyen-Sa Nguyen2, Annie WC KUNG1, Kathryn CB Tan1, Ching-Lung CHEUNG1. 1The University of Hong Kong, Hong kong, 2University of Massachusetts Medical School, United states
Disclosures: Ching-Lung CHEUNG, None

OSTEOPOROSIS – NUTRITION, DIETARY SUPPLEMENTS AND PHYSICAL ACTIVITY: CALCIUM AND VITAMIN D

MO0245 Cut-points for Associations Between Vitamin D Status and Multiple Musculoskeletal Outcomes in Middle-aged Women
Feitong Wu1, Karen Wills1, Laura Laslett1, Brian Oldenburg1, Markus Seibel1, Graeme Jones2, Tania Winzenberg3, 1Menzies Institute for Medical Research, University of Tasmania, Hobart, Tasmania, Australia, Australia, 2School of Population & Global Health, University of Melbourne, Australia, 3Bone Research Program, ANZAC Research Institute, The University of Sydney, Australia, 4Menzies Institute for Medical Research, University of Tasmania, Australia
Disclosures: Feitong Wu, None

MO0246 Influences of Dietary Vitamin D Restriction on Bone Strength, Body Composition, and Muscle in Rats Fed a High-fat Diet
Yuno Oku1, Rieko Tanabe1, Kanae Nakaoka1, Asako Yamada1, Seiko Noda1, Ayumi Hoshino1, Mayu Haraikawa1, Masae Goseki-Sone1, 1Japan Women’s University, Japan, 2Seitoku University, Japan
Disclosures: Yuno Oku, None

MO0247 Milk and alternatives intervention and bone mineral acquisition in 14 to 18 y postmenarcheal girls: Preliminary results at 12 months from a 2-year randomized controlled trial
May Slim1, Catherine Vanstone1, Suzanne Morin2, Elham Rahme1, Hope Weiler1. 1McGill University, Canada, 2McGill University Health Center, Canada
Disclosures: May Slim, None

MO0248 Optimal vitamin D status and its relationship with bone and mineral metabolism in Hong Kong Chinese
Raymond YH LEUNG1, Bernard MY CHEUNG1, Uyen-Sa Nguyen2, Annie WC KUNG1, Kathryn CB Tan1, Ching-Lung CHEUNG1. 1The University of Hong Kong, Hong kong, 2University of Massachusetts Medical School, United states
Disclosures: Ching-Lung CHEUNG, None

OSTEOPOROSIS – NUTRITION, DIETARY SUPPLEMENTS AND PHYSICAL ACTIVITY: EXERCISE

MO0249 Bone mineral accrual during puberty and its association with serum levels of growth hormone and insulin-growth factor I in vocational ballet dancers
Tânia Amorim1, José Maia2, George S. Metsios3, Andreas D. Flouris1, Matthew Wyon1, José Carlos Machado2, Franklim Marques2, Nuno Adubeiro4, Luisa Nogueira4, Yiannis Koutedakis3, 1University of Wolverhampton, United Kingdom, 2University of Porto, Portugal, 3University of Thessaly, Greece, 4Polytechnic Institute of Porto, Portugal
Disclosures: Tânia Amorim, None
MO0250 Can Exercise Protect Against the Age-associated Declines in Vertebral Height? The ProAct65+ Bone Study
Rachel L Duckham*, Tahir Masud, Rachael Taylor, Denise Kendrick, Hannah Carpenter, Dawn A Skelton, Susie Dinan-Young, Steve Iliffe, Richard Morris, Hayley Ladd, Katherine Brooke-Wavel, 1Institute for Physical Activity & Nutrition Research, Deakin University, Australia, 2Healthcare for Older People, Nottingham University Hospitals NHS Trust, United Kingdom, 3Healthcare for Older People, Nottingham University Hospitals NHS Trust, United Kingdom, 4School of Medicine, University of Nottingham, United Kingdom, 5School of Health & Life Sciences, United Kingdom, 6Department of Primary Care & Population Health, University College London, United Kingdom, 7School of Social & Community Medicine, University of Bristol, United Kingdom, 8School of Sport, Exercise & Health Sciences, Loughborough University, United Kingdom
Disclosures: Rachel L Duckham, None

OSTEOPOROSIS – NUTRITION, DIETARY SUPPLEMENTS AND PHYSICAL ACTIVITY: GENERAL

MO0251 The effects of dried plum supplementation on bone mRNA expression levels of Dkk-1, Sclerostin, β-catenin, Runx2, and Cx43 in ovariectomized rat model of osteoporosis
Lama Almaiman*, Bahram Arjmandi, Shirin Hooshmand. 1San Diego State University, United states, 2Florida State University, United states
Disclosures: Lama Almaiman, None

OSTEOPOROSIS – NUTRITION, DIETARY SUPPLEMENTS AND PHYSICAL ACTIVITY: INTERACTIONS

MO0252 A 5% Increase in Trabecular (Spine) Bone Density Occurs in the First six Months After Weaning (Factors Affecting Bone Formation After Breastfeeding Pilot Study [FABB-Pilot])
Sandra Cooke-Hubley*, Beth J. Kirby, Chrissy Wells, Gerry Mugford, James Valcour, Jonathan D. Adachi, Christopher S. Kovacs. 1Memorial University, Canada, 2McMaster University, Canada
Disclosures: Sandra Cooke-Hubley, None

OSTEOPOROSIS – NUTRITION, DIETARY SUPPLEMENTS AND PHYSICAL ACTIVITY: OTHER NUTRIENTS

MO0253 Effect of 12-week Tocotrienol Supplementation on Bone Biomarkers, Safety, and Quality of Life in Postmenopausal Osteopenic Women: A Randomized Double-blinded Placebo-controlled Study
Chwan-Li Shen*, Shengping Yang, Michael Tomison, Amanda Romero, Carol Felton, Peishuan Tsai, Barbara Pence, Huanbiao Mo. 1Texas Tech University Health Sciences Center, United states, 2Georgia State University, United states
Disclosures: Chwan-Li Shen, None

MO0254 Higher total vitamin C intake is not associated with higher grip strength in adults: The Framingham Offspring Study
Shivani Sahni*, Paul F. Jacques, Alyssa B. Dufour, Douglas P. Kiel, Robert R. McLean, Marian T. Hannan. 1Institute for Aging Research, HSL, Harvard Medical School, United states, 2Jean Mayer USDA HNRCA, Tufts University School of Nutrition, United states, 3Institute for Aging Research, HSL, Harvard Medical School, United states
Disclosures: Shivani Sahni, General Mills Bell Institute for Health and Nutrition, 13; PAI Inc., 13

OSTEOPOROSIS - PATHOPHYSIOLOGY: BONE MODELING AND REMODELING

MO0255 Characterizing the osteoanabolic epigenome of aging-related bone loss in humans
Matthias Ring, Hiroaki Saito, Hanna Taipaleenmäki, Zeynab Najafova, Katharina Jähn, Andreas Gasser, Carl Haasper, Roland Gessler, Thorsten Gehrke, Steven Johnsen, Eric Hesse. 1Department of Trauma, Hand & Reconstructive Surgery, University Medical Center Hamburg-Eppendorf, Germany, 2Clinic for General, Visceral & Pediatric Surgery, University Medical Center Göttingen, Germany, 3HELIOS ENDO Clinic, Germany
Disclosures: Eric Hesse, None
MO0256 Repair of Bone Defects in Bisphosphonate-treated Osteoporotic Mice
Michel Hauser*1, Mark Siegrist2, Silvia Dolder1, Willy Hofstetter1. 1Group of Bone Biology & Orthopaedic Research / University of Bern, Switzerland, 2Group of Bone Biology & Orthopaedic Research / university of Bern, Switzerland
Disclosures: Michel Hauser, None

MO0257 The balance between bone resorption and formation during intracortical osteonal bone remodeling: a study of transiliac bone biopsies from women
Christina Møller Andreasen*1, Jean-Marie Delaix², Bram C. J. van der Eerden³, Dorie Birkenhager-Frenkel², Johannes P. T. M. van Leeuwen⁴, Ming Ding¹, Thomas Levin Andersen⁵, ¹Orthopaedic Research Laboratory, Department of Orthopaedic Surgery & Traumatology, Odense University Hospital, Institute of Clinical Research, University of Southern Denmark, Denmark, ²Department of Clinical Cell Biology, Vejle Hospital/ Lillebaelt Hospital, Institute of Regional Health Research, University of Southern Denmark, Denmark, ³Laboratory for Calcium & Bone Metabolism, Department of Internal Medicine, Erasmus MC, Denmark, ⁴Laboratory for Calcium & Bone Metabolism, Department of Internal Medicine, Erasmus MC, Rotterdam, Denmark
Disclosures: Christina Møller Andreasen, None

