Final Programme

ECTS 2018

45th European Calcified Tissue Society Congress

26 – 29 MAY 2018
VALENCEIA, SPAIN
With your friends and colleagues form a team, join the ECTS Charity Beach Volley and help us fundraising for Camurati-Engelmann’s Disease.

Supporters are also welcome to join the event

**Sunday 27 May 2018 starting at 20:30hrs**

Bus service provided to players only with departure from Valencia Congress Center at 20:00hrs

Beach Bol
Carrer d’Isabel de Villena, 10
46011 Valencia

For more information visit ECTS Booth or NI Lounge
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Welcome
ACKNOWLEDGEMENT

ECTS thanks the following organisations for their continued support of the society.

Platinum Supporter

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clementia

Additional Supporters and Educational Grants

AgNovos

BIOMEDICA

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SCANCO MEDICAL
Welcome Message

It is a great privilege and pleasure to welcome you to the 45th European Calcified Tissue Society Congress. ECTS is an interdisciplinary society where basic researchers, clinicians, students and allied health professionals working in the musculoskeletal field join forces to discover and discuss the latest advances and controversies in research and in the daily care of patients.

Such interdisciplinary component is also reflected in our scientific programme that includes sessions on:

- From omics to therapy: Academia meets Industry
- Cancer & bone
- Rare bone diseases
- Inflammation & Bone
- Fish as a model for skeletal diseases
- Science methodology: the reproducibility crisis
- Molecular imaging
- Energy metabolism & bone
- Osteoporosis and vertebral fractures
- Microbiome: from research to (bone) clinic
- Bone marrow fat
- Weight loss & bone

New this year, the programme will include “Big Clinical Session” dedicated to two highly topical issues related to the clinical management of osteoporosis:

- Under-treatment of osteoporosis
- Review of current and emerging anabolic therpaies and role of sequential treatment

The educational aspect of ECTS Congress will include pre-meeting courses and workshops, meet-the-expert sessions, working groups, clinical and basic science updates.

Since 2006, the ECTS has held a dedicated session for Allied Healthcare Professionals (AHPs) at their annual congress. This is designed to be of particular interest to AHPs e.g. nurses, physiotherapists, radiologists, clinical scientists. The main session objectives are to represent and strengthen the professional position of AHPs, improve knowledge and highlight the challenges and rewards experienced by AHPs working in the musculoskeletal field.
ECTS Congress offers a New Investigator track fully organized by our future leaders, the ECTS Academy. The programme is designed to enhance the possibility for newcomers to orally present their data, promote interactions with peers and leading scientists in the field, and to provide training tools and ideas to promote your career.

Whether you are a first year PhD student or a key opinion leader in the field, the ECTS Congress will bring you plenty of opportunities to network, exchange learnings. We know you will enjoy the hospitality of the City of Valencia and being part of a great ECTS Congress!

Warm regards,

Anna Teti & Núria Guañabens
SPC Chair & LOC Chair
Awards
Awards
ECTS Grants and Awards

ECTS STEVEN BOONEN CLINICAL RESEARCH AWARD
In memory of Professor Steven Boonen, who sadly passed away during the ECTS 50th Anniversary Congress in Lisbon on 20 May 2013. Steven was an internationally recognised expert in the field of osteoporosis and metabolic bone disease, who was actively involved in bone disease research, education and patient care. His translational and clinical research activities focused on determinants of age-related skeletal fragility and on strategies to reduce fracture risk. Specific areas of expertise included musculoskeletal frailty, osteoporosis in old age and innovative trial design. He was an active and regular contributor to the ECTS congress for many years, and was also a member of the ECTS Board of Directors.
This award is open, by nomination only, to medical doctors who have made significant progress and contribution to the field of clinical bone disease research.
The 2018 Steven Boonen Award is supported by Amgen Europe.
Saturday, 26 May, 18:15 – 19:45, Auditorium 1

ECTS IAIN T BOYLE AWARD
In memory of Professor Iain T Boyle (1935–2001) who contributed greatly to the field of mineral metabolism and whose work on osteoporosis was known and acclaimed nationally and internationally.
The award is open, by nomination only, to young scientists who have made significant progress and contribution to the field of bone and calcified tissue.
Sunday, 27 May, 14:30 – 15:15, Auditorium 1

ECTS EXCELLENCE IN RESEARCH AWARD
With the ECTS Excellence in Research Award ECTS recognizes scientists who substantially advanced the field of musculoskeletal research. The recipient of the award is selected by the ECTS Board of Directors from the group of invited speakers of the ECTS Annual Congress.
Sunday, 27 May, 14:30 – 15:15, Auditorium 1

ECTS MIKE HORTON BASIC/TRANSLATIONAL AWARD
Professor Mike Horton (1948–2010) was a hematologist-turned-basic scientist who made significant contributions in the bone field and beyond. He performed pioneering work in osteoclast biology which resulted, among other things, in the recognition of the alpha v beta 3 integrin as a therapeutic target for inhibiting bone resorption. His warm personality and wide-ranging interests inspired many young researchers.
The ECTS Mike Horton Award is open, by nominations only, to individuals who have made a significant basic or translational contribution to the field of bone and calcified tissue.
Sunday, 27 May, 14:30 – 15:15, Auditorium 1
ECTS PHILIPPE BORDIER CLINICAL AWARD
Doctor Philippe Bordier (1927–1977) contributed significantly to the bone field by developing bone histomorphometry, which he applied to the analysis of several bone diseases. His work and dynamism in science has been recognised in Europe and the United States. This award, by nomination only, is open to individuals who have made a significant clinical contribution to the field of bone and calcified tissue.
Monday, 28 May, 14:30 – 15:15, Auditorium 1

ECTS FELLOWSHIP AWARDS
ECTS is presenting this year two new one-year fellowships which are available to our New Investigator members. Fellowships are open to both pre-clinical and clinical researchers and will be used exclusively to fund research in the area of bone disease.
Monday, 28 May, 14:30 – 15:15, Auditorium 1

ECTS NEW INVESTIGATOR AWARDS
These awards are available to ECTS members who submit an abstract to the congress and who satisfy the specific award criteria. The award winners were selected by the abstract review panel based on abstract scores.
Tuesday, 29 May 2018, 12:45 – 13:30, Auditorium 1

ECTS TRAVEL AWARDS
These awards are available to ECTS members who submit an abstract to the congress and who satisfy the specific award criteria. The award winners were selected by the abstract review panel based on abstract scores.
Tuesday, 29 May 2018, 12:45 – 13:30, Auditorium 1

ECTS ALLIED HEALTH PROFESSIONALS AWARD
These awards are available to ECTS members who submit an abstract to the congress and who satisfy the specific award criteria. The award winners were selected by the abstract review panel based on abstract scores.
Tuesday, 29 May 2018, 12:45 – 13:30, Auditorium 1

EAST-MEETS-WEST RESEARCH AWARD
As part of the East–Meets–West programme, ECTS will award the top three highest ranking abstracts submitted from China, Japan, Korea and India. For the third year, ECTS holds a special East–Meets–West programme as part of its Annual Congress. The East–Meets–West programme is aimed at promoting scientific exchange with colleagues from Asia and is a partnership initiative with the Chinese Society of Osteoporosis and Bone Mineral Research (CSOBMR), The Japanese society for Bone and Mineral Research (JSBMR), the Korean Society of Bone and Mineral Research (KSBMR) and the Korean Society of Osteoporosis (KSO).
The 2018 East–Meets–West Research Award is supported by AgNovos. Tuesday, 29 May 2018, 12:45 – 13:30, Auditorium 1
Scientific Programme
Download ECTS Society App to access ECTS 2018!

After installing the app, you can:

→ Access ECTS 2018 by clicking on the respective tile and pressing “Install”
→ Access the event programme, posters and speakers list
→ Find your way around through the interactive floorplan
→ Create your own daily schedule that will guide you through the day
→ Stay informed and receive the latest messages and news
→ Chat with other attendees and in topical forums
→ Vote, ask questions and take notes during sessions

Do you have questions? Don’t hesitate to contact us! ects2018@interplan.de

How to download:

The easiest way to download our mobile app is to scan one of these barcodes.

You can also search for ‘ECTS’ in the Apple App Store or Google Play Store.


After downloading the app, don’t forget to enable push notifications to stay up-to-date on the latest happenings and important news!
Pre-Congress ECTS 2018

FRIDAY, 25 MAY 2018

09:30 – 15:30  Mellanby Centre / ECTS Training Course
Identification of vertebral fractures
Chair: Richard Eastell (United Kingdom)
Josep Blanch Rubió (Spain)

09:30 – 10:00  Vertebral fracture: Clinical importance
Eugene McCloskey (United Kingdom)

10:00 – 10:30  Vertebral fracture assessment
Margaret Paggiosi (United Kingdom)

10:30 – 11:00  The normal spine and non-fracture deformities
Richard Eastell (United Kingdom)

11:00 – 11:15  Break

11:15 – 11:45  Vertebral fracture mechanism and identification
Sarah Gowlet (United Kingdom)

11:45 – 12:15  Other modalities for identifying vertebral fracture
Roland Chapurlat (France)

12:15 – 12:45  Incorporating VFA into fracture risk assessment
Jennifer Walsh (United Kingdom)

12:45 – 13:15  Management of symptomatic vertebral fracture
Emma Clark (United Kingdom)

13:15 – 14:15  Break

14:15 – 15:15  Quiz

15:15 – 15:30  Close of the Training

11:30 – 15:15  ECTS / ICCBH Workshop on Rare Bone Diseases
Pathophysiology manifestations and treatment
from childhood to adulthood
Chair: Carola Zillikens (The Netherlands)
Kassim Javaid (United Kingdom)

11:30 – 12:00  Rare bone diseases affecting mineralization in children
Wolfgang Högler (United Kingdom)

12:00 – 12:30  Rare bone diseases affecting mineralization in adults
Michael Econs (United States)

12:30 – 13:00  Break and Networking
13:00 – 13:30   Rare bone diseases affecting bone fragility in children  
Outi Mäkitie (Finland)

13:30 – 14:00   Rare bone diseases affecting bone fragility in adults  
Richard Keen (United Kingdom)

14:00 – 14:15   European reference network on bone rare diseases (BOND ERN)  
P370  
Luca Sangiorgi (Italy)

14:15 – 14:30   Somatic activating mutations in MAP2K1 cause melorheostosis  
P357  
Heeseog Kang (United States)

14:30 – 14:45   Disruption of a PTHrP–SIK3 mediated pathway alters mTOR signaling  
and causes a spectrum of skeletal dysplasias  
P361  
Fabiana Csukasi (United States)

14:45 – 15:15   Q&A

Supported by educational grants from industry.

**EU Consortia**

Meeting Room 3

13:00 – 13:45  Tips to get funded by the EU  
Michael Briggs (United Kingdom)

**Working Group 1: Rheumatic Diseases and Bone**

Meeting Room 2

14:00 – 16:00  
Chair: Willem Lems (The Netherlands)

14:00 – 14:30  Is osteoarthritis a bone disease?  
Willem Lems (The Netherlands)

14:30 – 15:00  New data on bone imaging in rheumatoid arthritis  
Piet Geusens (The Netherlands)

15:00 – 15:30  Glucocorticoids  
Kenneth Saag (United States)

15:30 – 15:45  Disruption of glucocorticoid signalling in osteoblasts attenuates surgically  
induced osteoarthritis  
P233  
Hong Zhou (Australia)

15:45 – 16:00  Traditional Chinese medicine formula Bi–Qi capsule alleviates rheumatoid  
arthritis–induced inflammation, synovial hyperplasia, and cartilage destruction  
in rats  
P234  
Janak Lal Pathak (China)
14:00 – 16:00  **Working Group 4: Cancer and Bone**  
**Breast and prostate bone metastases**  
*Chair: Nadia Rucci (Italy)  
Peyman Hadji (Germany)*

14:00 – 14:30  Experimental models to study reciprocal crosstalk between cancer and bone cells in vitro and in vivo  
*Aymen Idris (United Kingdom)*

14:30 – 15:00  Molecular mechanisms driving prostate cancer induced metastasis  
*Gabri van der Pluijm (The Netherlands)*

15:00 – 15:30  Bone health of men with prostate cancer – the old, new and upcoming  
*Robert Coleman (United Kingdom)*

15:30 – 16:00  Bone health in women with breast cancer – from adjuvant therapy to bone metastasis  
*Peyman Hadji (Germany)*

*Supported by educational grants from industry.*

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14:00 – 16:00  **Working Group 3: Bone bioengineering, regeneration and implants**  
**Bone Biomechanics**  
*Chair: Jerome Noailly (Spain)  
Fabio Galbusera (Italy)*

14:00 – 14:30  Osteoinduction by foamed and 3D-printed calcium phosphate scaffolds: Effect of nanostructure and pore architecture  
*Maria Pau Ginebra (Spain)*

14:30 – 15:00  Role of the immune response in bone regeneration after fracture  
*Melanie Haffner-Luntzer (Germany)*

15:00 – 15:30  In vivo mechanomics of bone adaptation and regeneration in the aging mouse  
*Ralph Müller (Switzerland)*

15:30 – 16:00  Recent advances in bone tissue engineering  
*Silvia Lopa (Italy)*

---

14:00 – 16:00  **Working Group 5: Imaging Bone Strength**  
**Standardization of microCT, QCT and FE data**  
*Chair: Philipp Schneider (Switzerland)  
Philippe Zysset (Switzerland)*

14:00 – 14:30  Standardization of QCT  
*Andrew Burghardt (United States)*

14:30 – 15:00  Comparison of morphological analysis software systems  
*Dieter Pahr (Austria)*
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<tr>
<th>Time</th>
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<tr>
<td>15:00 – 15:30</td>
<td>CT recycling</td>
<td>Klaus Engelke (Germany)</td>
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<td>15:30 – 16:00</td>
<td>Q&amp;A</td>
<td>Supported by educational grants from industry.</td>
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<td>14:00 – 16:00</td>
<td>Working Group 2: Non Mammalian Models</td>
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<td>Potential for the study of common and rare skeletal diseases</td>
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<td><strong>Chair:</strong> Leonor Cancela (Portugal)</td>
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<td></td>
<td><strong>Antonella Forlino (Italy)</strong></td>
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<td>14:00 – 14:25</td>
<td>Defining and refining the skeleton: The power of genetic analyses in</td>
<td>Matthew Harris (United States)</td>
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<td>small fishes</td>
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<td>14:25 – 14:50</td>
<td>Small, smaller and more advanced: The significance of zebrafish and</td>
<td>Paul Eckhard Witten (Belgium)</td>
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<td>medaka key skeletal characters</td>
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<td>14:50 – 15:15</td>
<td>Bone quality analysis in teleosts: structural, compositional and</td>
<td>Björn Busse (Germany)</td>
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<td>mechanical properties</td>
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<td>15:15 – 15:40</td>
<td>Zebrafish as a tool in drug screening for skeletal diseases</td>
<td>Antonella Forlino (Italy)</td>
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<td>15:40 – 16:00</td>
<td>Zebrafish as a model for studies of osteotoxicity-related skeletal</td>
<td>Leonor Cancela (Portugal)</td>
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<td>pathologies</td>
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<td>14:15 – 16:00</td>
<td>East meets West (Part I): Concepts for case finding in osteoporosis</td>
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<td><strong>Chair:</strong> Claus-C. Glüer (Germany)</td>
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<td><strong>Steve Cummings (United States)</strong></td>
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<tr>
<td>14:15 – 14:20</td>
<td>Introduction &amp; Welcome</td>
<td>Claus-C. Glüer (Germany)</td>
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<td><strong>Bo Abrahamsen (Denmark)</strong></td>
<td>Steve Cummings (United States)</td>
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<td><strong>Chinese approach</strong></td>
<td>Bo Abrahamsen (Denmark)</td>
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<td>14:20 – 14:30</td>
<td>Essentials of case finding schemes in the East and the West –</td>
<td>Ling Xu (China)</td>
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<td>Chinese approach</td>
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<td>14:30 – 14:40</td>
<td>Essentials of case finding schemes in the East and the West –</td>
<td>Yoshiya Tanaka (Japan)</td>
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<td>Japanese approach</td>
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</table>
14:40 – 14:50 Essentials of case finding schemes in the East and the West – The Korean approach
Ha Yong-Chan (Republic of Korea)

14:50 – 15:00 Essentials of case finding schemes in the East and the West – US approach
Steve Cummings (United States)

15:00 – 15:10 Essentials of case finding schemes in the East and the West – The FRAX based approach and its implementation in European countries
Eugene McCloskey (United Kingdom)

15:10 – 15:20 Concepts for case finding in osteoporosis – The DVO approach on risk calculation beyond FRAX
Claus-C. Glüer (Germany)

15:20 – 16:00 Panel Discussion: What is the best approach for identifying patients in need of treatment?
Steve Cummings (United States)

15:30 – 18:15 Sponsored SEIOMM Symposium
3D-SHAPER: analyzing the proximal femur in 3D from hip DXA Scan
Chair: Núria Guañabens (Spain)

15:30 – 15:35 Introduction
Núria Guañabens (Spain)

15:35 – 16:05 Method and validation
Ludovic Humbert (Spain)

16:05 – 16:45 3D-SHAPER in clinical research
Luis del Rio (Spain)
Jorge Malouf (Spain)
Renaud Winzenrieth (Spain)

16:45 – 17:00 Break

17:00 – 17:30 3D-SHAPER in clinical practices
Luis del Rio (Spain)

17:30 – 17:45 Software demonstration
Renaud Winzenrieth (Spain)

17:45 – 18:15 Discussion
Núria Guañabens (Spain)
16:15 – 18:15 | **East meets West (Part II): Meet the Professors Uncommon and Difficult Clinical Cases**

Three parallel sessions, repeated in two rounds, with one expert from the East and one from the West present together

**First Round**

**Meeting Room 7:**
Management of patients with osteomalacia but normal vitamin D levels, with special focus on tumor induced osteomalacia  
*Eastern expert: Weibo Xia (China)*  
*Western expert: Salvatore Minisola (Italy)*

**Meeting Room 8:**
Biology and treatment of MGUS and multiple myeloma  
*Eastern expert: Masahiro Abe (Japan)*  
*Western expert: Franz Jakob (Germany)*

**Meeting Room 9:**
Patients with atypical femur fractures: management and differences between East and West  
*Eastern expert: Kyu Hyun Yang (Korea)*  
*Western expert: Nicola Napoli (Italy)*

17:10 – 17:15 | **Break**

17:15 – 18:15 | **Second Round**

**Meeting Room 7:**
Management of patients with osteomalacia but normal vitamin D levels, with special focus on tumor induced osteomalacia  
*Eastern expert: Weibo Xia (China)*  
*Western expert: Salvatore Minisola (Italy)*

**Meeting Room 8:**
Biology and treatment of MGUS and multiple myeloma  
*Eastern expert: Masahiro Abe (Japan)*  
*Western expert: Franz Jakob (Germany)*

**Meeting Room 9:**
Patients with atypical femur fractures: management and differences between East and West  
*Eastern expert: Kyu Hyun Yang (Korea)*  
*Western expert: Nicola Napoli (Italy)*
16:30 – 18:30  Working Group 9: Non Calcified Tissues and Ectopic Calcifications

Meeting Room 2

Non calcified tissues and ectopic calcifications
Soft tissues normal function / structures and ectopic calcification processes

Chair: Neal Millar (United Kingdom)
Michael Kjaer (Denmark)

16:30 – 17:00  Role of inflammation in tendon overuse injury (tendinopathy) – potential future treatment
Neal Millar (United Kingdom)

17:00 – 17:30  Tissue turnover of healthy and diseased non-calcified connective tissues (tendon and cartilage)
Michael Kjaer (Denmark)

17:30 – 18:00  Mechanisms of ectopic mineralization
Eileen Shore (United States)

18:00 – 18:15  Levels of sclerostin in serum and femoral vascular tissue and its relationship with vascular calcification in patients with and without type 2 diabetes
Sheila González-Salvatierra (Spain)

18:15 – 18:30  Single nucleotide polymorphisms in the OCT1 gene are associated with potential vascular calcification in non-diabetic, prediabetic and diabetic patients
Natascha Schweighofer (Austria)

16:30 – 18:30  Working Group 10: Rare Bone Diseases

Meeting Room 3

Advances in therapies for the osteopetroses

Chair: Uwe Kornak (Germany)
Anna Villa (Italy)

16:30 – 17:00  Clinical aspects of osteopetrosis
Michael Econs (United States)

17:00 – 17:30  Somatic gene therapy for autosomal recessive osteopetrosis
Anna Villa (Italy)

17:30 – 18:00  RNAi-based therapy for autosomal dominant osteopetrosis type 2
Mattia Capulli (Italy)

18:00 – 18:15  MSC-seeded biomimetic scaffolds as factory of human soluble RANKL in Rankl-deficient osteopetrosis
Ciro Menale (Italy)

18:15-18:30  Osteoclasts differentiated from iPS cells as a test system for gene therapeutic approaches for autosomal recessive osteopetrosis
Uta Rössler (Germany)
### Working Group 7: Cartilage Pathophysiology
**Common and rare disorders of cartilage**

**Chair:** Antonio Rossi (Italy)

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<tr>
<th>Time</th>
<th>Session</th>
<th>Speaker</th>
<th>Location</th>
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<tbody>
<tr>
<td>16:30 – 16:50</td>
<td>Wnt signaling in osteoarthritis</td>
<td>Eric Hay (France)</td>
<td>Meeting Room 4</td>
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<tr>
<td>16:50 – 17:10</td>
<td>FGFR3 signaling and ciliogenesis</td>
<td>Laurence Legeai-Mallet (France)</td>
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<td>17:10 – 17:30</td>
<td>New therapeutic targets in genetic skeletal disease</td>
<td>Michael Briggs (United Kingdom)</td>
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<td>17:30 – 17:50</td>
<td>Stimulation of intracellular proteolysis reduces disease severity in mouse models of the ER</td>
<td>Ray Boot-Handford (United Kingdom)</td>
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<td>Stress-associated metaphyseal chondrodysplasia type Schmid</td>
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<td>17:50 – 18:10</td>
<td>Uhrf1 deficiency attenuates genome-wide DNA methylation and consequent specific gene expression</td>
<td>Yuuki Imai (Japan)</td>
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<td>in chondrocytes in vivo</td>
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### Working Group 8: Epigenetic Regulation of Bone Formation
**DNA and histone modifications**

**Chair:** André van Wijnen (United States)

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<th>Time</th>
<th>Session</th>
<th>Speaker</th>
<th>Location</th>
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<tbody>
<tr>
<td>16:30 – 17:10</td>
<td>Control of osteoblast differentiation by hydroxymethylation</td>
<td>Roman Thaler (United States)</td>
<td>Meeting Room 5</td>
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<tr>
<td>17:00 – 17:30</td>
<td>Regulation of bone cell fate by chromodomain proteins</td>
<td>André van Wijnen (United States)</td>
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<td>17:30 – 17:40</td>
<td>Lysine-specific demethylase 1 regulates osteoblast differentiation through modulating H3K4me1</td>
<td>Kati Tarkkonen (Finland)</td>
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<td>levels at specific gene promoters</td>
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<td>17:40 – 17:50</td>
<td>Functional studies of two variants found in the resequencing of SOST</td>
<td>Núria Martínez-Gil (Spain)</td>
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<td>17:50 – 18:00</td>
<td>Autosomal recessive osteogenesis imperfecta caused by a novel homozygous COL1A2 mutation</td>
<td>Alice Costantini (Sweden)</td>
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<tr>
<td>18:00 – 18:10</td>
<td>MicroRNA profiling of primary human osteoblasts and osteosarcoma cell lines reveals transcriptional</td>
<td>Brendan Norman (United Kingdom)</td>
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Final Programme

Pre-Congress, Friday 25 May 2018

16:30 – 18:30  Working Group 6: Transgenic Animals in Musculoskeletal Research
The use of various mouse models in musculoskeletal research
Chair: Ulrike Baschant (Germany)
Saravana Ramasamy (United Kingdom)
16:30 – 17:00 High-throughput skeletal phenotyping of knockout mice
Graham Williams (United Kingdom)
17:00 – 17:30 Unexpected effects of CRISPR/Cas-induced deletions and inversions in mice
Uwe Kornak (Germany)
17:30 – 18:00 Lineage tracing models in skeletal biology
Christa Maes (Belgium)
18:00 – 18:30 Mouse models to study bone-vascular interactions
Anjali Kusumbe (United Kingdom)

18:30 – 20:30  ECTS Academy Session
Hot topics in musculoskeletal research around the world
Chair: Martina Rauner (Germany)
Hanna Taipaleenmaeki (Germany)
18:30 – 18:50 Welcome and Reception
Martina Rauner (Germany)
18:50 – 19:15 ASBMR Representative
Joshua Farr (United States)
19:15 – 19:40 JSBMR Representative
Yuuki Imai (Japan)
19:40 – 20:05 ANZBMS Representative
Joshua Lewis (Australia)
20:05 – 20:30 ECTS Representative
Thomas Funck-Brentano (Sweden)

18:30 – 20:00  ECTS Affiliated Societies Networking
Welcome and Networking
Update of ECTS Academy and introduction of new members
Regional and national activities
Discussions
Programme Overview

SATURDAY, 26 MAY 2018

08:00
Welcome

08:30
Clinical Update 1
Basic Science Update 1: Bone Biology

09:00
09:30
10:00
Coffee break / Industry Exhibition

10:30
Clinical Update 2
Basic Science Update 2: Technology

11:00
11:30
12:00
Posters

12:30
Lunch break / Poster Exhibition / Industry Exhibition

13:00
Allied Health Professional: Topic 1
ECTS AGM

13:30
Clinical Update 3
Basic Science Update 3: Senolytics

14:00
14:30
15:00
ECTS Joint Committees Meeting
Coffee break / Poster Exhibition / Industry Exhibition

15:30
Corporate Satellite Symposia

16:00
16:30
17:00
What is New (WIN)

17:30
18:00
18:30
19:00
19:30
Opening Ceremony
ECTS / ASBMR debate

19:30
ECTS / ASBMR debate

20:00
20:30
21:00
Welcome Reception

21:30
22:00
Scientific Programme

SATURDAY, 26 MAY 2018

08:15 – 08:30 Welcome 
Welcome: President’s Address 
Anna Teti (Italy)

08:30 – 10:00 Clinical Update 1 
Chair: Roland Chapurlat (France) 
Manuel Muñoz (Spain)

08:30 – 09:00 Using Vertebral Fracture Assessment (VFA) by lateral DXA scanning in the evaluation of osteoporosis and fracture risk 
Emma Clark (United Kingdom)

09:00 – 09:30 Diagnostic work-up and secondary causes of osteoporosis 
Lorenz Hofbauer (Germany)

09:30 – 10:00 Fracture risk evaluation and bone fragility. When to treat? 
Eugene McCloskey (United Kingdom)

08:30 – 10:00 Basic Science Update 1: Bone Biology 
Chair: Hanna Taipaleenmaeki (Germany) 
José Antonio Riancho (Spain)

08:30 – 09:00 Osteoblasts, osteocytes 
Thorsten Schinke (Germany)

09:00 – 09:30 The physiologic humoral biomineral buffering system – implications for calcification regulation and control 
Andreas Pasch (Switzerland)

09:30 – 10:00 Osteoclasts 
Nadia Rucci (Italy)

10:30 – 12:30 Clinical Update 2 
Chair: Mattias Lorentzon (Sweden) 
Enrique Casado (Spain)

10:30 – 11:00 Pharmacological and non-pharmacological prevention of nonvertebral fractures 
Bo Abrahamsen (Denmark)

11:00 – 11:20 Treatment of osteoporosis in the oldest 
Mattias Lorentzon (Sweden)
11:20 – 11:40  Glucocorticoid-induced osteoporosis
   Adolfo Díez-Pérez (Spain)

11:40 – 12:00  Vitamin D and calcium supplementation. When and why?
   Karine Briot (France)

12:00 – 12:30  Renal osteodystrophy
   Roland Chapurlat (France)

10:30 – 12:30  Basic Science Update 2: Technology  
   Auditorium 2
   Chair:  Gudrun Stenbeck (United Kingdom)
       Susanna Balcells (Spain)

10:30 – 11:00  iPSC and organoid technology
   Johannes Grillari (Austria)

11:00 – 11:30  Intravital microscopy of the bone marrow: seeing is believing
   Delfim Duarte (United Kingdom)

11:30 – 12:00  Nanopore sequencing technology
   Joyce van Meurs (The Netherlands)

12:45 – 13:15  ECTS Annual General Meeting  
   Auditorium 2

13:15 – 14:05  Allied Health Professional: Topic 1  
   Auditorium 3
   Chair:  Margaret Paggiosi (United Kingdom)
       Mette Rothmann (Denmark)

13:15 – 13:40  Obesity and bone
   Jennifer Walsh (United Kingdom)

13:40 – 14:05  Patient involvement in research – the use of Participatory Design
   Mette Rothmann (Denmark)

13:30 – 14:30  Clinical Update 3  
   Auditorium 1
   Chair:  Núria Guañabens (Spain)
       Stuart Ralston (United Kingdom)

13:30 – 13:50  Primary hyperparathyroidism: What’s new?
   Richard Eastell (United Kingdom)

13:50 – 14:10  Paget’s disease of bone
   Luigi Gennari (Italy)

14:10 – 14:30  Drug-induced osteoporosis (other than glucocorticoid)
   Peyman Hadji (Germany)
13:30 – 14:30  **Basic Science Update 3:**  
**Senolytics, a cure for (bone) ageing?**  
*Chair: Yuuki Imai (Japan)  
  Nerea Alonso (United Kingdom)*

13:30 – 14:00  
The process of cellular senescence  
*Peter de Keizer (The Netherlands)*

14:00 – 14:30  
Targeting senescent bone cells to improve bone density  
*Joshua Farr (United States)*

14:05 – 15:00  **Allied Health Professional: Topic 2**  
*Chair: Mette Rothmann (Denmark)  
  Margaret Paggiosi (United Kingdom)*

14:05 – 14:15  
Why are patients with a recent fracture not attending the Fracture Liaison Service? A questionnaire-based study  
*Peter van den Berg (The Netherlands)*

14:15 – 14:25  
PoCOsteo: Personalized fracture risk prediction via point-of-care device  
*Patricia Khashayar (Belgium)*

14:25 – 14:35  
A new approach for lumbar vertebrae location and morphological characteristics on Chinese lumbar DXA images  
*Wenmin Guan (China)*

14:35 – 15:00  
Exercise and bone microarchitecture  
*Mattias Lorentzon (Sweden)*

17:15 – 18:15  **What is New (WIN)**  
*Chair: Martine Cohen-Solal (France)  
  Dacia Cerdà (Spain)*

17:15 – 17:45  
Basic Science  
*Hans Van Leeuwen (The Netherlands)*

17:45 – 18:15  
Clinical Science  
*Franz Jakob (Germany)*
18:15 – 19:45 **Opening Ceremony**

*Chair: Anna Teti (Italy)  
Núria Guarnaibens (Spain)*

18:15 – 18:35 President’s Welcoming Remarks  
Anna Teti (Italy)

18:35 – 18:45 Local Organising Committee Chair’s welcoming Remarks  
Núria Guarnaibens (Spain)

Clinical hot topics, ECTS perspective - from the new ECTS Policies & Consensus Committee:

18:45 – 18:55 Discontinuation of denosumab therapy for osteoporosis: a systematic review and position statement by ECTS  
Carola Zillikens (The Netherlands)  
Elena Tsourdi (Germany)

18:55 – 19:05 Fractures in patients with CKD-diagnosis, treatment, and prevention: a review by members of ERA-EDTA and ECTS  
Martine Cohen-Solal (France)

Richard Eastell (United Kingdom)

19:15 – 19:20 2018 Steven Boonen Clinical Research Award: Introduction  
Richard Eastell (United Kingdom)

19:20 – 19:45 **Steven Boonen Lecture:**  
Role of thyroid hormones in the regulation of bone mass  
Graham Williams (United Kingdom)

19:45 – 21:00 **ECTS / ASBMR debate**

*This house believes that population-based screening to detect high fracture risk should be offered to older postmenopausal women*

*Chair: Anna Teti (Italy)  
Michael Econs (United States)  
Juliet Compston (United Kingdom)*

19:45 – 19:55 Introduction by the chairs and vote

19:55 – 20:10 Debate: For the motion  
Carolyn Crandall (United States)

20:10 – 20:25 Debate: Against the motion  
Eugene McCloskey (United Kingdom)
20:25 – 20:35  Comments and questions from the audience
20:35 – 20:45  Rebuttal
   Carolyn Crandall (United States)
   Eugene McCloskey (United Kingdom)
20:45 – 20:50  Vote
20:50 – 20:55  Presentation of the Golden Femur Award
   Anna Teti (Italy)
20:55 – 21:00  Debate closed
# Programme Overview

**SUNDAY, 27 MAY 2018**

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<th>Time</th>
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**Meeting Rooms:**
- Meeting Room 2
- Meeting Room 3
- Meeting Room 4
- Meeting Room 5
- Meeting Room 6

**Notes:**
- NI/Academy
- ECTS Events
- AHP Sessions
- by invitation only
Scientific Programme

SUNDAY, 27 MAY 2018

08:00 – 09:00  Symposium 1: From omics to therapy  
Academia meets Industry  
Chair: André Uitterlinden (The Netherlands)  
Adolfo Diez-Pérez (Spain)

08:00 – 08:30  Advanced insights into bone biology through genomics  
Fernando Rivadeneira (The Netherlands)

08:30 – 09:00  How genomics can help the pharmaceutical industry  
Matthew Nelson (United States)

09:00 – 10:00  Plenary Oral Presentations 1: Bone regulators  
Chair: André van Wijnen (United States)  
Josep Blanch Rubió (Spain)

09:00 – 09:10  A high resolution Capture-C promoter ‘interactome’ implicates causal genes at BMD GWAS loci  
Alessandra Chesi (United States)

09:10 – 09:20  Genome-wide association of bone mineral density in the UK Biobank full release identifies 301 novel loci and implicates DAAM2 in osteoporosis  
John Morris (Canada)

09:20 – 09:30  Aging-related bone loss is attenuated through Tgif1-ERK1/2 signaling in osteoclasts  
Miki Maeda (Germany)

09:30 – 09:40  Androgen receptor in neurons is protective against age-related loss of cortical bone in male mice  
Ferran Jardi (Belgium)

09:40 – 09:50  PGC1α deficiency negatively regulates bone mass and strength  
Graziana Colaianni (Italy)

09:50 – 10:00  Tram2 is a novel genetic determinant of bone mass and strength  
Victoria D. Leitch (United Kingdom)
Join the ECTS Community

- Substantially **reduced registration fee** for ECTS Congress
- Access to other **ECTS Events** and IFMRS activities
- Monthly member **e-newsletter**
- Society **App**
- Opportunity to be **actively involved** in the organisation of the ECTS and be part of an international network of Key Opinion Leaders in the field

- Access to session recordings of ECTS and **ECTS Academy Webinars**
- **Best research**: ECTS Fellowship and ECTS Academy
- **Best education**: access to the ECTS Resource Center, our online educational library
- Access to the **Members’ Lounge** with members directory

Visit us at the ECTS Booth

**ECTS**
European Calcified Tissue Society

@ECTSoc  @ECTS_soc
Email: ects@ectsoc.org  www.ectsoc.org
10:00 – 10:30  Poster SNAPs 1  

**Chair:** Josép Blanch Rubió (Spain)  
André van Wijnen (United States)

P001  
Protein Tyrosine Kinase 7 is a critical factor for osteoblast differentiation of human skeletal stem cells and its expression is decreased in patients with osteoporosis  
Abbas Jafari (Denmark)

P003  
Pharmacodynamic results from a phase 2a, randomized, multicenter, open-label, dose-ranging study of asfotase alfa in adults with pediatric hypophosphatasia  
Lothar Seefried (Germany)

P005  
Elevated phosphate levels impair skeletal muscle cell differentiation in vitro  
Adalbert Raimann (Austria)

P007  
Collagen, extracellular matrix and angiogenic biomarkers in osteoporosis in idiopathic pulmonary arterial hypertension  
Evgeniya Kochetkova (France)

P009  
Effects of postnatal osteoblast-specific suppression of platelet-derived growth factor receptors α and β on bone metabolism  
Cyril Thouverey (Switzerland)

P011  
Collagen orientation and mechanical competence of osteoporotic and bisphosphonate treated human bone  
Kilian Stockhausen (Germany)

P013  
Global versus osteoprogenitor-specific Mct8 knockout exerts distinct effects on bone mass and turnover of male mice  
Franziska Lademann (Germany)

P015  
Patients on dialysis have markedly abnormal cortical hip parameters by dual-energy X-ray absorptiometry  
Grahame Elder (Australia)

P019  
Age at onset of walking in infancy is associated with hip shape in early old age  
Alex Ireland (United Kingdom)

P021  
A new targeted mouse model for the rare bone disease alkaptonuria: A disease exhibiting severe osteoarthropathy  
Juliette Hughes (United Kingdom)

P023  
Assessment of ruptured Achilles tendons by sonoelastography and risk for rupture of contralateral tendon  
Ivo Dumic-Cule (Croatia)

P025  
Targeted inactivation of Rin3 increases trabecular bone mass  
Mahéva Vallet (United Kingdom)
P027  Evidence that bi-allelic mutations in NPR3 result in a phenotype with tall stature, arachnodactyly, long halluces and multiple extra epiphyses in hands and feet
Eveline Boudin (Belgium)

P029  Tumour-derived extracellular vesicles affect the molecular profile of osteoblasts and stimulate endothelial functions
Riccardo Paone (Italy)

P031  Type 2 diabetes, glucose and insulin metabolism in relation to hip bone size and bone turnover in elderly Swedish men and women
Adam Mitchell (Sweden)

P033  Suppression of p38α MAPK signaling in osteoblasts impairs bone formation in RANKL-stimulated bone remodeling
Cyril Thouverey (Switzerland)

P035  Secondary hyperparathyroidism and bone turnover after obesity surgery
Stephen Hewitt (Norway)

P037  Fatigue behaviour of non-osteocytic bone in swordfish and site-matched histomorphometric evaluation of bone structure with respect to cellular activities
Felix Nikolai Schmidt (Germany)

Discussion

11:00 – 12:00  Workshop 1: Clinical Cancer  
Auditorium 1

11:00 – 11:30  Management of treatment-induced bone loss in breast and prostate cancer patients
Matti Aapro (Switzerland)

11:30 – 12:00  Management of SRE in patients with bone malignancies
Georg Pfeiler (Austria)
**11:00 – 12:00**  Workshop 1: Basic / Translational Fish as a model for skeletal diseases  
Chair: Leonor Cancela (Portugal)  
Daniel Grinberg (Spain)

11:00 – 11:30  Lurking just below the surface – understanding skeletogenesis through our inner fish  
Matthew Harris (United States)

11:30 – 12:00  Zebrafish and medaka. Diagnosing skeletal pathologies in small teleost fish  
Paul Eckhard Witten (Belgium)

**12:00 – 13:00**  Educational Symposium 1:  
FOP – Fibrodysplasia Ossificans Progressiva - a dramatic rare bone condition, with new perspectives  
Chair: Richard Keen (United Kingdom)

12:00 – 12:30  Heterotopic ossification in FOP – disease pathology and paths to treatment  
Eileen Shore (United States)

12:30 – 13:00  Prevalence, clinical presentation, and palovarotene development program  
Genevieve Baujat (France)  
Supported by an educational grant by industry.

