

# SCIENTIFIC PROGRAMME



## PRE CONGRESS

Friday, 24 May 2024 - p. 2

## MAIN CONGRESS

Saturday, 25 May 2024 - p. 10

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## ECTS 2024 Scientific programme

### Pre Congress - Friday, 24 May 2024

#### "Old Dog with New Tricks"- The interaction of Glucocorticoids on Bone in Rheumatic Diseases

10:30 - 12:30

Samena

*Chair: Barbara Hauser (United Kingdom)*

*Chair: Hennie Raterman (Netherlands)*

10:30

**Glucocorticoids: key regulators of bone immunometabolism**

*Presenter: Jan Tuckermann (Germany)*

10:50

**Discussion**

10:55

**Update on the epidemiology of Glucocorticoid-induced osteoporosis in rheumatic diseases**

*Presenter: Giovanni Adami (Italy)*

11:15

**Discussion**

11:20

**Update on treatment of Glucocorticoid induced osteoporosis**

*Presenter: Maria Yavropoulou (Greece)*

11:40

**Discussion**

11:45

**P142: Machine learning to characterize bone biomarkers profile in rheumatoid arthritis**

*Poster Presenter: Giovanni Adami (Italy)*

11:52

**Discussion**

11:55

**P216: Novel Pyrimidine derivative (18a) prevents glucocorticoid induced osteoporosis through upregulation of autophagy and PINK1/PARKIN mediated mitophagy**

*Poster Presenter: Sonu Khanka (India)*

12:02

**Discussion**

12:05

**General discussion**

#### Open Forum: New Insights in the Interaction Between Osteoclasts and Their Environment

10:30 - 12:30

Riou

*Chair: Claudine Blin (France)*

*Chair: Kent S e (Denmark)*

*Chair: Peter Pietschmann (Austria)*

10:30

**Different osteoclasts for different functions**

*Presenter: Maria Materozzi (France)*

10:55

**Discussion**

11:00

**ROS production and oxidative stress in osteoclasts**

*Presenter: Ciro Menale (Italy)*

11:25

**Discussion**



- 11:30 **Environment sensing triggers osteoclast differentiation**  
*Presenter: Aline Bozec (Germany)*
- 11:55 **Discussion**
- 12:00 **P086: Identification of a novel osteoclast progenitor cell type with higher multinuclear capacity**  
*Poster Presenter: Erika Yamashita (Japan)*
- 12:07 **Discussion**
- 12:10 **P132: Transcriptomic analysis of coding and non-coding RNAs in modeled osteoporosis**  
*Poster Presenter: Elisavet Ioannidou (Greece)*
- 12:17 **Discussion**
- 12:20 **General discussion**

**Open Forum: Diabetes and Bone**

10:30 - 12:30

Sormiou

*Chair: Martina Rauner (Germany)*

*Chair: Morten Frost (Denmark)*

- 10:30 **Dietary intervention and its effect on bone and fat metabolism**  
*Presenter: Michaela Tencerova (Czech Republic)*
- 10:55 **Discussion**
- 11:00 **Impact of incretins on bone health in diabetes and beyond**  
*Presenter: Morten Frost (Denmark)*
- 11:25 **Discussion**
- 11:30 **Bariatric surgery and bone health**  
*Presenter: Julien Paccou (France)*
- 11:55 **Discussion**
- 12:00 **P113: In otherwise healthy young men, Trabecular Bone Score (TBS) is significantly lower in case of insulin resistance: an analysis of the SIBLOS study**  
*Poster Presenter: Steven Van Offel (Belgium)*
- 12:08 **Discussion**
- 12:10 **P127: The functional and metabolic role of the glycolytic regulator PFKFB3 in skeletal progenitors**  
*Poster Presenter: Lore Rosseels (Belgium)*
- 12:18 **Discussion**
- 12:20 **General discussion**