OSTEOPOROSIS - PATHOPHYSIOLOGY: GENERAL

MO0258 Administration of B-blocker (propranolol) to ovariectomized mouse insignificantly prevents decrease of bone formation in spite of increase in neuropeptide Y mRNA expression in hypothalamus
Shinya Tanaka*¹, Takuto Tsuchiya², Akinori Sakai², Hiromi Oda¹. ¹Department of orthopaedics, Saitama medical university, Japan, ²Department of Environmental health, University of occupational & environmental health, Japan, Japan. ³Department of orthopaedics, University of occupational environmental health, Japan, Japan
Disclosures: Shinya Tanaka, None

MO0259 Allogeneic Hematopoietic Stem Cell Transplant (alloHSCT) is Associated With Rapid Loss of Bone Mineral Density and Fat Mass
Mohammed Almohaya*¹, Raewyn Broady¹, Alina Gerrie¹, Pamela Plantinga², Qun Yang³, David Kendler¹. ¹University of British Columbia, Canada, ²Simon Fraser University, Canada, ³ProHealth Clinical Research Centre, Canada
Disclosures: Mohammed Almohaya, None

MO0260 Can Golden Syrian Hamsters Serve as a Model for Ovarian Hormone Deficiency-Induced Bone Loss?
Negin Navaei*¹, Shirin Pourafshar², Neda Akhavan³, Elizabeth Foley³, Kelli George³, Bahram Ajrmandi³. ¹Florida State University; Center for Advancing Exercise & Nutrition Research on Aging (CAENRA), College of Human Sciences, Florida State University, Tallahassee, FL, United states, ²Florida State University, Tallahassee, Florida; Center for Advancing Exercise & Nutrition Research on Aging (CAENRA), College of Human Sciences, Florida State University, Tallahassee, FL, United states. ³Florida State University; Center for Advancing Exercise & Nutrition Research on Aging (CAENRA), College of Human Sciences, Florida State University, Tallahassee, FL, United states
Disclosures: Negin Navaei, None

MO0261 Endotoxin and bone turnover markers in postmenopausal Saudis with and without osteoporosis
Ibrahim Aziz, Nasser Al-Daghri*, Majed Alokail, Sobhy Yakout. King Saud University, Saudi arabia
Disclosures: Nasser Al-Daghri, None

MO0262 Establishing an early bone development model for osteoporosis-related genes in zebrafish (D. rerio)
Chen Shochat Carvalho¹, Ram Harari*¹, David Karasik². ¹Faculty of Medicine in the Galilee, Bar Ilan University, Israel, ²Faculty of Medicine in the Galilee, Bar Ilan University, Israel
Disclosures: Ram Harari, None
MO0263 Pharmacological Inhibition of ATP Release Through Pannexin-1 Channels Increases Bone Mass and Reduces Bone Resorption in Aging Mice
Rafael Pacheco-Costa*, Emily Atkinson1, Hannah Davis1, Innocent Byiringiro1, Roger Thompson2, Teresita Bellido1, Lilian Plotkin1. 1Indiana University School of Medicine, United states, 2Hotchkiss Brain Institute, Department of Cell Biology & Anatomy, University of Calgary, Canada
Disclosures: Rafael Pacheco-Costa, None

OSTEOPOROSIS - PATHOPHYSIOLOGY: GLUCOCORTICOIDS AND OTHER DRUGS

MO0264 Profile of a novel nonsteroidal glucocorticoid receptor modulator in preclinical and clinical studies: The case for improving translational correlation
Yanfei Ma*, Henry Bryant, Matthew Carson, Xiaoping Ruan, Christine Cheng, Mary D. Adrian, Charzad Montrose-Rafizadeh, Richard Zink, Michael J. Coghlan. Eli Lilly Company, United states
Disclosures: Yanfei Ma, Eli Lilly Company, 17

OSTEOPOROSIS - SECONDARY OSTEOPOROSIS: DIABETES

MO0265 Glycemic Control, Familiarity and Disease Duration Are Associated With Multiple Fragility Fractures In Type 1 Diabetes
Giulia Leanza*, Dario Pitocco2, Ernesto Maddaloni1, Luna Zanoboni1, Rocky Strollo1, Silvia Manfrini1, Paolo Pozzilli1, Ann Schwartz3, Andrea Palermo1, Nicola Napoli1. 1Campus Bio-Medico University of Rome, Italy, 2Policlinico Gemelli, Italy, 3UCSF School of Medicine, United states
Disclosures: Giulia Leanza, None

MO0266 Type 1 Diabetes and Bone Microarchitecture Assessment with Trabecular Bone Score (TBS): A Descriptive Study
Julie Gilmour*, Sandra Kim2, Anita Colquhoun2, Wei Wu2. 1St.Michael’s Hospital, Canada, 2Women’s College Hospital, Canada
Disclosures: Julie Gilmour, None

OSTEOPOROSIS - SECONDARY OSTEOPOROSIS: DRUGS, OTHER THAN GLUCOCORTICOIDS

MO0267 Changes in Bone Mineral Density and Biochemical Markers of Bone Turnover in Postmenopausal Women with Breast Cancer Initiating Aromatase Inhibitor Therapy
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OSTEOPOROSIS - SECONDARY OSTEOPOROSIS: GLUCOCORTICOIDS

MO0268 Effects of Once a Week Administration of the New Synthetic Product of 1-34 Teriparatide on Glucocorticoid-Induced Osteoporosis in Japanese Patients
Ikuko Tanaka*, Mari Ushikubo2, Misako Higashiba2, Erika Takei2, Keisuke Izumi2, Kumiko Akiya2, Shigenori Tamaki1, Hisaji Oshima2. 1Nagoya Rheumatology Clinic, Japan, 2Tokyo Medical Center, Japan
Disclosures: Ikuko Tanaka, None
**MO0269** Bone Loss in HIV Infection: What’s the B cell got to do with it?

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Disclosures: Kehmia Titanji, None

**MO0270** Effect Of Recent Spinal Cord Injury On The OPG/RANKL System And Its Relationship With Bone Loss And Antiosteoporotic Response To Denosumab Therapy

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Disclosures: Laia Gifre, None

**MO0271** Changes in gene and protein expression in osteoblastic cell line SCP1 after stimulation with adult crohns'disease patient serum

Martina Blaschke1, Regine Koepp1, Marina Komrakova2, Matthias Schieker3, Heide Siggelkow*4. 1Department of Gastroenterology & gastrointestinal Oncology, Germany, 2Department of Trauma Surgery & Reconstructive Surgery, Germany, 3Experimental Surgery & Regenerative Medicine, Germany, 4Clinic of Gastroenterology & gastrointestinal Oncology, Germany

Disclosures: Heide Siggelkow, None

**MO0272** Comparative Study between “Minodronate with Eldecalcitol” and “Denosumab” as the Treatment after 2-Year Daily Teriparatide in Osteoporosis in Patients with Rheumatoid Arthritis – Results in 12 Months -

Yuji Hirano*1, Masaaki Isono1, Takayasu Ito2. 1Rheumatology, Toyohashi Municipal Hospital, Japan, 2Ito Orthopaedic Clinic, Japan

Disclosures: Yuji Hirano, None

**MO0273** ASBMR 2016 Annual Meeting Young Investigator Award

Continuous improvement of impaired trabecular bone microarchitecture after 3 years on gluten-free diet: A prospective longitudinal HR-pQCT study in women with celiac disease

María Belen Zanchetta*1, Vanesa Carla Longobardi1, Florencia Costa1, Klavs Würgler Hansen3, Torquil Watt4, Lars Rejnmark5. 1Department of Endocrinology & Internal Medicine, Aarhus University Hospital, Denmark, 2Department of Endocrinology & Internal Medicine, Aarhus University Hospital, Denmark, 3Medical Department, Regional Hospital Silkeborg, Denmark, 4Department of Medical Endocrinology, Rigshospitalet, Denmark, 5Department of Endocrinology & Internal Medicine, Denmark

Disclosures: María Belen Zanchetta, None

**MO0274** Cortical Density Is Lower in Patients with Graves’ Disease Compared to Healthy Controls

Sofie Malmstroem*1, Diana Grove-Laugesen2, Eva Ebbehoj1, Klavs Würgler Hansen3, Torquil Watt4, Lars Rejnmark5. 1Department of Endocrinology & Internal Medicine, Aarhus University Hospital, Denmark, 2Department of Endocrinology & Internal Medicine, Aarhus University Hospital, Denmark, 3Medical Department, Regional Hospital Silkeborg, Denmark, 4Department of Medical Endocrinology, Rigshospitalet, Denmark, 5Department of Endocrinology & Internal Medicine, Denmark