**12:00 – 13:00**  Meet the Expert 1 – Clinical  
Hypoparathyroidism  
Lars Rejnmark (Denmark)

**12:00 – 13:00**  Meet the Expert 2 – Clinical  
Kidney disease and bone  
Martine Cohen-Solal (France)

**12:00 – 13:00**  Meet the Expert 3 – Basic  
Measuring and interpreting the microbiome  
Carolina Medina-Gomez (The Netherlands)
12:00 – 13:00  Meet the Expert 4 – Basic  
Inflammation and bone  
Gerhard Krönke (Germany)  

Meeting Room 4

12:00 – 13:00  Meet the Expert 5 – Clinical  
Type 2 diabetes and bariatric surgery  
Elaine W. Yu (United States)  

Meeting Room 5

13:15 – 14:15  Poster Tour  
Development of novel CRISPR/Cas9-based gene therapeutic approaches for osteopetrosis  
Floriane Hennig (Germany)  

Meeting Room 6

13:15 – 14:15  Poster Tour  
All-cause mortality with use of antidepressants and benzodiazepines after major osteoporotic fracture  
Irma de Bruin (The Netherlands)  


13:35 – 13:45  Osteoclast-derived autotaxin connects inflammation to bone erosion in arthritis  
Irma Machuca-Gayet (France)  

13:45 – 14:05  Bone union of spinal fusion surgery using local bone in long term bisphosphonates users  
SY Park (Republic of Korea)  

13:55 – 14:05  Wnt1 is an Lrp5-independent bone-anabolic Wnt ligand  
Julia Luther (Germany)  

14:05 – 14:15  Association between bone mineral density, bone remodeling markers and diet inflammatory index in women  
Olga Cvijanovic Peloza (Croatia)  

14:30 – 15:15  Awards Ceremony  
Chair: Anna Teti (Italy)  

2018 ECTS Excellence in Research Award: Hans Van Leeuwen (The Netherlands)  
Presented by Anna Teti (Italy)  

2018 ECTS Iain T Boyle Award: Franck Oury (France)  
Presented by Martine Cohen-Solal (France)  

2018 Mike Horton Award: Ralph Müller (Switzerland)  
Presented by Claus-C. Glüer (Germany)
15:15 – 16:15 Symposium 2: Insights from Outside Science methodology: The reproducibility crisis
Chair: André Uitterlinden (The Netherlands)
Pilar Peris (Spain)

15:15 – 15:45 Can we save medicine? An appraisal of the biomedical ecosystem
John Ioannidis (United States)

15:45 – 16:15 Scientific ecosystems and research reproducibility
Marcus Munafò (United Kingdom)

16:15 – 17:15 Plenary Oral Presentations 2: FGF23
Chair: Graham Williams (United Kingdom)
Angels Martinez-Ferrer (Spain)

16:15 – 16:25 FGFR3-gain-of-function mutation modifies lumbar vertebrae structure and cranial synchondroses in a hypochondroplasia mouse model
Léa Loisay (France)

16:25 – 16:35 Dissecting the alterations of bone remodeling activity in Cystinosis
Giulia Battafarano (Italy)

16:35 – 16:45 Neutralizing FGF-23 restores the altered bone phenotype and delays the onset of anemia in myelodysplastic mice
Heike Weidner (Germany)

16:45 – 16:55 Increased cancer mortality in older men with higher serum concentrations of fibroblast growth factor 23 – the STRAMBO study
Pawel Szulc (France)

16:55 – 17:05 A phase 3 randomized, double-blind, placebo-controlled study investigating the efficacy and safety of burosumab, an anti-FGF23 antibody, in adult X-Linked hypophosphatemia (XLH)
Robin Lachmann (United Kingdom)

17:05 – 17:15 Fetal serum phosphorus is set independently of maternal serum phosphorus and phosphorus intake, including the extremes of maternal hyperphosphatemia and hypophosphatemia
K. Berit Sellars (Canada)
17:45 – 18:45  Oral Posters 2 – Preclinical / Clinical  
Chair: Athanasios Anastasilakis (Greece)  
Ana Monegal (Spain)

P065  Organic matrix quality at actively forming trabecular surfaces is strongly associated with fragility fracture incidence independent of BMD and the clinical diagnosis  
Eleftherios Paschalidis (Austria)

P068  Zoledronate every 18 months for 6 years in osteopenic postmenopausal women reduces non-vertebral fractures and height loss  
Ian Reid (New Zealand)

P069  Structural geometry of bones is prominently associated with risk of fracture in children  
Olja Grgic (The Netherlands)

P071  Dickkopf-1 (Dkk1) plays distinct pathogenic roles in estrogen-deficiency vs. glucocorticoid-induced bone loss  
Juliane Colditz (Germany)

Discussion

P073  Predicting the risk of hip fracture from DXA-based 3D finite element simulations  
Carlos Ruiz Wills (Spain)

P075  Altered bone microarchitecture in CFTR-deficient newborn piglets  
Frédéric Velard (France)

P077  FSH is positively associated with vertebral bone marrow adiposity in postmenopausal women from the AGES–Reykjavik cohort  
Annegreet G. Veldhuis-Vlug (United States / The Netherlands)

P079  Low bone mass in mice with conditional Wnt1 deletion and an autosomal dominant WNT1 mutation causing early-onset osteoporosis  
Nele Vollersen (Germany)

Discussion

P081  Effect of the Zinc Finger Protein 384 (ZNF384) gene in a family with osteoporosis  
Melissa M. Formosa (Malta)

P083  Anabolic stimuli prevent the decline of bone formation associated with long-term exposure to sclerostin-neutralizing antibodies  
Maude Gerbaix (Switzerland)

P085  CYP11B1 is a key adrenal steroidogenesis factor influencing skeletal maturation in children of school age  
Olja Grgic (The Netherlands)

P087  Cellular and molecular analysis of patients affected by Gorham–Stout disease  
Michela Rossi (Italy)

Discussion
17:45 – 18:45 **Oral Posters 1 – Basic**  
Chair: Jillian Cornish (New Zealand)  
Antonio Cano (Spain)

**P041**  
Differential molecular profile of circulating Extracellular Vesicle (EV) cargos in mouse models of osteoporosis induced by oestrogen withdrawal or by mechanical unloading  
Alfredo Cappariello (Italy)

**P043**  
Magnesium substituted hydroxyapatite nanoparticles enhance bone regeneration: in-vitro using osteoblast cells and in-vivo in a zebrafish jaw bone regeneration model  
Deepak Kumar Khajuria (Israel)

**P045**  
Long noncoding RNAs: A new dimension in regulation of bone formation osteoblast differentiation from mesenchymal stromal cells  
Coralee Tye (United States)

**P047**  
Pre-proenkephalin 1 is a new mechanoresponding gene involved in osteoblast differentiation  
Nadia Rucci (Italy)

Discussion

**P049**  
Novel role of Syndecan-3 (Sdc3) in maintaining bone mass  
Francesca Brito (United Kingdom)

**P051**  
Rcor2 is a novel regulator of osteoblast differentiation and bone mass  
Petri Rummukainen (Finland)

**P053**  
Fracture callus is responsive and adapts to individualized cyclic mechanical loading shown by time-lapsed in vivo imaging  
Esther Wehrle (Switzerland)

**P055**  
GDF11 locally determines axial skeletal patterning and systemically enhances bone formation  
Joonho Suh (Republic of Korea)

Discussion

**P057**  
Fam73b is essential for skeletal growth and the maintenance of bone mass and strength  
Davide Komla–Ebri (United Kingdom)

**P059**  
N-acetylcysteine limits vascular calcification but preserves bone formation  
Lucie E. Bourne (United Kingdom)

**P061**  
Altered MicroRNA profile in osteoporosis caused by impaired WNT signaling  
Riikka Mäkitie (Finland)

**P063**  
Slc38a10 is a novel genetic determinant of osteoblast proliferation and bone mineral density  
Andrea Pollard (United Kingdom)

Discussion
18:45 – 19:45  **New Investigator Seminar**  
Chair: Abbas Jafari (Denmark)  
Nerea Alonso (United Kingdom)

18:45 – 18:55  
P089  
Associations between metabolic syndrome and bone mineral density, trabecular bone score in postmenopausal women with non-vertebral fractures  
Vladyslav Povoroznyuk (Ukraine)

18:55 – 19:05  
P091  
Description of cortical fibula structure in trained footballers using peripheral quantitative computed tomography (pQCT), with dynamometric correlates  
Alex Ireland (United Kingdom)

19:05 – 19:15  
P093  
Mesenchymal cell-derived juxtacrine Wnt1 signaling regulates osteoblast activity and osteoclast differentiation  
Fan Wang (Finland)

19:15 – 19:25  
P095  
Syndecan 3 deletion leads to premature bone ageing  
Andrew Butcher (United Kingdom)

19:25 – 19:35  
P097  
Mechanical characteristics of mineralized lacunae and surrounding bone tissue in osteoporotic and healthy humans  
Annika vom Scheidt (Germany)

19:35 – 19:45  
P099  
Significance of continuous gestational hypoglycaemia for foetal skeletal development in the rat  
Vivi Flou Hjorth Jensen (Denmark / Sweden)
Programme Overview

MONDAY, 28 MAY 2018

08:00 - 08:30
Symposium 3: Molecular Imaging

08:30 - 09:00
Plenary Oral Presentations 3: Cortical bone and osteocytes

09:00 - 09:30
Poster SNAPS 2

09:30 - 10:00
Coffee break / Poster Exhibition / Industry Exhibition

10:00 - 10:30
Workshop 2: Clinical Vertebral fractures

10:30 - 11:00
Workshop 2: Basic / Translational Energy metabolism & bone

11:00 - 11:30
Educational Symposium 2: Microbiome discovery and applications

11:30 - 12:00
MtE 6: The effects of burns on bone & muscle

12:00 - 12:30
Corporate Satellite Symposium

12:30 - 13:00
Lunch break / Poster Exhibition / Industry Exhibition

13:00 - 14:00
Awards Ceremony

14:00 - 14:30
Symposium 4: Inflammation & Bone

14:30 - 15:00
Plenary Oral Presentations 4: Energy metabolism

15:00 - 15:30
Coffee break / Poster Exhibition / Industry Exhibition

15:30 - 16:00
Oral Posters 4 - Clinical

16:00 - 16:30
Oral Posters 3 - Basic

16:30 - 17:00
NI Mentoring Session

17:00 - 17:30
Oral Posters 4 - Clinical

18:00 - 20:00
Networking Dinner

20:00 - 24:00
Networking Dinner
Monday 28 May 2018

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16:30
Oral Posters 3 - Basic

17:00
NI Mentoring Session

18:00
Networking Dinner

20:00 – 24:00
Networking Dinner

Meeting Room 2  Meeting Room 3  Meeting Room 4  Meeting Room 5  Meeting Room 6

Coffee break / Poster Exhibition / Industry Exhibition

MtE 7: Secondary Fracture Prevention

MtE 8: Biomechanics by microCT

MtE 9: How to analyse energy homeostasis

MtE 10: Fibrodysplasia ossificans progressiva & heterotopic ossification

Lunch break / Poster Exhibition / Industry Exhibition

Poster Tour

Coffee break / Poster Exhibition / Industry Exhibition

20:00 – 24:00
Networking Dinner

NI/Academy  ECTS Events
## Scientific Programme

### MONDAY, 28 MAY 2018

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<tr>
<th>Time</th>
<th>Session</th>
<th>Location</th>
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<tbody>
<tr>
<td>08:00 – 09:00</td>
<td>Symposium 3: Molecular Imaging</td>
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<tr>
<td></td>
<td><em>Chair:</em> Claus-C. Glüer (Germany)</td>
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<td></td>
<td>Luis del Rio (Spain)</td>
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<tr>
<td>08:00 – 08:30</td>
<td>Monitoring therapeutic action and efficacy by intravital imaging</td>
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<td>Delfim Duarte (United Kingdom)</td>
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<tr>
<td>08:30 – 09:00</td>
<td>Molecular imaging of bone metastases in the clinic: Current status and prospects</td>
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<td>Gary Gook (United Kingdom)</td>
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<tr>
<td>09:00 – 10:00</td>
<td>Plenary Oral Presentations 3: Cortical bone and osteocytes</td>
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<td><em>Chair:</em> Ilaria Roato (Italy)</td>
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<td>Bram van der Eerden (The Netherlands)</td>
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<tr>
<td>09:00 – 09:10</td>
<td>Effects of romosozumab in postmenopausal women with osteoporosis after 2 and 12 months by Micro Computed Tomography (MicroCT) and histomorphometry on iliac crest bone biopsies</td>
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<td></td>
<td>Pascale Chavassieux (France)</td>
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<tr>
<td>09:10 – 09:20</td>
<td>Osteocyte spreading is supported by Tgif1-mediated repression of PAK3</td>
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<td>Simona Bolamperti (Germany)</td>
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<td>09:20 – 09:30</td>
<td>Exogenous hyperthyroidism induces osteocytic osteolysis in male mice</td>
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<td>Elena Tsourdi (Germany)</td>
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<td>09:30 – 09:40</td>
<td>Cement lines mineralization is a bone tissue-age related phenomenon: A study in human femoral cortical bone</td>
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<td>Petar Milovanovic (Germany)</td>
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<td>09:40 – 09:50</td>
<td>Denosumab treatment improves bones hardness accompanied by lower osteocyte viability persisting during drug-holiday</td>
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<td>Katharina Jähn (Germany)</td>
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<td>09:50 – 10:00</td>
<td>Bone matrix mineralization after denosumab (DMAb) treatment discontinuation</td>
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<td>Georges Boivin (France)</td>
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Poster SNAPs 2

Chair: Bram van der Eerden (The Netherlands)
Ilaria Roato (Italy)

10:00 – 10:30

10:00 – 10:30  Poster SNAPs 2  Auditorium 1

P002 The role of iron in the development and activity of osteoclasts
Romina Cabra (Switzerland)

P004 Treatment with zoledronic acid subsequent to odanacatib prevents bone loss in postmenopausal women with osteoporosis
Anne Sophie Sølling (Denmark)

P006 Functional characteristics of a yogurt containing GOS obtained from enzymatic action on milk lactose: Effect on calcium absorption
Mariana Seijo (Argentina)

P008 4-PBA helps the clearance of the engorged osteogenesis imperfecta patients fibroblasts by stimulating both protein secretion and autophagy
Antonella Forlino (Italy)

P010 High fidelity of mouse models mimicking human genetic skeletal disorders resulting from mutations in 316 genes (Skeletal Dysplasia Society 2015 Nosology)
Robert Brommage (Sweden)

P012 Levels of soluble ST2 are unaffected by vitamin D supplementation
Vito Francic (Austria)

P014 Hyperbaric oxygen inhibits HMGB1/RAGE signaling pathway by upregulating Mir-107 expression in human osteoarthritic chondrocytes
Li-Jen Yuan (Taiwan)

P016 BMD association studies and functional assays to uncover the role of FLJ42280 in osteoporosis
Neus Roca-Ayats (Spain)

P018 The influence of non-enzymatic glycation on microdamage accumulation in bone after fatigue loading
Graeme Campbell (Germany)

P020 The effect of a vitamin D3 mediated PTH reduction on cardiovascular health in hyperparathyroid, vitamin D insufficient women – a randomized placebo-controlled trial
Lise Sofie Bislev (Denmark)

P022 Calcitriol may act on an alternate receptor during fetal development, since absence of calcitriol has different consequences than loss of the vitamin D receptor
Brittany A. Ryan (Canada)

P024 Prevalence and risk of vertebral fractures in primary hyperparathyroidism: A cross-sectional study
Henriette Ejlsmark-Svensson (Denmark)
P026  ZNF687-induced Paget’s disease of bone do not degenerate in Giant Cell Tumor in presence of pharmacological treatment
  Federica Scotto di Carlo (Italy)

P030  Sclerostin: A mediator between bone and vasculature?
  Annelies De Maré (Belgium)

P032  Onset of bone remodeling awakens local osteoprogenitors
  Thomas Levin Andersen (Denmark)

P034  Tryptophan Hydroxylase 2: A potential bone mass regulator?
  Yannick Sogl (Germany)

P036  Analysis of bone form a case of Bruck syndrome caused by PLOD2 mutations reveals the abnormal collagen post-translational chemistry and cross-linking driving pathogenesis
  Charlotte Gistelinck (United States)

P038  Long-term follow-up of the bone marrow adipose tissue distribution in ovariectomized rats reveals a clustering of adipocytes at the tibiae trabecular bone surface
  Cécile Olejnik (France)

P040  Chronic psychosocial stress disturbs the immune response and endochondral ossification after fracture
  Melanie Haffner-Luntzer (Germany)

Discussion

11:00 – 12:00  Workshop 2: Clinical Vertebral fractures (Jointly with ASBMR)
  Auditorium 1

Chair:  Bo Abrahamsen (Denmark)
        Michael Econs (United States)

11:00 – 11:30  Diagnosis of vertebral fractures through clinical features and imaging:
  Diagnosis and pitfalls
  Emma Clark (United Kingdom)

11:30 – 12:00  Management, diagnosis, prognosis
  John Schousboe (United States)
Monday 28 May 2018

11:00 – 12:00  **Workshop 2: Basic / Translational Energy metabolism & bone**  
**Auditorium 2**  
Chair: Martina Rauner (Germany)  
Carmen Huesa (United Kingdom)

11:00 – 11:30  Bone cell bioenergetics  
*Thomas Clemens (United States)*

11:30 – 12:00  Gut microbiota and energy homeostasis  
*Mirko Trajkovski (Switzerland)*

12:00 – 13:00  **Educational Symposium 2: Microbiome discovery and applications: From research to (bone) clinic**  
**Auditorium 1**  
Chair: Carolina Medina-Gomez (The Netherlands)  
Luigi Gennari (Italy)

12:00 – 12:30  Gut health and microbiota throughout the life span  
*Jan Knol (The Netherlands)*

12:30 – 13:00  Connections between gut microbiota and bone mass  
*Klara Sjögren (Sweden)*

12:00 – 13:00  **Meet the Expert 6 – Clinical**  
**Meeting Room 1**  
The effects of burns on bone and muscle: Interactions with phosphate metabolism  
*Gordon L. Klein (United States)*

12:00 – 13:00  **Meet the Expert 7 – Clinical**  
**Meeting Room 2**  
Secondary Fracture Prevention  
*Markus Seibel (Australia)*

12:00 – 13:00  **Meet the Expert 8 – Basic**  
**Meeting Room 3**  
Biomechanics by microCT  
*Ralph Müller (Switzerland)*

12:00 – 13:00  **Meet the Expert 9 – Basic**  
**Meeting Room 4**  
How to analyse energy homeostasis  
*Mirko Trajkovski (Switzerland)*
### 12:00 – 13:00
**Meet the Expert 10 – Clinical & Basic**  
Meeting Room 5  
Fibrodysplasia ossificans progressiva and heterotopic ossification  
*Eileen Shore (United States)*

### 13:15 – 14:15
**Poster Tour**  
Meeting Room 6

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<thead>
<tr>
<th>Time</th>
<th>Title</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>13:15 – 13:25</td>
<td>Impact of mild and moderate/severe vertebral fractures on physical activity: A five-year prospective study based on a cohort of older women in the UK</td>
<td>Usama Al-Sari (United Kingdom)</td>
</tr>
<tr>
<td>13:25 – 13:35</td>
<td>ER exit site microautophagy recycles misfolded procollagen in osteoblasts</td>
<td>Sergey Leikin (United States)</td>
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<td>13:35 – 13:45</td>
<td>Quantitative computed tomography discriminates between individuals with low areal bone mineral density with and without vertebral fractures</td>
<td>Margaret Paggiosi (United Kingdom)</td>
</tr>
<tr>
<td>13:45 – 13:55</td>
<td>Lentiviral-mediated gene transfer of TCIRG1 to correct osteoclast function in Autosomal Recessive Osteopetrosis</td>
<td>Sara Penna (Italy)</td>
</tr>
<tr>
<td>13:55 – 14:05</td>
<td>Clinical implications and potential role of the novel myokine irisin as a biomarker for sarcopenia</td>
<td>Sung-Kil Lim (Republic of Korea)</td>
</tr>
<tr>
<td>14:05 – 14:15</td>
<td>Proteoglycan synthesis defects in a Cant1 knock-out mouse model of Desbuquois dysplasia type 1</td>
<td>Antonio Rossi (Italy)</td>
</tr>
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</table>

### 14:30 – 15:15
**Awards Ceremony**  
Auditorium 1

**Chair:** Anna Teti (Italy)

- **14:30 – 14:40**  
  2018 ECTS Philippe Bordier Clinical Award: *Eugene McCloskey (United Kingdom)*  
  Presented by Núria Guanyabens (Spain)

- **14:40 – 14:50**  
  2018 ECTS Fellowship – Clinical: *Manuela Schoeb (Switzerland)*  
  Presented by Peter Pietschmann (Austria)

- **14:50 – 15:00**  
  2018 ECTS Fellowship – Basic: *Ciro Menale (Italy)*  
  Presented by Peter Pietschmann (Austria)
15:15 – 16:15  **Symposium 4: Inflammation & Bone**  
*Chair: Roland Chapurlat (France)  
Ozge Uluckan (Switzerland)*

**15:15 – 15:45**  
Insights into mechanisms underlying onset of inflammation and bone loss during rheumatoid arthritis  
*Gerhard Krönke (Germany)*

**15:45 – 16:15**  
Clinical approaches to assess bone loss due to inflammation  
*Stephanie Finzel (Germany)*

**16:15 – 17:15  Plenary Oral Presentations 4: Energy metabolism**  
*Chair: Katherine Staines (United Kingdom)  
Francesca Broggi (Italy)*

**16:15 – 16:25**  
Opg-Fc attenuates insulin-resistance and muscle weakness in a mouse model of diabetoporosis (Pparβ KO)  
*Lucie Bourgoin (Switzerland)*

**16:25 – 16:35**  
Denosumab improves muscle function and glucose homeostasis  
*Nicolas Bonnet (Switzerland)*

**16:35 – 16:45**  
Gut microbiome composition is associated with bone mineral density levels in healthy children of school age  
*Carolina Medina-Gomez (The Netherlands)*

**16:45 – 16:55**  
How do high levels of exercise affect the risk of fracture?  
*Karl Stattin (Sweden)*

**16:55 – 17:05**  
Role of lipocalin 2 in energy metabolism-bone crosstalk  
*Mattia Capulli (Italy)*

**17:05 – 17:15**  
The antidiabetic drug metformin improves the skeletal effects of plyometric exercise in ovariectomized rats  
*Mats Mosti (Norway)*

17:45 – 18:45  **Oral Posters 4 – Clinical**  
*Chair: Annegreet G. Veldhuis-Vlug (The Netherlands)  
Carlos Gomez (Spain)*

**P066**  
Genome-wide association meta-analysis of skull bone mineral density identifies novel associations at four loci and replicates 57 known BMD loci  
*Carolina Medina-Gomez (The Netherlands)*

**P067**  
The arterial calcification defines the survival and the graft function of the kidney transplant receptors  
*Raúl García Castro (Spain)*
P070  Women at high risk of hip fracture based on FRAX respond to appropriate osteoporosis management: Analysis from the SCOOP study of population screening
Eugene McCloskey (United Kingdom)

P072  Prevalence and association of sarcopenia in asthma and chronic obstructive pulmonary disease: The Rotterdam Study
Elizabeth Benz I (The Netherlands)

Discussion

P074  Genetic basis of falling risk susceptibility
Katerina Trajanoska (The Netherlands)

P076  Children with Spinal Muscular Atrophy: A bone picture
Francesca Broggi (Italy)

P078  Grade 1 vertebral height loss is not associated with frailty in the Canadian Multicentre Osteoporosis Study (CaMos)
Tayyab S. Khan (Canada)

P080  Location of first spinal fracture as determinant of future vertebral fracture risk
Fjorda Koromani (The Netherlands)

Discussion

P082  The longitudinal association between type 2 diabetes and fractures in a large dutch cohort of older women
Petra Elders (The Netherlands)

P084  The effect of teriparatide and denosumab on circulating microRNAs related to bone metabolism in women with postmenopausal osteoporosis
Athanasios Anastasilakis (Greece)

P086  Burosumab, an anti-FGF23 monoclonal antibody, for X-Linked hypophosphatemia (XLH): Analysis by age from two phase 2 pediatric trials
Wolfgang Höglér (United Kingdom)

P088  Effects of treatment with an angiotensin 2 receptor blocker and/or vitamin D on parathyroid hormone and aldosterone: A randomized, placebo-controlled trial
Lise Sofie Bislev (Denmark)

Discussion

17:45 – 18:45  Oral Posters 3 – Basic  
Auditorium 2
Chair: Fernando Rivadeneira (The Netherlands)
Jane Lian (United States)

P042  3D bone microstructure of the mandibular condyle correlates with masseter muscle mass in adult mice
Julián Balanta-Melo (Mexico, Colombia, Germany)
P044  High-resolution 3D X-ray imaging of the osteocyte lacunar network in the Chihuahua zebrafish model of osteogenesis imperfecta to assess cellular mechanisms associated with bone fragility  
Imke A. K. Fiedler (Germany)

P046  Generation and characterization of zebrafish models of recessive osteogenesis imperfecta  
Antonella Forlino (Italy)

P048  LP4, a lactoferrin-derived small peptide reverses osteopenia via BMP2-OPG dependent pathway  
Subhashis Pal (India)

Discussion

P050  Inhibition of JAK2/STAT3 signaling impairs mesenchymal stem cell proliferation, osteogenic differentiation, and bone defect healing  
Janak Lal Pathak (China)

P052  Modulation of subchondral bone turnover is associated with alteration of cartilage tissue quality  
Patrick Ammann (Switzerland)

P054  Tissue engineered bone marrow modeling: Multiple myeloma cell adipomimicry and drug resistance induced by bone marrow adipocytes  
Michaela Reagan (United States)

P056  Differential effects of IKKa inhibition on trabecular and cortical bone in a prostate cancer xenograft model  
Abdullah Aljeffery (United Kingdom)

Discussion

P058  Expression of sperm associated antigen 4 (SPAG4) and its role in myeloma bone disease  
Regina Ebert (Germany)

P060  Dissection of osteogenic differentiated human mesenchymal stromal cell population heterogeneity using single cell gene expression analysis  
Jeroen van de Peppel (The Netherlands)

P062  Implication of microbiota in the emergence of inflammatory osteoclasts: Protective effect of Saccharomyces boulardii CNCM I-745  
Maria-Bernadette Madel (France)

P064  Osteoclast precursors pattern of receptors is modulated by Ivacaftor treatment in G551D-bearing cystic fibrosis patients  
Marie-Laure Jourdain (France)

Discussion
18:30 – 19:30  NI Mentoring Session

This is an interactive session giving the New Investigators an opportunity to discuss various topics with the leaders in the field: Interactive, round table discussion (3x20 min)

Chair: Katherine Staines (United Kingdom)
Björn Busse (Germany)

Table 1: Skeletal imaging and biomechanics
Graeme Campbell (Germany)
Erica Scheller (United States)

Table 2: How to write an effective / a convincing grant
Duncan Basset (United Kingdom)

Table 3: How to make the best of your PhD/post-doc project
Thomas Clemens (United States)

Table 4: Moving from Academia to Industry
Matthew Nelson (United States)

Table 5: What makes a good mentor and how to organize yourself to mentor people?
André van Wijnen (United States)

Table 6: Project Management
Jane Lian (United States)
Programme Overview

Tuesday, 29 May 2018

08:00
Symposium 5: Bone marrow fat

08:30

09:00
Parallel Oral Presentations 6: Osteoporosis treatment
Parallel Oral Presentations 5: Bone and cartilage biology

09:30
Coffee break

10:00
Workshop 3: Clinical Weight Loss & Bone
Workshop 3: Basic Cancer

11:00

11:30

12:00
Big Clinical Session

12:30

13:00
Awards & Closing

13:30

14:00

Clinical | Basic | Clinical & Basic | ECTS Events
Scientific Programme

TUESDAY, 29 MAY 2018

08:00 – 09:00  Symposium 5: Bone marrow fat  
Chair: Christian Meier (Switzerland)  
        Peter Pietschmann (Austria)

08:00 – 08:30  Bone marrow adipose tissue: Friend or foe?  
Erica Scheller (United States)

08:30 – 09:00  Bone marrow adipose tissue: endocrine aspects and impact on metabolic homeostasis  
William Cawthorn (United Kingdom)

09:15 – 10:15  Parallel Oral Presentations 6: Osteoporosis treatment  
Chair: Lorenz Hofbauer (Germany)  
        Jessica Pepe (Italy)

09:15 – 09:25  The effect of vitamin MK-7 for 3 years on bone mineral density and microarchitecture in postmenopausal women with osteopenia  
Sofie Hertz Rønn (Denmark)

09:25 – 09:35  Denosumab compared with risedronate in glucocorticoid-treated subjects: Results from the final 24-month analysis of a randomized, double-blind, double-dummy study  
Kenneth Saag (United States)

09:35 – 09:45  Early increases in N-terminal propeptide of type 1 procollagen (P1NP) with romosozumab therapy as an indicator for BMD response  
Cesar Libanati (Belgium)

09:45 – 09:55  Denosumab (DMAb) reduced bone remodeling, eroded surface, and erosion depth in cortical bone of iliac crest biopsies from postmenopausal women in the FREEDOM trial  
Pascale Chavassieux (France)

09:55 – 10:05  Effects of teriparatide on hip and upper limb fractures in patients with osteoporosis: A systematic review and meta-analysis  
Adolfo Díez-Pérez (Spain)

10:05 – 10:15  Screening of high fracture risk in primary care to reduce fractures: The SALT Osteoporosis Study a randomized trial  
Thomas Merlijn (The Netherlands)
**Final Programme**

**Tuesday 29 May 2018**

**09:15 – 10:15** Parallel Oral Presentations 5: Bone and cartilage biology  
*Auditorium 2*

*Chair: Mattia Capulli (Italy)  
Guillermo Martinez-Diaz (Spain)*

- **09:15 – 09:25** Evidence supporting a vascular disease-muscle function relationship  
  PO25  
  Alexander Rodriguez (Australia)

- **09:25 – 09:35** The key role of the Notch2 signal in breast cancer dormancy and tumour-initiation  
  PO26  
  Kashmala Carys (Italy)

- **09:35 – 09:45** Characterisation of the role of the fractalkine receptor CX3CR1 in inflammatory osteoclasts  
  PO27  
  Maria-Bernadette Madel (France)

- **09:45 – 09:55** Perivascular fibrosis and upregulation of the TGFβ pathway in CLCN7-depedent Autosomal Dominant Osteopetrosis type 2 (ADO2)  
  PO28  
  Antonio Maurizi (Italy)

- **09:55 – 10:05** Mechanisms of action of the sphingosine 1-phosphate metabolic pathway in spondyloarthritis  
  PO29  
  Alaeddine El Jamal (France)

- **10:05 – 10:15** Lin28a overexpression protects chondrocyte from osteoarthritis phenotype  
  PO30  
  Yohan Jouan (France)

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**10:30 – 11:30** Workshop 3: Clinical Weight Loss & Bone  
*Auditorium 1*

*Chair: Jorge Malouf (Spain)  
Salvatore Minisola (Italy)*

- **10:30 – 11:00** Pathophysiology of bone loss in women with anorexia nervosa  
  Karen Miller (United States)

- **11:00 – 11:30** Gastric bypass. Effects on bone metabolism and fracture risk  
  Elaine W. Yu (United States)

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**10:30 – 11:30** Workshop 3: Basic Cancer  
*Auditorium 2*

*Chair: Nadia Rucci (Italy)  
Aymen Idris (United Kingdom)*

- **10:30 – 11:00** Molecular insights into bone tumors and predisposing disorders  
  Fernando Gianfrancesco (Italy)

- **11:00 – 11:30** RANKL and oncogenesis  
  Dominique Heymann (United Kingdom)
**11:45 – 12:45**  
**Big Clinical Session**  
*Chair: Erik Fink Eriksen (Norway)  
Bente Langdahl (Denmark)*  

11:45 – 12:15  
Closing the treatment gap / FLSs  
*Cyrus Cooper (United Kingdom)*

12:15 – 12:45  
Anabolic / Sequential therapies  
*Lorenz Hofbauer (Germany)*

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**12:45 – 13:30**  
**Awards & Closing**  
*Chair: Anna Teti (Italy)*  

Onsite selected Oral Presentation – Basic: TBA

Onsite selected Oral Presentation – Clinical: TBA

ECTS Academy Best Poster Award: Clinical & Basic  
*Presented by Anna Teti (Italy)*

2018 East Meets West Research Awards  
*Presented by Anna Teti (Italy)*

2018 ECTS New Investigator Awards  
*Presented by Anna Teti (Italy)*

2018 ECTS Travel Awards  
*Presented by Anna Teti (Italy)*

Handover & Closing Remarks  
*Anna Teti (Italy)*
Posters

All posters will be displayed in the Poster Loft located on the 2nd floor.

Presenters are kindly asked to be present at their poster during the morning and afternoon coffee breaks as well as during the lunch break for personal discussion about their results.

Presenters need to be present at their poster during the following time:

- 13:00 to 14:00 on Sunday, 27 May for the odd numbered posters
- 13:00 to 14:00 on Monday, 28 May for the even numbered posters

P001 Protein Tyrosine Kinase 7 is a critical factor for osteoblast differentiation of human skeletal stem cells and its expression is decreased in patients with osteoporosis

Abbas Jafari¹,², Weimin Qiu¹, Majken S. Siersbaek³, Nicholas Ditze⁵, Jean-Marie Delaisse⁴, Matthias Dobbelstein⁴, Thomas L. Andersen³, Moustapha Kassem¹,²

¹The Novo Nordisk Foundation Center for Stem Cell biology (DanStem), Institute of Cellular & Molecular Medicine, University of Copenhagen, Copenhagen, Denmark, ²Department of Endocrinology and Metabolism, Endocrine Research Laboratory (KMEB), Odense University Hospital & University of Southern Denmark, Odense, Denmark, ³Department of Clinical Cell Biology, Vejle/ Lillebaelt Hospital, Vejle, Denmark, ⁴Göttingen Center of Molecular Biosciences, University of Göttingen, Göttingen, Germany

P002 The role of iron in the development and activity of osteoclasts

Romina Cabra¹,²,³, Mark Siegrist¹, Silvia Dolder¹, Willy Hofstetter¹,²

¹Department of BioMedical Research, University of Bern, Bern, Switzerland, ²NCCR Transcure, Swiss National Centre of Competence in Research, Bern, Switzerland, ³Graduate School, University of Bern, Bern, Switzerland

P003 Pharmacodynamic results from a phase 2a, randomized, multicenter, open-label, dose-ranging study of asfotase alfa in adults with pediatric hypophosphatasia

Lothar Seefried¹, Priya Kishnani², Scott Moseley², Eric Watsky², Michael Whyte²,³, Kathryn Dahiri⁴

¹Orthopedic Department, University of Würzburg, Würzburg, Germany, ²Department of Pediatrics, Duke University Medical Center, Durham, United States, ³Alexion Pharmaceuticals, Inc., New Haven, United States, ⁴Center for Metabolic Bone Disease and Molecular Research, Shriners Hospital for Children, St. Louis, United States, ⁵Division of Bone and Mineral Diseases, Department of Internal Medicine, Washington University School of Medicine at Barnes–Jewish Hospital, St. Louis, United States, ⁶Division of Diabetes and Endocrinology, Vanderbilt University Medical Center, Nashville, United States

P004 Treatment with zoledronic acid subsequent to odanacatib prevents bone loss in postmenopausal women with osteoporosis

Anne Sophie Sølling¹, Torben Harsløf³, Bente Langdahl⁵

¹Department of Endocrinology and Internal Medicine, Aarhus University Hospital, Aarhus, Denmark

P005 Elevated phosphate levels impair skeletal muscle cell differentiation in vitro

Adalbert Raimann¹, Susanne Greber-Platzer¹, Alexander Dongl¹, Monika Egerbacher², Gabriele Haeusler¹, Peter Pietschmann²

¹Department of Pediatrics and Adolescent Medicine, Medical University of Vienna, Vienna, Austria, ²University of Veterinary Medicine Vienna, Vienna, Austria, ³Center for Pathophysiology, Infectiology and Immunology, Medical University of Vienna, Vienna, Austria

P006 Functional characteristics of a yogurt containing GOS obtained from enzymatic action on milk lactose: effect on calcium absorption

Mariana Seijo¹, C Venica¹, Maria Luz Pita Martin de Portela¹, C Bergamini², L Wolf², Maria Cristina Perotti², Susana N Zeni³

¹Posters
Programme highlights

- Interaction between the skeleton and nervous system
- Osteogenesis Imperfecta
- Mechanobiology
- Assessing bone quality
- High resolution imaging of osteocytes
- Osteoimmunology
- Anabolic therapies

Workshops on getting abstracts selected for oral presentation, public engagement and optimising graphs. Also student presentations, speed mentoring and debate.