**National Day: Bone Health: Aging and Nutrition**

10:30 - 12:30

Morgiou

*Chair: Frédéric Verlad (France)*

*Martine Cohen-Solal (France)*

10:30

**Welcome**

*Presenter: Martine Cohen-Solal (France)*

10:32

**Bone: sword shape of nutrition**

*Presenter: Julien Paccou (France)*

11:00

**Nutrients: hot topics and new models**

*Presenter: Yohann Wittrant (France)*

11:30

**Opportunistic detection of osteoporosis: methodological approach and applications**

*Presenter: Thomas Funck-Brentano (France)*

12:00

**Exercise and falls**

*Presenter: Olivier Gavarry (France)*

**ECTS Mellanby Training Course: Diagnostic Tests for Osteoporosis: Clinical Use of Bone Turnover Markers**

10:30 - 17:30

Pomègues

*Chair: Richard Eastell (United Kingdom)*

10:30

**Bone Turnover Markers: An introduction**

*Presenter: Richard Eastell (United Kingdom)*

11:00

**Bone remodelling and the interpretation of bone turnover marker (BTM) results**

*Presenter: Christian Meier (Switzerland)*

11:30

**Practical aspects of measurement and selection of marker**

*Presenter: Pawel Szulc (France)*

12:00

**Sources of variability in BTM**

*Presenter: Tatiane Vilaca (United Kingdom)*

12:30

**Lunch break**

13:30

**Use of BTM in Osteoporosis: shared care protocols in primary care**

*Presenter: Marian Schini (United Kingdom)*

14:00

**Parallel Group A: Protocols and case examples for the use of BTM in Osteoporosis practice**

*Presenter: Núria Guañabens (Spain)*

14:00

**Parallel Group A: Protocols and case examples for the use of BTM in Osteoporosis practice**

*Presenter: Marian Schini (United Kingdom)*

14:00

**Parallel Group B: Using BTM for Osteoporosis treatment: research application**

*Presenter: Richard Eastell (United Kingdom)*

14:00

**Parallel Group B: Using BTM for Osteoporosis treatment: research application**

*Presenter: Pawel Szulc (France)*



15:00	<b>Metabolic bone diseases in adults</b> <i>Presenter: Roland Chapurlat (France)</i>	
15:30	<b>Break</b>	
16:00	<b>Metabolic bone disease of chronic kidney disorder</b> <i>Presenter: Barbara Obermayer-Pietsch (Austria)</i>	
16:30	<b>Parallel Group A: Protocols and case examples for the use of BTM in Osteoporosis practice</b> <i>Presenter: Núria Guañabens (Spain)</i>	
16:30	<b>Parallel Group A: Protocols and case examples for the use of BTM in Osteoporosis practice</b> <i>Presenter: Marian Schini (United Kingdom)</i>	
16:30	<b>Parallel Group C: Using BTM in metabolic bone disease</b> <i>Presenter: Roland Chapurlat (France)</i>	
16:30	<b>Parallel Group C: Using BTM in metabolic bone disease</b> <i>Presenter: Barbara Obermayer-Pietsch (Austria)</i>	
 <b>Lunch break</b>		
12:30 - 13:30		Other Areas
<hr/>		
<b>Open Forum: Bone mechanobiology in mice</b>		
13:30 - 15:30		Samena
<hr/>		
	<i>Chair: Michaela Tencerova (Czech Republic)</i>	
	<i>Chair: Steve Stegen (Belgium)</i>	
13:30	<b>Mechanical loading in cancer mouse models</b> <i>Presenter: Ning Wang (United Kingdom)</i>	
13:55	<b>Discussion</b>	
14:00	<b>Analysing bone composition and mechanical properties of bone</b> <i>Presenter: Mustafa Unal (Turkey)</i>	
14:25	<b>Discussion</b>	
14:30	<b>Mechanomics of bone</b> <i>Presenter: Neashan Mathavan (Switzerland)</i>	
14:55	<b>Discussion</b>	
15:00	<b>P222: Comparative analysis of mechanoregulatory trabecular bone adaptations in response to mechanical loading or sclerostin antibody treatment</b> <i>Poster Presenter: Friederike Schulte (Switzerland)</i>	
15:10	<b>Discussion</b>	
15:15	<b>General discussion</b>	



**Open Forum: BMA, Stem Cells and Hematopoietic Interactions within the Bone Marrow Niche**

13:30 - 15:30

Riou

*Chair: Annegreet Vlug (Netherlands)*

*Chair: Bram van der Eerden (Netherlands)*

- 13:30                    **A brain-bone signaling axis controls skeletal stem cell dynamics that dictate bone marrow niche composition**  
*Presenter: Thomas Ambrosi (United States)*
- 13:55                    **Discussion**
- 14:00                    **Interaction between bone marrow adipocytes and malignant hematological cells**  
*Presenter: Michaela Reagan (United States)*
- 14:25                    **Discussion**
- 14:30                    **Lessons from BMAT plasticity in hematopoiesis**  
*Presenter: Olaia Naveiras (Switzerland)*
- 14:55                    **Discussion**
- 15:00                    **P119: Intermittent fasting supports elevation of alkaline phosphatase activity and adipogenesis of bone marrow mesenchymal stromal cells in middle-aged CBA mice**  
*Poster Presenter: Drenka Trivanovic (Serbia)*
- 15:10                    **Discussion**
- 15:15                    **P147: Exploring the Influence of Bone Marrow Adiposity on Osteoarthritis-Associated Bone Remodeling**  
*Poster Presenter: Natalia Zapata Linares (France)*
- 15:25                    **Discussion**

**Open Forum: Multiscale Imaging and Analytics of Interfaces in Musculoskeletal Health**

13:30 - 15:30

Sormiou

*Chair: Klaus Engelke (Germany)*

*Chair: Björn Busse (Germany)*

- 13:30                    **Multiscale synchrotron imaging to study mechanobiology of bone development**  
*Presenter: Isabella Silva Barreto (France)*
- 13:50                    **Discussion**
- 13:55                    **Compositional and molecular analysis of bone tissue using correlative microscopy and spectroscopy techniques**  
*Presenter: George Sarau (Germany)*
- 14:15                    **Discussion**
- 14:20                    **Interface dynamics at bone surfaces: Quantification with micro-CT and electron microscopy**  
*Presenter: Praveer Sihota (Germany)*
- 14:40                    **Discussion**



- 14:45 **Functional imaging of the human musculoskeletal system with MRI and ultrasound**  
*Presenter: Alex Ireland (United Kingdom)*
- 15:05 **Discussion**
- 15:10 **P180: From 2D to 3D Imaging: 3Dshaper and EOS Edge applications in the Rotterdam study**  
*Poster Presenter: Fjorda Koromani (Netherlands)*
- 15:17 **Discussion**
- 15:20 **P177: Comparisons of Hounsfield units and volumetric bone density in discriminating vertebral fractures on lumbar CT scans**  
*Poster Presenter: Wenshuang Zhang (China)*
- 15:27 **Discussion**

**National Day: European Consortium**

13:30 - 15:30

Morgiou

*Chair: Thomas Funck-Brentano (France)*

*Chair: Martine Cohen-Solal (France)*

- 13:30 **Fibrous Dysplasia – McCune-Albright Syndrom consortium**  
*Presenter: Roland Chapurlat (France)*
- 14:00 **Translational research in bone diseases, an European Joint Programme on Rare Diseases**  
*Presenter: Justine Bacchetta (France)*
- 14:30 **The role of immune osteoclasts in cancer, implication for therapy: the IMMOSCAN Project**  
*Presenter: Claudine Blin (France)*
- 15:00 **The Ectopic Calcification Network**  
*Presenter: Hervé Kempf (France)*

**ECTS-ISBM Workshop: Nanoscale Imaging of Skeletal Tissues**

16:00 - 18:00

Samena

*Chair: Biagio Palmisano (Italy)*

*Chair: Miguel Castilho (Netherlands)*

- 16:00 **Nanoscale organization of bone**  
*Presenter: Roland Kroger (United Kingdom)*
- 16:25 **Discussion**
- 16:30 **Electron microscopy of bone and the bone-implant interface**  
*Presenter: Furqan Shah (Sweden)*
- 16:55 **Discussion**
- 17:00 **P065: Hematopoietic autophagy defect contributes bone loss**  
*Poster Presenter: Ye Yuan (China)*



- 17:10 **Discussion**
- 17:15 **P094: An automated image pre-processing pipeline to identify lacunar-canalicular networks from FITC-stained confocal microscopy images**  
*Poster Presenter: Dilara Yilmaz (Switzerland)*
- 17:25 **Discussion**
- 17:30 **P261: Altered growth plate morphology but normal bone matrix mineralization in the LmnaG609G/G609G mouse model of progeria**  
*Poster Presenter: Stéphane Blouin (Austria)*
- 17:40 **Discussion**
- 17:45 **P007: Bone turnover markers and their correlations with parameters of bone quality from HRpQCT measurements of the femoral head**  
*Poster Presenter: Ines Foessler (Austria)*
- 17:55 **Discussion**