Disclosures: Sofie Malmstroem, None

**MO0275** Denosumab is safe in organ transplant patients for management of osteoporosis

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Disclosures: Ejigayehu Abate, None
Early and Sustained Changes in Bone Metabolism After Severe Burn Injury
Gabriela Katharina Muschitz¹, Elisabeth Maurer², Roland Kocijan³, Andreas Baierl⁴,
Alexandra Fochtmann⁵, Judith Haschka³, Heinrich Resch³, Peter Pietschmann⁶, Thomas
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Morgenstern-Platz 1, Austria, ⁵Division of Plastic & Reconstructive Surgery, Department
of Surgery, the, Austria, ⁶Department of Pathophysiology & Allergy Research, Center for
Pathophysiology, Infectiology & Immunology, the Medical University of Vienna, Austria
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Severe Deterioration of Cortical and Trabecular Bone Microarchitecture in Patients with
Inflammatory Bowel Disease
Judith Haschka*¹, Simon Hirschmann², Arnd Kleyer¹, Matthias Englbrecht¹, Francesca
Faustini¹, David Simon¹, Camille Figueiredo¹, Louis Schuster¹, Christian Muschitz³,
Roland Kocijan³, Heinrich Resch³, Raja Atreya², Juergen Rech³, Marcus Neurath², Georg
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Germany, ²University of Erlangen-Nuremberg, Department of Internal Medicine 1,
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Disclosures: Judith Haschka, None

MO0278 Bone microarchitecture and circulating bone turnover markers in patients with liver cirrhosis
casued by alcoholic and nonalcoholic steatohepatitis (ASH/NASH)
Heinrich Resch*¹, Robert Wakolbinger¹, Gerd Bodlaj¹, Afrodite Zendeli¹, Peter
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Liver Transplantation and Bone Density
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Abaloparatide-SC is an Effective Treatment Option for Postmenopausal Osteoporosis: Review
of the Number Needed to Treat Compared with Teriparatide
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Fitzpatrick³, Jean-Yves Reginster¹. ¹New Mexico Clinical Research & Osteoporosis, United
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Shire, 15; Merek, 13

Effect of investigational treatment abaloparatide-SC for prevention of major osteoporotic
fracture or any fracture is independent of baseline fracture probability
Ev McCloskey*¹, I H Johansson¹, Nc Harvey², A Oden¹, H Jiang¹, S Modin³, L
Fitzpatrick³, Ja Kanis¹. ¹University of Sheffield, United Kingdom, ²MRC Lifecourse
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Disclosures: Ev McCloskey, None
MO0282 Effects of Teriparatide and Denosumab, Alone or Combined, on Circulating Sclerostin in Postmenopausal Women
Joy Tsai*, Sherri-Ann Burnett-Bowie, Benjamin Leder. Massachusetts General Hospital, United states
Disclosures: Joy Tsai, None

MO0283 Low-dose RANKL as a potential therapeutic for postmenopausal osteoporosis
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Disclosures: Rajeev Aurora, None

MO0284 The Efficacy of Parathyroid Hormone Analogues in Combination With Bisphosphonates for the Prevention of Osteoporotic Fractures. A Simulation Meta-Analysis of Randomized Controlled Trials
Abdulhafez Selim1, Sahar Ghoname*2, Paula Karabelas3. 1PCOM, United states, 2Ain Shams University School of Medicine, Egypt, 3AEBM, United states
Disclosures: Sahar Ghoname, None

OSTEOPOROSIS - TREATMENT: ANTIRESORPTIVE AGENTS

MO0285 Acute Phase Reactions After Intravenous Infusion of Zoledronic Acid in Japanese Patients with Osteoporosis: Sub-analyses of the Phase III (ZONE) Study
Satoshi Tanaka1, Masataka Shiraki2, Momoko Ohashi3, Satoko Ueda4, Toshitaka Nakamura5. 1Asahi Kasei Pharma Corporation, Japan, 2Research Institute & Practice for Involutional Diseases, Japan, 3Gotanda Rehabilitation Hospital, Japan
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MO0286 Anti-resorptive activity of anti-hypertensive agent ACEi in older men
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Disclosures: Nahid Rianon, None

MO0287 Early Changes in Bone Turnover Markers Predict Longer-Term Changes in Bone Mineral Density But Not Microstructure in Frail Elderly Women
Mary Kotlarczyk*, Subashan Perera, Mary Anne Ferchak, David Nace, Neil Resnick, Susan Greenspan. University of Pittsburgh, United states
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MO0288 Effect of Denosumab Treatment on BMD as Assessed by DXA and QCT in Postmenopausal Osteoporosis With and Without Prior Bisphosphonates Treatment
Koji Ishikawa*, Tomoaki Toyone, Tsuchiya Koki, Wakako Sakamoto, Takuma Kuroda, Hiroshi Ito, Takashi Nagai, Katsunori Inagaki. 1Department of Orthopaedic Surgery, Showa University School of Medicine, 1-5-8 Hatanodai, Shinagawa-ku, Tokyo 142-8666, Japan, 2Department of Orthopaedic Surgery, Showa University School of Medicine, Japan
Disclosures: Koji Ishikawa, None

MO0289 Identifying Incomplete Atypical Femoral Fractures with Single-Energy Absorptiometry Femur Exam: Declining Prevalence
Malachi McKenna*, Fergus McKiernan, Bernie McGowan, Carmel Silke, Kathleen Bennett, Susan van der Kamp, Paul Ward, Conor Hurson, Eric Heffernan. 1St. Vincent’s University Hospital, Ireland, 2Marshfield Clinic Research Foundation, United states, 3The North Western Rheumatology Unit, Our Lady’s Hospital, Ireland, 4Division of Population & Health Sciences, Royal College of Surgeons in Ireland, Ireland, 5St. Vincent’s University Hospital, Ireland
Disclosures: Malachi McKenna, None

MO0290 iPTH Elevation after Denosumab Use is not Associated with Anabolic Effect
Se-Min Kim*, Mark O. Goodarzi, Stuart L. Silverman. Cedars-Sinai Medical Center, United states
Disclosures: Se-Min Kim, None
MO0291 Offset of Effect of Oral Bisphosphonates on Bone in Postmenopausal Osteoporosis: the TRIO Study
Kim Naylor1, Margaret Paggiosi1, Fatma Gossiel1, Nicola Peel2, Eugene McCloskey1, Jennifer Walsh1, Richard Eastell*1. 1University of Sheffield, United Kingdom, 2Sheffield Teaching Hospitals NHS Foundation Trust, United Kingdom
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MO0292 Significant Bone Loss After Stopping Denosumab Treatment
Maria Belen Zanchetta*1, Juan Bohlchuk2, Fabio Massari1, Fernando Silveira2, Cesar Bogado2, Jose Ruben Zanchetta1. 1IDIM, Universidad del Salvador, Argentina, 2IDIM, Argentina
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Osteoporosis - Treatment: Fracture Repair

MO0293 Radiological Follow-up Results of Cemented Vertebrae after Vertebroplasty
Jin Hwan Kim*, Kyoung Hwan Koh, Jung Hoon Kim. Department of Orthopedic Surgery, Inje University, Ilsan Paik Hospital, Korea, republic of
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Osteoporosis - Treatment: OTHER AGENTS

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Osteoporosis - Treatment: Quality of Life

MO0295 Comparison of the Medium-term Outcome After the Treatment of Osteoporotic Insufficiency Fractures by Means of Balloon Sacroplasty (BSP) and Radiofrequency Sacroplasty (RFS) in Comparison: A Prospective Randomised Study
Reimer Andresen*1, Sebastian Radmer2, Julian Ramin Andresen3, Hans-Christof Schober4. 1Institute of Diagnostic & Interventional Radiology/Neuroradiology, WKK Heide, Germany, 2Centre for Orthopaedics, Berlin, Germany, 3Werner Heisenberg high school, Heide, Germany, 4Department of Internal Medicine I, Municipal Hospital Suedstadt Rostock, Germany
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Paracrine Regulators: Bone Morphogenetic Proteins and Transforming Growth Factors

MO0296 Transcriptomic Analysis of Whole Bone Marrow Cultures Treated with Osteoinductive Agents: BMP-2 (bone morphogenetic protein 2) or TPO (thrombopoietin)
Marta B. Alvarez*1, Paul J. Childress1, Nabaruun Chakraborty2, Duncan E. Donohue2, Rasha Hammamieh2, Todd O. McKinley3, Melissa A. Kacena3. 1Indiana University School of Medicine, United states, 2US Army Center for Environmental Health Research, United states, 3Indiana University School of Medicine, Department of Orthopaedic Surgery, United states
Disclosures: Marta B. Alvarez, None

Paracrine Regulators: Cytokines and Immunomodulators

MO0297 Necrotic Bone Stimulates Pro-inflammatory Responses in Macrophages Through the Activation of Toll-like receptor 4
Naga Suresh Adapala*, Harry K.W. Kim, Ryo Suke Yamaguchi, Matthew Phipps, Olumide Aruwajoye. Texas Scottish Rite Hospital for Children, United states
Disclosures: Naga Suresh Adapala, None