Venue:
Koos Vorrinkhuis
Lage Vuursche, The Netherlands

Course Co-Chairs:
Astrid Bakker (Netherlands)
Nuria Guañabens (Spain)
Willem Lems (Netherlands)
Gudrun Stenbeck (UK)

Speakers:
Astrid Bakker (Netherlands)
Joop van den Berg (Netherlands)
Maarten Boers (Netherlands)
Andrea Burden (Switzerland)
Fleur van Dijk (UK)
Bram van der Eerden (Netherlands)
Willem Lems (Netherlands)
Cliff Rosen (USA)
Gonzalo Sanchez Duffhues (Netherlands)
Gudrun Stenbeck (UK)
Andre Uitterlinden (Netherlands)
Annegreet Veldhuis Vlug (Netherlands)
Carola Zillikens (Netherlands)

Full programme & registration details can be found at www.ectsoc.org/education/phd-training
P007  Collagen, extracellular matrix and angiogenic biomarkers in osteoporosis in idiopathic pulmonary arterial hypertension

Ludmila Ugay¹, Evgeniya Kochetkova², Yulia Maistrovskia¹
¹Pacific State Medical University, Vladivostok, Russian Federation, ²Multihealth, Vélizy–Villacoublay, France

P008  4-PBA helps the clearance of the engorged osteogenesis imperfecta patients fibroblasts by stimulating both protein secretion and autophagy

Roberta Besio¹, Giusy Iula¹, Nadia Garibaldi¹, Lina Cipolla², Simone Sabbioneda², Marco Biggiogera¹, Joan C. Marini³, Antonio Rossi¹, Antonella Forlino¹
¹University of Pavia, Pavia, Italy, ²Consiglio Nazionale delle Ricerche, Pavia, Italy, ³National Institute of Health, Bethesda, United States

P009  Effects of postnatal osteoblast-specific suppression of platelet-derived growth factor receptors α and β on bone metabolism

Cyril Thouverey¹, Joseph Caverzasio¹, Serge Ferrari¹
¹Service of Bone Diseases, University Hospital of Geneva, Geneva, Switzerland

P010  High fidelity of mouse models mimicking human genetic skeletal disorders resulting from mutations in 316 genes (Skeletal Dysplasia Society 2015 Nosology)

Robert Brommage¹, Claes Ohlsson¹
¹Centre for Bone and Arthritis Research, University of Gothenburg, Gothenburg, Sweden

P011  Collagen orientation and mechanical competence of osteoporotic and bisphosphonate treated human bone

Kilian Stockhausen¹, Katherina Lewandowski¹, Katharina Jähn¹, Michael Hahn¹, Michael Amling¹, Björn Busse¹
¹Department of Osteology and Biomechanics, University Medical Center Hamburg-Eppendorf, Hamburg, Germany

P012  Levels of soluble ST2 are unaffected by vitamin D supplementation

Vito Francic¹, Martin Gaksch², Verena Schwetz¹, Christian Trummer¹, Marlene Pandis¹, Felix Aberer¹, Martin Grübler¹, Nicolas D. Verheyen¹, Winfried März², Thomas R. Pieber¹, Andreas Tomaschitz³, Stefan Pilz¹, Barbara Obermayer-Pietsch¹
¹Department of Internal Medicine, Division of Endocrinology and Diabetology, Medical University of Graz, Graz, Austria, ²Department of Laboratory Medicine, Paracelsus Medical University, Salzburg, Austria, ³Department of Internal Medicine, Division of Cardiology, Medical University of Graz, Graz, Austria, ⁴Synlab Holding Germany GmbH, Synlab Academy, Mannheim, Germany

P013  Global versus osteoprogenitor-specific Mct8 knockout exerts distinct effects on bone mass and turnover of male mice

Franziska Lademann¹,², Heike Heuer³, Elena Tsourdi¹,², Eddy Rijntjes¹, Josef Köhrle⁴, Lorenz C. Hofbauer¹,²,⁵, Martina Rauner¹,²
¹Department of Medicine III, Technische Universität Dresden Medical Center, Dresden, Germany, ²Center for Healthy Aging, Dresden, Germany, ³Klinik für Endokrinologie, Universität Duisburg-Essen, Essen, Germany, ⁴Institut für Experimentelle Endokrinologie, Charité-Universitätsmedizin Berlin, Berlin, Germany, ⁵Center of Regenerative Therapies Dresden, TU Dresden, Dresden, Germany

P014  Hyperbaric oxygen inhibits HMGB1/RAGE signaling pathway by upregulating Mir-107 expression in human osteoarthritic chondrocytes

Li-Jen Yuan¹, Song-Shu Lin², Yuan-Kun Tu¹, Chi-Chien Niu², Chuen-Yung Yang², Steve WN Ueng²
¹Department of Orthopaedic Surgery, E-Da Hospital / I-Shou University, Kaohsiung City, Taiwan, Republic of China, ²Department of Orthopaedic Surgery, Chang Gung Memorial Hospital, Taoyuan, Taiwan, Republic of China
**P015** Patients on dialysis have markedly abnormal cortical hip parameters by dual-energy X-ray absorptiometry  
Grahame Elder¹, Jasna Aleksova²  
¹Renal Medicine, Westmead Hospital, Sydney, Australia, ²Hudson Institute, Melbourne, Australia

**P016** BMD association studies and functional assays to uncover the role of FLJ42280 in osteoporosis  
Neus Roca-Ayats¹,²,³, Dario G. Lupiáñez⁴, Núria Martínez-Gil¹,²,³, Marina Gerousi¹, Mónica Cozar¹,²,³, Natàlia García-Giralt⁵,⁶, Xavier Nogués⁵,⁶, Leonardo Mellibovsky⁵,⁶, Adolfo Díez-Pérez⁵,⁶, Susana Balcells¹,²,³, Daniel Grinberg¹,²,³  
¹Dept. Genetics, Microbiology and Statistics, IBUB, Universitat de Barcelona, Barcelona, Spain, ²CIBERER, ISCIII, Barcelona, Spain, ³Institut de Recerca Sant Joan de Déu, Barcelona, Spain, ⁴Epigenetics and Sex Development Group, Berlin Institute for Medical Systems Biology, Max-Delbrück Center for Molecular Medicine, Berlin, Germany, ⁵Musculoskeletal Research Group, IMIM (Hospital del Mar Medical Research Institute), Barcelona, Spain, ⁶CIBERFES, ISCIII, Barcelona, Spain

**P018** The influence of non-enzymatic glycation on microdamage accumulation in bone after fatigue loading  
Graeme Campbell¹, Martin Bellin¹, Felix Schmidt², Gabriela Mielke¹, Björn Busse², Michael Morlock¹, Gerd Huber¹  
¹Institute of Biomechanics, Hamburg University of Technology, Hamburg, Germany, ²Department of Osteology and Biomechanics, University Medical Center Hamburg-Eppendorf, Hamburg, Germany

**P019** Age at onset of walking in infancy is associated with hip shape in early old age  
Alex Ireland¹, Stella Muthuri², Fiona Saunders¹, Anastasia Pavlova¹, Rebecca Hardy², Kathryn Martin³, Rebecca Barr²,³,⁴, Judith Adams⁵, Diana Kuh⁶, Richard Aspden³, Jennifer Gregory³, Rachel Cooper²  
¹School of Healthcare Science, Manchester Metropolitan University, Manchester, United Kingdom, ²MRC Unit for Lifelong Health and Ageing, University College London, London, United Kingdom, ³Department of Ageing and Chronic Disease, University of Liverpool, Liverpool, United Kingdom, ⁴Department of Surgery P, Aarhus University Hospital, Aarhus C, Denmark, ⁵Department of Clinical Medicine, Aarhus University, Aarhus, Denmark, ⁶Department of Otolaryngology, Aarhus University Hospital, Aarhus C, Denmark

**P020** The effect of a vitamin D3 mediated PTH reduction on cardiovascular health in hyperparathyroid, vitamin D insufficient women – a randomized placebo-controlled trial  
Lise Sofie Bislev¹,²,¹, Lene Langagergaard Rødbro¹, Lars Rolighed²,³, Tanja Sikjær¹, Lars Rejnmark¹,²,¹  
¹Department of Endocrinology and Internal Medicine, Aarhus University Hospital, Aarhus C, Denmark, ²Department of Clinical Medicine, Aarhus University, Aarhus, Denmark, ³Department of Surgery P, Aarhus University Hospital, Aarhus C, Denmark

**P021** A new targeted mouse model for the rare bone disease Alkaptonuria: a disease exhibiting severe osteoarthropathy  
Juliette Hughes¹, Peter Wilson¹, Ke Liu¹, Hughes Andrew¹,², Hazel Sutherland¹, Lakshminarayan Ranganath¹,², James Gallagher¹, George Bou-Gharios¹  
¹Institute of Ageing and Chronic Disease, University of Liverpool, Liverpool, United Kingdom, ²Department of Clinical Chemistry, Royal Liverpool and Broadgreen University Hospital Trust, Liverpool, United Kingdom

**P022** Calcitriol may act on an alternate receptor during fetal development, since absence of calcitriol has different consequences than loss of the vitamin D receptor  
Brittany A. Ryan¹, K. Berit Sellars¹, Beth J. Kirby¹, René St-Arnaud²,³, Christopher S. Kovacs¹  
¹Memorial University of Newfoundland, St. John’s, Canada, ²McGill University, Montreal, Canada, ³Shriners Hospitals for Children, Montreal, Canada
PO23  Assessment of ruptured Achilles tendons by sonoelastography and risk for rupture of contralateral tendon
Ivo Dumic-Cule1, Gordana Ivanac1, Domagoj Lemac2, Boris Brkljacic1
1Department of Diagnostic and Interventional Radiology, Clinical Hospital Dubrova, Zagreb, Croatia, 2Department of Orthopaedics and Trauma Surgery, Clinical Hospital Dubrova, Zagreb, Croatia

PO24  Prevalence and risk of vertebral fractures in primary hyperparathyroidism: A cross-sectional study
Henriette Ejlsmark-Svensson1, Lise Sofie Bislev2, Siv Lajlev2, Torben Harslefb, Lars Rolighed2, Tanja Sikjær2, Lars Rejnmark2
1Endocrinology and Internal Medicine, Aarhus University Hospital, Aarhus, Denmark, 2Aarhus University Hospital, Aarhus, Denmark

PO25  Targeted inactivation of Rin3 increases trabecular bone mass
Mahéva Vallet1, Antonia Sophocleous2, Anna E. Törnqvist1, Asim Azfer1, Rob van’t Hof4, Omar M.E. Albagn1, Stuart H. Ralston1
1Institute of Genetics and Molecular Medicine, University of Edinburgh, Edinburgh, United Kingdom, 2Department of Life Sciences, School of Sciences, European University Cyprus, Nicosia, Cyprus, 3Department of Internal Medicine at Institute of Medicine, University of Gothenburg, Gothenburg, Sweden, 4Institute of Ageing and Chronic Disease, University of Liverpool, Liverpool, United Kingdom

PO26  ZNF687-induced Paget’s disease of bone do not degenerate in Giant Cell Tumor in presence of pharmacological treatment
Federica Scotto di Carlo1,2, Giuseppina Divisato1, Nadia Petrillo1, Laura Pazzaglia3, Maria Serena Benassi3, Teresa Esposito1,2, Fernanda Gianfrancesco1
1Institute of Genetics and Biophysics, National Research Council of Italy, Naples, Italy, 2Department of Environmental, Biological and Pharmaceutical Sciences and Technologies (DiSTABiF), University of Campania Luigi Vanvitelli, Caserta, Italy, 3Laboratory of Experimental Oncology, Rizzoli Orthopedic Institute, Bologna, Italy, 4IRCCS INM Neuromed, Pozzilli (IS), Italy

PO27  Evidence that bi-allelic mutations in nPr3 result in a phenotype with tall stature, arachnodactyly, long halluces and multiple extra epiphyses in hands and feet
Eveline Boudin1, Tjeerd de Jong3, Tim Prickett3, Bruno Lapauw4, Koatje Toye4, Viviane Van Hoof2, Ilse Luyckx1, Aline Verstraeten1, Hugo Heymans5, Eelco Dulfer7, Lut Van Laer1, Ian Berry8, Angus Dobbie9, Ed Blair10, Bart Loeys1, Eric Espiner2, Jan M Wit11, Win Van Hul1, Peter Houp12, Geert Mortier1
1Center of Medical Genetics, University of Antwerp, Edegem, Belgium, 2Department of Plastic and Reconstructive Surgery and Hand Surgery, Isala Clinics Zwolle, Zwolle, Netherlands, 3Department of Medicine, University of Otago, Christchurch, New Zealand, 4Department of Endocrinology and Unit for Osteoporosis and Metabolic Bone Diseases, Ghent University Hospital, Ghent, Belgium, 5Department of Clinical Chemistry, Antwerp University Hospital, Edegem, Belgium, 6Department of Pediatrics, Emma’s Children’s Hospital– Academic Medical Centre, Amsterdam, Netherlands, 7Department of Medical Genetics, University Medical Center Groningen, Groningen, Netherlands, 8Leeds Genetics Laboratory, St James’s University Hospital, Leeds, United Kingdom, 9Yorkshire Clinical Genetics Service, Chapel Allerton Hospital, Leeds, United Kingdom, 10Oxford Centre for Genomic Medicine, Oxford University Hospitals NHS Foundation Trust, Oxford, United Kingdom, 11Department of Pediatrics, Leiden University Medical Center, Leiden, Netherlands

PO28  Risk factors of new adjacent and remote vertebral fracture following vertebroplasty for osteoporotic vertebral compression fracture: survivorship analysis of 205 patients
Ye-Soo Park1, Jin-Sung Park1, Woong-Hwan Choi2
1Orthopaedic Surgery, Guri Hospital, Hanyang University College of Medicine, Guri City, Korea, Republic of, 2Internal Medicine, Hanyang University College of Medicine, Seoul, Korea, Republic of

PO29  Tumour-derived extracellular vesicles affect the molecular profile of osteoblasts and stimulate endothelial functions
Riccardo Paone1, Alexander Loftus1, Chris George1, Kirsty Shefferdi, Argia Uccci, Simona Delle-Monache1, Alfredo Cappariello1, Maurizio Muraca2, Anna Telii, Nadia Ruccii
1University of L’Aquila, L’Aquila, Italy, 2University of Padova, Padova, Italy
P030 Sclerostin: a mediator between bone and vasculature?
Annelies De Maré1, Britt Opdebeeck1, Ellen Neven1, Patrick C. D’Haese1, Anja Verhulst1
1University of Antwerp, Wilrijk, Belgium

P031 Type 2 diabetes, glucose and insulin metabolism in relation to hip bone size and bone turnover in elderly Swedish men and women
Adam Mitchell1, Tove Fall2, Håkan Melhus1, Alicia Wolk4, Karl Michelsen1, Liisa Byberg1
1Department of Surgical Sciences, Orthopaedics, Uppsala University, Uppsala, Sweden, 2Department of Medical Sciences, Molecular Epidemiology, Uppsala University, Uppsala, Sweden, 3Department of Medical Sciences, Clinical Pharmacogenomics and Osteoporosis, Uppsala University, Uppsala, Sweden, 4Institute of Environmental Medicine, Division of Nutritional Epidemiology, Karolinska Institutet, Stockholm, Sweden

P032 Onset of bone remodeling awakens local osteoprogenitors
Thomas Levin Andersen1, Pia Risagaard Jensen1, Tanja Tvistholm Sikjaer2, Lars Rejnmark2, Charlotte Ejersted2, Jean-Marie Delaissé1
1Clinical Cell Biology, University of Southern Denmark, Vejle, Denmark, 2Institute of Clinical Medicine, Aarhus University Hospital, Aarhus, Denmark, 3Department of Endocrinology, Odense University Hospital, Odense, Denmark

P033 Suppression of p38α MAPK signaling in osteoblasts impairs bone formation in RANKL-stimulated bone remodeling
Cyril Thouverey1, Joseph Caverzasio1, Serge Ferrari1
1Service of Bone Diseases, University Hospital of Geneva, Geneva, Switzerland

P034 Tryptophan Hydroxylase 2: a potential bone mass regulator?
Yannick Sogl1, Deeksha Malhan1, Sabine Stoetzel1, Polina Peeva2, Michael Bader2,3, Natalia Alenina2, Stefanie Kern1, Christian Heiss1,4, Thaqif El Khassawna1
1Laboratory for Experimental Trauma Surgery, Faculty of Medicine, Justus-Liebig University Giessen, Giessen, Germany, 2Max Delbrück Center for Molecular Medicine (MDC), Berlin, Germany, 3Charité University Medicine, Berlin, Germany, 4Department of Trauma, Hand and Reconstructive Surgery, University Hospital of Giessen-Marburg, Giessen, Germany

P035 Secondary hyperparathyroidism and bone turnover after obesity surgery
Stephen Hewitt1, Jon Kristinsson2,3, Erlend Aasheim3, Ingvild Blom-Høgestøl1, Eirik Aaseth4, Erik Fink Eriksen1, Tom Malo1,2,5
1Department of Endocrinology, Morbid Obesity and Preventive Medicine, Oslo University Hospital and Institute of Clinical Medicine, University of Oslo, Oslo, Norway, 2Department of Gastrointestinal Surgery, Oslo University Hospital, Oslo, Norway, 3Department of Endocrinology, Morbid Obesity and Preventive Medicine, Oslo University Hospital, Oslo, Norway, 4Department of Medicine, Innlandet Hospital, Elverum, Norway, 5Department of Gastrointestinal Surgery, Oslo University Hospital and Institute of Clinical Medicine, University of Oslo, Oslo, Norway

P036 Analysis of bone form a case of Bruck syndrome caused by PLOD2 mutations reveals the abnormal collagen post-translational chemistry and cross-linking driving pathogenesis
Charlotte Gistelinck1, Maryann Weis1, Peter H. Beyers2, David R. Eyre1
1Department of Orthopaedics and Sports Medicine, University of Washington, Seattle, United States, 2Departments of Pathology and Medicine, University of Washington, Seattle, United States

P037 Fatigue behaviour of non-osteocytic bone in swordfish and site-matched histomorphometric evaluation of bone structure with respect to cellular activities
Felix Nikolai Schmidt1, Flynn Walsh1, Christine Plummer1, Bernd Gludovatz2, Robert O. Ritchie2,3, Björn Busse1
1Department of Osteology and Biomechanics, University Medical Center Hamburg-Eppendorf, Hamburg, Germany, 2Materials Sciences Division, Lawrence Berkeley National Laboratory, Berkeley, United States, 3Department of Mechanical Engineering, University of California San Francisco, Berkeley, United States
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<thead>
<tr>
<th>Paper Number</th>
<th>Title</th>
<th>Authors</th>
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<tr>
<td>P038</td>
<td>Long-term follow-up of the bone marrow adipose tissue distribution in ovariecetomized rats reveals a clustering of adipocytes at the tibiae trabecular bone surface</td>
<td>Xavier Coutel1,2,3, Jérôme Delattre1, Pierre Marchandise1, Greet Kerckhofs4,5, Guillaume Penel1,2,3, Cécile Oleinik1,2,3</td>
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<td>1Université de Lille, EA4490 PMOI, Lille, France, 2Faculté de Chirurgie Dentaire, Lille, France, 3Service d’Odontologie, CHRU de Lille, Lille, France, 4Development and Regeneration, Skeletal Biology and Engineering Center, KU Leuven, Belgium, 5Division of Skeletal Tissue Engineering, Prometheus, KU Leuven, Belgium</td>
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<td>P039</td>
<td>Bilirubin promotes down-regulation of RUNX2 and up-regulation of RANKL gene expression in bone explants and in osteoblastic and osteocytic cell lines</td>
<td>Silvia Ruiz-Gaspà1, Albert Parés1, AndréS Combalia1, Pilar Peris1, Ana Monegal1, Núria Guañabens1</td>
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<td>1Metabolic Bone Diseases Unit and Liver Unit, CIBERehd, Hospital Clinic, IDIBAPS, University of Barcelona, Barcelona, Spain</td>
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<td>P040</td>
<td>Chronic psychosocial stress disturbs the immune response and endochondral ossification after fracture</td>
<td>Melanie Haffner-Luntzer1, Sandra Förtsch2, Verena Fischer1, Katja Prystaz1, Anita Ignatius1, Stefan O. Reber2</td>
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<td>1Institute of Orthopedic Research and Biomechanics, University Medical Center Ulm, Ulm, Germany, 2Clinic for Psychosomatic Medicine and Psychotherapy, University Hospital Ulm, Ulm, Germany</td>
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<td>P041</td>
<td>Differential molecular profile of circulating Extracellular Vesicle (EV) cargos in mouse models of osteoporosis induced by oestrogen withdrawal or by mechanical unloading</td>
<td>Alfredo Cappariello1, Argia Ucci1, Nadia Rucci1, Anna Teti1</td>
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<td>1DISCAB, University of L’Aquila, L’Aquila, Italy</td>
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<td>P042</td>
<td>3D bone microstructure of the mandibular condyle correlates with masseter muscle mass in adult mice</td>
<td>Julián Balanta-Melo1,2,3, Viviana Toro-Ibacache1,4,5, María Torres-Quintana6, Kornelius Kupczik4, Sonja Buvinic1</td>
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<td>1Institute for Research in Dental Sciences, Faculty of Dentistry, Universidad de Chile, Santiago de Chile, Chile, 2School of Dentistry, Universidad del Valle, Santiago de Cali, Colombia, 3Max Planck Weizmann Center for Integrative Archaeology and Anthropology, Max Planck Institute for Evolutionary Anthropology, Leipzig, Germany, 4Center for Quantitative Analysis in Dental Anthropology, Faculty of Dentistry, Universidad de Chile, Santiago de Chile, Chile, 5Department of Human Evolution, Max Planck Institute for Evolutionary Anthropology, Leipzig, Germany, 6Department of Pathology and Oral Medicine, Faculty of Dentistry, Universidad de Chile, Santiago de Chile, Chile</td>
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<td>P043</td>
<td>Magnesium substituted hydroxyapatite nanoparticles enhance bone regeneration: in-vitro using osteoblast cells and in-vivo in a zebrafish jaw bone regeneration model</td>
<td>Deepak Kumar Khajuria1, Dana Gigi1, Dalia David-Niv1, David Karasik1</td>
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<td>1The Musculoskeletal Genetics Laboratory, The Azrieli Faculty of Medicine, Bar-Ilan University, Safed, Israel</td>
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<td>P044</td>
<td>High-resolution 3D X-ray imaging of the osteocyte lacunar network in the Chihuahua zebrafish model of osteogenesis imperfecta to assess cellular mechanisms associated with bone fragility</td>
<td>Imke A. K. Fiedler1, Hrishikesh A. Bale2, Katharina Jahn1, Antonella Forlino4, Björn Busse1</td>
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<td>1Department of Osteology and Biomechanics, University Medical Center Hamburg-Eppendorf, Hamburg, Germany, 2Carl Zeiss X-ray Microscopy, Pleasanton, United States, 3Department of Molecular Medicine, University of Pavia, Pavia, Italy</td>
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<td>P045</td>
<td>Long noncoding RNAs: A new dimension in regulation of bone formation osteoblast differentiation from mesenchymal stromal cells</td>
<td>Coralee Tye1, Jonathan Gordon1, Kristiaan Finstad1, Roland Elling2, Katherine Fitzgerald2, Janet Stein1, Gary Stein2, Jane Lian3</td>
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<td>1Biochemistry, University of Vermont Larner College of Medicine, Burlington, United States, 2Medicine, University of Massachusetts Medical School, Worcester, United States</td>
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P046 Generation and characterization of zebrafish models of recessive osteogenesis imperfecta
Francesca Tonelli1, Laura Leoni1, Silvia Cotti1, Roberta Besio1, Roberta Gioia1, Björn Busse2, Imke Fiedler2, Antonio Rossi1, Antonella Forlino1
1Department of Molecular Medicine, University of Pavia, Pavia, Italy, 2Department of Osteology and Biomechanics, University Medical Center Hamburg-Eppendorf, Hamburg, Germany

P047 Pre-proenkephalin 1 is a new mechanoresponding gene involved in osteoblast differentiation
Nadia Rucci1, Antonio Maurizi1, Isabella Baldini1, Mattia Capulli1, Anna Teti1
1Università of L’Aquila, L’Aquila, Italy

P048 LP4, a lactoferrin-derived small peptide reverses osteopenia via BMP2–OPG dependent pathway
Subhashis Pal1, Mohd Sayeed2, Amit Kumar2, Munesh Kumar Harioudh2, Kalyan Mitra2, Jimut Kanti Ghosh2, Naibedya Chattopadhyay2
1Division of Endocrinology, Central Drug Research Institute, Lucknow, India, 2Division of Molecular and Structural Biology, Central Drug Research Institute, Lucknow, India

P049 Novel role of Syndecan-3 (Sdc3) in maintaining bone mass
Francesca Brito1, Addolorata Pisconti2, Gemma Charlesworth1, Amanda Prior1, George Bou–Gharios1, Rob van’t Hof1, Anna Daroszewska1
1University of Liverpool/ IACD, Liverpool, United Kingdom, 2University of Liverpool/ IIB, Liverpool, United Kingdom

P050 Inhibition of Jak2/Stat3 signaling impairs mesenchymal stem cell proliferation, osteogenic differentiation, and bone defect healing
Janak Lal Pathak1, Xin Yu2, Qilong Wan2, Zubing Li3
1Key Laboratory of Oral Medicine, Guangzhou Institute of Oral Disease, Stomatology Hospital of Guangzhou Medical University, Guangzhou Medical University, Guangzhou, China, 2Key Laboratory of Oral Biomedicine, Ministry of Education, School and Hospital of Stomatology, Wuhan University, Wuah, China

P051 Rcor2 is a novel regulator of osteoblast differentiation and bone mass
Petri Rummukainen1, Kati Tarkkonen1, Rana Al Majidi1, Lauri Sauastamoinen1, Amel Dudakovíc2, Cristina Valensisi3, David Hawkins1,4, Andre van Wijnen2, Riku Kiviranta3,5
1Institute of Biomedicine, University of Turku, Turku, Finland, 2Department of Orthopeadic Surgery, Mayo Clinic, Rochester, United States, 3Division of Medical Genetics, University of Washington Seattle, Seattle, United States, 4Turku Centre for Biotechnology, Turku, Finland, 5Division of Endocrinology, Turku University Hospital, Turku, Finland

P052 Modulation of subchondral bone turnover is associated with alteration of cartilage tissue quality
Patrick Ammann1, Isabelle Badoud1, Cedric Lavet1
1Service des maladies osseuses, Genève, Switzerland

P053 Fracture callus is responsive and adapts to individualized cyclic mechanical loading shown by time-lapsed in vivo imaging
Esther Wehrle1, Graeme R. Paul1, Duncan C. Betts1, Gisela A. Kuhn1, Ralph Müller1
1Institute for Biomechanics, ETH Zurich, Zurich, Switzerland

P054 Tissue engineered bone marrow modeling: Multiple myeloma cell adipomimicry and drug resistance induced by bone marrow adipocytes
Michaela Reagan1, Heather Fairfield1, Mariah Farrell1, Carolyne Falank1
1Center for Molecular Medicine, Maine Medical Center Research Institute, Scarborough, United States

P055 GDF11 locally determines axial skeletal patterning and systemically enhances bone formation
Joonho Suh1, Je–Hyun Eomi1, Na–Kyung Kim1, Joo–Cheol Park1, Kyung–Mi Woo1, Jeong–Hwa Baek1, Hyun–Mo Ryoo1, Se–Jin Lee1, Yun–Sil Lee1
P056 Differential effects of IKKa inhibition on trabecular and cortical bone in a prostate cancer xenograft model
Abdullah Aljeffery1, Silvia Marino1,2, Marco Ponzetti3, Nadia Rucci1, Aymen I. Idris1
1Department of Oncology and Metabolism, University of Sheffield, Medical School, Sheffield, United Kingdom, 2Division of Hematology/Oncology, IJ School of Medicine, Indianapolis, United States, 3Department of Biotechnological and Applied Clinical Sciences, University of L’Aquila, L’Aquila, Italy

P057 Fam73b is essential for skeletal growth and the maintenance of bone mass and strength
Davide Komla-Ebri1, Apostolos Gogakos1, Penny Sparkes1, John G Logan1, Sanger Institute Mouse Pipelines2, Peter I Croucher1, J H Duncan Bassett1, Graham R Williams1
1Molecular Endocrinology Laboratory, Imperial College London, London, United Kingdom, 2Wellcome Trust Sanger Institute, Cambridge, United Kingdom, 3Bone Biology Division, Garvan Institute of Medical Research, Sydney, Australia

P058 Expression of sperm associated antigen 4 (SPAG4) and its role in myeloma bone disease
Regina Ebert1, Anja Seckinger2, Julia Dotterweich1, Sabine Zeck1, Jutta Meissner-Weigl1, Dirk Hose2, Franz Jakob1
1Orthopädisches Zentrum für Muskuloskelettale Forschung, Universität Würzburg, Würzburg, Germany, 2Medizinische Klinik V, Labor für Myelomforschung, Universitätsklinikum Heidelberg, Heidelberg, Germany

P059 N-acetylcysteine limits vascular calcification but preserves bone formation
Lucie E Bourne1, Jessal J Patel1,2, Ellen Neven3, Patrick D’Haese3, Caroline Wheeler-Jones1, Isabel R Orriss1
1Comparative Biomedical Sciences, Royal Veterinary College, London, United Kingdom, 2School of Life and Medical Sciences, University of Hertfordshire, Hatfield, United Kingdom, 3Laboratory of Pathophysiology, Department of Biomedical Sciences, University of Antwerp, Antwerp, Belgium

P060 Dissection of osteogenic differentiated human mesenchymal stromal cell population heterogeneity using single cell gene expression analysis
Jeroen van de Peppel1, Rolf Vossen2, Henk Buermans2, Andre J. van Wijzen3, Hans van Leeuwen1
1Internal Medicine, Erasmus MC, Rotterdam, Netherlands, 2Department of Human Genetics; Leiden Genome Technology Center, Leiden University Medical Center, Leiden, Netherlands, 3Orthopedic Surgery, Mayo Clinic, Rochester, United States

P061 Altered MicroRNA profile in osteoporosis caused by impaired WNT signaling
Riikka Mäkitie1, Matthias Hack2, Riitta Niinimäki2, Sakari Kakko4, Johannes Grillari5, Outi Mäkitie1,6,7
1Folkhälsan Institute of Genetics and University of Helsinki, Helsinki, Finland, 2TamiRNA GmbH, Vienna, Austria, 3Department of Children and Adolescents, Oulu University Hospital, and PEDEGO Research Unit, University of Oulu, Oulu, Finland, 4Internal Medicine and Clinical Research Center, University of Oulu, Oulu, Finland, 5Christian Doppler Laboratory on Biotechnology of Skin Aging, Department of Biotechnology, BOKU – University of Natural Resources and Life Sciences Vienna, Vienna, Austria, 6Children’s Hospital, University of Helsinki and Helsinki University Hospital, Helsinki, Finland, 7Center for Molecular Medicine, Karolinska Institutet, and Clinical Genetics, Karolinska University Hospital, Stockholm, Sweden

P062 Implication of microbiota in the emergence of inflammatory osteoclasts: protective effect of Saccharomyces boulardii CNCM I-745
Maria-Bernadette Medel1, Lidia Ibanez1, Antoine Boutin1, Rodolphe Pontier-Bres2, Majlinda Topi1, Dorota Czerucka2, Matthieu Rouleau1, Abdellah Wakkach1, Claudine Blin-Wakkach1
1LP2M, CNRS UMR 7370, Faculté de Médecine, Université Côte d’Azur, Université Nice Sophia Antipolis, Nice, France, 2Centre Scientific de Monaco, Monaco, Monaco
P063  Slc38a10 is a novel genetic determinant of osteoblast proliferation and bone mineral density
Andrea Pollard1, Apostolos Gogakos1, John G Logan3, Davide Komla Ebri1, Penny Sparkes1, Natalie C Butterfield1, Victoria D Leitch1, Sanger Mouse Pipelines2, Peter I Croucher3, JH Duncan Bassett1, Graham R Williams1
1Molecular Endocrinology Laboratory, Imperial College London, London, United Kingdom, 2Wellcome Trust Sanger Institute, Hinxton, United Kingdom, 3Bone Biology Division, Garvan Institute of Medical Research, Sydney, Australia

P064  Osteoclast precursors pattern of receptors is modulated by Ivacaftor treatment in G551D-bearing cystic fibrosis patients
Dina Abdallah1, Marie-Laure Jourdain1, Christine Guillaume1, Nicola Ronan2, Yvonne Mc Carthy3, Evelyn Flanagan3, Barry Plant4, Sandra Audonnet4, Sophie C. Ganguero5, Frédéric Velard1, Jacky Jacquot1
1Laboratoire Bio EA4691, Université de Reims Champagne Ardenne, Reims, France, 2Respiratory Cork Cystic Fibrosis Center, Cork University Hospital Group, Cork, Ireland, 3Cork Cystic Fibrosis Center, Cork University Hospital Group, Cork, Ireland, 4Plateforme cytometrie URCA Cyt, Université de Reims Champagne Ardenne, Reims, France

P065  Organic matrix quality at actively forming trabecular surfaces is strongly associated with fragility fracture incidence independent of BMD and the clinical diagnosis
Eleftherios Paschalis1, Sonja Gamsjaeger1, Erik Eriksson1, Francis Glorieux2, Frank Rauch1, David Dempster4, Hua Zhou4, Elizabeth Shane6, Adi Cohen6, Rob Recker2, John Bilezikian9, Mihaela Rubin9, Carolina Moreira9, Joseph Lane7, Imre Pavo7, Jan Stepan8, Socrates Papapoulos9, Wolfgang Brozek1, Peter Fratzl11, Klaus Klaushofer1
1Ludwig Boltzmann Institute of Osteology at the Hanusch Hospital of WKKK, and AUA Trauma Center Meidling, 1st Medical Department Hanusch Hospital, Vienna, Austria, 2Oslo University Hospital and Institute of Clinical Medicine, University of Oslo, Oslo, Norway, 3Genetics Unit, Shriners Hospital for Children and McGill University, Montreal, Canada, 4Medicine and Pathology, College of Physicians and Surgeons of Columbia University, New York, United States, 5Creighton University School of Medicine, Omaha, United States, 6Endocrinology Division (SEMPR), Federal University of Parana, Curitiba, Brazil, 7Orthopedic Surgery, Weill Medical College, Cornell University, New York, United States, 8Eli Lilly & Co, Vienna, Austria, 9Institute of Rheumatology, and Charles University Faculty of Medicine 1, Prague, Czech Republic, 10Center for Bone Quality, Leiden University Medical Center, Leiden, Netherlands, 11Max Planck Institute of Colloids and Interfaces, Potsdam, Germany

P066  Genome-wide association meta-analysis of skull bone mineral density identifies novel associations at four loci and replicates 57 known BMD loci
Carolina Medina-Gomez1, Katerina Trajanoska1, John Kemp2, Kun Zhu3, Maria Netherland4, Gudmar Parleffsson5, Alessandra Chesi6, Ivana Nedeljovic6, Tarun Ahluwalia7, Raimo Joro8, Ruijiang Li-Gao9, Daniel S Evans10, Katharina E Schraut11, Benjamin Mullin11, Dennis Mook10, Linda Broer1, M. Carola Zillikens1, Carol Wang12, Cornelia M van Duijn1, Nathalie Van der Velde1, M. Arfan Ikram1, Babette Zemel1, Scott G. Wilson1, Timo Lakka6, James A. Wilson13, Klaus Bønnelykke6, Struan Grant12, Vincent Jaddoe1, Stuart H Ralston1, Jeroen Van Der Peppel1, Bram Van Der Eerden1, Unnur Styrkarsdottir6, Andre van Wijnen13, Claes Ohlsson1, Andre G. Uitterlinden1, Jon H. Tobias14, David Karasik15, Dave M. Evans2, Cheryl L. Ackert-Bicknell16, Fernanda Rivadeneira1
1ErasmusMC, Rotterdam, Netherlands, 2University of Queensland Diamantina Institute, Brisbane, Australia, 3Sir Charles Gardiner Hospital, Nedlands, Australia, 4University of Gothenburg, Gothenburg, Sweden, 5deCODE Genetics, Reykjavik, Iceland, 6Children’s Hospital of Philadelphia, Philadelphia, United States, 7COPSAC, Copenhagen Prospective Studies on Asthma in Childhood, Copenhagen, Denmark, 8University of Eastern Finland, Kuopio, Finland, 9Leiden University Medical Centre, Leiden, Netherlands, 10California Pacific Medical Center Research Institute, San Francisco, United States, 11University of Edinburgh, Edinburgh, United Kingdom, 12University of Western Australia, Crawley, Australia, 13Mayo Clinic, Rochester, United States, 14University of Bristol, Bristol, United Kingdom, 15Hebrew SeniorLife, Roslinlade, United States, 16University of Rochester, Rochester, United States
P067  The arterial calcification defines the survival and the graft function of the kidney transplant receptors
Raúl García Castro1, Minerva Rodríguez García2, María Luisa Suárez Fernández2, Miguel Ángel Suárez Hevia3, Jesús María Fernández Gómez3, Sara Barrio Vázquez4, Cristina Montes Alonso4, José Luis Fernández Martín5, Jorge Benito Cannata Andía5, Carlos Gómez Alonso4
1Diálisis, Fundación Hospital de Jove, Gijón, Spain, 2AGC Nefrología, Hospital Universitario Central de Asturias, Oviedo, Spain, 3AGC Urología, Hospital Universitario Central de Asturias, Oviedo, Spain, 4UGC Metabolismo Óseo y Mineral. REDinREN. Universidad de Oviedo, Hospital Universitario Central de Asturias, Oviedo, Spain

P068  Zoledronate every 18 months for 6 years in osteopenic postmenopausal women reduces non-vertebral fractures and height loss
Ian Reid1, Anne Horne1, Borislav Mihov1, Angela Stewart1, Liz Garratt1, Mark Bolland1, Sonja Bastin1, Greg Gamble1
1University of Auckland, Auckland, New Zealand

P069  Structural geometry of bones is prominently associated with risk of fracture in children
Olja Grgic1, Katerina Trajanoska2, Denise Heppe3, Carola Zillikens4, Vincent Jaddoe4, Andre Uitterlinden4, Eppo Wolvius5, Tom Beck6, Fernando Rivadeneira7, Carolina Medina-Gomez8
1Department of Maxillo-facial Surgery, Department of Internal Medicine, The Generation R Study, Erasmus MC, Rotterdam, Netherlands, 2Department of Internal Medicine, Department of Epidemiology, Erasmus MC, Rotterdam, Netherlands, 3The Generation R Study, Erasmus MC, Rotterdam, Netherlands, 4Department of Internal Medicine, Erasmus MC, Rotterdam, Netherlands, 5Department of Maxillo-facial Surgery, The Generation R Study, Erasmus MC, Rotterdam, Netherlands, 6Beck Radiological Innovations Inc., Baltimore, United States, 7Department of Internal Medicine, The Generation R Study, Erasmus MC, Rotterdam, Netherlands, 8Department of Internal Medicine, Department of Epidemiology, The Generation R Study, Erasmus MC, Rotterdam, Netherlands