**ECTS-CABS Workshop**

16:00 - 18:00

Riou

*Chair: Cyrille Confavreux (France)*

- 16:00 **Introduction: What is CABS?**
- 16:03 **Bone microenvironment control of multiple myeloma evolution and heterogeneous drug resistant disease**  
*Presenter: Conor Lynch (United States)*
- 16:23 **Discussion**
- 16:26 **Intramedullary bone adipocytes and myeloma cells: a fatal support**  
*Presenter: Michaela Reagan (United States)*
- 16:46 **Discussion**
- 16:49 **Mechanical characterisation of bone metastases**  
*Presenter: Aurélie Levillain (France)*
- 17:09 **Discussion**
- 17:12 **Immunity of bone metastases**  
*Presenter: Emmanuel Massy (France)*
- 17:32 **Discussion**
- 17:35 **What is the current real-life epidemiology of bone metastases in France and the use of anti-resorbers ?**  
*Presenter: Cyrille Confavreux (France)*
- 17:45 **General Discussion**





**Training Workshop on Abdominal Aortic Calcification (AAC)**

16:00 - 18:00

Sormiou

*Chair: Jack Dalla Via (Australia)*

16:00                   **Abdominal Aortic Calcification: Clinical importance.**  
*Presenter: Joshua Lewis (Australia)*

16:25                   **Discussion**

16:30                   **Assessing abdominal aortic calcification from lateral spine and vertebral fracture  
assessment images and radiographs.**  
*Presenter: Pawel Szulc (France)*

16:55                   **Discussion**

17:00                   **Abdominal aortic calcification and its relationship to musculoskeletal and non-  
cardiovascular outcomes.**  
*Presenter: Marc Sim (Australia)*

17:25                   **Discussion**

17:30                   **Automated assessment of abdominal aortic calcification with cardiovascular  
outcomes.**  
*Presenter: Joshua Lewis (Australia)*

17:55                   **Discussion**



## ECTS 2024 Scientific programme

### Main Congress - Saturday, 25 May 2024

#### Welcome Remarks

08:00 - 08:15

Callelongue

*Chair: Peter Pietschmann (Austria)*

08:00

#### **Opening of the Congress**

*Speaker: Peter Pietschmann (Austria)*

#### Clinical Update: Clinical Update 1: Current Aspects in Bone Densitometry and ECTS Clinical Guidelines 2024

08:30 - 10:00

Callelongue

*Chair: Willem Lems (Netherlands)*

*Chair: Roland Chapurlat (France)*

08:30

#### **Changes in BMD as a Surrogate Endpoint for Fractures: an update on the SABRE project**

*Presenter: Mary Bouxsein (United States)*

08:55

#### **Discussion**

09:00

#### **Bone Mineral Density Best Practice and Role of Vertebral Fracture Assessment in skeletal health assessment- Consensus Statement from the International Working Group endorsed by ECTS**

*Presenter: Aliya Khan (United States) & Willem Lems (Netherlands)*

09:25

#### **Discussion**

09:30

#### **GIOP guideline**

*Presenter: Julien Paccou (France)*

09:55

#### **Discussion**

#### Basic Science & Technology Update: Basic Science Update 1: Single Cell Transcriptomics

08:30 - 10:00

Endoume 1+2

*Chair: Geert Carmeliet (Belgium)*

*Chair: Björn Busse (Germany)*

08:30

#### **Number of cells, transcripts or resolution, what matters for me doing single cell or spatial transcriptomics**

*Presenter: Alexander Rauch (Denmark)*

09:00

#### **Discussion**

09:15

#### **Dissecting Cancer Cell Dormancy One Cell at a Time**

*Presenter: Peter Croucher (Australia)*

09:45

#### **Discussion**



**Coffee Break, Poster and Exhibition Visit**

10:00 - 10:30

Other Areas

**Big Session: Big Basic Science Session: Immune Disease and Bone**

10:30 - 11:30

Endoume 1+2

*Chair: Claudine Blin (France)*

*Chair: Aline Bozec (Germany)*

12:00 **Bone destructive fibroblasts mediate immune bone cell crosstalk**  
*Speaker: Hiroshi Takayanagi (Japan)*

12:25 **Discussion**

12:30 **Bone resorption by inflammatory immune signaling**  
*Speaker: Martina Rauner (Germany)*

12:55 **Discussion**

**Clinical Update: Clinical update 2: Best of the Year in Clinical Science**

10:30 - 11:30

Callelongue

*Chair: Bo Abrahamsen (Denmark)*

*Chair: Christian Girgis (Australia)*

10:30 **Best of the year in clinical science**  
*Presenter: Thomas Funck-Brentano (France)*

11:15 **Discussion**

**Lunch Break, Poster and Exhibition Visit**

12:30 - 14:00

Other Areas

**Opening ceremony**

12:30 - 12:45

Callelongue

*Chair: Peter Pietschmann (Austria)*

12:30 **President's Welcoming Remarks**  
*Speaker: Peter Pietschmann (Austria)*

12:40 **Local Organising Committee Chair's Welcoming Remarks**  
*Speaker: Martine Cohen-Solal (France)*



**ECTS Academy / NI Session: Poster Forum Clinical**

12:50 - 13:50

Callelongue

*Chair: Anda Mihaela Naciu (Italy)*

*Chair: Jakob Starup-Linde (Denmark)*

- 12:50                   **P001: Bone turnover biomarkers predict one-year all-cause mortality and walking ability in geriatric hip fracture patients**  
*Poster Presenter: Guangtao Fu (China)*
- 12:58                   **P221: Denosumab-associated Jaw Osteonecrosis: Descriptive Analysis and Comparison with Zoledronic Acid Using European EudraVigilance Data**  
*Poster Presenter: Sofia Ferreira Azevedo (Portugal)*
- 13:06                   **P181: Association between Hip Bone Mineral Density and Mortality Risk after Hip Fracture: a Prospective Cohort Study**  
*Poster Presenter: Yufeng Ge (China)*
- 13:14                   **P260: Variation in circulating levels of Periostin in Osteogenesis Imperfecta**  
*Poster Presenter: Alexandre Mercier (France)*
- 13:22                   **P051: Exploring the Nexus of Postural Control in Diabetes: A Cross-Sectional Investigation of New Strategies for Fracture Preventions.**  
*Poster Presenter: Nicklas Rasmussen (Denmark)*
- 13:30                   **P168: Growth Differentiation Factor 15 in Type 2 Diabetes: The Effect Of Exercise Training and its Relationship to Musculoskeletal Health.**  
*Poster Presenter: Lorenza Mattia (Italy)*
- 13:38                   **Discussion**