Paracrine Regulators: PTHR and Other Paracrine Regulators

MO0298 Effect of targeted overexpression of Notch signaling in periosteal progenitor cells
Emilie ROEDER*, Brya Matthews, Ivo Kalajzic. Uconn health, United states
Disclosures: Emilie ROEDER, None
The Anabolic Actions of PTH Are Mediated in Part through a Colony Stimulating Factor 1-Sphingosine-1-Phosphate Paracrine Loop
Gang-Qing Yao1*, Meiling Zhu2, Ben-hua Sun1, Joanne Walker1, Karl Insogna1. 1Yale University School of Medicine, United states, 2Yale School, United states
Disclosures: Gang-Qing Yao, None

PARACRINE REGULATORS: WNT SIGNALING

Romosozumab Blocks the Binding of Sclerostin to the Two Key Wnt Signaling Co-receptors, LRP5 and LRP6, but not to LRP4
Jianhua Gong, Jin Cao, Joanne Ho, Ching Chen, Chris Paszty*. Amgen Inc., United states
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PRECLINICAL MODELS – NUTRITION: GENERAL

A High-Fat Diet Induces Changes in the Bone Composition of Murine Humeri Independent of Total Body Bone Mineral Density
Michael-John G. Beltejar*1, Jun Zhang2, Dana A. Godfrey1, Michael J. Zuscik1, Douglas Adams3, Cheryl L. Ackert-Bicknell1, 1Center for Musculoskeletal Research, University of Rochester Medical Center, United states, 2Department of Orthopedics, Zhejiang Provincial People’s Hospital, China, 3Department of Orthopaedic Surgery, University of Connecticut Health, United states
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PRECLINICAL MODELS – NUTRITION: MICRONUTRIENTS

Effect of Age and Dietary Phosphorus Intake on Intestinal Phosphorus Absorption in Male Rats
Colby Vorland*, Pamela Lachcik, James Fleet, Kathleen Hill Gallant. Purdue University, United states
Disclosures: Colby Vorland, None

PRECLINICAL MODELS – PHARMACOLOGY: ANTIRESORPTIVES

Evaluation of Bone Turnover After Bisphosphonate Withdrawal and its Influence on Implant Osseointegration
Rafael Scaf de Molon*1, Fausto Frizzera1, Mario Henrique Arruda Verzola1, Gabriela Giro2, Sotirios Tetradis3, Silvana Regina Peres Orrico1, 1Department of Diagnosis & Surgery, School of Dentistry at Araraquara, Sao Paulo State University, Brazil, 2Department of Periodontology & Oral Implantology, Dental Research Division, Guarulhos University, Brazil, 3Division of Diagnostic & Surgical Sciences, UCLA School of Dentistry, Los Angeles, United states
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Icaritin, a Prenylated Flavonoid, Mediates Proteasomal Degradation of TRAF6 thereby Suppressing Osteoclastogenesis and Preventing Ovariectomy-induced Bone Loss
Ee Min Tan*1, Lei Li2, Nicholas Chew3, Eu Leong Yong4, 1National University of Singapore, Yong Loo Lin School of Medicine, Department of Obstetrics & Gynaecology, Singapore, 2National University of Singapore, Yong Loo Lin School of Medicine, Singapore, 3National University Health System, Department of Infectious Diseases, Singapore, 4National University Health System, Department of Obstetrics &, Singapore
Disclosures: Ee Min Tan, None
MO0306 Homing and Biodistribution of ALLOB®, an allogeneic osteoblastic cell therapy product
Sandra Pietri1, Sabrina Ena2, Enrico Bastianelli1. 1Bone Therapeutics, Belgium, 2skeletal cell therapy support, Belgium
Disclosures: Sandra Pietri, None

MO0307 Investigation of the effect of sequential treatment with zoledronic acid followed by weekly parathyroid hormone or vice versa in ovariectomized rats
Taku Shimizu*, Tomoya Tanaka, Teruki Kobayashi, Ikuyo Kudo, Aya Takakura, Ryoko Takao-Kawabata, Toshinori Ishizuya. Pharmaceuticals Research Center, Asahi Kasei Pharma Corporation, Japan
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MO0308 Local Osteolytic Effect of BMP-2 in Sheep Lumbar Spinal Fusion
Hsin Chuan Pan*, Soochul Lee2, Xinli Zhang1, Jia Shen1, Chencaho Wang3, A. Simon Turner4, Howard B. Seim2, Janette N. Zara2, Jin Hee Kwak1, Kang Ting1, Chia Soo5. 1Division of Growth & Development & Section of Orthodontics, School of Dentistry, University of California, Los Angeles, United states, 2Department of Orthopaedic Surgery, CHA Bundang Medical Center, CHA University, School of Medicine, United states, 3Department of Plastic Surgery, The First Hospital of China Medical University, United states, 4Department of Veterinary Sciences, Colorado State University, United states, 5Department of Orthopaedic Surgery & the Orthopaedic Hospital Research Center, University of California, Los Angeles, Los Angeles, United states
Disclosures: Hsin Chuan Pan, None

MO0309 Sclerostin Antibody Markedly Reverses the Severe Sublesional Bone Loss in Rats after Prolonged Spinal Cord Injury
Wei Zhao*, Xiaodong Li2, Yuanzhen Peng1, Jianping Pan1, Michael Ominsky2, Jian Q. Feng2, Hua Zhu Ke4, Christopher Cardozo5, William A. Bauman1, Weiping Qin3, 1James J. Peters VA Medical Center, United states, 2Amgen Inc., United states, 3Baylor College of Dentistry, TX A&M, United states, 4UCB Pharma, United Kingdom, 5James J. Peters VA Medical Center/Icahn School of Medicine at Mount Sinai, United states
Disclosures: Wei Zhao, None

MO0310 An 18F Analogue of Clodronate for PET Bone Imaging
Charles McKenna*, Amirsoheil Negahbani1, Boris Kashemirov1, Hongsheng Li2, Kai Chen2. 1Department of Chemistry, University of Southern California, United states, 2Molecular Imaging Center, Department of Radiology, University of Southern California, United states
Disclosures: Charles McKenna, None

MO0311 Differential Response of Bone and Kidney to ACEI in db/db mice: A Potential Effect of Captopril on Accelerating Bone Loss
Yan Zhang*, Man-Sau Wong1, Qi Shi1, Yong-Jun Wang2. 1Spine Disease Research Institute, Longhua Hospital, Shanghai University of Traditional Chinese Medicine, China, 2Department of Applied Biology & Chemical Technology, The Hong Kong Polytechnic University, China, 3School of Rehabilitation Science, Shanghai University of Traditional Chinese Medicine, China
Disclosures: Yan Zhang, None

MO0312 MGMTM: The Next Generation Carbon Nanotubes for Biomedical Applications
Michaela Reagan*, Aaron Tasset2, Heather Fairfield1, Joe Dillon2, Carolyne Falank1. 1Maine Medical Center Research Institute, United states, 2BioPact Ventures, United states
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MO0313 Prolonged Pharmacokinetic and Pharmacodynamic Actions of a Pegylated Parathyroid Hormone Peptide Fragment
Jun Guo*, Ashok Khatri, Thomas Dean, Monica Reyes, Braden Corbin, John T. Potts, Jr., Harald Jüppner, Thomas J. Gardella. Endocrine Unit, Massachusetts General Hospital & Harvard Medical School, United states
Disclosures: Jun Guo, None
MO0314  Selective Serotonin Reuptake Inhibitors (SSRIs) Impair bone mass accrual Through a Brain Serotonin/Sympathetic nervous system (SNS) pathway
Maria Jose Ortuno*1, Samuel Rombinson1, Riccardo Paone2, Yung-yu Huang1, Edward Guo3, John J. Mann4, Patricia Ducy1. 1Columbia University, United states, 2University of L’Aquila, Italy
Disclosures: Maria Jose Ortuno, None

MO0315  Selective Serotonin Reuptake Inhibitors Impair Fracture Healing
Anna Josephson*, Vivian Bradaschia Correa, Devan Mehta, Philipp Leucht. New York University School of Medicine, United states
Disclosures: Anna Josephson, None

RARE BONE DISEASES: FIBROUS DYSPLASIA

MO0316  Bone marrow failure and extramedullary hematopoiesis in fibrous dysplasia/McCune-Albright syndrome
Cemre Robinson, MD*1, Andrea Estrada, MD2, David E. Kleiner, MD, PhD3, Alison M. Boyce, MD1, Revi Mathew, MD4, Robert Stanton, MD5, Haydar Frangoul, MD, MS6, Edward Hsiao, MD, PhD7, Michael T. Collins, MD1. 1Section on Skeletal Diseases & Mineral Homeostasis, Craniofacial & Skeletal Diseases Branch, National Institute of Dental & Craniofacial Research, National Institutes of Health, Bethesda, MD, USA., United states, 2Division of Endocrinology & Diabetes, Children’s National Health System, Washington, D.C., United states, 3National Cancer Institute, National Institutes of Health, Bethesda, MD, USA., United states, 4The Children’s Hospital at TriStar Centennial, Nashville, TN, USA., United states, 5Nemours Children’s Hospital, Orlando, Florida, USA., United states, 6Endocrine Division, University of California San Francisco, San Francisco, CA, USA., United states
Disclosures: Cemre Robinson, MD, None