P070  Women at high risk of hip fracture based on FRAX respond to appropriate osteoporosis management: analysis from the SCOOP study of population screening
Eugene McCloskey1,2, Nicolas Harvey4, Helena Johansson4,5, Lee Shepstone6, Elizabeth Lenaghan6, Cyrus Cooper3, John Kanis4,5, The SCOOP study team
1Oncology & Metabolism, University of Sheffield, Sheffield, United Kingdom, 2Centre for Integrated research in Musculoskeletal Ageing (CIMA), University of Sheffield, Sheffield, United Kingdom, 3MRC Lifecourse Epidemiology Unit, University of Southampton, Southampton, United Kingdom, 4Centre for Metabolic Bone Diseases, University of Sheffield, Sheffield, United Kingdom, 5Australian Catholic University, Melbourne, Australia, 6School of Medicine, University of East Anglia, Norwich, United Kingdom

P071  Dickkopf-1 (Dkk1) plays distinct pathogenic roles in estrogen-deficiency vs. glucocorticoid-induced bone loss
Juliane Colditz1,2, Sylvia Thiele1,2, Ulrike Baschant1,2, Christof Niehrs1, Martina Rauner1,2, Lorenz Hofbauer1,2,4
1Department of Medicine III, Technische Universität Dresden, Dresden, Germany, 2Center for Healthy Aging, Technische Universität Dresden, Dresden, Germany, 3Institute of Molecular Biology, Mainz, Germany, 4DFG Research Center and Cluster of Excellence for Regenerative Therapies, Technische Universität Dresden, Dresden, Germany

P072  Prevalence and association of sarcopenia in asthma and chronic obstructive pulmonary disease: The Rotterdam Study
Elizabeth Benz1,2, Katerina Trajanoska1,2, Josje D Schoufour1,2, Lies Lahauserse, Emmely De Roos1,3, Natalie Terzikhan2,4, Bruno Stricker1,4, Oscar H Franco2,5, Guy Brusselle2,3, Fernando Rivadeneira1,2
1Internal Medicine, Erasmus MC University, Rotterdam, Netherlands, 2Epidemiology, Erasmus MC University, Rotterdam, Netherlands, 3Respiratory Medicine, Ghent University Hospital, Ghent, Belgium, 4Inspectorate of Healthcare, The Hague, Netherlands, 5Netherlands Consortium on Healthy Aging (NCHA), Leiden, Netherlands
**P073** Predicting the risk of hip fracture from DXA-based 3D finite element simulations  
Carlos Ruiz Wills¹, Simone Tassani¹, Miguel A. González Ballester¹,², Ludovic Humbert¹, Luis Del Río⁴, Jérôme Noailly¹  
¹BCN Barcelona Centre for New Medical Technologies, Universitat Pompeu Fabra, Barcelona, Spain, ²Catalan Institution for Research and Advanced Studies, Barcelona, Spain, ³Galgo Medical, Barcelona, Spain, ⁴CETIR Medical Centre, Barcelona, Spain

**P074** Genetic basis of falling risk susceptibility  
Katerina Trajanoska¹,², Felix Day¹,³, Carolina Medina-Gomez¹, Andre G. Uitterlinden¹, John Perry¹,³, Fernando Rivadeneira¹,²  
¹Internal Medicine, Erasmus Medical Center, Rotterdam, Netherlands, ²Epidemiology, Erasmus Medical Center, Rotterdam, Netherlands, ³MRC Epidemiology Unit, University of Cambridge School of Clinical Medicine, Cambridge, United Kingdom

**P075** Altered bone microarchitecture in CFTR-deficient newborn piglets  
Julien Braux¹, Marie-Laure Jourdain¹, Ignacio Caballero-Posadas², Nathalie Winter², Mustapha Si-Tahar², Nikolai Klymiuk¹, Sophie C. Gangloff¹, Jacky Jacquot¹, Frédéric Velard¹  
¹EA 4691 BIOS, University of Reims Champagne–Ardenne, Reims, France, ²Centre d’Etude des Pathologies Respiratoires, UMR1100, Inserm, Tours, France, ³Institute of Molecular Animal Breeding and Biotechnology, Gene Center, Ludwig–Maximilians-Universitat Munchen, Munchen, Germany

**P076** Children with Spinal Muscular Atrophy: a bone picture  
Francesca Broggi¹, Silvia Vai¹, Giovanni Baranello², Riccardo Zanin², Maria Luisa Bianchi¹  
¹Istituto Auxologico Italiano IRCCS, Milano, Italy, ²Fondazione Istituto Neurologico C. Besta IRCCS, Milano, Italy

**P077** FSH is positively associated with vertebral bone marrow adiposity in postmenopausal women from the AGES-Reykjavik cohort  
Annegreet G. Veldhuis-Vlug¹,², Gina N. Woods³,⁴, Sigurdur Sigurdsson⁵, Susan K. Ewing⁶, Phuong T. Le¹, Trisha F. Hue⁷, Kaipin Xu⁸, Vilmundur Gudnason⁹, Gunnar Sigurdsson⁹, Deborah M. Kado³,⁹, Gudny Eiriksdottir⁵, Tamara Harris¹⁰, Xiaojuan Li¹⁰, Clifford J. Rosen¹, Ann V. Schwartz⁶  
¹Center for Clinical and Translational Research, Maine Medical Center Research Institute, Scarborough, United States, ²Endocrinology and Metabolism, Academic Medical Center Amsterdam, Amsterdam, Netherlands, ³Department of Medicine, University of California San Diego, La Jolla, United States, ⁴VA San Diego Healthcare System, San Diego, United States, ⁵Icelandic Heart Association Research Institute, Reykjavik, Iceland, ⁶Department of Epidemiology and Biostatistics, University of California San Francisco, San Francisco, United States, ⁷Program of Advanced Musculoskeletal Imaging, Cleveland Clinic, Cleveland, United States, ⁸Faculty of Medicine, Icelandic Heart Association University of Iceland, Reykjavik, Iceland, ⁹Department of Family Medicine and Public Health, University of California San Diego, La Jolla, United States, ¹⁰National Institute on Aging, National Institutes of Health, Bethesda, United States

**P078** Grade 1 vertebral height loss is not associated with frailty in the Canadian Multicentre Osteoporosis Study (CaMos)  
Tayyab S Khan¹, George Ioannidis¹, Alexandra Papaioannou¹, Courtney Kennedy¹, Claudie Berger², Brian Lentle³, Jacques Brown⁴, Linda Probyn⁵, Christopher S Kovacs⁶, David A. Hanley⁷, Jerryllyn Prior⁸, David Goltzman⁹, Stephanie M. Kaiser¹⁰, Suzanne N. Morin¹, William D Leslie¹⁰, K. Shawn Davison¹¹, Tanveer Towheed¹¹, Wilma Hopman¹¹, Wojciech Olszynski¹², Jonathan D Adachi¹²  
¹McMaster University, Hamilton, Canada, ²McGill University, Montreal, Canada, ³University of British Columbia, Vancouver, Canada, ⁴Laval University and CHU de Quebec—(CHUL) Research Centre, Quebec City, Canada, ⁵University of Toronto, Toronto, Canada, ⁶Memorial University of Newfoundland, St. John, Canada, ⁷University of Calgary, Calgary, Canada, ⁸Dalhousie University, Halifax, Canada, ⁹University of Manitoba, Winnipeg, Canada, ¹⁰A Priori Medical Sciences Inc, Vancouver, Canada, ¹¹Queen’s University, Kingston, Canada, ¹²University of Saskatchewan, Saskatoon, Canada
P079 Low bone mass in mice with conditional Wnt1 deletion and an autosomal dominant WNT1 mutation causing early-onset osteoporosis
Nele Vollersen1, Timur Alexander Yorgan1, Irm Hermans-Borgmeyer2, Tim Rolvien1, Ralf Oheim1, Michael Amling1, Thorsten Schinke1
1Institut für Osteologie und Biomechanik, University Medical Center Hamburg-Eppendorf, Hamburg, Germany, 2Center for Molecular Neurobiology, University Medical Center Hamburg-Eppendorf, Hamburg, Germany

P080 Location of first spinal fracture as determinant of future vertebral fracture risk
Fjorda Koromani1,2,3, Ling Oei1,2,3, Stephan Breda2,3, Enisa Shevroja4, Joyce van Meurs1, Arfan Ikram2, JH Waarsing2, Frank van Rooij2, Carola Zillikens1, Andre Uitterlinden1,2, Gabriel Krestin3, Fernando Rivadeneira1,2, Edwin Oei3
1Internal Medicine, Erasmus Medical Center, Rotterdam, Netherlands, 2Epidemiology, Erasmus Medical Center, Rotterdam, Netherlands, 3Radiology, Erasmus Medical Center, Rotterdam, Netherlands, 4Bone & Joint, Lausanne University Hospital, Lausanne, Switzerland

P081 Effect of the Zinc finger Protein 384 (ZNF384) gene in a family with osteoporosis
Melissa M Formosa1, Dalila Palazzo1, Robert Formosa2, M. Carola Zillikens1, Andre G Uitterlinden1,4, Fernando Rivadeneira1,4, Annemieke JMH Verkerk3, Angela Xuereb-Anastasi7
1Department of Applied Biomedical Science, Faculty of Health Sciences, University of Malta, Msida, Malta, 2Department of Medicine, Faculty of Medicine and Surgery, University of Malta, Msida, Malta, 3Department of Internal Medicine, Erasmus MC, Rotterdam, Netherlands, 4Department of Epidemiology, Erasmus MC, Rotterdam, Netherlands

P082 The longitudinal association between type 2 diabetes and fractures in a large dutch cohort of older women
Petra Elders1, Thomas Merlijn2, Karin Swart1, Coen Netelenbos3
1General Practice and Elderly Care, VUmc medical centre, Amsterdam, Netherlands, 2General Practice and Elderly Care, Vumc Medical Centre, Amsterdam, Netherlands, 3Department of Internal Medicine, Endocrine Section, VUmc medical centre, Amsterdam, Netherlands

P083 Anabolic stimuli prevent the decline of bone formation associated with long-term exposure to sclerostin-neutralizing antibodies
Maude Gerbaix1, Serge Ferrari1
1University Geneva Hospital (HUG)/Faculty of Medicine (UNIGE), Geneva, Switzerland

P084 The effect of teriparatide and denosumab on circulating microRNAs related to bone metabolism in women with postmenopausal osteoporosis
Athanasios Anastasialakis1, Polizois Makras2, Symeon Tournis3, Maria Piklidou4, Konstantinos Makris5, Ilias Bissinas1, Olga Tsave6, John Yvos6, Maria Yavropoulou6
1Department of Endocrinology, 424 General Military Hospital, Thessaloniki, Greece, 2Department of Endocrinology and Diabetes, 251 Hellenic Air Force & VA General Hospital, Athens, Greece, 3Laboratory of Research of Musculoskeletal System Th. Garofalidis, University of Athens, Athens, Greece, 4Laboratory of Clinical and Molecular Endocrinology 1st Department of Internal Medicine, Aristotle University of Thessaloniki, Thessaloniki, Greece

P085 CYP11B1 is a key adrenal steroidogenesis factor influencing skeletal maturation in children of school age
Olja Grgic1, Alessandra Chesi2, Yoseph Barash3, Carolina Medina-Gomez4, Babette Zemel5, Shana McCormack6, Enisa Shevroja4, Katerina Trajanoska7, Jenny Visser8, Leo Hofland9, Vincent Jaddoe10, Andre Uitterlinden7, Eppe Walvis11, Struan Grant12, Fernando Rivadeneira13
1Department of Maxillo-Facial Surgery, Department of Internal Medicine, The Generation R Study, Erasmus MC, Rotterdam, Netherlands, 2Division of Human Genetics and Molecular Biology, The Children’s Hospital of Philadelphia, Philadelphia, United States, 3Genomics and computational Biology, Perelman School of medicine; University of Pennsylvania, Philadelphia, United States, 4Department of
Internal Medicine, Department of Epidemiology, The Generation R Study, Erasmus MC, Rotterdam, Netherlands, 1Division of Gastroenterology, Hepatology and Nutrition, The Children’s Hospital of Philadelphia, Philadelphia, United States, 2Division of Endocrinology and Diabetes, The Children’s Hospital of Philadelphia, Philadelphia, United States, 3Department of Internal Medicine, Erasmus MC, Rotterdam, Netherlands, 4Department of Internal Medicine, Department of Epidemiology, Erasmus MC, Rotterdam, Netherlands, 5Department of Internal Medicine, Erasmus MC, Rotterdam, Netherlands, 6Department of Maxillo-facial Surgery, The Generation R Study, Erasmus MC, Rotterdam, Netherlands, 7Department of Internal Medicine, The Generation R Study, Erasmus MC, Rotterdam, Netherlands, 8Department of Internal Medicine, Department of Epidemiology, Erasmus MC, Rotterdam, Netherlands, 9Department of Internal Medicine, Erasmus MC, Rotterdam, Netherlands, 10The Generation R Study, Erasmus MC, Rotterdam, Netherlands, 11Department of Maxillo-facial Surgery, The Generation R Study, Erasmus MC, Rotterdam, Netherlands, 12Department of Internal Medicine, The Generation R Study, Erasmus MC, Rotterdam, Netherlands

P086 Burosomab, an anti-FGF23 monoclonal antibody, for X-Linked Hypophosphatemia (XLH): analysis by age from two phase 2 pediatric trials
Wolfgang Högler1, Thomas O. Carpenter2, Erik Imel3, Anthony A. Portale4, Annemieke Boot5, Agnès Linglart6, Raja Padidela7, William van’t Hoff8, Gary S. Gottesman9, Meng Mao10, Alison Skrinar10, Javier San Martin10, Michael P. Whyte6
1Birmingham Children’s Hospital, Birmingham, United Kingdom, 2Yale School of Medicine, New Haven, United States, 3Indiana University School of Medicine, Indianapolis, United States, 4University of California, San Francisco, San Francisco, United States, 5University of Groningen, Groningen, Netherlands, 6Hôpital Bicêtre, Le Kremlin-Bicêtre, France, 7Royal Manchester Children's Hospital, Manchester, United Kingdom, 8Great Ormond Street Hospital, London, United Kingdom, 9Shriners Hospitals for Children, St Louis, United States, 10Ultragenyx Pharmaceutical Inc., Novato, United States

P087 Cellular and molecular analysis of patients affected by Gorham-Stout disease
Michela Rossi1, Giulia Battafarano1, Eda Mariani1, Paolo Sabrina Buonuomo1, Ilpolita Rana1, Alessandro Jenkner1, Rita De Vito1, Simone Pelle1, Matteo D’Agostini1, Andrea Bartuli2, Andrea Del Fattore1
1Bone Physiopathology Group, Multifactorial Disease and Complex Phenotype Research Area, Bambino Gesù Children’s Hospital, IRCCS, Rome, Italy, 2Rare Diseases and Medical Genetic Unit, Bambino Gesù Children’s Hospital, IRCCS, Rome, Italy, 3UO Rare Diseases, Bambino Gesù Children’s Hospital, IRCCS, Rome, Italy, 4Division of Immunology and Infectious Diseases Department of Pediatrics, Bambino Gesù Children’s Hospital, IRCCS, Rome, Italy, 5Histopathology Unit, Bambino Gesù Children’s Hospital, IRCCS, Rome, Italy, 6Casa di Cura Villa Aurora–San Feliciano, Rome, Italy, 7Clinical Laboratory, Bambino Gesù Children’s Hospital, IRCCS, Roma, Italy

P088 Effects of treatment with an angiotensin 2 receptor blocker and/or vitamin D on parathyroid hormone and aldosterone: a randomized, placebo-controlled trial
Lise Sofie Bislev1,2, Lene Langagergaard Rødbro1, Lars Rolighed3,4, Tanja Sikjær1, Lars Rejnmark1,2
1Department of Endocrinology and Internal Medicine, Aarhus University Hospital, Aarhus C, Denmark, 2Department of Clinical Medicine, Aarhus University, Aarhus C, Denmark, 3Department of Otolaryngology, Aarhus University Hospital, Aarhus C, Denmark, 4Department of Surgery P, Aarhus University Hospital, Aarhus C, Denmark

P089 Associations between metabolic syndrome and bone mineral density, trabecular bone score in postmenopausal women with non-vertebral fractures
Vladyslav Povoroznyuk1, Larysa Martynyuk1, Iryna Syzonenko1, Liliya Martynyuk7
1Department of Clinical Physiology and Pathology of Locomotor Apparatus, D. F. Chebotarev Institute of Gerontology NAMS Ukraine, Kyiv, Ukraine

P090 miRNAs as biomarkers for osteoporotic vertebral fractures
Patryk Zarecki1, Matthias Hackl2, Johannes Grillari2, Miguel Debono1, Richard Eastell1
1Department of Oncology & Metabolism, University of Sheffield, Medical School, Sheffield, United Kingdom, 2TamriRNA GmbH, Vienna, Austria

P091 Description of cortical fibula structure in trained footballers using peripheral quantitative computed tomography (pQCT), with dynamometric correlates
Sergio Luscher1, Laura Marcela Nocciolino1,2, Nicolas Pilat1, Leonardo Pisani2, Gustavo Roberto Cointry1, Joern Rittweger3,4, Alex Ireland6, Jose Luis Ferretti1, Ricardo Francisco Capozza1
PO92 Correlation of circulating microRNA and bone turnover biomarkers in ankylosing spondylitis patients using next-generation sequencing
Chi-Chien Niu1, Song-Shu Lin1, Li-Jen Yuan2, Chuen-Yung Yang3, Steve WN Ueng1
1Department of Orthopaedic Surgery, Chang Gung Memorial Hospital, Taoyuan, Taiwan, Republic of China, 2Department of Orthopaedic Surgery, É-Da Hospital / I-Shou University, Kaohsiung City, Taiwan, Republic of China

PO93 Mesenchymal cell-derived juxtacrine Wnt1 signaling regulates osteoblast activity and osteoclast differentiation
Fan Wang1, Kati Tarkkonen1, Vappu Nieminen-Pihala1, Kenichi Nagano2, Rana Al Majidi3, Tero Puolakkainen1, Petri Rummukainen1, Jemina Lehto1, Anne Roivainen1, Fuping Zhang4, Outi Mäkitie5,6, Roland Baroni1, Riku Kiviranta1,2
1University of Turku, Turku, Finland, 2Department of Oral Medicine, Harvard School of Dental Medicine, Boston, United States, 3Turku PET Centre and Turku Centre for Disease Modeling, University of Turku, Turku, Finland, 4Turku Center for Disease Modeling, University of Turku, Turku, Finland, 5Folkhälsan Institute of Genetics, Helsinki, Finland, 6University of Helsinki and Helsinki University Hospital, Helsinki, Finland, 7Department of Endocrinology, University of Turku and Turku University Hospital, Turku, Finland

PO94 Investigation into the role of CD146 (MCAM) in promoting the latter stages of metastases and tumor cell survival in the metastatic niche
Maren Tietgen1,2, Ulf Geisen1, Sanjay Tiwari1, Claus-Christian Glüer1
1MOIN CC, UKSH Kiel, Kiel, Germany, 2Molecular Oncology, UKSH Kiel, Kiel, Germany

PO95 Syndecan 3 deletion leads to premature bone ageing
Andrew Butcher1, Francesca Britto1, Gemma Charlesworth1, Amanda Prior1, Adolorata Pisconti2, George Bou-Gharios1, Anna Daroszewska1, Rob van ’t Hof1
1Department of Musculoskeletal Biology I, IACD, University of Liverpool, Liverpool, United Kingdom, 2Department of Biochemistry, IIB, University of Liverpool, Liverpool, United Kingdom

PO96 Plasma levels of microRNAs hsa-miR-30d-5p and hsa-miR-21-5p correlate with physical activity of postmenopausal women
Tilen Kranjc1, Barbara Ostanek1, Tomaž Kocjan2, Janez Preželj2, Janja Marc1
1University of Ljubljana, Faculty of Pharmacy, Ljubljana, Slovenia, 2Dept. of Endocrinology, Diabetes and Metabolic Diseases, University Medical Centre Ljubljana, Ljubljana, Slovenia

PO97 Mechanical characteristics of mineralized lacunae and surrounding bone tissue in osteoporotic and healthy humans
Annika vom Scheidt1, Ezgi D. Yilmaz2, Kathrin Mletzko1, Jasmin Koldehoff2, Eva Maria Wölfl1, Michael Amling1, Katharina Jähn1, Björn Busse1
1Department of Osteology and Biomechanics, University Medical Center Hamburg-Eppendorf, Hamburg, Germany, 2Institute of Advanced Ceramics, University of Technology Hamburg, Hamburg, Germany

PO98 Comparison of the reference interval for procollagen I N-propeptide and osteocalcin in men and women by two assays
Antonia Ugur1, Fatma Gossiel1, Philip Nicklin1, Jennifer Walsh5, Kim Naylor5, Richard Eastell1,2
1Academic Unit of Bone Metabolism, Oncology and Metabolism, University of Sheffield, Sheffield, United Kingdom, 2University of Sheffield, Mellanby Centre for Bone Research, Sheffield, United Kingdom

PO99 Significance of continuous gestational hypoglycaemia for foetal skeletal development in the rat
Vivi Flou Hjorth Jensen1,2,3, Anne-Marie Møck2, Jens Lykkesfeldt3, Fiona Mcguigan1, Kristina Åkesson1, Ingrid Brück Bøgh2
1Centro de Estudios de Metabolismo Fosfocálcico (CEMFoC), Universidad Nacional de Rosario, Rosario, Argentina, 2Center of Musculoskeletal Biomechanical Studies (CEBOM), University Institute of Gran Rosario (IUGR), Rosario, Argentina, 3Institute of Aerospace Medicine, German Aerospace Center (DLR), Cologne, Germany, 4Department of Pediatrics and Adolescent Medicine, University of Cologne, Cologne, Germany, 5School of Healthcare Science, Manchester Metropolitan University, Manchester, United Kingdom
1Department of Clinical Sciences Malmö, Clinical and Molecular Osteoporosis Research Unit, Lund University, Malmö, Sweden, 2Toxicology Development Projects, Novo Nordisk A/S, Maaloev, Denmark, 3Department of Veterinary and Animal Sciences, Section for Experimental Animal Models, University of Copenhagen, Copenhagen, Denmark

**P100** Mass spectrometry based biomarkers discovery for pseudarthrosis and confirmation using immunostaining  
Stefanie Kern1, Deeksha Malhan1, Felix Schulze2, Sabine Schulz3, Angela Rösen-Wolff2, Bernhard Spengler3, Markus Rupp4, Thaqif El Khassawna5, Christian Heiß1,4  
1Experimental Trauma Surgery, Justus–Liebig–University Giessen, Giessen, Germany, 2Department of Pediatrics, University Hospital Carl Gustav Carus, Technical University Dresden, Dresden, Germany, 3Institute of Inorganic and Analytical Chemistry, Justus–Liebig–University Giessen, Giessen, Germany, 4Department of Trauma, Hand and Reconstructive Surgery, University Hospital of Giessen–Marburg GmbH, Giessen, Germany

**P101** Circulating periostin and tartrate-resistant acid phosphatase 5b as markers of activity in Paget’s disease of bone  
Nuria Guanabens1, Xavier Filella2, Helena Florez3, Arantxa Conesa4, Silvia Ruiz-Gaspar5, Pilar Peris1, Ana Monegall1, Ferran Torres6  
1Rheumatology, Hospital Clinic, University of Barcelona, IDIBAPS, Barcelona, Spain, 2Biochemistry and Molecular Genetics, Hospital Clinic, University of Barcelona, IDIBAPS, Barcelona, Spain, 3Institute of Inorganic and Analytical Chemistry, University of Barcelona, Barcelona, Spain, 2Biostatistics and Data Management Platform, Hospital Clinic, IDIBAPS, Barcelona, Spain

**P102** Wnt3a and Wnt10b as biomarkers of changes in the regulation of bone metabolism in patients with Cushing’s disease  
Tatiana Grebennikova1, Zhanna Belaya1, Alexander Solodovnikov2, Alexander Ilyin1, Larisa Nikankina1, Galina Melnichenko1  
1The National Research Center for Endocrinology, Moscow, Russian Federation, 2Ural State Medical Academy, Ekaterinburg, Russian Federation

**P103** Asfotase Alpha: interference with ALP-detection system in immunoassays  
Isabelle Piec1, William D. Fraser1  
1Department of Medicine, University of East Anglia, Norwich, United Kingdom

**P104** Bone turnover markers after the menopause: T-score approach  
Fatma Gossiel1, Hibaallah Alataher2, David Reid3, Christian Roux4, Dieter Felsenberg5, Claus Glueer6  
1University of Sheffield, Sheffield.ac.uk, United Kingdom, 2University of Sheffield, Sheffield, United Kingdom, 3University of Aberdeen, Aberdeen, United Kingdom, 4Université Paris–Descartes, Paris, France, 5Universitätsmedizin Berlin, Berlin, Germany, 6Universitätsklinikum Schleswig–Holstein, Kiel, Germany

**P105** A new flow cytometry method to analyze Lamin A expression in Circulating Osteoprogenitor (COP) cells as a biomarker for musculoskeletal disease  
Ahmed Al Saedi1,2, Piumali Gunawardene1, Lakshman Singh1,2, Pushpa Suriyaarachchi Suriyaarachchi1, Gustavo Duque1,2  
1Melbourne Medical School (Western) – Faculty of Medicine, Dentistry and Health Sciences, The University of Melbourne, St Albans, Australia, 2Australian Institute for Musculoskeletal Science (AilSSS), St Albans, Australia, 3Sydney Medical School Nepean, The University of Sydney, Penrith, Australia

**P106** Development and characterization of an ELISA for the measurement of human Semaphorin 4D in plasma samples  
Anna Laber1, Elisabeth Gadermaier1, Gabriela Berg1,2, Gottfried Himmler1  
1The Antibody Lab GmbH, Vienna, Austria, 2Biomedica Medizinprodukte GmbH & Co KG, Vienna, Austria

**P107** A new, highly sensitive fluorescence immunoassay for the TGF–β antagonist ASPORIN based on plasmonic microtiter plates  
Gerhard Howa1, Teresa Jungwirth1, Albert Missbichler1, Adrian Prinz2, Georg Bauer2, Christoph Mauracher2  
1FIANOSTICS GmbH, Wiener Neustadt, Austria, 2STRATEC Consumables GmbH, Anif, Austria
P108 Identification of serum biomarkers associated with osteoporosis in Mexican postmenopausal women
Mayeli Margarita Martinez Aguilar1, Diana Aparicio-Bautista2, Juan Pablo Reyes-Grajeda3, Eric Gustavo Ramírez Salazar4, Jorge Salmerón Castro5, Berenice Rivera Paredez6, Rafael Velazquez Cruz7
1Genomic of Bone Metabolism Laboratory, National Institute of Genomic Medicine, Mexico, Mexico, 2Proteomic, National Institute of Genomic Medicine, Mexico, Mexico, 3Protein Structure, National Institute of Genomic Medicine, Mexico, Mexico, 4CONACYT-INMEGEN, National Institute of Genomic Medicine, Mexico, Mexico, 5Public Policy Research Institute, National Institute of Health, Mexico, Mexico, 6Public Policy Research Institute, National Institute of Public Health, Mexico, Mexico, 7Genomics of Bone Metabolism Laboratory, National Institute of Genomic Medicine, Mexico, Mexico

P109 Correlation of bone turnover markers, Vitamin D levels and steroidal hormones with bone density in healthy male population
Panagiotis Kokkoris1
1Hellenic Air Force General Hospital, Athens, Greece

P110 Mesenchymal stromal cells are sensitised to Wnt stimuli by plasma sprayed hydroxyapatite coatings
David Kuntin1,2,3, David Wood2, Niki Gosling2, Paul Genever1
1Biology, University of York, York, United Kingdom, 2University of Leeds, Leeds, United Kingdom, 3DePuy Synthes, Leeds, United Kingdom

P111 Therapeutic potential of periosteum-derived mesenchymal progenitor cells in bone regeneration
Ana Belén González-Gil1, José María Lamo-Espinosa1, Emma Muñños-López2, Purificación Ripalda-Cemborain1, Kai Stuckensen3, Gloria Abizanda4, Elena María Juan-Pardo5, Juergen Groll5, Dietmar W. Huttmacher6, Felipe Pröisper,7, Frolán Granero-Maltó1,2
1Orthopaedic Surgery and Traumatology, Clínica Universidad de Navarra, Pamplona, Spain, 2Cell Therapy, Clínica Universidad de Navarra, Pamplona, Spain, 3Functional Materials in Medicine and Dentistry, University of Würzburg, Würzburg, Germany, 4Cell Therapy, Clínica Universidad de Navarra, Pamplona, Spain, 5Regenerative Medicine, Queensland University of Technology, Brisbane, Australia

P112 Vitamin E (α-tocopherol) administration enhances the osseointegration of stainless steel implants by suppressing the immediate postoperative oxidative stress. An experimental study in rats
Matthaios Savvidis1, Ioannis Taitoglou2, Kyriakos Papavasiliou3, Ioannis Mirisidis4, Aristidis Veskoukis5,6, Ioannis Vrabas4, Nikiforos Galanis3, Ioannis Kyrkos1
11st Orthopaedic Dpt, 424 General Military Hospital, Thessaloniki, Greece, 2Laboratory of Physiology, School of Veterinary Medicine, Aristotle University, Thessaloniki, Greece, 33rd Orthopaedic Department, Aristotle University, Papageorgiou General Hospital, Thessaloniki, Greece, 4Laboratory for Machine Tools and Manufacturing Engineering, Mechanical Engineering Department, Aristotle University, Thessaloniki, Greece, 5Department of Biochemistry and Biotechnology, University of Thessaly, Larissa, Greece, 6Exercise Physiology and Biochemistry Laboratory, Faculty of Physical Education and Sport Sciences, Aristotle University, Serres, Greece

P113 Hydrogen sulfide–loaded silk fibroin scaffold for bone tissue regeneration
Laura Gambini1, Emanuela Amore1, Brunella Grigolo1, Antonella Motta2, Francesco Grassi1
1Lab Ramses, Istituto Ortopedico Rizzoli, Bologna, Italy, 2Department of Industrial Engineering, University of Trento, Trento, Italy

P114 Evaluation of fracture healing by Low Adhesive Scaffold Collagen (LASCol) in a rat femur osteotomy model
Toshiyuki Takemori1, Naomasa Fukase1, Soori Kunii2, Ryosuke Kuroda1, Koichi Morimoto2
1Kobe University, Kobe, Japan, 2Kindai University, Kinokawa, Japan

P115 Human mesenchymal stromal cells in adhesion to cell–derived extracellular matrix and titanium: comparative kinome profile analysis
Marta Barocelli1, Gwenny Fuhler2, Jeroen van de Peppel1, William Zambuzzi1, Johannes van Leeuwen1, Maikel Peppelenbosch2, Bram van der Eerden1
1School of Medicine, University of Waikato, Hamilton, New Zealand, 2Department of Chemistry, University of Waikato, Hamilton, New Zealand
P116 Histomorphometrical comparison of three different bone grafts: deproteinized bovine bone, bioglass and, synthetic hydroxyapatite


1Institute of Immunology, Genetics and Metabolism, Osteopathies Laboratory, University of Buenos Aires–CONICET, Ciudad Autónoma de Buenos Aires, Argentina, 2General and Oral Biochemistry, University of Buenos Aires, School of Dentistry, Ciudad Autónoma de Buenos Aires, Argentina

P117 Bone regenerative potential of adipose-derived stromal vascular fraction on a xenohybrid bone scaffold


1Center for Research and Medical Studies, A.O.U. Città della Salute e della Scienza of Turin, Turin, Italy, 2Chemistry, Materials and Chemical Engineering ’Giulio Natta’, Politecnico of Milan, Milan, Italy, 3Surgical Sciences, University of Turin, Turin, Italy, 4Life Sciences & Systems Biology, University of Turin, Turin, Italy, 5Pathology Unit, A.O.U. Città della Salute e della Scienza of Turin, Turin, Italy, 6Industrie Biomediche Insibri SA, Mezovico-Vira, Switzerland, 7University of Applied Sciences and Arts–SUPSI, Manno, Switzerland, 8Surgical Sciences (DISC), Orthopaedic Clinic–IRCCS A.O.U. San Martino, Genoa, Italy

P118 Investigation of the relationship between stem taper topography and the degree of corrosion and fretting in total hip arthroplasty


1Department of Osteology and Biomechanics, University Medical Center Hamburg-Eppendorf, Hamburg, Germany, 2Department of Orthopedic Surgery, Helios ENDO-Klinik Hamburg, Hamburg, Germany

P119 Comparison of healing effect on inflammatory bone loss between cultivated human dental pulp stem cells and their conditioned medium concentrate

*In Sook Kim*1, *Soon Jung Hwang*2

1Dental Research Institute, Seoul National University, Seoul, Korea, Republic of, 2Department of Oral and Maxillofacial Surgery, School of Dentistry, Seoul National University, Seoul, Republic of

P120 Characterization of Mg-alloy degradation from in-vivo µCT-data within the MgBone project

*Timo Damm*1, *Olga Will*1, *Mirko Gerle*1, *Claus-Christian Glueer*1

1Department of Biomedical Imaging, Clinic of Radiology, University-Hospital Schleswig-Holstein, Kiel, Germany, 2Clinic of Oral and Maxillofacial Surgery, University-Hospital Schleswig-Holstein, Kiel, Germany

P121 The impact of titanium dioxide–based scanning powder on L929 cells and human oral fibroblasts

*Gunpreet Oberoi*1,2, *Anna Müller*1,2, *Andreas Moritz*1,2, *Hassan Shokoohi–Tabrizi*1,2, *Christoph Kurzmann*1,2, *Hermann Agis*1,2

1Department of Conservative Dentistry and Periodontology, School of Dentistry, Medical University of Vienna, Vienna, Austria, 2Austrian Cluster for Tissue Regeneration, Vienna, Austria

P122 Comparison of osteogenic efficacy between alendronate, zoledronate or risedronate–combined collagen sponge composites for high dose BMP-2 delivery

*In Sook Kim*1, *Soon Jung Hwang*2

1Dental Research Institute, Seoul National University, Seoul, Korea, Republic of, 2Department of Oral and Maxillofacial Surgery, School of Dentistry, Seoul National University, Seoul, Korea, Republic of

P123 Electrospun shape memory mesh for in-vivo delivery of therapeutics to aid in fracture healing in a diabetic rodent model

*Benjamin Braun*1, *Jordan Skelly*1, *Ben Zhang*1, *David Ayers*1, *Jie Song*1

1Orthopaedic Surgery, University of Massachusetts Medical School, Worcester, United States
P124  **KP-070, a novel benzamide derivative, protects ligature-induced alveolar bone erosion by inhibiting NFATC1-mediated osteoclastogenesis**

*Hye Jung Ihn*¹, *Ju Ang Kim*², *Soomin Lim*², *Jung Eun Kim*³, *Hong-In Shin*², *Eui Kyun Park*²

¹Institute for Hard Tissue and Bio–tooth Regeneration, Deagu, Korea, Republic of, ²Pathology and Regenerative Medicine, Kyungpook National University School of Dentistry, Deagu, Korea, Republic of, ³Molecular Medicine, Kyungpook National University School of Medicine, Daegu, Korea, Republic of, ⁴Pathology and Regenerative Medicine, Kyungpook National University School of Dentistry, Daegu, Korea, Republic of

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P125  **Biodegradable poly(lactide-co-glycolide) beads for multiple deliveries of Wnt agonists and antibiotics to treat bone infection**


¹Department of Orthopaedic Surgery, Chang Gung Memorial Hospital, Taoyuan, Taiwan, Republic of China, ²Department of Mechanical Engineering, Chang Gung University, Taoyuan, Taiwan, Republic of China, ³Department of Biotechnology and Laboratory Science, Chang Gung University, Taoyuan, Taiwan, Republic of China, ⁴GenProNex INC, Research and Development, Taoyuan, Taiwan, Republic of China

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P126  **Impact of implantoplasty on surface roughness and human fibroblast growth in vitro**

*Mehrnaz Beheshti Maal*¹, *Stig Aanerød Ellingsen*¹, *Janne Reseland*², *Anders Verket*¹

¹Institute of Clinical Dentistry, Oslo, Norway, ²Biomaterials, Institute of Clinical Dentistry, Oslo, Norway

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P127  **Low adhesive scaffold type I collagen prepared from pig shinbone induces the osteogenic differentiation of rat bone marrow stromal cells**

*Saori Kunii*¹, *Koichi Morimoto*¹

¹Kindai University, Kinokawa, Japan

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P128  **Characterization of bone extracellular matrix produced by Recql4-deficient osteoblasts**

*Tatiana Gritsaenko*¹, *Valérie Pierrefite-Carle*¹, *Jean–Marie Guigonis¹, *Sabrina Pisano²*, *François Orange²*, *Chantal Cros²*, *Georges F. Carle¹*, *Sabine Santucci-Darmanin¹*

¹TIRO-MATOs UMR E-4320, CEA/UNS, Université Nice Sophia Antipolis / BIAM, Nice, France, ²IRCAN – CNRS UMR 7284, INSERM U1081, Université Nice Sophia Antipolis, Nice, France, ³Centre Commun de Microscopie Appliquée (CCMA), Université Nice Sophia Antipolis, Nice, France

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P129  **Original densitometric evidence of the independent influence of regional muscles’ mass, strength and use and sex hormones upon bone mineral content (BMC) determination**


¹Biomelab Research Center, Barranquilla, Colombia, ²Centro de Estudios de Metabolismo Fosfocálcico (CEMFoC), Universidad Nacional de Rosario, Rosario, Argentina, ³George Washington University, Washington D.C., United States, ⁴School of Healthcare Science, Manchester Metropolitan University, Manchester, United Kingdom, ⁵Fundación Oftalmológica de Santander (FOSCAL), Bucaramanga, Colombia

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P130  **Microarchitecture variation in the vicinity of the standard transiliac biopsy site assessed by microCT**

*Stéphane Blouin*¹, *Barbara Misof*², *Andrea Berzlanovich*², *Gerlinde Maria Gruber*³, *Klaus Klaushofer*¹, *Peter Fratzl*⁴, *Paul Roschger*¹