**ECTS Academy / NI Session: Poster Forum Basic**

12:50 - 13:50

Endoume 1+2

*Chair: Christina Andreasen (Denmark)*

*Chair: Morten Frost (Denmark)*

- 12:50                   **P034: Endothelial YAP/TAZ controls bone marrow fibrosis and Osteosclerosis**  
*Poster Presenter: Kishor Kumar Sivaraj (Germany)*
- 12:58                   **P126: High glucose levels negatively affect bone formation and regeneration in zebrafish larvae**  
*Poster Presenter: Tessa Krappa (Germany)*
- 13:06                   **P067: Delineating the role of Fshr in Bone Remodeling Using Novel Genetic Mouse Models**  
*Poster Presenter: Mingxin Sun (China)*
- 13:14                   **P265: Identification of onco-suppressor activity of SWAP-70: implications for new therapeutic target in osteosarcoma**  
*Poster Presenter: Laura Di Giuseppe (Italy)*
- 13:22                   **P123: Mechanical loading enhances the effect of insulin treatment on bone mass in young type 1 diabetic mice (Akita)**  
*Poster Presenter: Indira Toillon (Switzerland)*
- 13:30                   **P075: ADRB2/aCGRP-dependent induction of pro-angiogenic factors in periosteal cells by norepinephrine**  
*Poster Presenter: Jan Sevecke (Germany)*



13:38 **Discussion**

**ECTS Academy / NI Session: Meet the ECTS Academy**

14:00 – 15:00

Riou

*Chair: Alex Ireland (United Kingdom)*

*Chair: Jeroen Geurts (Switzerland)*

*Chair: Michaela Tencerova (Czech Republic)*

14:00 **9 years of the ECTS Academy - the story so far**

*Speaker: Alex Ireland (United Kingdom)*

14:10 **Your Academy Needs You! An overview of the Academy recruitment process**

*Speaker: Jeroen Geurts (Switzerland)*

14:20 **FIDELIO EU Training Network - an example of Academy collaboration**

*Speaker: Martina Rauner (Germany)*

14:30 **ANZBMS/ECTS B.O.N.E. Exchange Programme 2023 - reaching out to other MSK societies**

*Speaker: Michaela Tencerova (Czech Republic)*

14:40 **Experiences as an Academy member 2017-22**

*Speaker: Elena Tsourdi (Germany)*

14:50 **Discussion**

**ECTS-IFMRS Workshop: Are the Genes I'm investigating in Mice relevant to Human Disease?**

14:15 – 15:15

Callelongue

*Chair: Claus-Christian Glüer (Germany)*

*Chair: Geert Carmeliet (Belgium)*

14:15 **Are the Genes I'm investigating in Mice relevant to Human Disease?**

*Presenter: Cheryl Ackert-Bicknell (United States) & Carolina Medina-Gomez (Netherlands)*

**Maria Luisa Bianchi Award Lecture**

15:05 - 15:35

Callelongue

*Chair: Salvatore Minisola (Italy)*

14:40 **Introduction**

*Presenter: Salvatore Minisola (Italy)*

14:50 **Insights From the Indian Rare Metabolic Bone Disease Registry**

*Presenter: Sanjay Kumar Bhadada (India)*



**Break**

15:50 - 16:05

Other Areas

**Plenary symposium 1: Integrated Control of Osteogenesis and Adipogenesis**

16:05 - 17:05

Callelongue

*Chair: Bram van der Eerden (Netherlands)*

*Chair: Moustapha Kassem (Denmark)*

16:05                    **Bone fragility in diabetes and obesity - novel targets for therapy**  
*Speaker: Lorenz Hofbauer (Germany)*

16:30                    **Discussion**

16:35                    **Clinical implications of bone marrow adiposity**  
*Speaker: Annegreet Vlug (Netherlands)*

17:00                    **Discussion**

**Coffee break, Poster and Exhibition Visit**

17:05 - 17:50

Other Areas

**ECTS-ASBMR Debate: This House Believes that Bone Turnover Markers Improve Clinical Outcomes with Osteoporosis Treatments**

17:50 - 19:05

Callelongue

*Chair: Mary Bouxsein (United States)*

*Chair: Peter Pietschmann (Austria)*

17:50                    **Introduction by the chairs and vote**

17:55                    **For the motion**  
*Speaker: Richard Eastell (United Kingdom)*

18:15                    **Against the motion**  
*Speaker: Douglas Bauer (United States)*

18:35                    **Comments and questions from the audience**

18:50                    **Rebuttal for the motion**

18:55                    **Rebuttal against the motion**

19:00                    **Vote and debate close**



**Basic Science Debate: This House Believes that Classical Bone Histomorphometry Provides Better Functional Information than Emerging Imaging Techniques**

17:50 - 19:05

Endoume 1+2

*Chair: Philippe Zysset (Switzerland)*

*Chair: Danielle Whittier (Canada)*

- 17:50 **Introduction by the chairs and vote**
- 17:55 **For the motion**  
*Speaker: Natalie Sims (Australia)*
- 18:15 **Against the motion**  
*Speaker: Ralph Müller (Switzerland)*
- 18:35 **Comments and questions from the audience**
- 18:50 **Rebuttal for the motion**
- 18:55 **Rebuttal against the motion**
- 19:00 **Vote and debate closed**

**Main Congress - Sunday, 26 May 2024**

**Concurrent Symposium 1: Update on Premenopausal Osteoporosis**

08:00 - 09:00

Callelongue

*Chair: Núria Guañabens (Spain)*

*Chair: Shivani Sahni (United States)*

- 08:00 **Mechanisms of premenopausal osteoporosis**  
*Speaker: Frances Milat (Australia)*
- 08:25 **Discussion**
- 08:30 **Investigation and management of premenopausal osteoporosis**  
*Speaker: Adi Cohen (United States)*
- 08:55 **Discussion**