RARE BONE DISEASES: HYPOPHOSPHATASIA

MO0317  Determination of the Minimal Clinically Important Difference in the Six-Minute Walk Test for Patients with Hypophosphatasia
Ioannis Tomazos*, Scott Moseley, Eileen Sawyer, Uchenna Iloeje. Alexion Pharmaceuticals, Inc, United states
Disclosures: Ioannis Tomazos, Alexion Pharmaceuticals, Inc, 16; Alexion Pharmaceuticals, Inc, 17

MO0318  Does Pyrophosphate Inhibit Bone Resorption?
Aaron A Kwaasi1, James E Dunford2, Frank Hal Ebetino3, R Graham G Russell*4. 1The Botnar Research Centre, University of Oxford, UK, United Kingdom, 2The Botnar Research Centre, University of Oxford, UK, United Kingdom, 3Department of Chemistry, University of Rochester, USA, United states, 4The Botnar Research Centre, University of Oxford, & The Mellanby Centre for Bone Research, University of Sheffield, United Kingdom
Disclosures: R Graham G Russell, None

RARE BONE DISEASES: HYPOPHOSPHATEMIC RICKETS

MO0319  Clinical and Radiographic Characteristics of Adult X-linked Hypophosphatemia (XLH) in a Cohort of Patients Treated with KRN23, an Antibody to FGF23
Mary Ruppe*, Munro Peacock2, Tom Weber3, Anthony Portale4, Karl Insogna5, Erik Imel2, Diana Luca6, Alison Skrinar6, Matt Mealiffe6, Javier San Martin6, Thomas Carpenter1. 1Houston Methodist Hospital, United states, 2Indiana University School of Medicine, United states, 3Duke University, United states, 4University of California, San Francisco, United states, 5Yale University School of Medicine, United states, 6Ultradyn Pharmaceutical Inc., United states
Disclosures: Mary Ruppe, None

MO0320  Nuclear Isoforms of Fibroblast Growth Factor 2 Modulate Dentin Mineralization in HMWTg Mice
Johnny Joseph*, Anushree Banerjee, Mina Mina, Patience Meo Burt, Erxia Du, Liping Xiao, Marja M Hurley. UConn Health, United states
Disclosures: Johnny Joseph, None
MO0321 Atypical Femur Fractures in Osteogenesis Imperfecta
Pamela Trejo*, Francis Glorieux, Frank Rauch. Shriners Hospital for Children Canada, Canada
Disclosures: Pamela Trejo, None

MO0322 Effect of Bisphosphonates on Bone Mineral Density and other Health Outcomes in Type 1 Osteogenesis Imperfecta
Jaskaran Bains¹, Kate Citron¹, Erin Carter¹, David Cuthbertson², Jay Shapiro³, Robert Steiner⁴, Peter Smith⁵, Michael Bober⁶, Tracy Hart², Jeffery Krischer², Peter Byers⁶, Francis Glorieux⁹, Frank Rauch⁹, Sandesh Nagamani¹⁰, Vernon Sutton¹¹, Brendan Lee¹², Cathleen Raggio*¹. ¹Hospital for Special Surgery, United states; ²College of Medicine, University of South Florida, United states; ³Kennedy Krieger Institute, United states; ⁴Oregon Health & Science University, United states; ⁵Shriners Hospital for Children, United states; ⁶Alfred I. DuPont Hospital for Children, United states; ⁷Osteogenesis Imperfecta Foundation, United states; ⁸University of Washington, United states; ⁹Shriners Hospital for Children & McGill University, Canada; ¹⁰Baylor College of Medicine, United states; ¹¹Texas Children’s Hospital, United states
Disclosures: Cathleen Raggio, None

MO0323 Mortality and causes of death in patients with osteogenesis imperfecta. A register-based national cohort study
Lars Folkestad*¹, Jannie Dahl Hald², Vladnimir Cañudas-Romo³, Jeppe Gram⁴, Anne Pernille Hermann⁵, Bente Langdahl⁶, Bo Abrahamsen⁷, Kim Brixen⁸. ¹Department of Endocrinology, Odense University Hospital, Denmark; ²Department of Endocrinology & Internal medicine, Århus University Hospital, Denmark; ³Max-Planck Odense Center on the Bio electrometry of aging, Denmark; ⁴Hospital of Southwest Denmark, Denmark; ⁵Department of Endocrinology, Odense University Hospital, Denmark; ⁶Aarhus University, Denmark; ⁷Department of Medicine, Holbæk Hospital, Denmark; ⁸Department of Clinical Research, University of Southern Denmark, Denmark
Disclosures: Lars Folkestad, AstraZeneca, 15; Genzyme, 15

MO0324 Mutation in the Collagen-specific Molecular Chaperone Hsp47 Causes Endoplasmic Reticulum Stress in Osteoblast Cells of Osteogenesis imperfecta patients
vandana Dhieman*¹, Sanjay Bhadada¹, Naresh Sachdeva¹, Amanjit Bal¹, Anuradha Chakraborti¹, Anil Bhansali¹, Nirmal Raj Gopinathan¹, D K Dhawan². ¹PGIMER, Chandigarh, India, India; ²Panjab University, India
Disclosures: vandana Dhieman, None

RARE BONE DISEASES: OTHER RARE BONE DISEASES

MO0325 PLS3 Sequencing in Childhood-onset Primary Osteoporosis Identifies Two Novel Mutations
Anders J Kämpe*, Alice Costantini¹, Riikka E Mäkitie², Nina Jäntti¹, Helena Valta¹, Minna Pekkinen², Mervi Mäyränpää³, Fulya Taylan¹, Hong Jiao³, Outi Mäkitie⁶. ¹Department of Molecular Medicine & Surgery & Center for Molecular Medicine, Karolinska Institutet, Stockholm, Sweden, Sweden; ²Folkhälsan Institute of Genetics & University of Helsinki, Helsinki, Finland, Finland; ³Children’s Hospital, University of Helsinki & Helsinki University Hospital, Helsinki, Finland, Finland; ⁴Children’s Hospital, University of Helsinki & Helsinki University Hospital, Helsinki, Finland, Sweden; ⁵Department of Biosciences & Nutrition, & Science for Life Laboratory, Karolinska Institutet, Stockholm, Sweden, Sweden; ⁶Department of Molecular Medicine & Surgery, Karolinska Institutet, Sweden; Folkhälsan Institute of Genetics & University of Helsinki, Helsinki, Finland; Children’s Hospital, University of Helsinki & Helsinki University Hospital, Helsinki, Finland, Sweden
Disclosures: Anders J Kämpe, None
MO0326 Activin A activates the ACVR1 (R206H) receptor in human primary dermal fibroblasts of fibrodysplasia ossificans progressiva patients

Dimitra Micha1, Marelise Eekhoff*2, Coen Netelenbos2, Vinitha Kandiah1, Teun de Vries3, Gerard Pals1, Nathalie Bravenboer4. 1Department of Clinical Genetics, VU University Medical Center, Netherlands, 2Internal Medicine, Endocrinology section, VU University Medical Center, Netherlands, 3Department of Oral Cell Biology, ACTA, VU University, Netherlands, 4Department of Clinical Chemistry, VU University Medical Center, MOVE Research Institute, Netherlands

Disclosures: Marelise Eekhoff, None

MO0327 Bone Material Properties Assessment by Microindentation in Patients with Type 1 Gaucher’s Disease

Sabina Herrera*1, Marc Molto2, Roberto Guerri-Fernandez3, Elena Cabezudo1, Silvana Novelli1, Jordi Esteve1, Albert Hernandez1, Inmaculada Roig1, Xavier Solanich1, Daniel Prieto-Alhambra1, Xavier Nogues3, Jordi Perez-Lopez3, Adolfo Diez-Perez3. 1MD, Spain, 2MD, PhD, Spain

Disclosures: Sabina Herrera, None

MO0328 Establishment of Tet-On C2C12 Cells Express ALK2 Responsible for Fibrodysplasia Ossificans Progressiva and Diffuse Intrinsic Pontine Glioma

Takenobu Katagiri*, Satoshi Ohte, Sho Tsukamoto, Mai Kuratani, Aiko Machiya, Keigo Kumagai. Saitama Medical University, RCGM, Japan

Disclosures: Takenobu Katagiri, None

MO0329 Impaired Chondrocyte Hypertrophic Differentiation Potential is Associated with Abnormal Glycosaminoglycan Accumulation in Mucopolysaccharidosis VII Dogs