¹1st Medical Department, Ludwig Boltzmann Institute of Osteology at the Hanusch Hospital of WGGK and AUFF Trauma Centre Meidling, Vienna, Austria, ²Department of Forensic Medicine, Medical University of Vienna, Vienna, Austria, ³Department of Anatomy, Center for Anatomy and Cell Biology, Medical University of Vienna, Vienna, Austria, ⁴Department of Biomaterials, Max Planck Institute of Colloids and Interfaces, Vienna, Austria
P131 Relationships between DXA-assessed bone, lean and fat masses in a large sample of non-obese children, men, and pre- and post-menopausal women considering the Tanner stage
Edgar Denova-Gutierrez1,2, Patricia Clark2-3, Ricardo Francisco Capozza4, Laura Marcela Nocciolino4, José Luis Ferreretti4, Rafael Velazquez-Cruz5, Berenice Rivera6, Alex Ireland7, Gustavo Roberto Cointry3-4, Jorge Salmerón8-9
1Centro de Investigación en Nutrición y Salud, Instituto Nacional de Salud Pública, Cuernavaca, Mexico, 2Facultad de Medicina, Universidad Nacional Autónoma de México, Ciudad de México, Mexico, 3Unidad de Investigación en Epidemiología Clínica, Hospital Infantil de México Federico Gómez, Ciudad de México, Mexico, 4Centro de Estudios de Metabolismo Fosfocálcico (CEMFOC), Universidad Nacional de Rosario, Rosario, Argentina, 5Laboratorio de Genómica del Metabolismo Óseo, Instituto Nacional de Medicina Genómica, Ciudad de México, Mexico, 6Unidad Académica en Investigación Epidemiológica, Centro de Investigación en Políticas, Población y Salud. Facultad de Medicina, Universidad Nacional Autónoma de México, Ciudad de México, Mexico, 7School of Healthcare Science, Manchester Metropolitan University, Manchester, United Kingdom, 8Centro de Investigación en Salud Poblacional, Instituto Nacional de Salud Pública, Cuernavaca, Mexico

P132 Influence of egg production on tibiae bone properties of laying hens
Beryl Eusemann1, Stefanie Petow1, Estefania Sanchez-Rodriguez1, Cristina Benavides-Reyes1, Nazaret Dominguez-Gasca2, Santiago Gonzalez-Lopez3, Alejandro B. Rodriguez-Navarro2
1Institute of Animal Welfare and Animal Husbandry, Friedrich–Loeffler-Institut, Celle, Germany, 2Departamento de Mineralogía y Petrología, University of Granada, Granada, Spain, 3Departamento de Estomatología, University of Granada, Granada, Spain

P133 Dose microstructural and mechanical change effect on change of stress distribution on the distal femur with osteoarthritic change?
Kwangkyoun Kim
1Orthopedic Surgery, Konyang University, Daejeon, Korea, Republic of

P134 Delayed fracture healing in Mmp10 (Stromelysin 2) knockout mice
José Valdés-Fernández1, Emma Muñoz-López1, Tania López-Martínez1, Purificación Ripalda-Cembrán1, José Antonio Rodriguez2, Jose Antonio Páramo3,4, Josune Orbe5, Felipe Prósper1,3, Froilán Granero-Moltó1,5
1Cell Therapy, Clínica Universidad de Navarra, Pamplona, Spain, 2Atherothrombosis Research Laboratory, CIMA–University of Navarra, Pamplona, Spain, 3Haematology, Clínica Universidad de Navarra, Pamplona, Spain, 4Atherothrombosis Research Laboratory, CIMA–University of Navarra, Pamplona, Spain, 5Orthopaedic Surgery and Traumatology, Clínica Universidad de Navarra, Pamplona, Spain

P135 Autoantibodies in human growth correlate positively with body dimensions
Christoph Haudum1,2, Waldemar Minich3, Julia Münzker1, Andrea Groselj-Strele4, Ewald Kolesnik5, Ines Mursic6, Christian Schwiebert3, Tim Welsink3, Albrecht Schmidt6, Thomas Pieber1,2, Lutz Schomburg3, Barbara Obermayer-Pietsch1,2
1Division of Endocrinology and Diabetology, Department of Internal Medicine, Medical University Graz, Graz, Austria, 2CBmed GmbH – Center for Biomarker Research in Medicine, Graz, Austria, 3Institut für Experimentelle Endokrinologie, Charité–Universitätsmedizin, Berlin, Germany, 4Center for Medical Research, Core Facility Computational Bioanalytics, Medical University of Graz, Graz, Austria, 5Division of Cardiology, Department of Internal Medicine, Medical University of Graz, Graz, Austria

P136 Increased Midkine serum levels in female fracture patients after menopause negatively affect osteogenic differentiation
Verena Fischer1,2, Miriam Kalbitz2,3, Florian Gebhard2,3, Anita Ignatius1,2, Astrid Liedert1,2, Melanie Haffner-Luntzer1,2
1Institute of Orthopedic Research and Biomechanics, Ulm University, Ulm, Germany, 2Center for Trauma Research Ulm (ZTF), Ulm University, Ulm, Germany, 3Department of Traumatology, Hand-, Plastic-, and Reconstructive Surgery, University Medical Center Ulm, Ulm, Germany
P137 **Populations of Colony-forming mesenchymal stromal cells are tolerant to antimicrobial silver ion concentrations by activation of the glutathione antioxidant pathway**

*Paul Souter¹, James Dodd², Katie Blackwell³, Emma Tozer³, Mike Hall³, Jim Cunningham², Darren Wilson², Alan Horner², Paul Genever¹*

¹Department of Biology, University of York, York, United Kingdom, ²Smith & Nephew plc, Hull, United Kingdom

P138 **IL-4 strongly inhibits osteogenic differentiation of human adipose stem cells under hypoxia**

*Angela Bastidas-Coral¹, Jolanda Hogervorst¹, Tim Forouzanfar², Jenneke Klein-Nulend¹, Astrid Bakker¹*

¹Oral Cell Biology, ACTA, UvA and VU, Amsterdam, Netherlands, ²Oral and Maxillofacial Surgery, VU University Medical Center, Amsterdam, Netherlands

P139 **Management of femoral fractures in an orthogeriatric ward**

*Ferdinando D’Amico¹, Rosetta Grasso²*

¹Geriatrics, Hospital of Patti – University of Messina, Patti, Italy, ²Geriatrics, Hospital of Patti, Patti, Italy

P140 **Growth rate of the tibia after implantation of selenium enhanced hydroxyapatite into it**

*Oleg Meriuts¹, Vladyslav Luzin¹, Dmitry Astrakhantsev¹, Ilya Prikhodchenko¹*

¹LPR SE, St. Luke State Medical University of Lugansk, Lugansk, Ukraine

P141 **Profiling osteogenic and angiogenic markers in cells engaged in early alveolar/mandibular bone formation**

*Jan Bobek¹, Barbora Veselá¹, Eva Švandová¹, Hervé Lesot³, Eva Matalová¹*

¹Institute of Animal Physiology and Genetics, Czech Academy of Sciences, Brno, Czech Republic

P142 **Bone structural changes on neonatally thymectomized rats: A histomorphometric study**

*Wagner Garcez de Mello¹², Noêlle Egidia Watanabe Kii³, Gisele Mitsu Kayahara³, Olivia Borgi Nascimento¹, Narayana Guimardes Marqui¹, Samuel Rodrigues Lourenço de Morais¹, Marcelo Macedo Criveli¹, João Cesar Bedran de Castro²*

¹Centro Universitário Toledo–UNI TOLEDO, Araçatuba, Brazil, ²Department of Basic Sciences, School of Dentistry, Univ. Estadual Paulista–UNESP, Araçatuba, Brazil, ³Department of Pathology and Clinical Propaedeutic, School of Dentistry, Univ. Estadual Paulista–UNESP, Araçatuba, Brazil

P143 **Macroelemental composition of tibial proximal epiphysis in rats after 60-day application of sodium benzoate and formation of defect in tibia**

*Olga Fastova¹, Vladyslav Luzin¹, Vitaly Morozov², Helen Morozova², Nadezhda Mosyagina¹*

¹LPR SE, St. Luke State Medical University of Lugansk, Lugansk, Ukraine, ²Belgorod National Research University, Belgorod, Russian Federation

P144 **KIAA1199, a novel secreted factor of stromal (skeletal) stem cells that promotes adipogenesis and cellular cross-talk in bone marrow microenvironment**

*Li Chen¹, Kaikai Shi¹, Weimin Qiu¹, Greet Kerckhofs², Thomas Levin Geiser Andersen¹, Moustapha Kassem¹⁴*

¹Department of Endocrinology and Metabolism, Endocrine Research Laboratory (KMEB), Odense University Hospital, Southern Denmark University, Odense, Denmark, ²Biomechanics Lab – Institute of Mechanics, Materials and Civil Engineering, UCLouvain, Louvain-la-Neuve, Belgium, ³Department of Clinical Cell Biology (KCB), Institute of Regional Health Research, University of Southern Denmark, Odense, Denmark, ⁴The Danish Stem Cell Center (DanStem), University of Copenhagen, Copenhagen, Denmark

P145 **Bone marrow mesenchymal stem cell implantation for osteonecrosis of femoral head. A matched pair control study**

*Joon-Soon Kang¹, Young-Sook Park², Jun-Sung Park¹*

¹Inha University Hospital, Incheon, Korea, Republic of, ²Eulji Medical University Hospital, Seoul, Korea, Republic of

P146 **Dissociation of the inverse relationship of marrow adipocytes and osteoblasts in burns**

*Amina El Ayadi¹, Ron Helderman², David Herndon¹, Celeste C Finnerty¹, Clifford J Rosen², Gordon L Klein²*
P147 Inhibition of 1,25(OH)2D3-enhanced intestinal calcium transport after exposure to high apical calcium is mediated by calcium-sensing receptor and fibroblast growth factor-23
Narattaphol Charoenphandhu1,2,3, Mayuree Rodrat1,2, Kannikar Wongdee2,4
1Department of Physiology, Faculty of Science, Mahidol University, Bangkok, Thailand, 2Center of Calcium and Bone Research, Faculty of Science, Mahidol University, Bangkok, Thailand, 3Institute of Molecular Biosciences, Mahidol University, Nakhon Pathom, Thailand, 4Faculty of Allied Health Sciences, Burapha University, Chonburi, Thailand

P148 Impairment of intestinal calcium absorption, bone mineral density and mechanical property in spontaneous hydrenephrotic mice
Panan Suntornsaratoon1,2, Nithipak Thammayon1,2, Narattaphol Charoenphandhu1,2,3
1Department of Physiology, Faculty of Science, Mahidol University, Bangkok, Thailand, 2Center of Calcium and Bone Research, Faculty of Science, Mahidol University, Bangkok, Thailand, 3Institute of Molecular Biosciences, Mahidol University, Nakhon Pathom, Thailand

P149 The effect of Vitamin D supplementation on plasma Non–Oxidized PTH concentration
Stan Ursem1, Vito Francic2, Martin Gaksch3, Verena Schwetz2, Christian Trummer2, Marlene Pandis2, Felix Aberer3, Martin Grubler2, Nicolas D. Verheyen1, Winfried Marz2, Thomas R. Pieber2, Andreas Tomaschitz4, Stefan Pilz2, Barbara Obermayer-Pietsch2, Annemieke C. Heijboer1,6
1Clinical Chemistry, Endocrine Laboratory, VU University Medical Center, Amsterdam, Netherlands, 2Division of Endocrinology and Diabetology, Medical University of Graz, Graz, Austria, 3Department of Laboratory Medicine, Paracelsus Medical University, Salzburg, Austria, 4Division of Cardiology, Medical University of Graz, Graz, Austria, 5Synlab Holding Germany GmbH, Synlab Academy, München, Germany, 6Department of Clinical Chemistry, Laboratory of Endocrinology, Academic Medical Center, Amsterdam, Netherlands

P150 Bone and calcium metabolic changes during anti-resorptive treatment in early breast cancer
Victoria Gunmalm1, Anne Qvist Rasmussen1, Trine Lund-Jacobsen1, Michael Andersson2, Charlotte Brøns1, Peter Schwarz1
1Department of Endocrinology, Rigshospitalet, Copenhagen, Denmark, 2Department of Oncology, Rigshospitalet, Copenhagen, Denmark

P151 LC–MS/MS based 25(OH)D status in a large central European outpatient cohort – gender and age specific differences
Markus Herrmann1, Silvia Giuliano2, Verena Barbieri1, Angela Maria Di Pierra3, Fabio Rossi4, Thomas Widmann5, Manuela Lucchiarì6, Irene Pusceddu7, Stefan Pilz2, Barbara Obermayer–Pietsch2
1Clinical Institute for Medical and Chemical Laboratory Diagnostics, Medical University of Graz, Graz, Austria, 2Department of Clinical Pathology, Bolzano Hospital, Bolzano, Italy, 3Bolzano Hospital, Bolzano, Italy, 4Asklepios Clinic Triberg, Triberg, Germany, 5Department of Internal Medicine, Division of Endocrinology and Diabetology, Medical University of Graz, Graz, Austria

P152 The relevance of vitamin D receptor gene BsmDand FokDpolymorphism with bone mineral density in Han female in Changchun City
Mengmeng ZHANG1, Qianqian Ma1, Weixian Mao1, Yuan Gao1, Shikai Song1, Jiwei Yin1
1Osteoporosis Treatment Center, The Fourth Hospital of Jilin University, Changchun, China

P153 Clinical profile of patients with chronic hypoparathyroidism and potential indications for treatment with parathyroid hormone
Antonia Garcia-Martín1, M Carmen Serrano-Laguna1, Maria Hayón-Ponce1, M Dolores Avilés-Pérez1, Elena Torres-Vela1, Manuel Muñoz-Torres1
1Endocrinology, University Hospital Campus de la Salud, Granada, Spain

P154 The role of non–canonical Wnt signalling in osteosarcoma formation
Kazuhiko Matsuoka1, Latifa Bakiri1, Özge Uluçkan2, Erwin F. Wagner1, Genes, Development and Disease Group
P155 RANK expression in Circulating Tumor Cells (CTCs): clinical utility in monitoring metastatic breast cancer patients (MBC) under Denosumab treatment
Francesco Pantano¹, Elisabetta Rossi²,³, Michele Iuliani¹, Giulia Ribelli¹, Sonia Simonetti¹, Bruno Vincenzi¹, Giuseppe Tonini¹, Rita Zamarchi², Daniele Santini¹
¹Medical Oncology, Campus Bio-Medico University of Rome, Rome, Italy, ²Veneto Institute of Oncology IOV–IRCCS, Padua, Italy, ³Department of Surgery, Oncology and Gastroenterology, Oncology Section, University of Padova, Padova, Italy

P156 A long-coding RNA MANCR, restricted in expression to metastatic breast cancer metastatic cells, induces cell death upon depletion
Kristen Tracy¹, Coralee Tye¹, Prachi Ghule¹, Heidi Malaby², Jason Stumpff², Janet Stein¹, Gary Stein¹, Jane Lian¹
¹Biochemistry, University of Vermont Larner College of Medicine, Burlington, United States, ²Molecular Physiology and Biophysics and Vermont Cancer Center, University of Vermont Larner College of Medicine, Burlington, United States

P157 LIGHT promotes osteolytic bone metastases in non-small cell lung cancer patients
Giacomina Brunetti¹, Dimas Carolina Belisario², Lucio Buffoni¹, Silvia Colucci¹, Giuseppe Ingravallo⁴, Carl Ware⁴, Maria Grandi², Riccarda Ferracini², Ilaria Roato²
¹Basic and Medical Sciences, Neurosciences and Sense Organs, section of Human Anatomy and Histology, University of Bari, Bari, Italy, ²CeRMS, A.O.U. Città della Salute e della Scienzi di Torino, Torino, Italy, ³Oncology, San Luigi Hospital, University of Turin, Orbassano, Italy, ⁴Emergency and Organ Transplantation, Pathology Section, University of Bari, Bari, Italy, ⁵Infectious and Inflammatory Disease Center, Sanford Burnham Prebys Medical Discovery Institute, La Jolla, United States, ⁶Emergency and Organ Transplantation, Section of Human Anatomy and Histology, University of Bari, Bari, Italy, ⁷DISC, S. Martino Hospital, University of Genova, Genova, Italy

P158 Inhibition of PARP1 potentiate the effect of the DNA damaging agent doxorubicin in osteosarcoma
Jung Ryul Kim¹, Kyu Yun Jang¹
¹Orthopaedic Surgery, Chonbuk National University Medical School, Jeonju, Korea, Republic of

P159 In-vitro effect of pharmaco-modulation of pyridazinone molecules on osteosarcoma cells
Aurélie Moniot¹, Fabien Lamret¹, Christine Guillaume¹, Ingrid Allart-Simon², Janos Sapi², Sophie C. Gangloff¹, Stéphane Gérard², Frédéric Velard¹
¹EA4691 BIOS, Université Reims Champagne-Ardenne, Reims, France, ²UMR CNRS 7312 ICMR, Université Reims Champagne-Ardenne, Reims, France

P161 Role of osteoblasts (OBS) in castration resistant prostate cancer (CRPC) progression
Giulia Ribelli¹, Sonia Simonetti¹, Michele Iuliani¹, Bruno Vincenzi¹, Giuseppe Tonini¹, Daniele Santini¹, Francesco Pantano¹
¹Campus Bio-Medico University, Rome, Italy

P162 Increased osteoblastic activity suppressed proliferation of multiple myeloma plasma cells
Young-Hoon Kim¹, Yoo-Kyung Cho², Kee-Yong Ha², Hyung-Youl Park²
¹Seoul St. Mary’s Hospital, The Catholic University of Korea, Seoul, Korea, Republic of, ²Orthopedic surgery, Seoul St. Mary’s Hospital, The Catholic University of Korea, Seoul, Korea, Republic of

P163 Regulation of RANKL in human osteosarcoma cells
Nika Lovšin¹, Klemen Kodrič², Janja Marc¹
¹University of Ljubljana, Faculty of pharmacy, Ljubljana, Slovenia, ²Faculty of Pharmacy, University of Ljubljana, Ljubljana, Slovenia

P164 Role of autophagy in the crosstalk between osteosarcoma and the bone microenvironment
Valérie Pierrefite-Carle¹, Olivier Camuzard¹, Sabine Santucci-Darmanin¹, Tatiana Gritsaenko¹, Sophie Pagnotta², Chantal Cros¹, Fanny Burel-Vandenbos³, Dominique Heymann², Georges F. Carle¹
P165  ER exit site microautophagy recycles misfolded procollagen in osteoblasts
Shakib Omari1, Elena Makareeva1, Lynn Mirigian1, Anna Roberts-Pilgrin1, Edward Mertz1, Michal Jarnik1, Laura Gorrell1, Jennifer Lippincott-Schwartz2, Sergey Leikin1
1NIHMD, National Institutes of Health, Bethesda, United States, 2Janelia Research Campus, Howard Hughes Medical Institute, Ashburn, United States

P166  Wnt1 is an Lrp5-independent bone-anabolic Wnt ligand
Julia Luther1, Timur A Yorgan1, Tim Rolvien1, Lorenz Ulsamer1, Till Koehne1,2, Daniela Mau1,3, Nelle Vollersen1, Stefan Teufel1,4, Mona Neven1, Sefanie Peters1, Michaela Schweizer5, Andreas Trumpp6, Sebastian Rosigkeit7, Ernesto Bockamp7, Stefan Mundlos8,9, Uwe Kornak3,8,9, Ralf Oheim1, Michael Amling1, Thorsten Schinke1, Jean-Pierre David1
1Institute for Osteology and Biomechanics (IOBM), University Medical Center Hamburg-Eppendorf, Hamburg, Germany, 2Department of Orthodontics, University Medical Center Hamburg-Eppendorf, Hamburg, Germany, 3Berlin-Brandenburg Center for Regenerative Therapies, Charité-Universitätsmedizin Berlin, Berlin, Germany, 4Institute of Experimental Musculoskeletal Medicine, Medical Faculty of the University of Münster, Münster, Germany, 5Center for Molecular Neurobiology Hamburg, University Medical Center Hamburg-Eppendorf, Hamburg, Germany, 6Division of Stem Cells and Cancer, Deutsches Krebsforschungszentrum (DKFZ), Heidelberg, Germany, 7Institute for Translational Immunology and Research Center for Immunotherapy, University Medical Center, Johannes Gutenberg University, Mainz, Germany, 8Institute of Medical Genetics and Human Genetics, Charité-Universitätsmedizin Berlin, Berlin, Germany, 9Max Planck Institute for Molecular Genetics, Berlin, Germany

P167  Single-cell high content imaging predicts the functionality of cultured skeletal stem cells.
Justyna Magdalena Kowal1, Hagen Schmal2, Arndt-Peter Schulz3, Moustapha Kassem1
1The Molecular Endocrinology & Stem Cell Research Unit, Odense University Hospital, Odense, Denmark, 2Department of Orthopaedics and Traumatology and Department of Clinical Research, Odense University Hospital, Odense, Denmark, 3Department of Orthopaedics and Trauma Surgery, University Medical Center Schleswig-Holstein, Luebeck, Germany

P168  Osteoblast functionality in patients with Shwachman-Diamond syndrome
Annalisa Frattini1,2, Isabella Villa3, Roberto Valli3, Michela Signo4, Simona Bolamper4, Maria Rita Pinto4, Marco Zecca3, Maria Rita Frau5, Emanuela Maserati5, Francesco Pasquali5, Alessandro Rubiniacci3
1Human and Medical Genetics, Department of Medicine and Surgery, University of Insubria, Varese, Italy, 2IRGB, National Council of Research, Milan, Italy, 3Bone Metabolism Unit, San Raffaele Scientific Institute, Milan, Italy, 4Department of Pediatric Hematology/Oncology and Transfusion Medicine, IRCCS Bambino Gesù Hospital, Rome, Italy, 5Department of Pediatric Oncohematology, IRCCS Policlinico San Matteo, Pavia, Italy, 6Pediatric and Intensive Care Unit, San Francesco Hospital, Nuoro, Italy

P169  Azathioprine protects against poor bone health in mice with DSS induced inflammatory bowel disease
Stephanie Morgan1, Kirsty Hooper1, Katherine Halewood1, Elspeth Milne1, Colin Farquharson2, Craig Stevens1, Katherine Staines1
1School of Applied Sciences, Edinburgh Napier University, Edinburgh, United Kingdom, 2Roslin Institute and R(D)SVS, University of Edinburgh, Edinburgh, United Kingdom

P170  Hepcidin regulate biomineralization of bone by BMP Signaling in zebrafish
Yu Jiang1
1The Second Affiliated Hospital of Soochow University, Suzhou, China

P171  CSaR1 interacts with TLR2 and upregulates the immune cell-recruiting and osteoclast-inducing chemokine CXCL10 in osteoblasts
Yvonne Mödinger1, Verena Fischer1, Melanie Haffner-Luntzer1, Anna Rapp1, Julia Pazmandi1, Markus Huber-Lang2, Anita Ignatius1
1Friedrich-Alexander-Universität Erlangen-Nürnberg, Institute of Anatomy, Erlangen, Germany, 2University Medical Center, Innsbruck, Austria
P172 Activation of TRPC3 by ATP regulates the differentiation and functions of bone cells in bone remodelling
Yu-Mi Yang1, Namju Kang2, Dong Min Shin1
1Department of Oral Biology, Yonsei University College of Dentistry, Seoul, Korea, Republic of
2Department of Oral Biology, BK21 PLUS Project, Yonsei University College of Dentistry, Seoul, Korea, Republic of

P173 A human mesenchymal stem cell model of aging reveals paracrine signaling as a strategy to modulate osteogenesis
Arantza Infante1, Clara I Rodríguez1
1Stem Cells and Cell Therapy Lab, BioCrucies Health Research Institute, Barakaldo, Spain

P174 Evidence that teriparatide highly increases CXCR4 expression during mineralization in MC3T3-derived osteoblasts
Beatriz Larraz Prieto1, Asim Azfer1, Esther Anguiana1, Angela Quiroga1, Stuart H. Ralston1, Nerea Alonso1
1Rheumatology and Bone Disease Unit, University of Edinburgh, Edinburgh, United Kingdom

P175 Cell surface glycoprotein CD24 marks bone marrow derived hMSCs with reduced proliferation and differentiation in vitro
Jeroen van de Peppel1, Adriana Arruda Matos1, Tanja Strinati1, Wenda Verschoor1, Amel Dudakovic1, Gerben Schauf1, Andre J. van Wijnen1, Hans van Leeuwen1
1Internal Medicine, Erasmus MC, Rotterdam, Netherlands, 2Orthopedic Surgery, Mayo Clinic, Rochester, United States, 3Pediatrics, Erasmus MC, Rotterdam, Netherlands

P176 Kruppel-like factor 10 (KLF10) as a mediator of shear stress in osteoblast like MC3T3-E1 cells
Norbert Hassler1, Martha Blank1, Silvia Spitzer1, Klaus Klaushofer1, Franz Varga1
1Ludwig Boltzmann Institute of Osteology at the Hanusch Hospital of WKKK and AUVA Trauma Centre Meidling, 1st Medical Department of Hanusch Hospital, Vienna, Austria

P177 Characterization of extracellular vesicles obtained from murine mesenchymal D1 cell cultures
Martha Blank1, Norbert Hassler1, Stéphane Blouin1, Peter Pichler2, Goran Mitulovic3, Silvia Spitzer1, Klaus Klaushofer1, Franz Varga1
1Ludwig Boltzmann Institute of Osteology at the Hanusch Hospital of WKKK and AUVA Trauma Centre Meidling, 1st Medical Department of Hanusch Hospital, Vienna, Austria, 2University of Vienna, Department of Analytical Chemistry, Vienna, Austria, 3Medical University of Vienna, Core Facility Proteomics, Clinical Institute of Laboratory Medicine, Vienna, Austria

P178 Effects of icaritin on osteogenic differentiation of C2C12 cells
Dan-Bi Park1, Hee Su Lee2, Seong-Hee Ko1
1Pharmacology, College of Dentistry and Research Institute of Oral Science, Gangneung-Wonju National University, Gangneung, Korea, Republic of
2Oral anatomy, College of Dentistry and Research Institute of Oral Science, Gangneung-Wonju National University, Gangneung, Korea, Republic of

P179 Wnt/β-catenin signaling mediates HDAC inhibitor-induced osteoblast differentiation
Jeong-Hwa Baek1, Jae-Ran Seo1, Kyung Mi Woo1, Hyun-Mo Ryoo1, Yun-Sil Lee1, Hyun Jeong Kim1, Jin Chung2
1Seoul National University School of Dentistry, Seoul, Korea, Republic of
2Busan National University School of Dentistry, Yangsan, Korea, Republic of

P180 Circadian clock components in human dental pulp-derived cells under hypoxic conditions
Klara Janjic1, Christoph Kurzmann1, Andreas Moritz1, Hermann Agis1
1School of Dentistry, Medical University of Vienna, Vienna, Austria, 2Austrian Cluster for Tissue Regeneration, Vienna, Austria
P181  **Skp2 inhibits osteogenesis by promoting ubiquitin–proteasome degradation of Runx2**

Gatha Thacker¹, Yogesh Kumar¹, Mohd. Parvez Khan², Nidhi Shukla¹, Ishu Kapoor¹, Jitendra Kumar Kanaujiya¹, Savita Lochab¹, Shakil Ahmed³, Sabyasachi Sanyal¹, Naibedya Chattopadhyay², Arun Kumar Trivedi²

¹Biochemistry, CSIR−Central Drug Research Institute, Lucknow, India, ²Division of Endocrinology and Center for Research in Anabolic Skeletal Targets in Health and Illness (ASTHI), CSIR−Central Drug Research Institute, Lucknow, India, ³Molecular and Structural Biology Division, CSIR−Central Drug Research Institute, Lucknow, India

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P182  **Elevated extracellular calcium ions promote proliferation and migration of mesenchymal stem cells via increasing osteopontin expression**

Jeong-Tae Koh¹,², Mi Nam Lee¹,², Hee-Su Hwang¹,², Sin-Hye Oh¹,², Jung-Woo Kim¹,², Ju Han Song¹,², Yun-Chan Hwang¹,², Je-Hwan Ryu¹,²

¹Department of Pharmacology and Dental Therapeutics, Chonnam National University School of Dentistry, Gwangju, Korea, Republic of, ²Research Center for Biominalization Disorders, Gwangju, Korea, Republic of, ³Department of Conservative Dentistry, Chonnam National University School of Dentistry, Gwangju, Korea, Republic of

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P183  **Sprouty 2 in intramembranous ossification**

Eva Svandova¹, Barbora Vesela¹, Adela Kratochvilova¹, Maria Hovorakova², Renata Peterkova², Herve Lesot³, Eva Matalova¹,³

¹Institute of Animal Physiology and Genetics, CAS, v.v.i., Brno, Czech Republic, ²Institute of Experimental Medicine CAS, v.v.i, Prague, Czech Republic, ³University of Veterinary and Pharmaceutical Sciences, Brno, Czech Republic

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P184  **Differentiation and mineral deposition of murine mesenchymal D1 cells**

Martha Blank¹, Norbert Hassler¹, Silvia Spitzer¹, Klaus Klaushofer¹, Franz Varga¹

¹Ludwig Boltzmann Institute of Osteology at the Hanusch Hospital of WGKK and AUVA Trauma Centre Meidling, 1st Medical Department of Hanusch Hospital, Vienna, Austria

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P185  **Comprehensive analysis of osteoclastogenic proteome reshaping reveals a novel regulator of osteoclast differentiation and function**

Cecilia Facchi¹, Enrico Milan¹,², Maria Scolari¹, Simone Cenci¹,²

¹Genetics and Cell Biology, San Raffaele Scientific Institute, Milan, Italy, ²Vita–Salute San Raffaele University, Milan, Italy

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P186  **Fra1 dependent IgG1 secretion by bone marrow B cells induces osteoporosis**

Bettina Grötsch¹, Anja Lux¹, Anna-Carin Hoffmann¹, Falk Nimmenjahn², Wei Xiang³, Hans Ulrich Scherer⁴, Georg Schett¹, Aline Bozec³

¹Rheumatology and Immunology, University Hospital Erlangen, Department of Medicine III, Erlangen, Germany, ²University Erlangen-Nuremberg, Division of Genetics, Erlangen, Germany, ³Department Biology, University of Erlangen-Nuremberg, Division of Biochemistry, Erlangen, Germany, ⁴Leiden University Medical Center, Leiden, Netherlands

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P187  **Osteoclasts differentiated from iPSC cells as a test system for gene therapeutic approaches for autosomal recessive osteopetrosis**

Uta Rössler¹,²,³, Floriane Hennig¹,², Harald Stachelscheid²,³, Manfred Gossen²,⁴, Zsuzsanna Izsvák², Uwe Kornak¹,²,⁶

¹Institute for Medical Genetics and Human Genetics, Charité – Universitätsmedizin Berlin, Berlin, Germany, ²Berlin-Brandenburg Center for Regenerative Therapies, Charité – Universitätsmedizin Berlin, Berlin, Germany, ³Berlin Institute of Health, Berlin, Germany, ⁴Institute of Biomaterial Science, Helmholtz-Zentrum Geesthacht, Teltow, Germany, ⁵Max–Delbrück–Center for Molecular Medicine in the Helmholtz Society, Berlin, Germany, ⁶Max Planck Institute for Molecular Genetics, Berlin, Germany

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P188  **In vivo deletion of Gulp1 resulted in high trabecular bone mass phenotypes in male mice**

Soon-Yung Kim¹,², Gun-II Park¹,², Eun-Hye Lee¹,², Seung-Yoon Park¹, Yeon-Ju Lee¹,², Suk-Hee Lee¹,², Seung-Hoon Lee¹,², Hye Jung Ihr¹, Eui Kyun Park⁴, Jung–Eun Kim¹,²

¹Department of Molecular Medicine, School of Medicine, Kyungpook National University, Daegu,
**P189** Mild inhibition of Cathepsin K paradoxically stimulates the resorptive activity of osteoclasts co-cultured with osteoblast lineage cells

*Dinisha Cyril Pirapaharan¹, Kent Soe², Preety Panwar³, Sandra Bjerring Christensen⁴, Per Kjersgaard-Andersen⁵, Jonna Skov Madsen⁶, Dieter Brömme⁷, Jean-Marie Delaisse¹*

¹Clinical Cell Biology, Vejle Hospital/Lillebaelt Hospital, Institute of Regional Health Research, University of Southern Denmark, Vejle, Denmark, ²Clinical Cell Biology, Institute of Regional Health Research, University of Southern Denmark, Vejle, Denmark, ³Clinical Cell Biology, Institute of Regional Health Research, University of Southern Denmark, Vejle, Denmark, ⁴Biochemistry and Molecular Biology, Faculty of Medicine, University of British Columbia, Vancouver, BC, Canada, ⁵Clinical Cell Biology, Vejle Hospital/Lillebaelt Hospital, University of Southern Denmark, Vejle, Denmark, ⁶Department of Orthopedic Surgery, Vejle Hospital/Lillebaelt Hospital, Vejle, Denmark, ⁷Clinical Immunology and Biochemistry, Vejle Hospital/Lillebaelt Hospital, Institute of Regional Health Research, University of Southern Denmark, Vejle, Denmark

**P190** Age-related increased osteoclastogenesis is due to increased phosphorylation of p38 and enhanced expression of V-ATPase

*Jacqueline Lim¹, Francesca Brito¹, Gemma Charlesworth¹, Rob van’t Hof¹, Anna Daroszewska¹*

¹Musculoskeletal Biology I, Institute of Ageing and Chronic Disease, University of Liverpool, Liverpool, United Kingdom

**P191** Transcription factor Sry regulates RANKL gene expression by binding to its proximal promoter region

*Klemen Kodrič¹, Janja Zupan¹, Tilen Kranjc¹, Radko Komadina², Vid Makar¹, Nika Marija Lovšin¹, Janja Marc¹*

¹Chair of Clinical Biochemistry, University of Ljubljana, Faculty of Pharmacy, Ljubljana, Slovenia, ²Department for Research and Education, General and Teaching Hospital Celje, Celje, Slovenia

**P192** Sestrin 2 regulates osteoclast differentiation via the interaction with p62 and TRAF6

*Namju Kang¹, Sue Young Oh¹, Inik Chang¹, Dong Min Shin¹*

¹Department of Oral Biology, BK21 PLUS project, Yonsei University College of Dentistry, Seoul, Korea, Republic of

**P193** Inhibition of CDK8 suppresses osteoclastogenesis and promotes osteoblast differentiation in vitro

*Mehdi Amirhosseini¹, Johan Flygare², Anna Fahlgren³*

¹Department of Clinical and Experimental Medicine (IKE), Linköping University, Linköping, Sweden, ²Department of Molecular Medicine and Gene Therapy, Lund University, Lund, Sweden

**P194** Tartrate resistant acid phosphatase 5a is secreted during osteoclastogenesis and correlates to CTX-I levels in serum

*Laia Mira-Pascual¹, Christina Patlaka¹, Staffan Paulie², Tuomas Nääeroja¹, Pernilla Lång¹, Göran Andersson¹*

¹Karolinska Institutet, Huddinge, Sweden, ²Mabtech AB, Stockholm, Sweden

**P195** Heterogeneity of macrophage progenitor RAW 264.7 cell line

*Laia Mira Pascual¹, Tuomas Nääeroja¹, Göran Andersson¹, Pernilla Lång¹*

¹Division of Pathology, Department of Laboratory Medicine, Karolinska Institutet, Stockholm, Sweden

**P196** RACK1 regulates osteoclast function via its interaction with c-Src

*Sol Yi¹, Ji Hee Kim¹, Jin Hee Park¹, Etteum Jeong¹, Soo Young Lee¹*

¹College of Natural Sciences, Ewha Womans University, Seoul, Korea, Republic of

**P197** Assessment of fluid flow through the osteocyte lacuno-canalicular network in whole human osteons of different type

*Alexander F. van Tol¹, Andreas Roschger¹, Junning Chen¹-², Felix Repp³, Philip Kollmannsberger³, Paul Roschger³, Peter Fratzl¹, Richard Weinkamer¹*
P198  Effect of mechanical loading on osteocyte activity
Mylène Zarka1, François Etienne2, Morgane Bourmaud1, Christophe Helary1, François Rannou1, Eric Hay1, Martine Cohen-Solal1
1Inserm UMR1132, Hôpital Lariboisière; Univ Paris Diderot, Sorbonne Paris Cité, Paris, France, 2Inserm UMR-S1124, Université Paris Descartes, Sorbonne Paris Cité, Paris, France

P199  Osteocyte numbers and morphology correlate with the shear force at the bone-implant interface
Sabine Stoetzel1, Ute Wild1, Christoph Biehl1, Deeksha Malhan1, Carolin Dewald2, Stefan Maenz2, Klaus D. Jandt2, Katrin S. Lips1, Thaqif El Khassawna1, Christian Heiß2
1Experimental Trauma Surgery, Justus-Liebig University Giessen, Gießen, Germany, 2Department of Trauma, Hand and Reconstructive Surgery, University Hospital of Giessen-Marburg GmbH, Campus Giessen, Gießen, Germany, 3Otto Schott Institute of Materials Research, Chair of Materials Science, Friedrich Schiller University, Jena, Germany

P200  Uhrf1 deficiency attenuates genome-wide DNA methylation and consequent specific gene expression in chondrocytes in vivo
Michiko Yamashita1, Noritaka Saeki1, Yuta Yanagihara1, Yuichiro Sawada1, Jiwon Lee1, Tadahiro Iimura1, Yuuki Imai1
1Proteo-Science Center, Ehime University, Toon, Japan

P201  Proteoglycan synthesis defects in a Cant1 knock-out mouse model of Desbuquois dysplasia type 1
Chiara Paganini1, Rossella Costantini1, Luca Monti1, Anna Lundari1, Marco Biggiogera2, Jean-Marc Schwartz1, Celine Huber4, Valerie Cormier-Daire4, Beth Gibson5, Katarzyna A. Pirog6, Antonella Forlino1, Antonio Rossi7
1Dept. of Molecular Medicine – Unit of Biochemistry, University of Pavia, Pavia, Italy, 2Dept. of Biology and Biotechnology, University of Pavia, Pavia, Italy, 3Faculty of Biology, Medicine and Health, University of Manchester, Manchester, United Kingdom, 4Dept. of Genetics and INSERM UMR1163, Hopital Necker Enfants Malades, Paris, France, 5Institute of Genetic Medicine, Newcastle University, Newcastle upon Tyne, United Kingdom