**Concurrent Symposium 1: Novel approaches to Skeletal Imaging**

08:00 - 09:00

Endoume 1+2

*Chair: Ralph Müller (Switzerland)*

*Chair: Heide Siggelkow (Germany)*

- 08:00 **Synchrotron imaging of bone: past and future**  
*Speaker: Françoise Peyrin (France)*
- 08:25 **Discussion**



08:30 **Statistical shape and intensity modelling and atlas of bones**  
*Speaker: Alejandro Frangi (United Kingdom)*

08:55 **Discussion**

**Nurses & Allied Health Professionals (AHP) Seminar 1**

08:30 - 10:00 Endoumee 3

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*Chair: Mylène Zarka (France)*

*Chair: Pawel Matusik (Poland)*

08:30 **Basics of Bone Biology**  
*Presenter: Petar Milovanovic (Serbia)*

08:55 **Discussion**

09:00 **Diagnosis of Osteoporosis**  
*Presenter: Barbara Obermayer-Pietsch (Austria)*

09:25 **Discussion**

09:30 **Treatment of Osteoporosis: an International Perspective**  
*Presenter: Christian Girgis (Australia)*

09:55 **Discussion**

**Concurrent Oral Presentations 1: Rare Bone Diseases**

09:05 - 10:05 Callelongue

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*Chair: Adalbert Raimann (Austria)*

*Chair: Ciro Menale (Italy)*

09:05 **COP01 Possible role of bone turnover markers in the diagnosis of Adult Hypophosphatasia**  
*Abstract Presenter: Marco Onofrio Torres (Italy)*

09:15 **COP02 Exploring the interplay of genetics, epigenetics, gene expression, and biochemistry in individuals with suspected adult hypophosphatasia.**  
*Abstract Presenter: Alvaro Del Real (Spain)*

09:25 **COP03 Mineral homeostasis in adults with suspected hypophosphatasia: data from the FAME study**  
*Abstract Presenter: Tatiane Vilaca (United Kingdom)*

09:35 **COP04 Dosing studies to determine the efficacy and safety of recombinant AAV type 8 vector encoding TNAP-D10 in late-onset hypophosphatasia**  
*Abstract Presenter: Flavia Amadeu De Oliveira (United States)*

09:45 **COP05 Impact of INZ-701 on Bone and Mineral Metabolism Biomarkers and Clinical Outcomes in Adults with ENPP1 Deficiency- Results from 48-week Phase 1/2 Open Label Study**  
*Abstract Presenter: Yves Sabbagh (United States)*

09:55 **COP06 Noninvasive personalized therapeutic approach for the treatment of cranial bone defects in Crouzon syndrome using ferritin nanoparticles-mediated siRNAm delivery**  
*Abstract Presenter: Federica Tiberio (Italy)*





**Concurrent Oral Presentations 1: Pathophysiology and Treatment of Bone Diseases**

09:05 - 10:05

Endoume 1+2

*Chair: Emma Duncan (United Kingdom)*

*Chair: Andre Van Wijnen (United States)*

09:05 **COP07 Preferential editing of the mutated CLCN7 allele as therapeutic approach for autosomal dominant osteopetrosis**  
*Abstract Presenter: Dario Gajewski (Germany)*

09:15 **COP08 CFTR modulators treatments (ETI) partially restore osteoclasts phenotype in cystic fibrosis-related bone disease**  
*Abstract Presenter: Johan Sergheraert (France)*

09:25 **COP09 Anti-myostatin treatment effectively ameliorates bone metastasis in a xenograft mouse model of breast cancer**  
*Abstract Presenter: Corinna Wehmeyer (Germany)*

09:35 **COP10 Mitochondrial E3 Ubiquitin Ligase MUL1 reduces proliferation and increases cell death in metastatic osteosarcoma cells**  
*Abstract Presenter: Jacopo Di Gregorio (Italy)*

09:45 **COP11 Glucocorticoid-induced osteoporosis and the osteohematopoietic niche**  
*Abstract Presenter: Ulrike Baschant (Germany)*

09:55 **COP12 Lrp5 p.Val667Met variant does not alter the response to anti-sclerostin antibodies**  
*Abstract Presenter: Stephanie Fabre (France)*

**Coffee Break, Poster and Exhibition Visit**

10:05 - 10:30

Other Areas

**Best Article Award Presentations**

10:30 - 11:00

Callelongue

*Chair: Salvatore Minisola (Italy)*

*Chair: Klaus Engelke (Germany)*

10:30 **Machine-Learning Assessed Abdominal Aortic Calcification is Associated with Long-Term Fall and Fracture Risk in Community-Dwelling Older Australian Women**  
*Presenter: Jack Dalla Via (Australia)*

10:37 **Discussion**

10:40 **Gene therapy using recombinant AAV type 8 vector encoding TNAP-D10 improves the skeletal phenotypes in murine models of osteomalacia**  
*Presenter: Flavia Amadeu De Oliveira (United States)*

10:47 **Discussion**

10:50 **Sugar transporter Slc37a2 regulates bone metabolism in mice via a tubular lysosomal network in osteoclasts**  
*Presenter: Amy Ribet (Germany)*



10:57 **Discussion**

**Plenary Symposium 2: New Insights into Osteogenesis Imperfecta**

11:00 - 12:00 Callelongue

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*Chair: Adi Cohen (United States)*

*Chair: Roland Chapurlat (France)*

11:00 **Extracellular matrix properties in OI**  
*Speaker: Florence Ruggiero (France)*

11:25 **Discussion**

11:30 **Health-related problems in adults with osteogenesis imperfecta**  
*Speaker: Jane Dahl Andersen (Denmark)*

11:55 **Discussion**

**Corporate Satellite Symposium 1**

12:00 - 13:00 Endoume 1+2

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More details can be found on the website:  
<https://www.ects2024.org/sponsors-exhibitors/satellite-symposia-programme/>

**Lunch Break, Poster and Exhibition Visit**

12:00 - 13:30 Other Areas

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**Nurses & Allied Health Professionals (AHP) Seminar 2**

13:00 - 14:30 Endoume 3

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*Chair: Julien Paccou (France)*

*Chair: Katrine Hass Rubin (Denmark)*

13:00 **Obesity and Bone: the Pediatric Perspective**  
*Presenter: Pawel Matusik (Poland)*

13:25 **Discussion**

13:30 **Nutrition and Bone**  
*Presenter: Shivani Sahni (United States)*

13:55 **Discussion**

14:00 **Fracture Liaison Services: Current State of the Art**  
*Presenter: Willem Lems (Netherlands)*