Sun Peck*, Jennifer Kang1, Maurizio Pacifici2, George Dodge1, Neil Malhotra1, Mark Haskins1, Eileen Shore1, Lachlan Smith1. 1University of Pennsylvania, United states, 2The Children’s Hospital of Philadelphia, United states

Disclosures: Sun Peck, None

MO0330 Paradigm Shift: Jaw Surgery in Selected Fibrodysplasia Ossificans Progressiva Patients Could Offer Better Quality of Life and Precede Drug Treatment Trial

Coen Netelenbos*, Marelise Eekhoff, Pieter Raijmakers1, Robert van Es3, 1VUmc, Netherlands, 2VUmc FOP Expert Center, Netherlands, 3UMC, Netherlands

Disclosures: Coen Netelenbos, None

MO0331 Whole Body Computed Tomography (CT) Versus Dual Energy x-ray Absorptiometry (DXA) Imaging for Assessing Heterotopic Ossification (HO) in Fibrodysplasia Ossificans Progressiva (FOP)

Frederick S. Kaplan1, Robert J. Pignolo3, Stacy E. Smith3, Sarah E. Warner4, Edward C. Hsiao5, Carmen De Cunto6, Maja Di Rocca7, Harry K. Genant8, Donna R. Grogan9. 1The University of Pennsylvania, United states, 2University of Pennsylvania Perelman School of Medicine, United states, 3Division of Musculoskeletal Imaging & Intervention, Dept. of Radiology, Brigham & Women’s Hospital, Harvard Medical School, United states, 4PAREXEL Medical Imaging, United states, 5Division of Endocrinology & Metabolism, University of California, San Francisco, United states, 6Department of Pediatrics/Hospital Italiano de Buenos Aires, Argentina, 7Unit of Rare Diseases, Department of Pediatrics, Gaslini Institute, Italy, 8UCSF/BioClinica, United states, 9Clementia Pharmaceuticals Inc., United states

Disclosures: Donna R. Grogan, None

SARCOPENIA, MUSCLE AND FALLS: FALLS ASSESSMENT AND EPIDEMIOLOGY

MO0332 BODY COMPOSITION IN A HEALTHY POPULATION OF CURITIBA, BRAZIL

THAISA JONASSON*, TATIANA LEMOS COSTA, CAROLINA MOREIRA, CESAR BOGUSZEWSKI, VICTORIA BORBA. Endocrine Division (SEMPR) - Federal University of Paraná, Brazil

Disclosures: THAISA JONASSON, None
Prevalence of sarcopenia according to different consensus definitions in patients with a recent clinical fracture
Caroline E Wyers1*, Lisanne Vranken1, Robert Y van der Velde2, Piet P Geusens3, Joop PW van de Bergh1. 1Maastricht UMC+, Department of Internal Medicine; VieCuri Medical Center, Department of Internal Medicine, Netherlands; 2VieCuri Medical Center, Department of Internal Medicine; Maastricht UMC+, Department of Internal Medicine, Netherlands; 3Maastricht UMC+, Department of Internal Medicine subdivision of Rheumatology; University of Hasselt, Netherlands, 4VieCuri Medical Center, Department of Internal Medicine; Maastricht UMC+, Department of Internal Medicine; University of Hasselt, Netherlands
Disclosures: Caroline E Wyers, None

Cross-sectional and Longitudinal Associations Between Skeletal Muscle Mass and Vitamin D Status in a Homogeneous Cohort of 65-year Old Subjects
Andrea Trombetti*, Mélanie Hars, Thierry Chevalley, Emmanuel Biver, René Rizzoli, Serge Ferrari. Division of Bone Diseases, Department of Internal Medicine Specialties, Geneva University Hospitals & Faculty of Medicine, Switzerland
Disclosures: Andrea Trombetti, None

Predicting impact force during a fall onto the outstretched hand using a single-spring-model
James Johnston1*, Chantal Kawalilak1, Joel Lanovaz2, Saija Kontulainen3. 1Department of Mechanical Engineering, University of Saskatchewan, Canada, 2College of Kinesiology, University of Saskatchewan, Canada
Disclosures: James Johnston, None

The Association Between Muscle Mass Deficits Estimated from Bioelectrical Impedance Analysis and Bone Mineral Density in Adults
Hee-Jeong Choi1*, Hye-Yoen Jang1, Byeong-Yeon Yu2, Hyeok-Jung Kown3. 1Department of Family Medicine, Eulji University School of Medicine, Korea, republic of, 2Department of Family Medicine, Konyang University School of Medicine, Korea, republic of, 3Department of Family Medicine, Konkuk University School of Medicine, Korea, republic of
Disclosures: Hee-Jeong Choi, None

Characteristics of Regional Bone Mineral Density and Soft Tissue Composition in Japanese Elderly Women with Sarcopenia and Sarcopenic Obesity
Shinjiro Takata*. Department of Orthopedics & Rehabilitation Medicine, Tokushima National Hospital, National Hospital Organization, Japan
Disclosures: Shinjiro Takata, None

FNIH SARCOPENIA CRITERIA IN COPD PATIENTS HAD BETTER CORRELATION WITH GAIT SPEED COMPARED TO FOUR DIFFERENT METHODS
TATIANA LEMOS COSTA1*, FABIO Marcelo Costa2, THAISA JONASSON1, CAROLINA MOREIRA1, LEDA RABELO3, CESAR BOGUSZEWSKI1, VICTORIA BORBA1. 1Endocrine Division (SEMPR) - Federal University of Paraná, Brazil, 2DIVISION OF PNEUMOLOGY- FEDERAL UNIVERSITY OF PARANA, Brazil, 3DIVISION OF PNEUMOLOGY- FEDERAL UNIVERSITY OF PARANA, Brazil
Disclosures: TATIANA LEMOS COSTA, None

Relationship of vitamin D with skeletal muscle volume, muscle strength, and physical performance
Akiko Kuwabara1*, Naoko Tsugawa1, Misora Ao2, Hiroko Takaoka3, Kaoru Aoyama3, Tetsuo Nakano4, Kiyoshi Tanaka2. 1Osaka Shoin Women’s University, Japan, 2Kyoto Women’s University, Japan, 3LifeIn Kyoto, Japan, 4Tamana Central Hospital, Japan
Disclosures: Akiko Kuwabara, None
MO0340 Clinical Feasibility of Oral Administration of Meclozine for the Treatment of Short Stature in Achondroplasia
Masaki Matsushita*, Hiroshi Kitoh, Kenichi Mishima, Naoki Ishiguro, Kinji Ohno.
Department of Orthopaedic Surgery, Nagoya University Graduate School of Medicine, Japan, Division of Neurogenetics, Center for Neurological Diseases & Cancer, Nagoya University Graduate School of Medicine, Japan
Disclosures: Masaki Matsushita, None

MO0341 Direct Effects of Nicotine Exposure on Murine Calvaria
Emily Durham*, R. Nicole Howie, Laurel Black, Graham Warren, Amanda LaRue, James Cray. MUSC, United states
Disclosures: Emily Durham, None

MO0342 Epiphyseal versus Metaphyseal Trabecular Microarchitecture: Regional Ontogenetic Patterns in the Human Proximal Tibia
Jesse Goliath*, James Gosman, Zachariah Hubbell, Timothy Ryan. Department of Anthropology, The Ohio State University, United states, Department of Anthropology, Center for Quantitative Imaging, Pennsylvania State University, United states
Disclosures: Jesse Goliath, None

MO0343 Nell-1 Deficiency in Cranial Neural Crest Cells Results in Microcephalic Phenotype
Mengliu Yu, Hisinuwan Pan, Justine Tanjaya, Chenshuang Li, Shen Jia, Eric Chen, Xiaoyan Chen, Huiming Wang, Kang Ting, Chia Soo, Xinli Zhang. Section of Orthodontics, Division of Growthand DevelopmentSchool of Dentistry, University of California, Los Angeles; The Affiliated Stomatologic Hospital, Zhejiang University, United states, Section of Orthodontics, Division of Growthand DevelopmentSchool of Dentistry, University of California, Los Angeles, United states, The Affiliated Stomatologic Hospital, Zhejiang University, China, Orthopaedic Hospital Research Center, University of California, Los Angeles, United states, Section of Orthodontics, Division of Growth & DevelopmentSchool of Dentistry, University of California, Los Angeles, United states
Disclosures: Xinli Zhang, None

MO0344 Perlecan/HSPG2: Novel Signaling Role in Early Chondrogenesis and Chondro-Osseous Boundary Formation
Brian Grindel, Mary Farach-Carson, Jerahme Martinez. Rice University, United states
Disclosures: Jerahme Martinez, None