P202  Derivation and characterisation of a unique chondrocyte population from human Embryonic Stem Cells
Lauren Jevons1, Franchesca Houghton1, Rahul Tare1
1Centre for Human Development, Stem Cells and Regeneration, University of Southampton, Southampton, United Kingdom

P203  Cardamonin attenuates IL-1β and urate crystal-induced inflammation in joint cells
Chun Jung Huang1, Shao Chi Chen1, Chih Chien Wang1, Feng Cheng Liu1, Yi Jen Peng1,2
1Graduate Institute of Pathology and Parasitology, National Defense Medical Center, Taipei City, Taiwan, Republic of China, 2Department of Orthopedics, Tri-Service General Hospital, Taipei City, Taiwan, Republic of China

P204  Early insulin treatment partially improves bone mechanical properties of Goto-Kakizaki type-2 diabetic rats
Kannikar Wongdee1,2, Ratchoneevan Aeimlapa2,3, Narattaphol Charoenphandhu2,3
1Faculty of Allied Health Sciences, Burapha University, Chonburi, Thailand, 2Center of Calcium and Bone
P205 Bone formation markers are reduced in patients with diabetes. Results of a 24-hour study  
Katrine Hygum¹, Jakob Starup-Linde¹, Torben Harslafl¹, Bente L. Langdahl¹  
¹Department of Endocrinology and Internal Medicine, Aarhus University Hospital, Aarhus C, Denmark

P206 Attenuation of glucocorticoid signalling in osteoblasts protects from high-fat diet-induced obesity, insulin resistance and bone loss  
Sarah Kim¹, Holger Hennecke¹,², Sylvia Gasparini¹, Lee Thai¹, Markus Seibel¹, Hong Zhou¹  
¹Bone Research Program, ANZAC Research Institute, The University of Sydney, Sydney, Australia, ²DFG-Center for Regenerative Therapies, Technische Universität Dresden, Dresden, Germany

P207 Characterization of Bone Marrow Adipocytes in the ovariectomy model shows an evolving phenotype that can contribute to altered bone remodeling  
Tareck Rharass¹, Severine Delplace¹, Damien Letterme¹, Anne Resonet¹, Pierre Marchandise², Pierre Hardouin¹, Christophe Chauveau¹, Stephanie Lucas¹  
¹EA-4490 PMOI laboratory, Littoiral Côte d’Opale University -ULCO, Boulogne sur Mer, France, ²EA4490 PMOI laboratory, Lille University, Lille, France

P208 Levels of sclerostin in serum and femoral vascular tissue and its relationship with vascular calcification in patients with and without type 2 diabetes  
Sheila González-Salvaterra¹, Cristina Novo-Rodríguez¹, Francisco Andújar-Vera¹, Cristina García-Fontana¹, Teresa Márquez-Hernández¹, Silvia Lozano-Alonso¹, Sonia Morales-Santana¹, Pedro Razas-Moreno¹, Antonia García-Martín¹, Francisco O’valle-Ravassa¹, Juan De Dios Luna-Del Castillo¹, Manuel Muñoz-Torres¹, Beatriz García-Fontana¹  
¹Instituto de Investigación Biosanitaria de Granada (Ibs.Granada); Department of Medicine, University of Granada, Granada, Spain, ²Endocrinology and Nutrition Unit, Hospital Universitario Campus de la Salud, Instituto de Investigación Biosanitaria de Granada (Ibs.Granada), Granada, Spain, ³Instituto de Investigación Biosanitaria de Granada (Ibs.Granada), Granada, Spain, ⁴Instituto de Investigación Biosanitaria de Granada (Ibs. Granada); Department of Medicine, University of Granada, Granada, Spain, ⁵Service of Angiology and Vascular Surgery, Universitario Campus de la Salud, Granada, Spain, ⁶Proteomic Research Service, Fundación para la Investigación Biosanitaria de Andalucía Oriental- Alejandro Otero, Instituto de Investigación Biosanitaria de Granada (Ibs.Granada), Granada, Spain, ⁷Endocrinology Division, Hospital General de Ciudad Real, Ciudad Real, Spain, ⁸Endocrinology and Nutrition Unit, Hospital Universitario Campus de la Salud, Instituto de Investigación Biosanitaria de Granada (Ibs.Granada), CIBERFES Instituto de Salud Carlos III, Granada, Spain, ⁹Department of Pathological Anatomy, University of Granada, Granada, Spain, ¹⁰Department of Biostatistical, University of Granada, Granada, Spain, ¹¹Endocrinology and Nutrition Unit, Hospital Universitario Campus de la Salud, Instituto de Investigación Biosanitaria de Granada (Ibs.Granada), CIBERFES Instituto de Salud Carlos III, Department of Medicine, University of Granada, Granada, Spain

P209 NGF/BDNF and Osteocalcin/Oxytocin/IL-6 mRNA levels are up-regulated in bone and muscle after cold stress challenge in mice  
Claudia Camerino¹, Elena Conté², Maria Rosaria Carratu³, Adriano Fonzino², Domenico Tricarico²  
¹Department of Biomedical Sciences and Human Oncology, University of Bari, Bari, Italy, ²Department of Pharmacy–Drug Sciences, University of Bari, Bari, Italy

P210 Effect of estrogen deficiency on development of skeletal changes induced by type 1 diabetes in rats  
Aleksandra Janas¹, Ewa Kruczek¹, Joanna Folwarczna¹  
¹Department of Pharmacology, School of Pharmacy with the Division of Laboratory Medicine in Sosnowiec, Medical University of Silesia, Katowice, Sosnowiec, Poland

P211 Association between bone mineral density and serum uric acid in postmenopausal women with diabetic nephropathy  
Simeon Monov¹, Daniela Monova², Elena Milashova³, Russka Shumralieva¹  
¹Institute of Molecular Biosciences, Mahidol University, Nakhon Pathom, Thailand, ²Department of Physiology, Faculty of Science, Mahidol University, Bangkok, Thailand, ³Institute of Molecular Biosciences, Mahidol University, Nakhon Pathom, Thailand
P212 Calcium intake and BMD, bone fractures and cardiovascular hospitalizations in women with type 2 diabetes in a 5-years prospective study
Luiza Napiórkowska¹, Hanna Wichrowska¹, Magdalena Walicka¹, Edward Franek¹,² ¹Department of Internal Diseases, Endocrinology and Diabetology, Central Clinical Hospital of the Ministry of the Interior and Administration, Warsaw, Warsaw, Poland, ²Department of Human Epigenetics, Mossakowski Medical Centre, Polish Academy of Sciences, Warsaw, Poland

P213 Phloridzin, an apple polyphenol, may exert unfavorable effects on bone and muscle in an experimental model of type 2 diabetes in rats
Piotr Londzin¹, Arkadiusz Waligóra¹, Szymon Siudak¹, Urszula Cegieła¹, Maria Pytlik¹, Aleksandra Janas¹, Joanna Folwarczna¹ ¹Department of Pharmacology, School of Pharmacy with the Division of Laboratory Medicine in Sosnowiec, Medical University of Silesia, Katowice, Sosnowiec, Poland

P214 Osteocytes regulate bone marrow fat during progression of osteoporosis in large and small animal models
Thaqif El Khassawna¹, Deeksha Malhan¹, Diaa Eldin S. Daghma¹, Sabine Stözel¹, Stefanie Kern¹, Fathi Hassan¹, Markus Rupp¹,², Christian Heiss¹,² ¹Experimental Trauma Surgery, Justus Liebig University of Giessen, Giessen, Germany, ²Department of Trauma, Hand and Reconstructive Surgery, University Hospital of Giessen–Marburg GmbH, Campus Giessen, Giessen, Germany

P215 Diabetes Mellitus: a synonym to functional hypoparathyroidism
Amit Saraf¹ ¹Orthopaedics, Teerthanker Mahavir University, Moradabad, India

P216 Chemical composition of dentin of the lower incisor in rats of various ages after excessive palm oil intake and administration of garciniae cambogia extract
Kamilya Ismailova¹, Vladyslav Luzin¹, Yuliya Gayvoronskaya¹, Maksim Grishchuk¹ ¹LPR SE “St. Luke State Medical University of Lugansk “, Lugansk, Ukraine

P217 Development of novel CRISPR/Cas9-based gene therapeutic approaches for osteopetrosis
Floriane Hennig¹,², Uta Rössler¹,²,³, Dimitrios L. Wagner³, Thorsten Braun³, Sven Geissler¹,², Harald Stachelscheid³,⁴, Manfred Gossen¹,², Uwe Kornak¹,²,³, ¹Berlin-Brandenburg Center for Regenerative Therapies, Charité – Universitätsmedizin Berlin, Berlin, Germany, ²Institute for Medical Genetics and Human Genetics, Charité – Universitätsmedizin Berlin, Berlin, Germany, ³Berlin Institute of Health, Berlin, Germany, ⁴Institute of Medical Immunology, Charité – Universitätsmedizin Berlin, Berlin, Germany, ⁵Department of Obstetrics and Gynecology, Charité – Universitätsmedizin Berlin, Berlin, Germany, ⁶Julius Wolff Institute and Center for Musculoskeletal Surgery, Charité – Universitätsmedizin Berlin, Berlin, Germany, ⁷Institute of Biomaterial Science, Helmholtz–Zentrum Geesthacht, Teltow, Germany, ⁸Max Planck Institute for Molecular Genetics, Berlin, Germany

P218 Lysine-specific demethylase 1 regulates osteoblast differentiation through modulating H3K4me1 levels at specific gene promoters
Kati Tarkkonen¹, Petri Rummukainen¹, Amel Dudakovic², Rana Al-Majidi¹, Cristina Valensisi³, David Hawkins²,⁴, Andre Van Wijnen², Riku Kiviranta¹,² ¹Institute of Biomedicine, University of Turku, Turku, Finland, ²Orthopedic Research, Mayo Clinic, Rochester, United States, ³Division of Medical Genetics, University of Washington Seattle, Seattle, United States, ⁴Turku Centre for Biotechnology, University of Turku, Turku, Finland, ⁵Division of Endocrinology, Turku University Hospital, Turku, Finland

P219 Functional studies of two variants found in the resequencing of SOST
Noria Martínez-Gil¹,²,³, Neus Roca-Ayats¹,²,³, Natalia Garcia-Giralt⁴,⁵, Xavier Nogués⁴,⁵, Leonardo Mellibovsky⁴,⁵, Adolfo Diez-Pérez⁴,⁵, Daniel Grinberg¹,²,³, Susana Balcells¹,²,³
P220  **A genetic risk score for whole body BMD associates with the risk of pediatric fracture**  

Carolina Medina-Gómez¹, Olja Grgic¹, Katerina Trajanoska¹, Andre G. Uitterlinden¹, Vincent Jaddoe¹, Fernando Rivadeneira¹  
¹ErasmusMC, Rotterdam, Netherlands

P221  **Bone-specific miRNA profiles in elderly diabetes patients with and without prevalent and prospective hip fractures**  

Ines Foessl¹, Petra Kotzbeck¹, Vito Francic¹, Christoph Haumd¹, Andrea Groselj-Strele², Jutta Claudia Piszanger-Sölkner¹, Harald Dobnig¹,³, Thomas Pieber¹, Astrid Fahrleitner-Pammer², Barbara Obermayer-Pietsch¹  
¹Department of Internal Medicine, Division of Endocrinology and Diabetology, Medical University of Graz, Graz, Austria, ²Core Facility Computational Bioanalytics, Medical University of Graz, Graz, Austria, ³Schildrüsen/Endokrinologie/OsteoporosInstitut Dobnig GmbH, Graz, Austria

P222  **Autosomal recessive osteogenesis imperfecta caused by a novel homozygous COL1A2 mutation**  

Alice Costantini¹, Symeon Tournis², Anders Kämpe¹, Noor Ul Ain¹, Fulya Taylan¹, Artemis Doulgeraki², Outi Mäkitie²,³  
¹Department of Molecular Medicine and Surgery and Center for Molecular Medicine, Karolinska institutet, Stockholm, Sweden, ²Laboratory for Research of the Musculoskeletal System ‘Th. Garofalidis’, KAT Hospital, National and Kapodistrian University of Athens, School of Medicine, Athens, Greece, ³Department of Bone and Mineral Metabolism, Institute of Child Health, “Aghia Sophia” Children’s Hospital, Athens, Greece, ⁴Folkhälsoins Institute of Genetics and University of Helsinki, Helsinki, Finland, ⁵Children’s Hospital, University of Helsinki and Helsinki University Hospital, Helsinki, Finland

P223  **MicroRNA profiling of primary human osteoblasts and osteosarcoma cell lines reveals transcriptional regulators of oncogenesis and of osteoblastic differentiation**  

Brendan Norman¹, Peter Wilson¹, Mohd Osman¹, Norman Roberts¹,², Lakshminarayan Ranganath¹,², James Gallagher¹  
¹Institute of Ageing & Chronic Disease, University of Liverpool, Liverpool, United Kingdom, ²Liverpool Clinical Laboratories, Royal Liverpool and Broadgreen University Hospital Trust, Liverpool, United Kingdom

P224  **Incidence of mutations in the TNSALP, GGPS1 and CYP1A1 genes in patients with atypical femoral fractures**  

Pilar Peris¹, Eva González-Roca², Sebastian C. Rodríguez-García¹, Mª Del Mar López-Cobo¹, Ana Monegal¹, Nuria Guahabens¹  
¹Rheumatology, Hospital Clinic, University of Barcelona, IDIBAPS, Barcelona, Spain, ²Immunology, Hospital Clinic, University of Barcelona, IDIBAPS, Barcelona, Spain, ³Molecular Biology Core Laboratory, Hospital Clinic, University of Barcelona, IDIBAPS, Barcelona, Spain

P225  **Hypophosphatasia: search for coding mutations and large genomic deletions of the ALPL gene in a large cohort of South Italy**  

Luigia Cinque¹, Antonio S Salcuni², Domenico Trombetta², Flavia Pugliese³, Agostino Gaudio³, Luisa Polito³, Agnese Chao³, Claudia Battista³, Teresa Mattina³, Giuseppe L Mandarà³, Piera Vicchio³, Elisabetta Pasquinì³, Annamaria Calao³, Mauro Celli³, Arturo Ferrara³, Cosimo Giannini³, Rosaria M Ruggeri³, Alfredo B Scillitani³, Vito Guarnieri¹  
¹Division of Medical Genetics, IRCCS Casa Sollievo della Sofferenza, San Giovanni Rotondo, Italy, ²Department of Medical Sciences, University of Cagliari, Cagliari, Italy, ³Laboratory of Oncology, IRCCS Casa Sollievo della Sofferenza, San Giovanni Rotondo, Italy, ⁴Endocrinology, IRCCS Casa Sollievo della Sofferenza, San Giovanni Rotondo, Italy, ⁵Internal Medicine, Policlinico Universitario G. Rodolico, Catania, Italy, ⁶Cardiomyology and Medical Genetics, Campania University Luigi Vanvitelli, Italy
P226 Common gene signature for osteoporosis, diabetes mellitus and peripheral neuropathy by translational bioinformatic approach

Francisco Andújar Vera1, Cristina García Fontana1, Sheila González Salvatierra2, Antonia García Martín3, Manuel Muñoz Torres4, Beatriz García Fontana5

1Instituto de Investigación Biosanitaria de Granada (Ibs.GRANADA), Granada, Spain, 2Instituto de Investigación Biosanitaria de Granada (Ibs.GRANADA); Department of Medicine. University of Granada, Granada, Spain, 3Endocrinology and Nutrition Unit, Hospital Universitario Campus de la Salud. Instituto de Investigación Biosanitaria de Granada (Ibs.GRANADA), Granada, Spain, 4Endocrinology and Nutrition Unit, Hospital Universitario Campus de la Salud. Instituto de Investigación Biosanitaria de Granada (Ibs.GRANADA); CIBERFES. Instituto de Salud Carlos III, Department of Medicine. University of Granada., Granada, Spain, 5Endocrinology and Nutrition Unit, Hospital Universitario Campus de la Salud. Instituto de Investigación Biosanitaria de Granada (Ibs.GRANADA); CIBERFES. Instituto de Salud Carlos III, Granada, Spain

P227 Single nucleotide polymorphisms in the OCT1 gene are associated with potential vascular calcification in non-diabetic, prediabetic and diabetic patients

Natascha Schweighofer1,2, Christoph Haudum1,2, Albrecht Schmidt3, Caterina Raffaella Colantonio3, Ines Mursic1, Thomas R. Pieber1,2, Barbara Obermayer-Pietsch1,2

1Department of Internal Medicine, Division of Endocrinology and Diabetology, Medical University of Graz, Graz, Austria, 2CBmed GmbH, Center for Biomarker Research in Medicine, Graz, Austria, 3Department of Internal Medicine, Division of Cardiology, Medical University of Graz, Graz, Austria

P228 Wnt16 genetic variation in fracture-prone children and osteoporosis

Minna Pekkinen1,2, Sara Mäkitie3, Mervi Mäyränpää3, Helena Valta3, Outi Mäkitie1,3

1Folkhälsan Institute of Genetics and University of Helsinki, University of Helsinki, Finland, 2Children’s Hospital, University of Helsinki, Helsinki, Finland, 3Children's Hospital, Helsinki University Central Hospital and University of Helsinki, Helsinki, Finland

P229 Association between polymorphisms in neuropeptide Y, and neuronal nitric oxide synthase (NOS1) gene polymorphisms and bone response to hormone therapy in postmenopausal Korean women

Jung Gu Kim1, Hoon Kim1, Jong Hak Kim2

1Seoul National University Hospital, Seoul, Korea, Republic of, 2Ewha Womans’ University Hospital, Seoul, Korea, Republic of

P230 Osteoclast-derived autotaxin connects inflammation to bone erosion in arthritis

Irma Machuca-gayet1, Sacha Flammier1, Fanny Bourguillault1, François Duboeuf1, Gabor Tigyi2, Fabienne Coury1, Olivier Peyruchaud1

1Faculté de Medicine Laennec Lyon, Inserm1033 University Claude Bernard Lyon1, Lyon, France, 2Departament of Pharmaceutical Sciences, University of Tennesse Health Science center, Memphis, United States

P231 Circulating mesenchymal stem cells are increased in patients with Ankylosing Spondylitis

Chul-Soo Cho1, Ki-Jo Kim2, In-Woon Boek3, Wan-Uk Kim4

1Rheumatology, Yeouido St. Mary’s Hospital, The Catholic Universityof Korea, Seoul, Korea, Republic of, 2Rheumatology, St. Vincent Hospital, The Catholic Universityof Korea, Suwon, Korea, Republic of, 3Rheumatology, Yeouido St. Mary’s Hospital, Seoul, Korea, Republic of, 4Rheumatology, Seoul St. Mary’s Hospital, The Catholic University of Korea, Seoul, Korea, Republic of
P232 Associations between trabecular bone score and vertebral fractures in patients with axial spondyloarthritis
Hyoung Rae Kim1, Kwi Young Kang2
1Catholic University of Korea, Incheon, Korea, Republic of, 2The Catholic University of Korea, Seoul, Korea, Republic of

P233 Disruption of glucocorticoid signalling in osteoblasts attenuates surgically induced osteoarthritis
Jinwen Tu1, Zhe Ji1, Peng Zhang1, Holger Hennecke1,2, Jingbao Li1,3, Christopher Little4, Markus Seibel1, Hong Zhou1
1Bone Research Program, ANZAC Research Institute, The University of Sydney, Sydney, Australia, 2DFG-Center for Regenerative Therapies, Technische Universität Dresden, Dresden, Germany, 3Key Laboratory for Space Bioscience & Biotechnology, School of Life Sciences, Northwestern Polytechnical University, Xi’an, China, 4Kolling Institute of Medical Research, The University of Sydney, Sydney, Australia

P234 Traditional Chinese Medicine formula Bi-Qi capsule alleviates rheumatoid arthritis-induced inflammation, synovial hyperplasia, and cartilage destruction in rats
Janak Lal Pathak1, Dongmei Zhang2, Kai Wang3, Baoli Li2
1Key Laboratory of Oral Medicine, Guangzhou Institute of Oral Disease, Stomatology Hospital of Guangzhou Medical University, Guangzhou Medical University, Guangzhou, China, 2Department of Traditional Chinese Medicine, Tianjin Medical University General Hospital, Tianjin, China, 3Department of International Medicine, Geriatric Disease Research Institute, Tianjin Hospital, Tianjin, China

Ramón Mazucchelli1, Natalia Crespi Villarías2, Elia Perez Fernandez3, Alberto García-Vadillo4, Olalla Guzón5, Javier Quirós6, Marina Peña6, Cristina Macía Villa7, Jose Luis Morell8, Hilda Godoy9, Carmen Barbadillo9, Manuel Fernandez Prada10, Virginia Villoverde11, Concepción Morado12, Angeles Herranz13
1Rheumatology Unit, Hospital Universitario Fundación Alcorcón, Madrid, Spain, 2Centro de Salud de La Rivota, Alcorcón, Spain, 3Hospital Universitario Fundación Alcorcón, Alcorcón, Spain, 4Hospital Universitario La Princesa, Madrid, Spain, 5Hospital U. Severo Ochoa, Leganés, Spain, 6Hospital U. Ramón y Cajal, Madrid, Spain, 7Hospital U. Puerta de Hierro, Majadahonda, Spain, 8H. U. Guadalajara, Guadalajara, Spain, 9H. U. Móstoles, Móstoles, Spain, 10H. U. Clínico San Carlos, Madrid, Spain, 11H. U. del Henares, Madrid, Spain

P236 Osteophytes a characteristic pathology with osteoarthritis revisited
Katharina Jähn1, Gustavo Davi Rabelo1, Felix Klebig2, Mustafa Citak2, Björn Busse1
1Department of Osteology and Biomechanics, University Medical Center Hamburg-Eppendorf, Hamburg, Germany, 2Helios ENDO-Klinik Hamburg, Hamburg, Germany

P237 Achievement of imaging remission among patients with rheumatoid arthritis in clinical remission and their characteristics
Yeon-Ah Lee1, Ji-Young Choi1, Ran Song2, Seung-Jae Hong2, Sang-Hoon Lee2, Hyung-In Yang2
1Rheumatology, Kyung Hee University Hospital, Seoul, Korea, Republic of, 2Rheumatology, Kyung Hee University Hospital at Gondang, Seoul, Korea, Republic of

P238 Therapeutic effect of Metformin in ischemic osteonecrosis via Angiopoietin1 induced osteoblastic differentiation
Jung Ryul Kim1
1Orthopaedic Surgery, Chonbuk National University Medical School, Jeonju, Korea, Republic of

P239 Rheumatoid arthritis patients with higher disease severity and subclinical carotid plaque experience more cardiovascular events despite a favorable conventional cardiovascular risk profiles
Yeon-Ah Lee1, Ran Song2, Seung-Jae Hong1, Sang-Hoon Lee2, Hyung-In Yang2
1Rheumatology, Kyung Hee University Hospital, Seoul, Korea, Republic of, 2Rheumatology, Kyung Hee University Hospital at Gondang, Seoul, Korea, Republic of
P240  Frequencies of ligament ossification in patients with ankylosing spondylitis according to several ligaments around spine by whole spine CT scan
Ran Song1, Yeon-Ah Lee2, Seung-Jae Hong2, Hyung-In Yang1, Sang-Hoon Lee1
1Kyung Hee University Hospital at Goyang, Goyang, Korea, Republic of, 2Kyung Hee University Hospital, Seoul, Korea, Republic of

P241  Development of a modular microfluidic Joint-on-a-Chip platform for reliable in vitro modelling of the human joint
Astrid Bakker1, Jolanda Hogervorst1, Joanneke Kweekeboom2, Simon Mastbergen3, Andreea Ioan-Facsinay4
1Oral Cell Biology, ACTA, UvA and VU, Amsterdam, Netherlands, 2Rheumatology, Leiden University Medical Center, Leiden, Netherlands, 3Rheumatology & Clinical Immunology, UMC Utrecht, Utrecht, Netherlands

P242  Immunosuppressive mesenchymal stromal cells derived from human induced pluripotent stem cells use the PD-1/PD1 axis and induce human regulatory T cells
Clémence Roux1, Gaelle Saviane1, Jonathan Pini1, Nourhene Belaïd1, Gihen Dhib1, Christine Voha1, Lidia Ibanez1, Antoine Boutin1, Nathalie Masure1, Abdelilah Wakkach1, Claudine Bliën-Wakkach1, Matthieu Rouleau1
1Faculty of Medicine, LP2M UMR 7370 CNRS UNS, Nice, France, 2Faculty of Medicine, IRCAN, Nice, France

P243  Lipid profile in Rheumatoid Arthritis patients and its relation to disease activity
Poonji Gupta1
1ENT, Teerthkaner Mahavir Medical College, Ghaziabad, India

P244  Development of medullary bone in laying hens during eggshell formation
Nazaret Domínguez Gasca1, Heather M McCormack2, Alejandro B Rodríguez Navarro1, Robert H Fleming2, Ian Dunn2
1Mineralogy and Petrology, University of Granada, Granada, Spain, 2Roslin Institute, University of Edinburgh, Edinburgh, United Kingdom

P245  Soybean meal induces intestinal inflammation and bone resorption in adult zebrafish scale
Marta Carnovali1, Giorgia Millefanti2, Alessia Rainero2, Giuseppe Banfi1, Massimo Mariotti3,4,5
1Gruppo Ospedaliero San Donato Foundation, Milan, Italy, 2Department of Medicine and Surgery, University of Insurbria, Varese, Italy, 3IRCSS Galeazzi Orthopedic Institute, Milan, Italy, 4Vita–Salute San Raffaele University, Milan, Italy, 5Department of Biomedical, Surgical and Dental Sciences, University of Milan, Milan, Italy

P246  Screening for osteogenic compounds using the zebrafish as a model
Jan Willem Bek1, Charlotte Gistelinc2, Hanna De Saffel1, Paul Coucke1, Andy Willaert1
1Ghent University, Ghent, Belgium, 2University of Washington, Seattle, United States

P247  Zebrafish type I collagen mutants faithfully recapitulate human type I collagenopathies
Andy Willaert1, Charlotte Gistelinc2, Ronald Y Kwon2, Fransiska Malfait1, Sofie Symoens1, Matthew P. Harris3,4, Katrin Henke1,4, Shannon Fisher1, Patrick Sips1, Brecht Guillemy1, Jan Willem Bek1, Petra Vermassen1, Hanna De Saffel1, Maryann Weis2, Anne De Poepe1, David R. Eyre2, Paul Coucke1
1Center for Medical Genetics, Ghent University, Gent, Belgium, 2Department of Orthopedics and Sports Medicine, University of Washington, Seattle, United States, 3Department of Genetics, Harvard Medical School, Boston, United States, 4Department of Orthopaedic Research, Boston Children's Hospital, Boston, United States, 5Department of Pharmacology & Experimental Therapeutics, Boston University School of Medicine, Boston, United States

P248  A rodent long bone fracture/fixation model with improved clinical relevence
Benjamin Braun1, Jordan Skelly1, David Ayers1, Jie Song1
1Orthopaedic Surgery, University of Massachusetts Medical School, Worcester, United States
P250 Clinical implications and potential role of the novel myokine irisin as a biomarker for sarcopenia
Hye-Sun Park¹, Hyun Chang Kim², Hoon Choi³, Sung-Kil Lim¹
¹Internal Medicine, Yonsei University / College of Medicine, Seoul, Korea, Republic of; ²Preventive Medicine, Yonsei University, Seoul, Korea, Republic of; ³Obstetrics and Gynecology, InJe University / College of Medicine, Seoul, Korea, Republic of

P251 Psoas cross-sectional area as a predictor of mortality and a simple diagnostic method of sarcopenia in hip fracture patients age over 50
Yong-Chan Ha¹, Young-Kyun Lee², Deog-Yoon Kim³
¹Department of Orthopaedic Surgery, Chung-Ang University, Seoul, Korea, Republic of; ²Department of Orthopaedic Surgery, Seoul National University Bundang Hospital, Seongnam, Korea, Republic of; ³Kyung Hee University Medical Center, Seoul, Korea, Republic of

P252 Myostatin/Follistatin signalling in cultivated muscle derived stem cells
Sigrid Mueller-Deubert¹, Regina Ebert¹, Konstantin Horas¹, Melanie Krug¹, Sabine Zeck¹, Franz Jakob¹
¹Orthopedic Center of Musculoskeletal Research, University of Würzburg, Wuerzburg, Germany

P253 Muscle adaptions to swimming exercise in the adult zebrafish model
Maiwulanjiang Mamuti¹, Imke Fiedler¹, Annika vom Scheidt¹, Katharina Jähn¹, Björn Busse¹
¹Department of Osteology and Biomechanics, University Medical Center Hamburg-Eppendorf, Hamburg, Germany

P254 Modulation of MMPs-TIMPs expression in cytokine-stimulated fibroblasts using cyclooxygenase2 inhibitor
Jihye Kim¹, Youngmi Kang¹, Seonghwan Moon¹, Byungho Lee¹, Hwanmo Lee¹, Kilhan Lee¹
¹Orthopaedic Surgery, Yonsei University/College of Medicine, Seoul, Korea, Republic of

P255 Risk factors of sarcopenia in Ukrainian postmenopausal women
Vladyslav Povoroznyuk¹, Nataliia Dzerovych¹, Roksolana Povoroznyuk¹
¹Department of Clinical Physiology and Pathology of Locomotor Apparatus, D.F. Chebotarev Institute of Gerontology AMS Ukraine, Kyiv, Ukraine

P256 The relationship between the changes of pulmonary function and whole body non-fat mass in Korean elderly population
Young-Sang Kim¹, Bom-Taek Kim², Seung Geon Park¹
¹CHA University, Seongnam, Korea, Republic of; ²Ajou University School of Medicine, Suwon, Korea, Republic of

P257 The association between muscle mass deficits estimated from BIA and lumbar spine BMD in Korean male adults
Hee-Jeong Choi¹, Han-Jin Oh¹, Byeong-Yeon Yu²
¹Family Medicine, Eulji University Hospital, Daejeon, Korea, Republic of; ²Family Medicine, Konyang University Hospital, Daejeon, Korea, Republic of

P258 The relationship between muscle parameters and balance abilities evaluated by a new device for elderly people
Myung Jun Shin¹, Tae Sung Park², Yun Kyung Jeon³, In Joo Kim³
¹Rehabilitation Medicine, Pusan National University Hospital, Busan, Korea, Republic of; ²Biomedical Research Institute, Pusan National University Hospital, Busan, Korea, Republic of; ³Endocrinology and Metabolism, Pusan National University Hospital, Busan, Korea, Republic of

P260 Association between bone mineral density, bone remodeling markers and diet inflammatory index in women
Olaa Cvijanovic Peloza¹, Gordana Kendel Jovanovic², Sandra Pavićic Zezelj², Sanja Klobucar Majanovic³, Tanka Celic¹, Mirna Bobinac¹, Dragica Bobinac¹
¹Department of Anatomy, Medical Faculty of the University of Rijeka, Rijeka, Croatia; ²Teaching Institute of Public Health of Primorsko-goranska County, Rijeka, Croatia; ³Department of Endocrinology, Diabetes
P261 Impact of mild and moderate/severe vertebral fractures on physical activity: A five-year prospective study based on a cohort of older women in the UK
Usama Al-Sari1, Jonathan Tobias1, Emma Clark1
1University of Bristol, Bristol, United Kingdom

P262 Quantitative computed tomography discriminates between individuals with low areal bone mineral density with and without vertebral fractures
Margaret Paggiosi1, Miguel Debono2, Jennifer S Walsh1, Richard Eastell1
1The Mellanby Centre for Bone Research, Department of Oncology and Metabolism, The University of Sheffield, Sheffield, United Kingdom, 2Endocrinology and Acute Medicine, Sheffield Teaching Hospitals NHS Foundation Trust, Sheffield, United Kingdom

P263 High rates of abnormal serum protein electrophoresis (SPEP) in patients >50 yrs with fragility fractures admitted to a Midwestern Tertiary Academic Center
Naga Yalla1, Chinenyeg Udokwu2, Elizabeth Lin3
1Division of Bone and Mineral Diseases, Division of Endocrinology, Metabolism and Lipid Research, Washington University, St Louis, United States, 2Division of Endocrinology, Metabolism and Lipid Research, Washington University, St Louis, United States, 3Division of Bone and Mineral Metabolism, Division of Endocrinology, Metabolism and Lipid Research, Washington University, St Louis, United States

P264 The utility of TBS-adjusted BMD T-score in the discrimination of the major osteoporotic fractures in the postmenopausal women of the Rotterdam and the OsteoLaus studies
Enisa Shevroja1,2, Fjorida Koromani2, William D. Leslie1, Olivier Lamy1, Fernando Rivadeneira2, Didier Hans1
1Center of Bone Diseases, University Hospital Lausanne, Lausanne, Switzerland, 2Departments of Internal Medicine and Epidemiology, Erasmus Medical Center, Rotterdam, Netherlands, 3Department of Internal Medicine, University of Manitoba, Manitoba, Canada

P265 Accurate BMD Calibration in QCT requires consideration of scanner specific X-ray field inhomogeneity
Klaus Engelke1,2, Faulkner Ken3, Bernd Stampa2, Thomas Fuerst3, Harry Genant4
1Inst. of Medical Physics, FAU Erlangen-Nürnberg, Erlangen, Germany, 2Bioclinica, Hamburg, Germany, 3Bioclinica, Inc, Newark, United States, 4Radiology, University of California San Francisco, San Francisco, United States

P266 The change of injected cement after Percutaneous Vertebrolasty (PVP) and Percutaneous Balloon Kyphoplasty (KP) on osteoporotic vertebral fractures
Jin Hwan Kim1, Jung Hoon Kim1
1Department of Orthopedic Surgery, Inje University, Ilsan Paik Hospital, Goyang, Korea, Republic of

P267 Systematic screening by DXA lateral vertebral morphometry is associated with a high prevalence of vertebral fractures in Duchenne Muscular Dystrophy
Shuko Joseph1,2, Sheila Shepherd1, Marina Di Marco2, Jennifer Dunne2, Martin McMillan1, Iain Horrocks2, SF Ahmed2, SC Wong1
1The University of Glasgow, Developmental Endocrinology Research Group, Glasgow, United Kingdom, 2The Department of Paediatric Neurology, Paediatric Neurosciences Research Group The Royal Hospital for Children, Glasgow, United Kingdom, 3West of Scotland Genetic Services, Queen Elizabeth University Hospital, Scottish Muscle Network, Glasgow, United Kingdom

P268 Impact of the new trabecular bone score algorithm using a different correction model based on soft tissue thickness on incident atraumatic fracture risk prediction
Enisa Shevroja1,2, Olivier Lamy1, Berengere Aubry-Rozier1, Elena Gonzalez Rodriguez1, Delphine Stoll1, Didier Hans1
1Center of Bone Diseases, University Hospital Lausanne, Lausanne, Switzerland, 2Departments of Internal Medicine and Epidemiology, Erasmus Medical Center, Rotterdam, Netherlands
P269  Bone mineral density and fragility fractures in lung or heart transplant recipients: a longitudinal study
Carla Caffarelli¹, Maria Dea Tomai Pitinca², Valentina Francolini², Maria Alessandrini², Ranuccio Nuti², Stefano Gonnelli²
¹University of Siena, Siena, Italy, ²Department of Medicine, Surgery and Neuroscience, University of Siena, Siena, Italy

P270  An innovative non-ionizing technique for bone status assessment: results of a multicenter clinical study comparing rem and DXA at femoral neck
Carla Caffarelli¹, Giovanni Airoli², Loredana Cavalli³, Gerolamo Bianchi³, Maria Luisa Brandi³, Luisella Ciarferotti³, Marco Matucci Cerinic⁴, Francesco Conversano⁴, Marco Di Paola⁵, Davide Gotti⁶, Giuseppe Girasole⁶, Andrea Giusti⁶, Monica Manfredini⁶, Maurizio Muratore⁶, Ranuccio Nuti¹, Paola Pisan⁶, Eugenio Quarta⁶, Maurizio Rossini⁶, Ombretta Viapiana⁶, Stefano Gonnelli¹
¹Department of Medicine, Surgery and Neurosciences, University of Siena, Siena, Italy, ²Department of Neurosciences and Rehabilitation, Carlo Poma Hospital, Mantova, Italy, ³Department of Surgery and Translational Medicine, Metabolic Bone Disease Unit, University of Florence, Florence, Italy, ⁴SC Rheumatology, ASL3 genovese, Genoa, Italy, ⁵Department of Experimental and Clinical Medicine, SOD Rheumatology, University of Florence, Florence, Italy, ⁶Institute of Clinical Physiology, National Research Council, Lecce, Italy, ¹Department of Medicine, Rheumatology Unit, University of Verona, Verona, Italy, ⁶O.U. of Rheumatology, “Galateo” Hospital, San Cesario di Lecce, Lecce, Italy

P271  Three dimensional comparisons between QCTPro and MIAF Femur for the proximal femur measurements
Ling Wang¹, Oleg Museyko¹, Keenan Brown¹, Xiaoguang Cheng¹, Klaus Engelke²
¹Department of Radiology, Beijing Jishuitan Hospital, Beijing, China, ²Institute of Medical Physics, University of Erlangen, Erlangen, Germany

P272  Fast versus accurate estimation of Colles’ fracture load of the distal radius by homogenized finite element analysis based on low- and high-resolution HR-pQCT
Denis E. Schenk¹, Philippe K. Zysset¹
¹Institute for Surgical Technology and Biomechanics, University of Bern, Bern, Switzerland

P273  Is a thickness-based corrective model of soft tissue effects better for TBS?
François De Guio¹, Franck Michelet¹, Doris Tran¹, Didier Hans²
¹R&D Department, Medimaps, Canéjan, France, ²Center of Bone Diseases, Bone and Joint Department, Lausanne University Hospital, Lausanne, Switzerland

P274  A new approach for lumbar vertebrae location and morphological characteristics on Chinese lumbar DXA images
Wenmin Guan¹, Wei Yu¹, Evelyn Hsieh²
¹Radiology, Peking Union Medical College Hospital, Chinese Academy of Medical Sciences, Beijing, China, ²Internal Medicine, Yale School of Medicine, New Haven, United States