14:25 **Discussion**



**Meet the Expert 1: Reference Point Indentation in Vivo**

13:30 - 14:30

Endoume 1+2

13:30

**Reference point indentation in vivo**  
*Presenter: Natasha Appelman-Dijkstra (Netherlands)*

**Meet the Expert 2: Opportunistic CT for Musculoskeletal Research**

13:30 - 14:30

Morgiou

13:30

**Opportunistic CT for musculoskeletal research**  
*Presenter: Ken Poole (United Kingdom)*

**Meet the Expert 3: Osteoimmunology**

13:30 - 14:30

Sormiou

13:30

**Osteoimmunology**  
*Presenter: Aline Bozec (Germany)*

**Meet the Expert 4: Which Target to Reach to Discontinue Treatment**

13:30 - 14:30

Riou

13:30

**Which target to reach to discontinue treatment**  
*Presenter: Elena Tsourdi (Germany)*

**Meet the Expert 5: XLH Evidence-Based Guidelines**

13:30 - 14:30

Pomègues

13:30

**XLH evidence-based guidelines**  
*Presenter: Agnès Linglart (France)*

**Break**

14:30 - 15:00

Other Areas

**Corporate Satellite Symposium 2**

15:00 - 16:00

Endoume 1+2

More details can be found on the website:

<https://www.ects2024.org/sponsors-exhibitors/satellite-symposia-programme/>



**Coffee break, Poster and Exhibition visit**

16:00 - 16:45

Other Areas

**Plenary Oral Presentations 1: Rare Bone Diseases and Cancer**

16:45 - 17:45

Callelongue

*Chair: Jose A. Riancho (Spain)*

*Chair: Guillaume Odri (France)*

16:45 **PLO01 The Wnt1G177C mutation impairs load-induced bone formation via nuclear receptor 4a2**

*Abstract Presenter: Mubashir Ahmad (Germany)*

16:55 **PLO02 Bi-allelic missense variants of ERI1 cause a new type of spondylo-epi-metaphyseal dysplasia**

*Abstract Presenter: Long Guo (China)*

17:05 **PLO03 A pathogenic role for brain-derived neurotrophic factor (BDNF) in Fibrous Dysplasia of bone**

*Abstract Presenter: Biagio Palmisano (Italy)*

17:15 **PLO04 Mucopolysaccharidosis type I Hurler skeletal alterations and cross-correction in an ex vivo gene therapy approach**

*Abstract Presenter: Ludovica Santi (Italy)*

17:25 **PLO05 Spine deformity in mice lacking Nf1 gene in boundary cap-derived osteoblasts**

*Abstract Presenter: Franceska Kovaci (France)*

17:35 **PLO06 A brief vitamin B6 supplementation to individuals with low alkaline phosphatase is useful to identify patients with ALPL mutations**

*Abstract Presenter: Sofia Álvarez Villalobos (Spain)*

**Break**

17:45 - 18:00

Other Areas

**Concurrent Oral Poster Presentations 1: Clinical/Public Health**

18:00 - 19:00

Callelongue

*Chair: Martine Cohen-Solal (France)*

*Chair: Elena Tsourdi (Germany)*

18:00 **P213 Treatment-related changes in total hip bone mineral density and fracture risk reduction for drugs with different mechanisms of action: the FNIH-ASBMR-SABRE Project**

*Poster Presenter: Tatiane Vilaca (United Kingdom)*

18:05 **P247 Availability of physical therapy for children with osteogenesis imperfecta in Austria**

*Poster Presenter: Adalbert Raimann (Austria)*



- 18:10 **P281 Adeno-associated virus type 8 vector encoding TNAP-D10 improves the skeletal phenotype in a mouse model of infantile HPP**  
*Poster Presenter: Cintia Kazuko Tokuhara (United States)*
- 18:15 **P237 Safety and Exploratory Efficacy of INZ-701 in Adults with ABCC6 Deficiency Manifesting as Pseudoxanthoma Elasticum– Results from 48-week Phase 1/2 Open Label Study**  
*Poster Presenter: Yves Sabbagh (United States)*
- 18:20 **P267 The role of physical therapy in adult chronic nonbacterial osteitis (CNO): patients' and therapists' perspective**  
*Poster Presenter: Anne Leerling (Netherlands)*
- 18:25 **P268 Multidisciplinary recommendations for the diagnosis and management of chronic nonbacterial osteitis (CNO) in adults**  
*Poster Presenter: Anne Leerling (Netherlands)*
- 18:30 **P194 Increased risk of osteoporosis, use of osteoporosis medication and major osteoporotic fractures in patients with Addison's disease in Sweden: a nationwide population-based cohort study.**  
*Poster Presenter: Stavros Stergianos (Sweden)*
- 18:35 **P198 Components of osteoporosis and long-term cardiovascular disease outcomes**  
*Poster Presenter: Cassandra Smith (Australia)*
- 18:40 **P115 Semaglutide increases bone resorption but not formation and causes bone loss in adult men and women with increased fracture risk**  
*Poster Presenter: Morten Svarer Hansen (Denmark)*
- 18:45 **P005 Diabetes and bones: Unraveling the Biomarker Symphony and Density Dance**  
*Poster Presenter: Nicklas Rasmussen (Denmark)*
- 18:50 **P125 Long-term effects of weight restoration on bone mineral density (BMD) in patients with anorexia nervosa**  
*Poster Presenter: Giovanni Adami (Italy)*
- 18:55 **P259 Epidemiology of fibrodysplasia ossificans progressiva (FOP) mortality in the USA, 2017–2023**  
*Poster Presenter: Caitlin Knox (United States)*

### Concurrent Oral Poster Presentations 1: Bone and Cartilage Biology

18:00 - 19:00

Endoume 1+2

*Chair: Frédéric Velard (France)*

*Chair: Cristina Sobacchi (Italy)*

- 18:00 **P145 Inhibiting lysyl oxidases (LOX(L)) prevents cartilage calcification in osteoarthritis**  
*Poster Presenter: Sonia Nasi (Switzerland)*
- 18:05 **P041 Chondrocyte-specific Deletion of the  $\beta 2$  Adrenoceptor impairs Bone Growth and Fracture Healing**  
*Poster Presenter: Miriam E. A. Tschaffon-Müller (Germany)*
- 18:10 **P053 Nf1 loss in skeletal progenitors induces cellular senescence and an inhibitory bystander effect on the osteogenic differentiation of normal osteoprogenitors**  
*Poster Presenter: Florent Eleftheriou (United States)*