MO0345 Phosphate Deficiency Leads to a Phase Shift in Circadian Oscillation During Fracture Healing
Takashi Noguchi*, Amira Hussein, Nina Horowitz, Deven Carroll, Louis Gerstenfeld. Department of Orthopedic Surgery, School of Medicine, Boston University, United states
Disclosures: Takashi Noguchi, None

LATE-BREAKING POSTERS III
12:30 pm - 2:30 pm Georgia World Congress Center
ASBMR Discovery Hall - Expo Hall A1

BIOMECHANICS AND BONE QUALITY: ASSESSMENT OF BONE QUALITY AND STRENGTH
LB-MO0346 Both TBS and volumetric BMD are associated with pedicle screw pull-out strength: an ex-vivo feasibility study
R Winzenrieth*, J Choisne, J-M Valiadis, P Le Nost, S Kolta, C Lelong, W Skalli. R&D department, Medimaps, France, Institut de Biomecanique Huamine Georges Charpak, Arts et Metiers ParisTech, France, CEMO, Cochin Hospital, AP-HP, France, Medimaps, France
Disclosures: R Winzenrieth, Medimaps, 17
BONE TUMORS AND METASTASIS: BONE TUMOR MICROENVIRONMENT

LB-MO0347 Hematopoietic Stem Cell-derived Osteoblasts Enhance Tumorigenicity in the Osteosarcoma Microenvironment
Uday Baliga*, Inhong Kang, Ying Xiong, Shilpak Chatterjee, Meenal Mehrotra. Medical University of South Carolina, United states
Disclosures: Uday Baliga, None

ENERGY METABOLISM AND BONE: DIABETES AND BONE (ANIMAL MODELS)

LB-MO0348 Type 2 Diabetes Impairs Insulin-Stimulated Bone Blood Flow and Compromises Bone Biomechanical Properties in Hyperphagic OLETF Rats
Pam Hinton*, Laura Ortinau, Rebecca Dirkes, Matthew Richard, R. Scott Rector, T. Dylan Olver. University of Missouri, United states
Disclosures: Pam Hinton, None

ENERGY METABOLISM AND BONE: DIABETES AND BONE (ANIMAL MODELS)

LB-MO0349 Androgens Enhance the Adverse Metabolic Effects of Glucocorticoids
Sylvia Gasparini1, Lee J. Thai2, Marie C. Weber3, Holger Henneicke2, Sarah Kim2, Hong Zhou4, Markus J. Seibel4. 1The University of Sydney, Australia, 2ANZAC Research Institute, Australia, 3A, Australia, 4University of Sydney, Australia
Disclosures: Markus J. Seibel, None

GENETIC MODELS OF MUSCULOSKELETAL DISEASES: ANIMAL MODELS

LB-MO0350 Genetic disruption of compensatory Wnt inhibitor expression reveals a context-dependent, highly osteo-anabolic role for Dkk1 inhibition in the skeleton
Phillip C. Witcher1, Alison L. Adaniya1, Emily N. Adaniya1, Gabriela G. Loots2, Alexander G. Robling*1. 1Indiana University School of Medicine, United states, 2Lawrence Livermore National Laboratory, United states
Disclosures: Alexander G. Robling, None

GENOMICS, TRANSCRIPTOMICS, PROTEOMICS AND METABOLOMICS OF MUSCULOSKELETAL DISEASE: GENETIC ASSOCIATION STUDIES

LB-MO0351 Prediction of Putative Causal Variants and Genes at BMD GWAS Loci
Basel Al-Barghouthi*1, Charles Farber2. 1Center for Public Health Genomics & Department of Biochemistry & Molecular Genetics, School of Medicine, University of Virginia, United states, 2Center for Public Health Genomics & Departments of Public Health Sciences & Biochemistry & Molecular Genetics, School of Medicine, University of Virginia, United states
Disclosures: Basel Al-Barghouthi, None

MECHANOBIOLOGY: GENERAL

LB-MO0352 Feeding After Overnight Fast Enhances Bone's Response To Mechanical Loading In Mice
Hasmik J Samvelyan*1, John C Mathers2, Tim M Skerry1. 1The Mellanby Centre for Bone Research, The MRC-Arthritis Research UK Centre for Integrated Research Into Musculoskeletal Ageing, Department of Oncology & Metabolism, The University of Sheffield, UK, United Kingdom, 2Human Nutrition Research Centre, Institute of Cellular Medicine, Newcastle University, UK, United Kingdom
Disclosures: Hasmik J Samvelyan, None

MUSCULOSKELETAL PROGENITOR CELLS AND LINEAGE DETERMINATION: MULTI-LINEAGE

LB-MO0353 CyclinD1 regulates the balance between the osteogenic and chondrogenic differentiation of mesenchymal cells that constitutively express Nanog
Toru Ogasawara*, Jun-pei Imamura, Yasuyuki Fujii. The University of Tokyo, Japan
Disclosures: Toru Ogasawara, None
OSTEOARTHRITIS AND OTHER JOINT DISORDERS: GENERAL

LB-MO0354 Knee Osteoarthritis and Risk of Fall Injuries among Older Adults: the Health ABC Study
Kamil Barbour*1, Robert Boudreau2, Naoko Sagawa2, Jane Cauley2, Michael Nevitt3, Tomoko Fuji2, Kushang Patel4, Elsa Strotmeyer5. 1Arthritis Program, Division of Population Health, NCCDPHP, CDC, United states, 2Department of Epidemiology, University of Pittsburgh, Pittsburgh, PA, USA, United states, 3University of California, San Francisco, CA, USA, United states, 4Center for Pain Research on Impact, Measurement, & Effectiveness, Department of Anesthesiology, & Pain Medicine, University of Washington, Seattle, USA., United states, 5Department of Epidemiology, University of Pittsburgh, Pittsburgh, PA, USA, United states
Disclosures: Kamil Barbour, None

LB-MO0355 Arthritis prevalence, defined by self-report and symptomatology, according to age, sex and social disadvantage in six low and middle income countries: The World Health Organization Study on global AGEing and adult health (SAGE) Wave 1
Sharon Brennan-Olsen*1, Selina Cook1, Michelle Leech2, Steve Bowe1, Richard Page1, Nirmala Naidoo3, Paul Kowal4, Julie Pasco1, Sarah Hosking5, Mohammadreza Mohebbi1, 1Deakin University, Australia, 2Monash University, Australia, 3World Health Organization, Switzerland, 4University of Newcastle, Australia
Disclosures: Sharon Brennan-Olsen, None

OSTEOBLASTS – MATRIX PROTEINS AND FUNCTION: HORMONAL AND LOCAL REGULATION

LB-MO0356 Dexamethasone-induced Poldip2 expression possibly recapitulating the osteoblast aging was suppressed by a longevity factor basic-FGF
Sakie Katsumura*1, Yoichi Ezura1, Kathy Griendling2, Masaki Noda3. 1Tokyo Medical & Dental University, Japan, 2Emory University, United states, 3Yokohama City Minato Red Cross Hospital, Japan
Disclosures: Sakie Katsumura, None

OSTEOCLASTS - FUNCTION: BONE RESORPTION MECHANISMS

LB-MO0357 Profilin1 Deficiency in Osteoclasts Causes Osteolytic Erlenmeyer-Flask Deformity of the Femurs Due to the Increased Migratory Potential
Jumpei Shirakawa1, Yoichi Ezura*2, Tadayoshi Hayata3, Yayoi Izu4, Ralph Botcher5, Reinhard Fassler5, Masaki Noda6. 1School of Dental Medicine Tsurumi University, Japan, 2Tokyo Medical & Dental University, Japan, 3University of Tsukuba, Japan, 4Chiba Institute of Science, Japan, 5Max Planck Institute of Biochemistry, Germany, 6Yokohama City Minato Red Cross Hospital, Japan
Disclosures: Yoichi Ezura, None

OSTEOPOROSIS - ASSESSMENT: BONE QUALITY

LB-MO0358 Baseline femoral neck width predicts inter-individual differences in structural and mass changes during the menopausal transition
Karl Jepsen*1, Andrew Kozminski1, Erin Bigelow1, Stephen Schlecht1, Robert Goulet1, Sioban Harlow1, Jane Cauley2, Carrie Karvonen-Gutierrez1. 1University of Michigan, United states, 2University of Pittsburgh, United states
Disclosures: Karl Jepsen, None

LB-MO0359 Women with Type 2 Diabetes Have Lower Cortical Porosity than Women without Diabetes, and Higher Glucose is Associated with Reduced Cortical Porosity
Marit Osima*1, Rita Kral2, Ragnar Joakimsen3, Erik F Eriksen4, Åshild Bjørnerem5. 1Department of Community Medicine, UiT The Arctic University of Norway, Norway, 2Department of Medical Biology, UiT The Arctic University of Norway, Norway, 3Department of Clinical Medicine, UiT The Arctic University of Norway, Norway, 4Department of Clinical Endocrinology, Oslo University Hospital, Norway, 5Department of Obstetrics & Gynaecology, University Hospital of North Norway, Norway
Disclosures: Marit Osima, None
OSTEOPOROSIS - EPIDEMIOLOGY: BONE MINERAL DENSITY