P275  The importance of distal forearm DXA in PHPT – a retrospective study of 33 patients
Theodor-Eugen Oprea¹, Sorina Martin¹,², Anca Elena Sirbu¹,², Alice Albu¹,², Carmen Barbu¹,²
¹Endocrinology, Elias Emergency Hospital, Bucharest, Romania, ²Carol Davila University of Medicine and Pharmacology, Bucharest, Romania

P276  Trabecular Bone Score (TBS) in postmenopausal women: an observational study in Italy
Cristiana Cipriani¹, Jessica Pepe¹, Luciano Nieddu², Vittoria Danese², Veronica Cecchetti², Pietro Donato², Valentina Piazzolla¹, Luciano Colangelo¹, Chiara Sonato¹, Federica Biamonte¹, Maurizio Angelozzi¹, Salvatore Minisola¹
¹Internal Medicine and Medical Disciplines, Sapienza University of Rome, Rome, Italy, ²Faculty of Economics, UNINT University, Rome, Italy

P277  Role of bone scan for predicting impending complete fracture among incomplete atypical femoral fractures
Young-Kyun Lee¹, Youjin Lee², Yong-Chan Ha², Kyung-Hai Koo¹
P278  Trabecular bone score (TBS) in Spanish adult men: the camargo cohort study  
José M. Olmos1, José L. Hernández1, Josefina Martínez1, Jesús Castillo2, José M. Olmos-Martínez1, Jesús González-Macias1  
1Hospital Universitario M. Valdecilla, Santander, Spain, 2Centro de Salud. Camargo, Camargo, Spain

P279  Metabolism of bone tissue in peri- and postmenopausal women with type 1 diabetes mellitus  
Sain Safarova1  
1Internal Disease, Azerbaijano Medical University, Baku, Azerbaijan

P280  A comparative study of changes of TBS between menopausal women with TSH suppressive therapy for differentiated thyroid cancer with healthy postmenopausal women  
Yun Kyung Jeon1, Keunyoung Kim2, Myung Jun Shin2, Kyoungjune Park2, Seong-Jang Kim3, In Joo Kim4  
1Endocrinology and Metabolism, Pusan National University Hospital, Busan, Korea, Republic of, 2Nuclear Medicine, Pusan National University Hospital, Busan, Korea, Republic of, 3Rehabilitation Medicine, Pusan National University Hospital, Busan, Korea, Republic of, 4Nuclear Medicine, Yangsan Pusan National University Hospital, Busan, Korea, Republic of

P281  Platisespondilia/complicated osteoporosis  
Maria Del Pilar Ahijado Guzman1, Raul Maria Veiga Cabello2, Miguel Cantalejo Moreira1, Justo Ruiz Ruiz3, Antonio Zapatero Gaviria4  
1Unit of Rheumatology, Htal Universitario de Fuenlabrada, Fuenlabrada, Spain, 2Rheumatology Unit, Htal Universitario de Fuenlabrada, Fuenlabrada, Spain, 3Rheumatology Unit, Htal Universitario de Fuenlabrada, Fuenlabrada, Spain

P282  Effect of denosumab on vertebral bone microarchitecture in patients with rheumatoid arthritis, as assessed by clinical computed tomography in vivo  
Taro Mawatari1,2, Gen Matsui1, Takahiro Iguchi1, Hiroaki Mitsuyasu1, Shinya Kawahara2, Satoshi Ikemura3, Seiji Yoshizawa1, Yasuharu Nakashima2  
1Hamanomachi Hospital, Fukuoka, Japan, 2Kyushu University, Fukuoka, Japan

P283  Study to evaluate the effect of radiation therapy on pelvic bones in patients of carcinoma cervix undergoing concurrent chemoradiation – an ongoing clinical trial interim analysis  
Divyesh Kumar1  
1Radiotherapy & Oncology, Post Graduate Institute of Medical Education & Research, Chandigarh, India

P284  Obstructive sleep apnea syndrome in males: Bone mineral density and vitamin D3 levels in blood  
Maria Del Pilar Ahijado Guzman1, Miguel Cantalejo Moreira2, Raul Maria Veiga Cabello3, Justo Ruiz Ruiz4, Antonio Zapatero Gaviria4  
1Rheumatology, Htal Universitario de Fuenlabrada, Fuenlabrada, Spain, 2Rheumatology Unit, Htal Universitario de Fuenlabrada, Fuenlabrada, Spain, 3Rheumatology Service, Htal Central de la Defensa, Madrid, Spain, 4Internal Medicine Service, Htal Universitario de Fuenlabrada, Fuenlabrada, Spain

P285  Bone mass improvement after liver transplant: case report  
Iulia Simona Soare1, Anca Elena Sirbu2, Raluca Pascu3, Liliana Mazalu3, Simona Fica2  
1Endocrinology, Carol Davila University of Medicine and Pharmacology, Bucharest, Romania, 2Endocrinology, Diabetes and Metabolic Disease – Elias Hospital, Carol Davila University of Medicine and Pharmacology, Bucharest, Romania, 3Endocrinology, Diabetes and Metabolic Diseases, Elias Emergency Hospital, Bucharest, Romania

P286  PoCOsteo: Personalized fracture risk prediction via point-of-care device  
Patricia Khoshayar1, Ciara Kathleen O’Sullivan2, Ioannis Katakis3, Mayreli Ortiz4, Josep Lluis Acero4, Rainer Gransee5, Daniel Latta5, Richard Hoogenboom6, Frank Devlieghere7, Peter Ragaert8, An Vermeulen8, Mieke Adriaens8, Frederik Leys8, Paula Lopes9, Gust Schols9, Ian James Riley9, Phil Biggs9, Borja Barredo9
P287  Controlling hypoxia-inducible factor-$2\alpha$ is critical to maintain bone homeostasis in mice
Je-Hwang Ryu1, Sun Young Lee1, Ka Hyon Park1, Jeong-Tae Koh1, Yun-Chan Hwang1, Yun Hyun Huh2
1School of Dentistry, Chonnam National University, Gwangju, Korea, Republic of; 2School of Life Sciences, Gwangju Institute of Science and Technology, Gwangju, Korea, Republic of

P288  The effect of anti-osteoporosis treatment on titanium particle-induced osteolysis in osteoporotic mouse calvarial model
Yue Ding1, Guangtao Fu1, Junxiong Qiu1, Peng Peng1
1Orthopedics, Sun Yat-sen memorial Hospital, Sun Yat-sen University, Guangzhou, China

P289  The prevalence of newly diagnosed celiac disease in patients with a recent fracture at the FLS
Irma de Bruin1,2, Lisanne Vranken1,2, Caroline Wyers1,2, Robert van de Velde1,2, Thera Trienekens1, Sjoerd Kaarsemaker1, Heinrich Janzing3, Frank Wolters3, Siebe Wouda2, Piet Geusens3,6, Joop van den Bergh7,2,9
1Department of Internal Medicine, VieCuri Medical Center, Venlo, Netherlands, 2NUTRIM, Department of Internal Medicine, Maastricht University Medical Center +, Maastricht, Netherlands, 3Department of Medical Microbiology, VieCuri Medical Center, Venlo, Netherlands, 4Department of Orthopedic Surgery, VieCuri Medical Center, Venlo, Netherlands, 5Department of Surgery, VieCuri Medical Center, Venlo, Netherlands, 6Department of Gastro-Enterology, VieCuri Medical Center, Venlo, Netherlands, 7Department of Pathology, VieCuri Medical Center, Venlo, Netherlands, 8CAPHRI, Department of Internal Medicine, Subdivision Rheumatology, Maastricht University Medical Center +, Maastricht, Netherlands, 9Biomedical Research Center, Hasselt University, Diepenbeek, Belgium

P290  Porcupine inhibitors impair both trabecular and cortical bone subsequently altering bone strength in adult mice
Thomas Funck-Brentano1, Karin Nilsson1, Robert Brommage1, Petra Henning1, Ulf Lerner1, Juha Tuukkanen2, Sofia Movéarde-Skrtic3, Martine Cohen-Solal4, Claes Ohlsson1
1Center for Bone & Arthritis Research, Gothenburg University, Gothenburg, Sweden, 2Unit of Cancer Research and Translational Medicine, University of Oulu, Oulu, Finland, 3INSERM UMR 1132, Université Paris Diderot, Paris, France

P291  Secular trends of hip fractures in France between 2002 and 2013: impact of the reference values
Romain Garofoli1, Martine Cohen-Solal1, Agnès Ostertag1
1Lariboisiere Hospital, Paris, France

P292  Smoking is associated with trabecular structure and radiographic vertebral fractures in women independent of BMD
Fjorda Koromani1,2,3, Enisa Shevroja4, Ling Oei1, Carola Zillikens1, Arfan Ikram2, Didier Hans4, Gabriel Krestin1, Andre Uitterlinden1,2, Edwin Oei3, Fernando Rivadeneira1,2
1Internal Medicine, Erasmus Medical Center, Rotterdam, Netherlands, 2Epidemiology, Erasmus Medical Center, Rotterdam, Netherlands, 3Radiology, Erasmus Medical Center, Rotterdam, Netherlands, 4Bone & Joint, Lausanne University Hospital, Lausanne, Switzerland
P293  Effects of long-term use of unfractionated heparin or low-molecular-weight heparin on bone mineral density in patients with nephrotic syndrome  
Simeon Monov1, Daniela Monova2  
1Department of Internal Medicine, Clinic of Rheumatology, Medical University – Sofia, Sofia, Bulgaria,  
2Department of Internal Medicine, Medical University – Sofia, Medical Institute, Sofia, Bulgaria

P294  Effects of a selective phosphodiesterase 5 inhibitor (sildenafil) on the skeletal system of ovarioctomized and non-ovarioctomized rats  
Maria Pytlik1, Leszek Śliwiński1, Małgorzata Zbrojkiewicz1, Joanna Folwarczna1, Urszula Cegiela1, Aleksandra Janas1  
1Department of Pharmacology, School of Pharmacy with the Division of Laboratory Medicine in Sosnowiec, Medical University of Silesia, Katowice, Sosnowiec, Poland

P295  Short term effects of ambient air pollution on osteoporotic hip fracture. An ecological study in a period of 16 years  
Ramón Mazzucchelli1, Natalia Crespí Villarías2, Elia Perez Fernandez3, Javier Quirós4, Olalla Guzón5, Alberto García-Vadillo6, Gil Rodríguez Caravaca6, Loreto Carmona7  
1Rheumatology Unit, Hospital Universitario Fundación Alcorcón, Madrid, Spain, 2Centro de Salud de La Rivota, Alcorcón, Spain, 3Clinical Investigation, Hospital Universitario Fundación Alcorcón, Madrid, Spain, 4Rehabilitation, Hospital Universitario Fundación Alcorcón, Madrid, Spain, 5Rheumatology Unit, Hospital Universitario La Princesa, Madrid, Spain, 6Preventive Medicine and Public Health, Universidad Rey Juan Carlos, Alcorcón Madrid, Spain, 7Instituto de la Salud Musculoesquelética (INMUSC), Madrid, Spain

P296  Senile rats: a clinically relevant osteoporotic animal model?  
Deeksha Malhan1, Stefanie Kern1, Diaa Eldin S Daghmat2, Sabine Stoetzel2, Fathi Hassan1, Marian Kampschulte3, Jan Belikan2, Felix Schulze2, Angela Rösen-Wollf2, Markus Rupp1,5, Christian Heiss1,5, Thaqif El Khassawna1  
1Laboratory for Experimental Trauma Surgery, Faculty of Medicine, Justus Liebig University of Giessen, Giessen, Germany, 2Laboratory of Experimental Radiology, Faculty of Medicine, Justus Liebig University of Giessen, Giessen, Germany, 3Department of Diagnostic and Interventional Radiology, University Hospital Giessen–Marburg, Giessen, Germany, 4Department of Pediatrics, University Hospital Carl Gustav Carus, TU Dresden, Dresden, Germany, 5Department of Trauma, Hand and Reconstructive Surgery, University Hospital of Giessen–Marburg, Giessen, Germany

P297  Bone mineral density decline in subjects waiting for simultaneous pancreas kidney transplantation (retrospective analysis)  
Simona Kratochvílová1, Jana Brunová1  
1Diabetes Centre, Institute for Clinical and Experimental Medicine, Prague, Czech Republic

P298  Development of a porcine model for bone effects of juvenile binge alcohol drinking  
Peter Pietschmann1, Ursula Föger-Samwald1, Christian Knecht2, Thomas Stimpfl3, Thomas Szekeres3, Katharina Kerschan-Schindl1, Peter Mikasch1, Wolfgang Sipos2  
1Department of Pathophysiology and Allergy Research, Medical University of Vienna, Vienna, Austria, 2University Clinic for Swine, Department for Farm Animals and Veterinary Public Health, University of Veterinary Medicine Vienna, Vienna, Austria, 3Clinical Department for Medical and Chemical Laboratory Diagnostics, Medical University of Vienna, Vienna, Austria, 4Department of Physical Medicine and Rehabilitation, Medical University of Vienna, Vienna, Austria, 5Department of Medicine 2, Landesklinikum Mistelbach–Gänserndorf, Mistelbach, Austria

P299  Incidence and mortality of osteoporotic fracture in Rheumatoid arthritis over 50 yrs of age in South Korea using nationwide claims data  
Deog-Yoon Kim1, Yong-Chan Ha2, Young-Kyun Lee2  
1Department of Nuclear Medicine, Kyung Hee University, School of Medicine, Seoul, Korea, Republic of, 2Department of Orthopaedic Surgery, Chung-Ang University, Seoul, Korea, Republic of, 3Seoul National University Bundang Hospital, Seoul, Korea, Republic of
P300 Iron overload in Hfe-hemochromatosis mice does not cause osteoporosis
Maja Vujic Spasic¹, Alessa Wagner¹, Betül Alan¹, Dilay Lai¹, Naveen Tangudu¹, Mubashir Ahmad¹, Jan Tuckermann¹
¹Institute of Comparative Molecular Endocrinology, University of Ulm, Ulm, Germany

P301 Changes of periprosthetic BMD in proximal femur of patients with osteoporosis after cementless total hip arthroplasty
Yue Ding¹, Guangtao Fu¹, Changchuan Li¹, Shixun Li¹
¹Orthopedics, Sun Yat-sen memorial Hospital, Sun Yat-sen University, Guangzhou, China

P302 Proximal femoral geometry as fracture risk factor of osteoporotic hip fracture in Korean women
Myung Hoon Hahn¹, Jun Han²
¹Orthopedic Surgery, Cheil General Hospital and Women’s Healthcare Center, Dankook University, Seoul, Korea, Republic of, ²Orthopedic Surgery, Ajou University School of Medicine, Suwon, Korea, Republic of

P303 Trends of mortality after osteoporotic hip fracture in a period of 17 years
Olalla Guzón¹, Ramón Mazzucchelli¹, Elia Perez Fernandez³, Natalia Crespi Villarías³, Javier Quirós¹, Marina Peña¹, Alberto García-Vadillo³
¹Hospital U. Fundación Alcorcón, Madrid, Spain, ²C. S La Rivota, Alcorcón, Spain, ³Hospital Universitario La Princesa, Madrid, Spain

P304 12 weeks is the appropriate timing for ovariectomy to induce animal model for osteopenia in mature female C57/BL6J mice
Yue Ding¹, Guangtao Fu¹, Changchuan Li¹, Guibin Fang¹
¹Orthopedics, Sun Yat-sen memorial Hospital, Sun Yat-sen University, Guangzhou, China

P305 Bisphosphonates use and risk of subtrochanteric and diaphyseal femur fractures in Korea: Results from the National Claim Registry
Young-Kyun Lee¹, Yong-Chan Ha¹, Tae-Young Kim⁵, Hyo-Joon Kim⁴, Dong Won Byun⁶
¹Seoul National University Bundang Hospital, Seongnam, Korea, Republic of, ²Chung-Ang University, Seoul, Korea, Republic of, ³Konkuk University, Seoul, Korea, Republic of, ⁴Wonkwang University Sanbon Hospital, Gunpo, Korea, Republic of, ⁵Kyung Hee University Medical Center, Seoul, Korea, Republic of, ⁶Seonchunhyang University Hospital, Seoul, Korea, Republic of

P306 Impact of atrophic gastritis on bone mineral density in premenopausal women in their 40s
A Sol Kim¹, Hae Jin Ko²
¹Department of Family Medicine, Kyungpook National University Chilgok Hospital, Daegu, Korea, Republic of, ²Department of Family Medicine, Kyungpook National University School of Medicine, Daegu, Korea, Republic of

P307 Weather conditions and their effect on seasonality of incident osteoporotic hip fracture in a Mediterranean area
Ramón Mazzucchelli¹, Natalia Crespi Villarías¹, Elia Perez Fernandez¹, Javier Quirós¹, Olalla Guzón⁴, Alberto García-Vadillo³, Gil Rodriguez Caravaca⁶, Angel Gil de Miguel⁶, Loreto Carmona⁷
¹Rheumatology Unit, Hospital Universitario Fundación Alcorcón, Madrid, Spain, ²Centro de Salud de La Rivota, Alcorcón, Spain, ³Clinical Investigation, Hospital Universitario Fundación Alcorcón, Madrid, Spain, ⁴Rehabilitation Unit, Hospital Universitario Fundación Alcorcón, Madrid, Spain, ⁵Rheumatology Unit, Hospital Universitario La Princesa, Madrid, Spain, ⁶Preventive Medicine and Public Health, Universidad Rey Juan Carlos, Madrid, Spain, ⁷Instituto de la Salud Musculoesquelética (INMUSC), Madrid, Spain

P308 Bone density and quality in long-term levothyroxine treated patients for thyroid cancer patients in premenopausal and postmenopausal state
Sonsoles Guadalix¹, María Luisa De Mingo¹, David Males Maldonado¹, Cristina Martín-Arriscado², Guillermo Martínez Díaz-Guerra³, Federico Hawkins¹,³
¹Servicio de Endocrinología, Hospital Universitario 12 de Octubre, Madrid, Spain, ²Clinical Research Institute, Hospital Universitario 12 de Octubre, Madrid, Spain, ³Instituto de Investigacion I+12, Hospital Universitario 12 de Octubre, Facultad de Medicina, Universidad Complutense de Madrid, Madrid, Spain
P309  Difference in bone markers and BMD in type I. and II. diabetic patients  
Vaclav Vyskocil1,2, Anna Planicova3  
1Centre for Metabolic Bone Disease Department of Medicine II, Charles University Hospital, PLZEN, Czech Republic, 2Department of Orthopaedic Surgery, Charles University Hospital, PLZEN, Czech Republic, 3Centre for Metabolic Bone Disease Department of Medicine II., Charles University Hospital, PLZEN, Czech Republic

P310  Combining calcaneus QUS with OSTA in the application of osteoporosis screening  
Yue Ding1, Wei Liu1, Changchuan Li1, Xumin Hu1  
1Orthopedics, Sun Yat-sen Memorial Hospital, Sun Yat-sen University, Guangzhou, China

Woong Choi1  
1Hanyang University Hospital, Seoul, Korea, Republic of

P312  Analysis in postmenopausal osteoporosis patients with fragility fracture during zoledronic acid treatment  
Yue Ding1, Wei Liu1, Changchuan Li1, Chunhai Li1  
1Orthopedics, Sun Yat-sen Memorial Hospital, Sun Yat-sen University, Guangzhou, China

P313  Biochemical markers of osteoporosis in postmenopausal women  
Raj Raghupathy1, Fawaz Azizieh2, Olusegun Majiminiyi2, Diaa Shehab2, Khaled Al-Jarallah2, Renu Gupta5  
1Department of Mathematics and Natural Sciences, Gulf University of Science and Technology, Kuwait, Kuwait, 2Department of Pathology, Faculty of Medicine, Kuwait University, Kuwait, Kuwait, 3Department of Medicine, Faculty of Medicine, Kuwait University, Kuwait, Kuwait, 4Department of Radiology, Faculty of Medicine, Kuwait University, Kuwait, Kuwait, 5Department of Microbiology, Faculty of Medicine, Kuwait University, Kuwait, Kuwait

P314  Positive effects of intermittent PTH on growing bone and dystrophic muscle in Mdx mouse model of Duchenne Muscular Dystrophy  
Sung-Hee (Seanna) Yoon1,2, Marc Grynpas2, Jane Mitchell2  
1Pharmacology and Toxicology, University of Toronto, Toronto, Canada, 2Lunenfeld–Tanenbaum Research Institute, Toronto, Canada

P315  A novel triphasic calcium-based implant increases bone formation in ovariectomized rat femoral metaphyseal defects  
Jonathan Shaul1, Peggy Lalor2, Shane Woods3, Scott Bruder4, Ronald Hill1  
1Research and Development, AgNovos Healthcare, Rockville, United States, 2Histion, Everett, United States, 3MPI Research, Mattawan, United States, 4Bruder Consulting and Venture Group, Franklin Lakes, United States

P316  Bone Union of spinal fusion surgery using local bone in long term bisphosphonates users  
SY Park1, TW Kang2, SW Suh2  
1Orthopaedicsurgery, Korea University, Seoul, Korea, Republic of, 2Korea University, Seoul, Korea, Republic of

P318  Biological therapy or bisphosphonates in postmenopausal women with osteoporosis?  
Corina Galesanu1  
1University of Medicine and Pharmacy ‘Grigore T. Popa’, Iasi, Romania

P319  Effect of medications on secondary prevention of Osteoporotic Vertebral Compression Fracture: a meta-analysis of randomized controlled trials  
Yuan-Zhe Jin1, Jae Hyup Lee1  
1Orthopedic Surgery, Seoul National University College of Medicine, Seoul, Korea, Republic of
P320  Tromsoporosis – secondary fracture prevention program resulted in improved adherence to anti-osteoporotic drugs in Tromsø, Norway  
Camilla Andreasen1,2, Veronica G. Rogli1,2, Jan Elvenes1,2, Ragnar M. Jaakimsen1,2, Tove T. Borgen1, Lene B. Solberg4, Frede Frihagen1,5, Lars Nordsletten4,5, Erik F. Eriksen4,5, Trude Basso1, Cecilia Dahl1, Tone K. Omsland1, Åshild Bjernerem1,2  
1University Hospital of North-Norway, Tromsø, Norway, 2The Arctic University of Norway, Tromsø, Norway, 3Vestre Viken Hospital Trust, Hospital of Drammen, Drammen, Norway, 4Oslo University Hospital, Oslo, Norway, 5University of Oslo, Oslo, Norway, 6St. Olav University Hospital, Trondheim, Norway

P321  Vitamin D status and refill compliance as determinants of BMD response to Oral Bisphosphonates in a real world setting  
Martin T Ernst1,2, Katrine H Rubin1,2, Daniel Prieto-Alhambra3,4, Anne Pernille Herrmann5, Bo Abrahamsen1,6  
1Odense Patient Data Explorative Network, University of Southern Denmark, Odense, Denmark, 2Odense University Hospital, Odense, Denmark, 3NDORMS, University of Oxford, Oxford, United Kingdom, 4GREMPAL Research Group, Universitat Autonoma de Barcelona, Barcelona, Spain, 5Department of Endocrinology, Odense University Hospital, Odense, Denmark, 6Medicine, Holbæk Hospital, Holbæk, Denmark

P322  Teriparatide is superior to standard care in severe spinal osteoporosis: observational study in routine clinical practice  
Philip Riches1, Ailsa Oswald1, Kathryn Berg1, Stuart Ralston1  
1University of Edinburgh, Edinburgh, United Kingdom

P323  Periodontal infection affects the severity of the medication-related osteonecrosis of the jaw (MRONJ)  
Jeong Keun Lee1,2  
1Oral and Maxillofacial Surgery, Ajou University School of Medicine, Suwon, Korea, Republic of, 2Oral and Maxillofacial Surgery, Ajou University Dental Hospital, Suwon, Korea, Republic of

P324  A new approach for reversing osteoporosis bone loss with a conjugated drug (C3) in an Ovariectomized (OVX) rat model  
Marc Grynpas1, Zeeshan Sheikh2, Gang Chen3, Robert Young3, Michael Glogauer2  
1Mount Sinai Hospital, Toronto, Canada, 2University of Toronto, Toronto, Canada, 3Simon Fraser University, Burnaby, Canada

P325  Why are patients with a recent fracture not attending the Fracture Liaison Service? A questionnaire-based study  
Peter van den Berg1, Paul van Haard2, Piet Geusens1,2, Joop van den Bergh3,5, Dave Schweitzer4  
1FLS – orthopaedics, Reiner de Graaf Gasthuis, Delft, Netherlands, 2Medical Laboratories, Association of Clinical Chemistry, Reiner the Graaf Gasthuis, Delft, Netherlands, 3Subdivision Rheumatology, Maastricht University Medical Center, Maastricht, Netherlands, 4Hasselt University, Hasselt, Belgium, 5Internal Medicine, VieCuri Medical Center Noord-Limburg, Venlo, Netherlands, 6Internal Medicine and Endocrinology, Reiner de Graaf Gasthuis, Delft, Netherlands

P326  LC-MS/MS measurement of parathyroid hormone PTH (1–34): Use in studying oral PTH (1–34) administration and possible diagnostic application in pseudohypoparathyroidism  
Sulaiman Al-Riyami1, Jonathan Tang1, Hillel Galitzer1, William Fraser1  
1Norwich Medical School, University of East Anglia, Norwich, United Kingdom, 2Hadassah Ein–Kerem, Jerusalem Bio Park, Entera Bio Ltd, Jerusalem, Israel

P327  Health-related quality of life in postmenopausal osteoporosis connected to the adherence and persistence of Denosumab vs weekly Bisphosphonate  
Giorgio Carlino1, Roberta Maggia2  
1Rheumatology, ASL LECCE, Casarano, Italy, 2Internal Medicine, Scorrano Hospital, Scorrano, Italy
P328  Abaloparatide: an effective osteoanabolic compared with PTH (1-34) and PTHrP (1-36) in mice
Carole Le Henaff1, Florante Ricarte2,3, Zhiming He4, Joshua Johnson1, Nicola C. Partridge1
1Department of Basic Science and Craniofacial Biology, New York University Dental School, New York, United States, 2Molecular Pharmacology Training Program, Sackler Institute of Graduate Biomedical Sciences, New York University School of Medicine, New York, United States, 3Department of Basic Science and Craniofacial Biology, New York University College of Dentistry, New York, United States

P329  NaQuinate treatment maintains bone architecture and improves bone quality in ovariectomized rats
Stephanie Gohin1, Robin Soper2, Behzad Javaheiri1, Lars Marius Ytreba3, Mark Hopkinson1, Richard Meeson4, David Howat5, Andrew Pitsillides6, Stephen Hodges1,2,3
1Comparative Biomedical Sciences, Royal Veterinary College, London, United Kingdom, 2Haoma Medica, London, United Kingdom, 3Anaesthesiology and Intensive Care Medicine, Tromsø University Hospital, Tromsø, Norway, 4Institute of Orthopaedics and Musculoskeletal Science, University College London, Stanmore, United Kingdom

P330  Comparison of the new bioactive Sclerostin ELISA with other commercially available Sclerostin immunoassays
Jacqueline Wallwitz1, Elisabeth Gadermaier1, Gabriela Berg1,2, Gottfried Himmler1
1The Antibody Lab GmbH, Vienna, Austria, 2Biomedica Medizinprodukte GmbH & Co KG, Vienna, Austria

P331  Dose nail length effect on operative result of atypical subtrochanteric femur fracture?
Kwangkyoun Kim1
1Orthopedic Surgery, Konyang University, Daejeon, Korea, Republic of

P332  Bisphosphonate treatment in 6 patients with pregnancy- and lactation-associated osteoporosis
Kalliopi Lampropoulou-Adamidou1, Ioannis K Triantafyllopoulos1, Alexia Balanika2, Konstantinos Makris3, ChrysoULA G Liakou4, George Travoras5, Symeon Tournis1
1Laboratory for the Research of Musculoskeletal System “Th. Garofalidis”, Medical School, University of Athens, KAT Hospital, Athens, Greece, 2Department of Computed Tomography, Asklepeion Voula Hospital, Athens, Greece, 3Biochemistry Department, KAT Hospital, Athens, Greece, 4First Obstetrics and Gynaecology Department, ‘Alexandra’ Hospital, Athens, Greece

P333  Oxytocin did not affect the skeletal system in prednisolone-treated female rats
Aleksandra Janas1, Ewa Kruczek1, Dominika Gancarczyk1, Karolina Balamucka1, Adam Materla1, Joanna Folkowicz1
1Department of Pharmacology, School of Pharmacy with the Division of Laboratory Medicine in Sosnowiec, Medical University of Silesia, Katowice, Sosnowiec, Poland

P334  How much does bone mineral density increase after short-term teriparatide treatment (≤ 12 months) in patients with severe osteoporosis?
Kyung Jung Kang1, Min Hyung Jung2
1Kyung Hee University Medical Center, Seoul, Korea, Republic of, 2Kyung Hee University, Kyung Hee Medical, Seoul, Korea, Republic of

P335  A hip fracture during the delivery because of transient migratory osteoporosis: the suspected diagnosis’ importance
Lorena Pena1, Diego Bertrand1, Alejandro Braña1, Daniel Nuñez1
1Traumatología y Cirugía Ortopédica, Hospital Universitario Central de Asturias, Oviedo, Spain

P336  Teriparatide treatment in pregnancy-associated osteoporosis with multiple vertebra fractures
Vera Choida1, Judith Bubbear1, Richard Keen1
1Royal National Orthopaedic Hospital, London, United Kingdom
P337 Rete Osteoporosi Sicilia (Sicilian Osteoporosis Network): an IT platform for the improvement of diagnosis and treatment of osteoporosis in Sicily
Agostino Gaudio1, Rosario Rapisarda1, Anastasia Xourafa1, Anna Schillaci1, Carmelo Erio Fiore1, Pietro Castellino1
1Department of Clinical and Experimental Medicine, University of Catania, Catania, Italy

P338 Assessment of femoral cortical bone quality in individuals with type 2 diabetes mellitus reveals increased porosity accompanied by altered hard tissue characteristics in endocortical compartments
Eva Maria Wölfel1, Petar Milovanovic1,2, Katharina Jähn1, Herbert Mushumba2, Birgit Wulf2, Michael Amling1, Klaus Püschel3, Graeme M. Campbell4, Björn Busse1
1Department of Osteology and Biomechanics, University Medical Center Hamburg-Eppendorf, Hamburg, Germany, 2Institute of Anatomy, Belgrade, Serbia, 3Department of Forensic Medicine, University Medical Center Hamburg-Eppendorf, Hamburg, Germany, 4Institute of Biomechanics, Hamburg University of Technology, Hamburg, Germany

P339 All-cause mortality with use of antidepressants and benzodiazepines after major osteoporotic fracture
Irma de Bruin1,2, Corinne Klop1, Caroline Wyers1,2, Jetty Overbeek1,2,3, Piet Geusens4,5, Joop van den Bergh1,2,5, Piet de Vries5,9
1Department of Internal Medicine, VieCuri Medical Center, Venlo, Netherlands, 2NUTRIM, Department of Internal Medicine, Maastricht University Medical Center +, Maastricht, Netherlands, 3Division of Pharmacoepidemiology & Clinical Pharmacology, Utrecht Institute for Pharmaceutical Sciences, Utrecht University, Utrecht, Netherlands, 4PHARMO institute, Utrecht, Netherlands, 5Biomedical Research Center, Hasselt University, Diepenbeek, Belgium, 6CAPRI, Department of Internal Medicine, Subdivision Rheumatology, Maastricht University Medical Center +, Maastricht, Netherlands, 7NUTRIM/CAPHRI, Maastricht University Medical Center +, Maastricht, Netherlands, 8Department of Clinical Pharmacy and Toxicology, Maastricht University Medical Center +, Maastricht, Netherlands, 9CAPHRI, Maastricht University Medical Center +, Maastricht, Netherlands

P340 SQSTM1 mutations in a Hungarian cohort of Paget’s disease of bone: associations with disease severity
Judit Donáth1, Márton Pálinkás1, Rita Rásonyi1, Gyula Vastag2,3, Nerea Alonso4, Beatriz Larraz Prieto4, Mahéva Vallet4, Stuart Ralston4, Gyula Poór1,5
1Rheumatology, National Institute of Rheumatology and Physiotherapy, Budapest, Hungary, 2Széchenyi University, Győr, Hungary, 3National University of Public Service, Budapest, Hungary, 4Edinburgh Clinical Trials Unit, University of Edinburgh, Western General Hospital, Edinburgh, United Kingdom, 5Semmelweis University, Budapest, Hungary

P341 Reduction of arrhythmias in primary hyperparathyroidism by parathyroidectomy, evaluated with 24 hour ecg monitoring
Jessica Pepe1, Cristiana Cipriani1, Mario Curione1, Federica Biamonte1, Luciano Colangelo1, Vittoria Danese1, Veronica Cechetti1, Chiara Sonato1, Federica Ferrone1, Mirella Cili1, Salvatore Minisola1
1Department of Internal Medicine and Medical Disciplines, Sapienza University of Rome, Rome, Italy

P342 High bone mineral density on routine bone density scanning: Frequency and causes
Aurore Nottez1, Sami Kolta2, Isabelle Lègroux-Gérot1, Georges Lion1, Bernard Cortet1, Julien Paccou2
1Lille University Hospital, Lille, France, 2CHU de Cochin, Paris, France

P343 Osteoporosis in Crohn’s Disease is dependent on Serum factors which change protein expression in a linear relationship to patients’ disease stage and bone mineral density
Martina Blaschke1,2, Regine Köpp1, Christoph Lenz1,2, Jochen Kruppa1,2, Klaus Jung1,2, Heide Siggelkow1,2
1Gastroenterology and gastrointestinal Oncology, University of Göttingen, Göttingen, Germany, 2MVZ Endokrinologikum Göttingen, Göttingen, Germany, 3Bioanalytical Mass Spectrometry, Max Planck Institute for Biophysical Chemistry, Göttingen, Germany, 4Institute of Clinical Chemistry, University Medical Center, Göttingen, Germany, 5Department of Medical Statistics, University Medical Center, Göttingen, Germany, 6Genomics and Bioinformatics of Infectious Diseases, University of Veterinary Medicine Hannover, Hannover, Germany
P344 Patterns of spinal ossifications in 500 chronic spinal injury patients
Shamsa Shariatpanahi1
1Shahed University, Tehran, Iran, Islamic Republic of

P345 The relationship between the renin-angiotensin-aldosterone system and bone metabolism in patients with secondary aldosteronism caused by anorexia nervosa or laxative abuse
Gen Yasuda1, Akira Fujiwara, Sanee Sako, Nobuhito Hirowa1
1Yokohama City University, Yokohama, Japan

P346 Obesity and vitamin D deficiency and insufficiency in postmenopausal women
Vladyslav Povoroznyuk1, Anna Musienko1, Nataliia Dzerovych1, Roksolana Povoroznyuk1, Oksana Ivaniv1
1Department of Clinical Physiology and Pathology of Locomotor Apparatus, D. F. Chebotarev Institute of Gerontology AMS Ukraine, Kyiv, Ukraine

P347 Association of dorsal flat vertebra/platyspondyly as a form of vertebral dysplasia within type II collagen disorders
Maria Del Pilar Abiado Guzman1, Raúl Veiga Cabello2, Miguel Cantalejo Moreira3, Justo Ruiz Ruiz3, Antonio Zapatero Gaviria1
1Rheumatology, Hospital de Fuenlabrada, Fuenlabrada, Spain, 2Rheumatology, Hospital Central de la Defensa, Madrid, Spain, 3Internal Medicine, Hospital de Fuenlabrada, Fuenlabrada, Spain

P348 Bone parameters in experimental colitis following the corticosteroid therapy in rats
Ivana Maric1, Ivana Smoljan2, Igor Erjavec3, Andrica Lekic4, Tamara Vrlanic Vranci1, Dragica Bobinac1, Sanja Zoricic Cvek1
1Department of Anatomy, Faculty of Medicine, University of Rijeka, Rijeka, Croatia, 2Department of Cardiovascular Disease, University Hospital Rijeka, Rijeka, Croatia, 3Laboratory for Mineralized Tissues, University of Zagreb School of Medicine, Rijeka, Croatia, 4Department of Basic Medical Sciences, Faculty of Health Studies, University of Rijeka, Rijeka, Croatia

P349 Mechanisms of bone morphogenetic protein – 7 protective effect against cold ischemia induced renal injury
Tanja Celic1, Hrvoje Omrcen1, Olga Cvijanovic–Peloza1, Ivana Maric1, Dragica Bobinac1
1University of Rijeka, Medical faculty, Rijeka, Croatia

P350 Bone density in duchenne muscular dystrophy: longitudinal changes
Silvia Va1, Barbara Pasonisi2, Giovanni Baranello2, Francesca Broggi2, Maria Luisa Bianchi3
1Istituto Auxologico Italiano IRCCS, Milano, Italy, 2Fondazione Istituto Neurologico C. Besta IRCCS, Milano, Italy

P351 Osteosarcoma cells show laminopathic nuclear phenotypes: study on the nuclear envelope composition
Enrica Urciuoli1, Stefania Petrini1, Valentina D’Oria1, Barbara Peruzzi1
1Multifactorial Diseases Unit – Research Laboratories, Bambino Gesù Children’s Hospital, IRCCS, Rome, Italy, 2Confocal Microscopy Core Facility, Bambino Gesù Children Hospital, IRCCS, Rome, Italy

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Jean De Schepper1, Armand Laumen2, Caroline Ernst1, Kathlimentary Keymolen1, Marjan De Rademaeker4, Olivia Louis3
1Pediatrics, UZ Brussel, Brussels, Belgium, 2Orthopedics, UZ Brussel, Brussels, Belgium, 3Radiology, UZ Brussel, Brussels, Belgium, 4Genetics, UZ Brussel, Brussels, Belgium

P353 The effect of growth hormone treatment in a child with a novel TRPS1 gene mutation
Yael Levy-Shraga1,2, Shlomo Wientroub2,3, Leonid Zeitlin2,3
1Pediatric Endocrine and Diabetes Unit, Safra Children’s Hospital, Ramat Gan, Israel, 2Sackler Faculty of Medicine, Tel Aviv University, Tel Aviv, Israel, 3Pediatric Orthopaedics, Dana Children’s Hospital, Tel Aviv, Israel