- 18:15 **P039 TYRA-300 Demonstrates Significant Increases in Bone Length and foramen magnum area in a Mouse Model of FGFR3-Related Skeletal Dysplasia**  
*Poster Presenter: Clara Lemoine (France)*
- 18:20 **P090 Dysregulated myeloid differentiation in colitis is induced by inflammatory osteoclasts in a TNF $\alpha$ -dependent manner**  
*Poster Presenter: Abdellilah Wakkach (France)*
- 18:25 **P070 Defining a therapeutic window to treat osteopathia striata with cranial sclerosis in a mouse model**  
*Poster Presenter: Clément Nachef (France)*
- 18:30 **P118 In SOPF conditions, female BALBc mice have greater bone toughness and altered ovariectomy-induced bone fragility**  
*Poster Presenter: H  l  ne Racap   (France)*
- 18:35 **P083 Connecting HIPPO signaling to chromatin action during early osteoblast and adipocyte differentiation**  
*Poster Presenter: Atenisa Caci (Denmark)*
- 18:40 **P137 Innate immune response modulation by osteoblasts in Cutibacterium acnes related bone prosthesis infections.**  
*Poster Presenter: L  a Thoraval (France)*
- 18:45 **P087 The anti-diabetic drug pramlintide protects against ovariectomy-induced osteoporosis by inhibiting bone resorption in a calcitonin receptor-dependent manner.**  
*Poster Presenter: Shan Jiang (Germany)*
- 18:50 **P101 Impaired ossification of the femoral head in a mouse model of mucopolipidosis type III gamma**  
*Poster Presenter: Assil-Ramin Alimy (Germany)*
- 18:55 **P011 PLGA-PEG-COOH Microparticles Covalent Functionalization of MEW PCL 3D Printed mimetic Periosteum Autografts**  
*Poster Presenter: Juan Antonio Romero Torrecilla (Spain)*

**NI Mentoring Session**

19:00 - 20:00

Sormiou

- 19:00 **Forming productive collaborations**  
*Presenter: Mary Bouxsein (United States)*
- 19:00 **How to pitch your project idea / how to pitch my research**  
*Presenter: Richard Eastell (United Kingdom)*
- 19:00 **Clinics and research: how to combine the two?**  
*Presenter: Thomas Funck-Brentano (France)*
- 19:00 **Transition to Independence**  
*Presenter: Alexander Rauch (Denmark)*
- 19:00 **From bench to bedside**  
*Presenter: Christian Girgis (Australia)*
- 19:00 **Networking for professional development: benefits of serving scientific societies**  
*Presenter: Bj  rn Busse (Germany)*



**Main Congress - Monday, 27 May 2024**

**Concurrent Symposium 2: Bone Metastasis**

08:00 - 09:00

Endoume 1+2

*Chair: Jean-Jacques Body (Belgium)*

*Chair: Olivier Peyruchaud (France)*

08:00

**Novel targets in osteolytic bone metastasis**

*Speaker: Sonja Loges (Germany)*

08:25

**Discussion**

08:30

**Metabolic crosstalk between stromal and malignant cells in the bone marrow niche**

*Speaker: Nick van Gestel (Belgium)*

08:55

**Discussion**

**Concurrent Symposium 2: Metabolomic Profiling and Nutrition in Bone Health**

08:00 - 09:00

Callelongue

*Chair: Graham Williams (United Kingdom)*

*Chair: Barbara Obermayer-Pietsch (Austria)*

08:00

**Using proteomics and metabolomics to assess bone health**

*Speaker: Claes Ohlsson (Sweden)*

08:25

**Discussion**

08:30

**New insights into nutrition and bone**

*Speaker: Shivani Sahni (United States)*

08:55

**Discussion**

**Concurrent Oral Presentations 2: Osteoporosis**

09:05 - 10:05

Callelongue

*Chair: Frances Milat (Australia)*

*Chair: Pilar Peris (Spain)*

09:05

**COP13 Analysis of the relationship between baseline BMD and fracture incidence in the placebo groups using individual patient data from the FNIH-ASBMR-SABRE Project**

*Abstract Presenter: Marian Schini (United Kingdom)*

09:15

**COP14 A Randomized, Double-blind, Phase III Study to Compare SB16 (Proposed Denosumab Biosimilar) to Reference Denosumab in Patients with Postmenopausal Osteoporosis: 18-Month Results**

*Abstract Presenter: Bente Langdahl (Denmark)*



- 09:25 **COP15 Clinical Experience with Denosumab Discontinuation**  
*Abstract Presenter: Natasha Laursen (Denmark)*
- 09:35 **COP16 Romosozumab and denosumab combination therapy in postmenopausal osteoporosis**  
*Abstract Presenter: Giovanni Adami (Italy)*
- 09:45 **COP17 Effectiveness of conservative treatment in the management of acute painful vertebral compression fractures: Systematic review and network meta-analysis**  
*Abstract Presenter: Tim Rolvien (Germany)*
- 09:55 **COP18 Bone material properties in male patients with "idiopathic osteoporosis"**  
*Abstract Presenter: Markus Hartmann (Austria)*

**Concurrent Oral Presentations 2: Bone Biology and Biomechanics**

09:05 - 10:05 Endoume 1+2

*Chair: Michaela Tencerova (Czech Republic)*

*Chair: Melanie Haffner-Luntzer (Germany)*

- 09:05 **COP19 The beta2-adrenoreceptor is essential for bone repair in adult mice.**  
*Abstract Presenter: Paul-Richard Knapstein (Germany)*
- 09:15 **COP20 Lysosomal enzymes in mature osteoblasts and osteocytes limit collagen width and mineral accrual in bone tissue**  
*Abstract Presenter: Martha Blank (Australia)*
- 09:25 **COP21 Unveiling Age- and Sex-Specific Impairments in Mechanical Adaptation of Prematurely Aged PolgA Mice**  
*Abstract Presenter: Dilara Yilmaz (Switzerland)*
- 09:35 **COP22 Neutrophil extracellular traps are targetable mediators of impaired bone healing in mice**  
*Abstract Presenter: Lilly-Charlotte Albertsen (Germany)*
- 09:45 **COP23 Family-based whole-exome sequencing implicates a variant in lysyl oxidase like 4 in atypical femur fractures**  
*Abstract Presenter: Carola Zillikens (Netherlands)*
- 09:55 **COP24 GWAS meta-analysis of bone stiffness indices in 544,864 individuals identifies new candidate genes that may control the structural integrity of bone and susceptibility to fracture.**  
*Abstract Presenter: Kaitlyn Flynn (Australia)*