LB-MO0360 Genetic Profiling Predicts Bone Loss and Bone Mineral Density
Thao P. Ho-Le*, Hanh M. Pham*, Jacqueline R. Center, John A. Eisman, Hung T. Nguyen, Tuan V. Nguyen. 1Centre for Health Technologies, University of Technology, Sydney, Australia, 2Bone Biology Division, Garvan Institute of Medical Research, Australia, 3Bone Biology Division, Garvan Institute of Medical Research; UNSW Medicine, UNSW Australia, Australia, 4Bone Biology Division, Garvan Institute of Medical Research; UNSW Medicine, UNSW Australia; Notre Dame University School of Medicine, Sydney, Australia, 5Centre for Health Technologies, University of Technology, Sydney; Bone Biology Division, Garvan Institute of Medical Research; UNSW Medicine, UNSW Australia, Australia
Disclosures: Thao P. Ho-Le, None

OSTEOPOROSIS - EPIDEMIOLOGY: FALLS AND FRACTURES

LB-MO0361 Persistence of excess mortality following individual types of fragility fracture: A relative survival analysis
Thach Tran*, Dana Bluic, Tuan V Nguyen, John A Eisman, Louise Hansen, Bo Abrahamsen, Peter Vestergaard, Tineke van Geel, Piet Geusens, Joop van den Bergh, Jacqueline R Center. 1Garvan Institute of Medical Research, Australia, 2Aalborg University, Denmark, 3University of Sourthen Denmark, Denmark, 4Maastricht University, Netherlands, 5Maastricht University Medical Center, Netherlands
Disclosures: Thach Tran, None

OSTEOPOROSIS - HEALTH CARE DELIVERY: GENERAL

LB-MO0362 Presence of Vertebral Fractures and Disc Disease in Post Menopausal Females with Height Loss as a Possible Screening Method for Osteoporosis
Nicola Berman*, Gregory Chang, Stephen Honig. 1NYU Department of Rheumatology, United states, 2NYU Department of Radiology, United states, 3New York University Department of Rheumatology, United states
Disclosures: Nicola Berman, None

OSTEOPOROSIS – NUTRITION, DIETARY SUPPLEMENTS AND PHYSICAL ACTIVITY: GENERAL

LB-MO0363 Sedentary time and diaphyseal cortical bone outcomes in American adolescents
Simon Higgins*, Joseph Kindler, Thomas Mahar, Elizabeth Hathaway, Emma Laing, Michael Schmidt, Ellen Evans, Richard Lewis. 1University of Georgia, Department of Kinesiology, United states, 2University of Georgia, Department of Foods & Nutrition, United states
Disclosures: Simon Higgins, None

OSTEOPOROSIS - PATHOPHYSIOLOGY: BONE MODELING AND REMODELING

LB-MO0364 Female-Specific Role of Progranulin to Suppress Bone Formation
Liping Wang*, Theresa Roth, Robert Nissenson. 1San Francisco VA Medical Center, United states, 2San Francisco VA Medical Center; Department of Medicine, University of California, San Francisco, United states
Disclosures: Liping Wang, None

OSTEOPOROSIS - TREATMENT: ANABOLIC AGENTS

LB-MO0365 PF708, A Therapeutic Equivalent Candidate to FORTEO® (Teriparatide), Demonstrates Clinical Pharmacokinetic And Pharmacodynamic Equivalence to the Reference Product
Hubert Chen*, Hongfan Jin, Jonathan Lee, Randall Stoltz. 1Pfenex Inc, United states, 2Covance Clinical Research Unit, United states
Disclosures: Hubert Chen, Pfenex Inc, 17
Rebound-associated bone loss after non-renewal of long-term denosumab treatment offsets 10-year gains at the total hip within 12 months
Albrecht W Popp*, Helene Buffat, Christoph Senn, Kurt Lippuner. Department of Osteoporosis, Bern University Hospital, University of Bern, Switzerland
Disclosures: Albrecht W Popp, Labatec, 101; Gilead, 101; Amgen CH, 101

An Unusual Case of Atypical Femur Fracture Long After Discontinuation of Longterm Alendronate Therapy for Osteopenia
Sudhaker D. Rao*, Shijing Qiu, Shiri Levy, Mahalakshmi Honasoge. Henry Ford Hospital, United states
Disclosures: Sudhaker D. Rao, None

Potential of a rapidly-gelling chitosan sponge for cell encapsulation of adipose-derived stem cells
Timothee Baudequin*, Hadil Al-Jallad, Laila Benenameur, Reggie Hamdy, Maryam Tabrizian. 1Department of Biomedical Engineering, McGill University, Canada, 2Shriners Hospital for Children & McGill University, Canada, 3Faculty of Dentistry, McGill University, Canada
Disclosures: Timothee Baudequin, None

Post-Weaning Endocortical Bone Formation Rate is Increased in Rats Fed a Low Calcium Diet During Lactation
Matthew Meagher*, Ryan Ross, D. Rick Sumner. Rush University Medical Center, United states
Disclosures: Matthew Meagher, None

Cell-Permeable BMP2 for Bone Healing Therapy Induces Osteogenesis
Hynuji Lee*, Whajung Cho, Jeongmin Kim, Junho Jang, Yongdae Jeong, Mijeong Kim, Daewoong Jo. 1Metabolic Disease Lab I, Cellivery R&D Institute, Cellivery Therapeutics, Inc., F9, K-BIZ DMC Tower, 189 Sungam-Ro, Mapo-Gu, Korea, republic of, 2Metabolic Disease Lab, Cellivery R&D Institute, Cellivery Therapeutics, Inc., F9, K-BIZ DMC Tower, 189 Sungam-Ro, Mapo-Gu, Korea, republic of, 3Cellivery Therapeutics, Inc., F9, K-BIZ DMC Tower, 189 Sungam-Ro, Mapo-Gu, Korea, republic of
Disclosures: Hynuji Lee, None

Raman spectroscopy in HYP mouse teeth and bone reveal tooth dentin as a proxy for XLH bone carbonate ion substitution
Carolyn Macica*, Holger Petermann, Catherine Skinner, Steven Tommasini. 1Frank H. Netter, M.D., School of Medicine at Quinnipiac University, United states, 2Yale University, United states, 3Yale University School of Medicine, United states
Disclosures: Carolyn Macica, None

OASIS Deficiency Associated with Tissue Specific Effects on Collagen I, Aberrant Osteoblast Ultrastructure and Low Levels of Glycosaminoglycans/Matrix in Bone in Patient with Severe OI caused by Homozygous Premature Stop Codon in CREB3L1
Katarina Lindahl*, Eva Astrom, Anca Dragomir, Sofie Symoens, Paul Coucke, Sune Larsson, Eleftherios Paschalidis, Paul Roscher, Sonja Gamsjäger, Klaus Klaushofer, Nadja Fratzl-Zelman, Andreas Kindmark. 1Uppsala University, Sweden, 2Karolinska Institute, Sweden, 3Center for Medical Genetics, Ghent University Hospital, Belgium, 4Ludwig Boltzmann Institute of Osteology, Austria
Disclosures: Katarina Lindahl, None
RARE BONE DISEASES: OTHER RARE BONE DISEASES

LB-M00373 Clinical and Radiographic Appearance of ONJ in Patients with Osteoporosis vs. Bone Malignancy
Kaycee Walton, Edwin Eshaghzadeh, Sanjay Mallya, Tara Aghaloo, Sotirios Tetradis*
UCLA School of Dentistry, United states
Disclosures: Sotirios Tetradis, None

PLENARY SYMPOSIUM-DETERMINANTS OF SKELETAL AGING

Supported by an Educational Grant from Merck & Co., Inc.

2:30 pm - 4:00 pm Georgia World Congress Center
Sidney Marcus Auditorium – Building A

Co-Chairs
Robert Pignolo, M.D., Ph.D.
University of Pennsylvania, USA
Disclosures: Robert Pignolo, None

Rivka Dresner-Pollak, M.D.
Hadassah-Hebrew University Medical Center, Israel
Disclosures: Rivka Dresner-Pollak, None

2:30 pm Role of Genetics and Aging
Simon Melov, PhD
Buck Institute for Research on Aging, USA
Disclosures: Simon Melov, None

2:55 pm Treatments to Delay Aging
Amy Wagers, Ph.D.
Harvard Stem Cell Institute, USA
Disclosures: Amy Wagers, None

3:20 pm Senescence and Aging
Benjamin Alman, M.D., FRCSC
Duke Medicine, USA
Disclosures: Benjamin Alman, None

CLOSING RECEPTION

4:00 pm - 5:00 pm
Sidney Marcus Foyer Building A