P354 Dysplasia epiphysealis hemimelica of the proximal femur
Leonid Hlazkin1, Iryna Maliovanaya1, Mikhail Mikhovich1, Aleh Sakalouski2
1Orthopaedics and Traumatology, Mogilev Regional Children’s Hospital, Mogilev, Belarus, 2Belarus Republican Scientific and Practical Centre for Traumatology and Orthopaedics, Minsk, Belarus
P355  Quantification of four mouse periostin isoforms with an in depth characterized sandwich ELISA  
Elisabeth Gadermaier1, Jacqueline Wallwitz1, Gabriela Berg1,2, Gottfried Himmler1  
1The Antibody Lab GmbH, Vienna, Austria, 2Biomedica Medizinprodukte GmbH & Co KG, Vienna, Austria

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Johannes Schneider1, Adalbert Raimann2, Andrea Boni-Mikats3, Martin Krssak4, Radka Klepochová5,  
Gabriele Haeusler2, Janina Patsch3, Kay Raum1  
1Berlin-Brandenburg Center for Regenerative Therapies, Charité – Universitätsmedizin Berlin, Berlin,  
Germany, 2Department of Pediatrics and Adolescent Medicine, Medical University of Vienna, Vienna,  
Austria, 3Department of Biomedical Imaging and Image-Guided Therapy, Division of General Radiology  
and Pediatric Radiology, Medical University of Vienna, Vienna, Austria, 4Division of Endocrinology  
and Metabolism, Department of Internal Medicine III, Medical University of Vienna, Vienna, Austria,  
5Department of Biomedical Imaging and Image-Guided Therapy, High Field MR Centre, Medical  
University of Vienna, Vienna, Austria

P357  Somatic activating mutations in MAP2K1 cause melorheostosis  
Heeseog Kang1, Smita Jha2,3, Zuoming Deng1, Nadja Fratzl-Zelman2, Wayne Cabral1, Aleksandra Ivovic4,  
Françoise Meylan3, Eric Hanson4, Eileen Lange5, James Katz6, Paul Roschger3, Klaus Klauschofer3, Edward  
Coven9, Richard Siege6, Timothy Bhattacharyya7, Joan Marini7  
1Section on Heritable Disorders of Bone and Extracellular Matrix, National Institute of Child Health and  
Human Development, National Institutes of Health, Bethesda, United States, 2Clinical and Investigative  
Orthopedics Surgery Unit, National Institute of Arthritis and Musculoskeletal and Skin Diseases, National  
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Branch, National Institute of Arthritis and Musculoskeletal and Skin Diseases, National Institutes of  
Health, Bethesda, United States

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Francesca Ficaro1,5, Cristina Sabocchi1,5, Bernhard Gentner1, Anna Villa1,5  
1San Raffaele Telethon Institute for Gene Therapy, Milan, Italy, 2School of Medicine and Surgery,  
University of Milano-Bicocca, Monza, Italy, 3Humanitas Clinical and Research Center, Rozzano, Italy,  
4Department of Medical Biotechnologies and Translational Medicine, University of Milan, Milan, Italy,  
5Milan Unit, CNR, Milan, Italy

P359  Impaired proteoglycan glycosylation, elevated TGF–D signaling, and abnormal osteoblast  
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Uwe Kornak1, Wing–Lee Chan1, Magdalena Steiner1, Tomasz M. Witkos2, Bettina Willie2, Thorsten  
Schinke2, Antonio Rossi2, Michael Amling2, Martin Lowe2, Danny Chan3, Stefan Mundlos1  
1Institut für Medizinische Genetik, Charité-Universitätsmedizin Berlin, Berlin, Germany, 2Faculty of  
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Kong, China
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1IRGB–CNR UOS Milan, Rozzano–Milan, Italy, 2Humanitas Clinical and Research Center, Rozzano, Italy, 3Department of Medical Biotechnologies and Translational Medicine, University of Milan, Milan, Italy, 4ISTEC–CNR, Faenza, Italy, 5Laboratory of Immunology and Rheumatic Diseases, Pediatrics II, Gaslini Institute, Genova, Italy, 6Humanitas University, Rozzano, Italy

P361 Disruption of a PTHrP-SIK3 mediated pathway alters mTOR signaling and causes a spectrum of skeletal dysplasias
Fabiana Csukasi1, Ivan Duran1, Maya Barad1, Jorge Martin1, Daniel H Cohn1, Pavel Krejci2, Deborah Krakow1
1University of California Los Angeles, Los Angeles, United States, 2Masaryk University, Brno, Czech Republic

P362 The high bone mass phenotype of Lrp5-mutant mice is not affected by megakaryocyte depletion
Timur Yorgan1, Nele Vollersen1, Jean-Pierre David1, Michael Amling1, Thosten Schinke1
1Department of Osteology and Biomechanics, University Medical Center Hamburg-Eppendorf, Hamburg, Germany

P364 Material properties in bone tissue from patients with melorheostosis caused by somatic activation mutations in MAP2K1
Nadja Fratzl-Zelman1, Paul Roschger1, Heseog Kang2, Smita Jha3,4, Andreas Roschger5, Stephane Blouin1, Zuoming Deng6, Wayne A. Cabral2,7, Aleksandra Ivovic8, Françoise Meylan9, Eric P. Hanson9, Eileen Lange10, James Katz10, Edward W. Cowen11, Klaus Klauschofer1, Richard Siege1, Peter Fratzl6, Timothy Bhattacharyya1, Joan C. Marini2
1Ludwig Boltzmann Institute of Osteology at the Hanusch Hospital of WGKK, and AUVA Trauma Center Meidling, 1st Medical Department Hanusch Hospital, Vienna, Austria, 2Section on Heritable Disorders of Bone and Extracellular Matrix, National Institute of Child Health and Human Development, National Institutes of Health, Bethesda, United States, 3Clinical and Investigative Orthopedics Surgery Unit, National Institute of Arthritis and Musculoskeletal and Skin Diseases, National Institutes of Health, Bethesda, United States, 4Program in Reproductive and Adult Endocrinology, Eunice Kennedy Shriver National Institute of Child Health and Human Development, National Institutes of Health, Bethesda, United States, 5Max Planck Institute of Colloids and Interfaces, Department of Biomaterials, Potsdam, Germany, 6Biodata Mining and Discovery Section, Office of Science and Technology, National Institute of Arthritis and Musculoskeletal and Skin Diseases, National Institutes of Health, Bethesda, United States, 7Current Address: Molecular Genetics Section, National Human Genome Research Institute, National Institutes of Health, Bethesda, United States, 8Immunoregulation Section, Autoimmunity Branch, National Institute of Arthritis and Musculoskeletal and Skin Diseases, National Institutes of Health, Bethesda, United States, 9Immunodeficiency and Inflammation Unit, Autoimmunity Branch, National Institute of Arthritis and Musculoskeletal and Skin Diseases, National Institutes of Health, Bethesda, United States, 10Office of the Clinical Director, National Institute of Arthritis and Musculoskeletal and Skin Diseases, National Institutes of Health, Bethesda, United States, 11Dermatology Branch, National Institute of Arthritis and Musculoskeletal and Skin Diseases, National Institutes of Health, Bethesda, United States

P365 A homozygous CREB3L1 missense mutation expands the mutational spectrum of CREB3L1-related osteogenesis imperfecta
B Guillemyn1, D Syx1, L Demuynck1, H Kayseril2, A De Paepe1, P Coucke1, F Malfait1, S Symoens1
1Center for Medical Genetics Ghent (CMGG) – Medical Research Building (MRB), Ghent University, Ghent, Belgium, 2Medical Genetics, University of Istanbul, Istanbul, Turkey

P366 The cardiovascular profile among patients with Non-Surgical Hypoparathyroidism and Pseudohypoparathyroidism: a cohort study
Line Underbjerg1, Tanja Sikjaer1, Lars Rejnmark1
1Dept. of Endocrinology and Internal Medicine, Aarhus University Hospital, Aarhus C, Denmark
P367  [18F]NaF PET: A good modality for identifying progression of HO in Fibrodysplasia ossificans progressiva
Esmée Botman1, Pieter G.H.M. Raijmakers2, Maqsood M. Yaqub3, Bernd Teunissen3, J. Coen Netelenbos1, Wouter Lubbers4, Lothar Schwarte4, Adriaan A. Lammertsma2, Marelise (Elisabeth) Eekhoff1, on behalf of the FOP research group
1Endocrinology, VU University Medical Center, Amsterdam, Netherlands, 2Nuclear Medicine, VU University Medical Center, Amsterdam, Netherlands, 3Radiology, VU University Medical Center, Amsterdam, Netherlands, 4Anesthesiology, VU University Medical Center, Amsterdam, Netherlands

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B Guillemyn1, D Syx1, T Rosseel1, H Kayserili2, AM Cueto-González3, L Van Maldergem4, B Menten1, A De Paepe1, P Coucke1, F Malfait1, S Symoens1
1Center for Medical Genetics Ghent (CMGG) – Medical Research Building (MRB), Ghent University, Ghent, Belgium, 2Medical Genetics, University of Istanbul, Istanbul, Turkey, 3Clinical Genetics, Vall D’Hebron Hospital Materna Infantil, Barcelona, Spain, 4Centre Hospitalier Universitaire de Besançon – Génétique, Besancon Cedex, France

P369  Trabecular bone score in osteogenesis imperfecta. Is it useful?
Helena Florez1, Africa Muxi2, Eva Gonzalez3, Ana Monegal1, Núria Guañabens1, Pilar Peris1
1Metabolic Bone Diseases Unit, Department of Rheumatology. Hospital Clinic. University of Barcelona, Barcelona, Spain, 2Department of Nuclear Medicine. Hospital Clinic, University of Barcelona, Barcelona, Spain, 3Department of Immunology. Hospital Clinic, University of Barcelona, Barcelona, Spain

P370  European reference network on bone rare diseases (BOND ERN)
Luca Sangiorgi1, Matias de la Calle2
1SSD Genetica Medica e Malattie Rare Ortopediche, Istituto Ortopedico Rizzoli, Bologna, Italy, 2SGG Genetica Medica e Malattie Rare Ortopediche, Istituto Ortopedico Rizzoli, Bologna, Italy

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Jane Andersen1,2, Mathias Hauge Bünger3, Ole Rahbek4, Jannie Dahl Hold1, Torben Harsløf5, Bente Langdahl1
1Dept of Endocrinology and Internal Medicine, Aarhus University Hospital, Århus, Denmark, 2Dept. of Internal Medicine, Horsens Sygehus, Horsens, Denmark, 3Dept of Paediatric Orthopaedics, Aarhus University Hospital, Århus, Denmark

P372  New mechanisms and therapies for Osteogenesis Imperfecta caused by mutations in type I procollagen chaperones
Ivan Duran1, Fabiana Csukasi1, Jorge Martin1, Pavel Krejci2, Dan Cohn1, Deborah Krakow1
1University of California Los Angeles, Los Angeles, United States, 2Masaryk University, Brno, Czech Republic

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Cristina García Fontana1, Juan Miguel Villa Suárez2, Maria Teresa Márquez Hernández3, Francisco Andújar Vera1, José María Gómez Vida4, Tomás de Haro2, Beatriz García Fontana5, Manuel Muñoz Torres6
1Instituto de Investigación Biosanitaria de Granada (lbs.GRANADA), Granada, Spain, 2Clinical Analyses Unit, Hospital Universitario Campus de la Salud, Granada, Spain, 3Instituto de Investigación Biosanitaria de Granada (lbs.GRANADA); Department of Medicine. University of Granada, Granada, Spain, 4Pediatric Unit, Hospital Universitario Campus de la Salud, Granada, Spain, 5Endocrinology and Nutrition Unit, Hospital Universitario Campus de la Salud. Instituto de Investigación Biosanitaria de Granada (lbs. GRANADA); CIBERFES. Instituto de Salud Carlos III, Granada, Spain, 6Endocrinology and Nutrition Unit, Hospital Universitario Campus de la Salud. Instituto de Investigación Biosanitaria de Granada (lbs. GRANADA); CIBERFES. Instituto de Salud Carlos III; Department of Medicine. University of Granada, Granada, Spain
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Arantza Infante¹, Andrea Goitia¹, Ana Bueno², Belén Sagastizabal³, Blanca Gener⁴, Clara I Rodríguez¹
¹Stern Cell and Cell Therapy Lab, BioCruces Health Research Institute, Barakaldo, Spain, ²Department of Orthopedic Surgery, Getafe University Hospital, Madrid, Spain, ³Endocrinology Department, Getafe University Hospital, Madrid, Spain, ⁴Genetics Service, Cruces University Hospital, Barakaldo, Spain

P375  Osteitis condensans ili: Differential diagnosis and management. A case of back pain with combined OCI and syringomyelia findings
Peter Peev¹, Francesca Mellor¹, Daniela Dyankova²
¹London Northwest Hospitals NHS Trust, Ealing Hospital, London, United Kingdom, ²Royal National Orthopaedic Hospital, London, United Kingdom

P376  Bilateral multiple insufficiency femoral fractures in a patient with Paget disease treated 7 years with calcitonin and 20 years with etidronate
George Trovas¹, Evagelia Kaskani², Chistos Kosmidis³
¹Laboratory for Research of the Musculoskeletal System ‘Th. Garofalidis’, KAT Hospital, National and Kapodistrian University of Athens, School of Medicine, Athens, Greece, ²Health Center Chalandri, 1st Health District Attica, Athens, Greece, ³Health Center Alexandras, 1st Health District Attica, Athens, Greece

P377  The Dual Roles of ENPP1, an Enzyme Suppressing Ectopic Mineralization and Supporting Bone Mineral Density
Dillon Kavanagh¹, Kristin Zimmerman¹, Paul Stabach¹, Thomas Carpenter², Mark Horowitz³
¹Department of Pathology, Yale University, New Haven, United States, ²Department of Pediatrics, Yale University, New Haven, United States, ³Department of Orthopaedics and Rehabilitation, Yale University, New Haven, United States
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Introduction

Peter Kamenický
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XLH: a chronic, lifelong disease

Tom Sudo
Kyowa Hakko Kirin, UK
XLH pathophysiology: the pivotal role of FGF23

Outi Mäkitie
University of Helsinki, Finland
Disease manifestation and burden in XLH

Carola Zillikens
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9th International Conference on Children’s Bone Health (ICCBH) / 22-25 June 2019 / Salzburg, Austria / Abstract deadline: 11 February 2019
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Kyowa Kirin International

Kyowa Kirin International plc is a rapidly growing specialty pharmaceutical company engaged in the development and commercialisation of innovative medicines, with a growing portfolio in rare diseases and therapeutic areas with high medical needs. With headquarters in Scotland, Kyowa Kirin International has business operations throughout Europe and the United States.

Kyowa Kirin International is a wholly owned subsidiary of Japan-based Kyowa Hakko Kirin Co. Ltd., a leading research-based life sciences company with particular strength in antibody technologies for oncology, nephrology and immunology/allergy. Through its research and global commercialisation of innovative medicines, the company seeks to contribute to the health and wellbeing of people around the world.

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PerkinElmer is a global life sciences company uniquely positioned to bring instruments and software solutions to enable comprehensive imaging & detection solutions for your preclinical research. Our Quantum GX2 microCT imaging system combines high resolution microCT imaging with high-speed, low dose CT scanning across multiple species, ideal for bone and tissue research. When coupled with AccuCT, our automated, advanced bone analysis software, researchers can perform ASBMR bone morphometry and BMD analysis with just a few clicks. Stop by booth #13 and learn how PerkinElmer preclinical solutions can work for you.

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SCANCO Medical (www.scanco.ch) is the leading global provider of mCT and the only provider of HR-pQCT systems (XtremeCT). The range of scanners offer capabilities of obtaining images with sub-micron resolution from specimen scanners to 10 micron resolution from in vivo scanners. All systems are bundled with easy to use and comprehensive tools for Scan Acquisition, Image analyses (including Finite Element Analysis), Visualization and Archiving solutions. The micro-CT systems are bundled with high-performance workstations with large memory and data storage capabilities and optional GPU-based reconstruction solutions. SCANCO also provides contract based scanning and analysis services for academic and industrial groups.

Stratec Medizintechnik GmbH

Stratec Medizintechnik is the world’s most successful producer of pQCT-based bone densitometry scanners. Results are presented in real density units (g/cm³). Additionally geometrical properties of bone can be analysed which allow the estimation of mechanical properties. The combined analysis of muscle and bone allows differentiation of disuse osteopenia from true osteoporosis.

The sister company Novotec Medical is manufacturer of Galileo vibration training devices for muscle stimulation and of Leonardo motion analysis systems (mechanography). The side alternating technology employs a natural movement similar to human gait. Improvement of muscle function, treatment of back pain and immobility are typical fields of application.
TAmiRNA GmbH

TAmiRNA stands for “Triple-A microRNA research”. Our mission is to develop novel diagnostic solutions for unmet clinical needs, and to offer high-quality analytical services in compliance with the high standards required by diagnostics development. The osteomiR™ kit provides deep insights into bone quality through analysis of a microRNA bone biomarker signature in serum. The thrombomiR™ kit allows to determine platelet activation on the basis of fresh or frozen plasma samples. R&D teams at universities and companies benefit from TAmiRNA’s compelling solutions for the analysis of non-coding RNAs in biofluids, single-cells or tissue compartments in any research area.

Virtual Exhibitors

Medimaps Group SA. Seating Area (Exhibition Area)
Taking the walk of life, one life at a time.

Caring for people.
Cherishing life.

Compassionate hopes and dreams soon come together to develop wings, embracing the wind to soar.

Life is precious.
Always there to support each and every one,
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Educational Grants
Some components of the ECTS 2018 have been supported through Educational Grants from the following companies:

AgNovos Healthcare
Radius Healthcare

This event is supported, in part, by funding from industry. All support is managed in strict accordance with CME/CPD accreditation criteria and standards for commercial support.
Corporate Satellite Symposia

SATURDAY, 26 MAY 2018

15:30 – 17:00 Satellite symposium Amgen
Evolving concepts in long-term osteoporosis treatment
Chair: Bente Langdahl (Denmark)

- 15:30 – 15:35 Welcome and introduction
  Bente Langdahl (Denmark)
- 15:35 – 16:10 Time to move away from the concept of over-suppression
  Socrates Papapoulos (The Netherlands)
- 16:10 – 16:45 Moving forward towards longterm osteoporosis treatment
  Serge Ferrari (Switzerland)
- 16:45 Discussion

SUNDAY, 27 MAY 2018

13:00 – 14:30 Satellite symposium UCB
A universe of new understanding in fragility fractures

Learning objectives:
After the 90-minute educational symposium, participants should be able to answer the following questions:
1. How do bone quality and quantity impact bone strength?
2. What factors can enhance bone modelling and so improve bone strength?
3. What specific next step actions will you and your team take to drive basic research in bone strengthening approaches or apply your learnings on bone strengthening approaches in the clinic?

Chair: Claus-C. Glüer (Germany)

- 13:00 – 13:10 Welcome and introduction
  Claus-C. Glüer (Germany)
  Smith Johnston (United States)
- 13:30 – 13:40 Q&A
- 13:40 – 14:10 Bone modelling and mechanobiology: New perspectives for fracture management
  Ralph Müller (Switzerland)
- 14:10 – 14:30 Taking action in the terrestrial world: Q&A and closing comments
  All, led by Claus-C. Glüer (Germany)
MONDAY, 28 MAY 2018

13:00 – 14:30 Satellite symposium Kyowa Kirin
Innovation in management of XLH: a modern paradigm  
Chair: Carola Zillikens (The Netherlands)  
Mariano Rodriguez Portillo (Spain)

13:00 – 13:05 Introduction  
Carola Zillikens (The Netherlands)  
Mariano Rodriguez Portillo (Spain)

13:05 – 13:25 XLH, a chronic, lifelong disease  
Peter Kamenicky (France)

13:25 – 13:35 XLH pathophysiology: the pivotal role of FGF23  
Tom Sudo (United Kingdom)

13:35 – 13:55 Disease manifestation and burden in XLH  
Outi Mäkitie (Finland)

13:55 – 14:15 Current assessment and management approaches in XLH  
Carola Zillikens (The Netherlands)

14:15 – 14:25 Q&A

14:25 – 14:30 Summary and close  
Carola Zillikens (The Netherlands)  
Mariano Rodriguez Portillo (Spain)
Evolving concepts in long-term osteoporosis treatment

Saturday 26 May 2018 | 15.30 – 17.00 | Auditorium 2

P R O G R A M M E

Chair: Bente Langdahl, Denmark

15.30 Welcome and introduction
Bente Langdahl, Denmark

15.35 Time to move away from the concept of over-suppression
Socrates Papapoulos, The Netherlands

16.10 Moving forward towards long-term osteoporosis treatment
Serge Ferrari, Switzerland

16.45 Discussion
A UCB-sponsored satellite symposium.

This symposium is only open to healthcare professionals who are registered for the ECTS Congress.

**A UNIVERSE OF NEW UNDERSTANDING IN FRAGILITY FRACTURES**

**Sunday 27th May, 13:00–14:30**

**Auditorium 2**

**Smith Johnston**
*Johnson Space Centre, USA*

**Bones in Space:**
Microgravity and its effects

**Ralph Müller**
*ETH Zürich, Switzerland*

**Bone modelling and mechanobiology:**
New perspectives for fracture management

**Claus-C Glüer**
*Chair*
*Christian-Albrechts-University zu Kiel, Germany*

**Taking action in the terrestrial world:**
Q&A and closing comments

*All, led by Claus-C Glüer*

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A UCB-sponsored satellite symposium.

This symposium is only open to healthcare professionals who are registered for the ECTS Congress.
Opening Hours

REGISTRATION COUNTER PRE-CONGRESS ON FRIDAY, 25 MAY 2018
Pre-Congress delegates can pick up their name badges at the registration counter located in the entrance hall on the ground floor of the Valencia Conference Centre on Friday, 25 May 2018, from 08:00.

REGISTRATION COUNTER
The registration counter is located in the entrance hall on the ground floor of the Valencia Conference Centre and open at the following times:

- Friday, 25 May 2018: 16:00 – 19:00
- Saturday, 26 May 2018: 07:00 – 20:00
- Sunday, 27 May 2018: 07:30 – 19:30
- Monday, 28 May 2018: 07:30 – 19:30
- Tuesday, 29 May 2018: 07:30 – 13:30

EXHIBITION
The Exhibition Area is located on the ground floor and open at the following times:

- Saturday, 26 May 2018: 08:30 – 18:00
- Sunday, 27 May 2018: 09:00 – 18:00
- Monday, 28 May 2018: 09:00 – 18:00

SPEAKERS’ PREVIEW CENTER
The Speakers’ Preview Center is located on the ground floor, to the right of the entrance of Auditorium 2, and open at the following times:

- Friday, 25 May 2018: 16:00 – 19:00
- Saturday, 26 May 2018: 07:00 – 20:00
- Sunday, 27 May 2018: 07:30 – 19:30
- Monday, 28 May 2018: 07:30 – 19:30
- Tuesday, 29 May 2018: 07:30 – 11:30
Badges and Tickets

Each registered participant will receive a name badge upon arrival. For organisational and security reasons, we request that all participants and exhibitors wear their badges at all times during the congress activities. Lost badges can be replaced at the registration desk at a cost of € 10 per badge (Spanish VAT included).

A barcode is printed on each name badge. These may be scanned by exhibitors/supporters to access the name affiliation, country, email address and professional interests provided by you when registering for the congress. We would like to point out that this is entirely voluntary and not compulsory for the participation in corporate events. Delegates can refuse to be scanned at any time. By permitting an exhibitor to scan your badge, you agree that these details may be used by the exhibiting company to send you further relevant product information.

Badges will be colour-coded as follows:

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Congress SECRETARIAT

INTERPLAN
Congress, Meeting & Event Management AG
Office Hamburg
Kaiser-Wilhelm-Strasse 93, 20355 Hamburg, Germany
Phone: +49 40 325092-57
Fax: +49 40 325092-44
Congress Venue

Valencia Conference Centre (VCC)
Avinguda de les Corts
Valencianes, 60
46015 València, Spain
www.palcongres-vlc.com

The emblematic building is the perfect balance of beauty, functionality and versatility. Its spectacular façade and entrance are ideal for showcasing events. The Centre’s rooms and auditoria offer infinite versatility for all types of events, whatever their size. In 1999, the Valencia Conference Centre was named as Best European Building by the Royal Institute of British Architects (RIBA).

HOW TO GET THERE

The Valencia Conference Centre is located on the main northwest approach road into the city. It is seven minutes from the Valencia-Manises international airport and eight minutes from the city centre and the high-speed train station. It has excellent transport links to the rest of the city via metro, taxi, bus, bike and tram.

VALENCIA AIRPORT

The airport is located about 10 kilometres from the city centre. Valencia Conference Centre can be reached by car in 15 minutes. There are numerous regular flights to the main European cities.

METRO

VCC has metro and tram stations nearby which connect the venue to the airport and to the Joaquín Sorolla mainline train station: Metrovalencia lines 1 and 4.
Web: www.metrovalencia.es

MOTORWAY

The Centre is easy to reach by car, thanks to its location on Avda. Cortes Valencianas, one of the main roads into the city and the main northwest approach road.

PARKING

The VCC have a secure underground car park with 600 parking spaces, and two open-air car parks.
Congress App

DOWNLOAD ECTS SOCIETY APP TO ACCESS ECTS 2018!

After installing the app, you can:
- Access ECTS 2018 by clicking on the respective tile and pressing “Install”
- Access the event programme, posters and speakers list
- Find your way around through the interactive floorplan
- Create your own daily schedule that will guide your through the day
- Stay informed and receive the latest messages and news
- Chat with other attendees

Do you have questions? Don’t hesitate to contact us! ects2018@interplan.de

HOW TO DOWNLOAD:

The easiest way to download our mobile app is to scan one of these barcodes. You can also search for ‘ECTS’ in the Apple App Store or Google Play Store.


Scavenger Hunt

The ECTS invites you to participate in our first scavenger hunt for ECTS 2018. Take part in this activity and complete the challenge to get the chance to win a prize.

What do you have to do to participate?
1.) Pick up your scavenger hunt pass at the ECTS booth.
2.) Go to the listed stations and pick up a stamp at each of them.
3.) Hand in your completely filled in pass at the ECTS booth until Monday, 28 May, 19:00 and by doing so, participate in a draw in which the ECTS raffles:

1st Place: ECTS 2019 Free congress registration
2nd Place: 1 year of free ECTS Membership
3rd Place: 1 night of hotel accommodation at HQ Hotel (in the context of ECTS 2019)

The winners will be announced at the Closing Ceremony.
Good to know

BANKS & LOCAL CURRENCY
There are several cash dispensers along the street “Avinguda de les Corts Valencianes”
The official currency in Spain is the Euro (€). Payment in other currencies will not be accepted.

CLOAKROOM & LUGGAGE
The cloakroom (free of charge) is located on ground floor next to Auditorium 1.

COPYRIGHT
All abstracts are copyright of the ECTS.

DISABLED PEOPLE
The congress venue is equipped with facilities for the disabled.

DISCLAIMER
The European Calcified Tissue Society (ECTS) hereby provides notice to Congress attendees and anyone else that the ECTS makes no warranty of any kind whatsoever, expressed or implied, that any information, materials, techniques or products or anything else presented at this congress is accurate, valid, adequate or fit for any purpose whatsoever. Congress attendees are solely responsible for determining the validity, adequacy and fitness of any information, materials or products or anything else presented at this Congress for any and all uses. Statements and descriptions made by the ECTS at Disclaimer this Congress and included in Congress literature are informational only and are not made or given as a warranty. The views, opinions and statements made at the Congress are solely those of the speakers and may not reflect the views of the ECTS. Furthermore, speakers may have vested interests in the concepts and products they discuss. It is further understood and agreed that the ECTS shall not be liable whether in contract, in tort, under any warranty, in negligence or otherwise for any kind of claim for loss, damage or expense of any kind arising out of or resulting from the use of any information, materials, products or anything else presented at this Congress, and under no circumstances shall the ECTS be liable for special, indirect or consequential damages. ECTS and/or its agents have the right to alter or cancel the Congress or any of the arrangements, timetables, plans or other items relating directly or indirectly to the Congress without prior notice for any reason beyond their control. The Congress and/or its agents shall not be liable for any loss, damage, expenditure or inconvenience caused as a result of such alteration or cancellation.
ELECTRICITY & TIME
The normal electricity supply is 220–240V–50Hz. Valencia is in the Central European Time Zone, UTC+1 hour.

FIRST AID
Participants in need of medical attention should contact the staff at the registration counter.

FOOD & DRINKS
A light lunch, coffee and tea are included in the registration fee and are available to all congress participants at the exhibition area during official breaks.

INSURANCE & LIABILITY
The organisers cannot be held responsible for any personal injury, loss, damage, or accident or for additional expenses incurred as a result of delays or changes in air, rail, road or other services, strikes, sickness, weather and other causes. All participants are encouraged to make their own arrangements for health and travel insurance.

LANGUAGE
The official language of the ECTS Congress 2018 is English. There is no simultaneous translation service provided.

LOST AND FOUND
For lost and found items, please go to the registration desk located in the entrance hall on the ground floor.

POLICIES AND DISCLOSURES
Phones, photography and recording of sessions: Delegates are respectfully reminded that mobile phones should be switched off or put into silent mode inside the session rooms. Photography, audio recording and videotaping inside the lecture rooms is strictly prohibited. Taking photos of posters presented at ECTS 2018 is only allowed with written permission by ECTS and the respective author. Delegates found to be contravening this request will be asked to leave the session room.

PRAYER ROOM
The prayer room is located in meeting room 10, level 0, just around the corner of the registration desk.
PUBLIC TRANSPORTATION

Web: www.metrovalencia.es
Valencia Conference Centre has metro and tram stations nearby which connect the venue to the airport and to the Joaquin Sorolla mainline train station: Metrovalencia lines 1 and 4.

RECORDING, FILMING AND PHOTOGRAPHY

Audio and video recording and taking pictures with flash are prohibited during the congress sessions. The only photography which is allowed during sessions is photography of slides, which is permitted only for reference purposes (to respect the speaker’s copyright, reproduction is strictly forbidden). Photography of posters is allowed under similar terms.

SMOKING

The ECTS Congress 2018 is a non-smoking congress.

SOCIAL MEDIA

Twitter: You can view the ECTS Congress 2018 Twitter feed by clicking on the News button on the home screen. To tweet from the app, click on “View on Twitter” at the bottom, your Twitter app will then open, type your tweet using the #ECTS2018 hashtag.

TAXIS

Taxis are usually stationed outside the main entrance of the congress venue.
Taxi Car Valencia: +34 966 11 11 36

TIPPING

Service is usually included in the prices in bars and restaurants. Tips are always welcome if the service was satisfactorily, usually 10%.

WI-FI

Wi-Fi access will be available throughout the venue, free of charge.
SSID: ECTS-Congress
Username and Password: ECTS2018
Networking Programme
Official ECTS 2018 Events

WELCOME RECEPTION
Saturday, 26 May 2018
From 21:00 in the Exhibition Area

The Welcome Reception on Saturday evening is the place to connect with other experts, physicians and researchers from around the globe. Please join us at this informal get-together to greet old friends, meet new colleagues, and exchange impressions of the Congress. Enjoy traditional Spanish finger food in the casual atmosphere of the Valencia Congress Centre.

Ticket: Included in Registration Fee

NEW INVESTIGATOR GATHERING
Sunday, 27 May 2018
From 18:30 in Meeting Room 1 followed by the ECTS Academy Seminar (18:45–19:45)

Postdocs, PhD students and junior faculty staff are invited to gather together for the New Investigator Seminar, student presentations and a social gathering.

Light refreshments will be served in a relaxed and informal environment and delegates will have the opportunity to interact with other new investigators and to meet up with ECTS staff and members of the New Investigator Committee to discuss what the ECTS can do for YOU!

AHP NETWORKING
Sunday, 27 May 2018
18:45–19:45 in the Poster Loft

Allied Healthcare Professionals (AHPs) are invited to gather together on Sunday evening. The networking session will be an informal poster tour. Posters of relevance to AHPs will be displayed and presented by the authors. The session provides an ideal opportunity for AHPs to discuss their own work and other research studies whilst enjoying light refreshments.
NETWORKING DINNER

Monday, 28 May 2018
20:00–24:00 at the Masía de Xamandreu

With a stunning entrance flanked by palm trees, this typical Valencian XIX century mansion with orange groves, outside of Valencia is the perfect place for an informal gathering open to all participants of the ECTS 2018. It offers a buffet and gives the opportunity to reconnect with old acquaintances and make some new contacts. This is an extraordinary place for focusing on communication and networking.

Ticket:
Delegate fee: EUR 45 per person incl. VAT
Accompanying person’s fee: EUR 65 per person incl. VAT

Limited number of tickets available.

Bus Shuttle will be offered at the following times:
From VCC: 19:50 / 20:00 / 20:10 / 20:20
From Masía de Xamandreu to VCC and city centre (Torres Serranos):
22:30 / 22:45 / 23:00 / 23:30 / 23:45 / 00:00

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About ECTS
ECTS Mission

The mission of ECTS, a not-for-profit scientific organisation, is to promote excellence in research into the field of calcified tissues within Europe, and to ensure the findings are disseminated to enable benefit to patients with metabolic bone disease.

ECTS PRIORITIES & ACTIVITIES

Education: Expand learning and development opportunities

Education is key to develop tomorrow’s talents, build on leadership and scientific Excellence. ECTS offers training and educational opportunities to members at all stages of their careers:

- ECTS PhD Training Course
- ECTS-Mellanby Training on Diagnostic Tests for Osteoporosis
- Webinar Series “Bone, Muscle & Beyond”
- Education Resource Center

Scientific Excellence: Promote and Provide the science-based information that stakeholders need for their practice

- Clinical and basic science guidelines and position papers
- Support the research via the Grants & Awards funding programme
- East-Meets-West programme

ECTS Academy: Build on tomorrow’s talents, Leadership

The ECTS Academy counts today 33 of the most talented young researchers and clinicians working on calcified tissues in Europe. Their contributions to the field and to the ECTS life has been key. Through the Future Leaders Group, recently established by the IFMRS, ECTS will be able to contribute to the international networking and exchange of our young leaders.

See separate ECTS Academy section for more information.

ECTS CONGRESS

For over 50 years, the ECTS congress has grown in reputation as the most significant European research event in the musculoskeletal field, of interest to both scientists and clinicians. The next ECTS Annual Congress:

ECTS 2019
10-14 May 2019, Budapest, Hungary | Pre-Congress programme 9 May 2019
www.ects2019.org

Stakeholder Engagement: Collaborate and engage with all stakeholders

The Association remains dedicated to the pursuit of excellence in research and clinical practice of musculoskeletal disorders. To accomplish this, international exchange and multi-stakeholder engagement is essential.
ECTS MEMBERSHIP

The European Calcified Tissue Society is the major organisation in Europe for researchers and clinicians working in the field of calcified tissues and related fields. Since 1963 the Society has acted as a forum for broad-ranging high quality research through its annual congresses and workshops. The Society’s strength lies in its members and we invite you to join them. Membership is open to anyone working in the field at whatever stage in their career and from anywhere in the world.

Benefits of joining the ECTS

- Substantially reduced registration fee for ECTS congresses
- Access to other ECTS Events and IFMRS activities
- Monthly member e-newsletter
- Society App
- Opportunity to be actively involved in the organisation of the ECTS and be part of an international network of Key Opinion Leaders in the field
- Access to session recordings of ECTS and ECTS Academy Webinars
- Best research: ECTS Fellowship and ECTS Academy Mentorship
- Best education: ECTS Academy, access to the ECTS Resource Center, our online educational library
- Access to the Members’ Lounge with members directory

ECTS MEMBERSHIP PRICING

- Full Membership: 95 Euros
- Student Membership: 45 Euros

The membership year runs from January to December. ECTS does not provide pro-rated membership fees, but new members joining from October will automatically be given the following year’s membership.

Annual General Meeting

The Annual General Meeting of the European Calcified Tissue Society will take place on Saturday 26 May 2018 at 12:45 – 13:15. The meeting will be held in Auditorium 2 and all ECTS members are encouraged to attend and participate.
ECTS Board of Directors

President
Anna Teti

Past-President
Claus-C. Glüer

Secretary
Gudrun Stenbeck

Treasurer
Erik Fink Eriksen

Members
Martine Cohen-Solal
Núria Guañabens
Lorenz Hofbauer
Barbara Obermayer-Pietsch
Martina Rauner
Hanna Taipaleenmäki
Carola Zillikens

New Board of Directors’ members have been elected during the Annual General Meeting of 26 May 2018 at 12:45hrs.

ECTS Staff and Secretariat

Executive Director
Roberta Mugnai

Events & Administration
Rosemary Oduor

Finance & Membership Manager
Marian Churchill

Grants & Awards Administrator
Lucy Boswell

Contact information
European Calcified Tissue Society (ECTS)
c/o Maison des Associations Internationales
Rue Washington 40, 1050 Brussels, Belgium
Tel: +32 476 520 716
Email: ects@ectsoc.org
Web: www.ectsoc.org
The ECTS Academy: Advancing Bone Research – Together

The ECTS Academy was developed in collaboration with the ECTS Affiliated Societies in Europe to allow young researchers to self-organise their society and foster personal contact and networking among the most talented young scientists in Europe. It was inaugurated at the ECTS meeting in Rome in 2016.

The ECTS Academy mission is to form a network of researchers on calcified tissue and musculoskeletal diseases to promote scientific excellence through fostering collaborations and mentoring young scientists and doctors in Europe. With this strategy we are eager to strengthen the future of musculoskeletal research in Europe and worldwide. The Academy currently consists of 33 members from 10 countries, who are selected through a competitive application process. Each year, 6–10 new members are selected. Each member has a term of 5 years.

The ECTS Academy has initiated numerous activities for networking and education. Current activities include:

- New Investigator programme at the ECTS Annual Meeting
  - Mentoring session
  - New Investigator seminar
  - Working group on transgenic animal models
  - Academy Session
  - Poster tours and NI Lounge
- Webinar series with ERC winners
- Mentoring programme for young researchers
- Social media representation
  - ID cards
  - Mentor stories
- Website development & newsletter
- Retreat organization
- Outreach to other societies in the field
- Contribution towards ECTS activities

The ECTS Academy has also put together a New Investigator Programme during ECTS 2018. In the Scientific Programme section, look out for this icon:
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| 18 Oct 2018 | 16:00 – 17:00 CET | Osteohematology  
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| 14 Dec 2018 | 16:00 – 17:00 CET | Can bone loss and osteoporosis be prevented with probiotics?  
Featuring Mattias Lorentzon |                                               |
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