**Coffee Break, Poster and Exhibition Visit**

10:05 – 10:30 Other Areas

**Steven Boonen Award Lecture**

10:30 - 11:00 Callelongue

*Chair: Bo Abrahamsen (Denmark)*





- 10:30 **Introduction**  
*Speaker: Bo Abrahamsen (Denmark)*
- 10:40 **Improving fracture risk prediction using large scale real-world data and novel measurement techniques**  
*Speaker: Mattias Lorentzon (Sweden)*

**Plenary Symposium 3: What is New: New Insights into Bone Anabolics**

11:00 - 12:00 Callelongue

*Chair: Sundeep Khosla (United States)*

*Chair: Christian Meier (Switzerland)*

- 11:00 **The mechanism of action of anabolics**  
*Speaker: Teresita Bellido (United States)*
- 11:25 **Discussion**
- 11:30 **What do we know and what don't we know about anabolics?**  
*Speaker: Fernando Marin (Spain)*
- 11:55 **Discussion**

**Educational symposium: Artificial Intelligence Tools for Musculoskeletal Research and Management**

12:00 - 13:00 Callelongue

*Chair: Bo Abrahamsen (Denmark)*

*Chair: Christian Meier (Switzerland)*

- 12:00 **Can machine learning contribute to our knowledge of musculoskeletal diseases?**  
*Speaker: Sharmila Majumdar (United States)*
- 12:15 **Discussion**
- 12:20 **AI tools for fracture detection and fracture risk prediction**  
*Speaker: Nicholas Fuggle (United Kingdom)*
- 12:35 **Discussion**
- 12:40 **AI and chatbots in musculoskeletal medicine**  
*Speaker: Annegreet Vlug (Netherlands)*
- 12:55 **Discussion**

**Lunch Break, Poster and Exhibition Visit**

12:00 - 13:30 Other Areas

**Meet the Expert 6: Update on Bone histology and Histomorphometry**

13:30 - 14:30 Morgiou



13:30 **Update on bone histology and histomorphometry**  
*Presenter: Nathalie Bravenboer (Netherlands)*

**Meet the Expert 7: Artificial Intelligence in Bone Imaging and Fracture Prediction**

13:30 - 14:30

Endoume 1+2

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13:30 **Artificial intelligence in bone imaging and fracture prediction**  
*Presenter: Alejandro Frangi (United Kingdom)*

**Meet the Expert 9: Thyroid Hormones and Bone**

13:30 - 14:30

Riou

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13:30 **Thyroid hormones and bone**  
*Presenter: Graham Williams (United Kingdom)*

**Meet the Expert 10: Bone Surgery in Rare Bone Diseases: Challenge and Limits**

13:30 - 14:30

Pomègues

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13:30 **Bone surgery in rare bone diseases: challenge and limits**  
*Presenter: Pascal Bizot (France)*

**Meet the Expert 8: Bone ECM Mechanics in Rare Diseases**

13:30 - 14:30

Samena

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13:30 **bone ECM mechanics in rare diseases**  
*Presenter: Philipp Thurner (Austria)*

**Meet The ECTS Committees**

13:30 - 14:30

Sormiou

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**Break**

14:30 - 15:00

Other Areas

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**Corporate Satellite Symposium 3**

15:00 - 16:00

Callelongue

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More details can be found on the website:  
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#### Corporate Mini Symposium 4

15:00 - 16:00

Endoume 1+2

More details can be found on the website:

<https://www.ects2024.org/sponsors-exhibitors/satellite-symposia-programme/>

#### Coffee Break, Poster and Exhibition Visit

16:00 - 16:45

Other Areas

#### Plenary Oral Presentations 2: Treatment and Fracture Repair

16:45 - 17:45

Callelongue

*Chair: Petar Milovanovic (Serbia)*

*Chair: Johannes Grillari (Austria)*

- 16:45 **PLO07 Single nuclei analyses of immune cells during bone repair reveal a crucial role of macrophages in musculoskeletal trauma**  
*Abstract Presenter: Yasmine Hachemi (France)*
- 16:55 **PLO08 Revolutionizing Fracture Risk Prediction: Machine-Learning Synergy with Genetic Insights**  
*Abstract Presenter: Qing Wu (China)*
- 17:05 **PLO09 Periosteal response to bone fracture at single nuclei resolution**  
*Abstract Presenter: Cassandre Goachet (France)*
- 17:15 **PLO10 Compound heterozygous TNSALP mutations cause poorly hydrated, densely-packed mineral platelets, explaining spontaneous, osteopetrosis-like femoral fractures in hypophosphatasia**  
*Abstract Presenter: Ken Poole (United Kingdom)*
- 17:25 **PLO11 Spatial transcriptomics reveal distinct gene expression patterns in non-union and union bone fractures in mice**  
*Abstract Presenter: Esther Wehrle (Switzerland)*
- 17:35 **PLO12 Identification of a rare heterozygous variant in WDR5 associated with high bone mass**  
*Abstract Presenter: Neelam Hassan (United Kingdom)*

#### Break

17:45 - 18:00

Other Areas

#### Concurrent Oral Poster Presentations 2: Clinical/Public Health

18:00 - 19:00

Callelongue

*Chair: Polyzois Makras (Greece)*

*Chair: Carola Zillikens (Netherlands)*



- 18:00 **P258 Describing the clinical characteristics of patients living with fibrodysplasia ossificans progressiva (FOP): a non-interventional cohort in the USA**  
*Poster Presenter: Caitlin Knox (United States)*
- 18:05 **P250 Interactions between Fibroblast Growth Factor 23 and Iron Metabolism in X-Linked Hypophosphatemia (XLH)**  
*Poster Presenter: Gaetano Paride Arcidiacono (Italy)*
- 18:10 **P023 A Novel Bone Microstructure Analysis Revealed Critical Regions for Early Stability in Total Hip Arthroplasty**  
*Poster Presenter: Jing Xu (China)*
- 18:15 **P202 Alcohol intake and bone microarchitecture deterioration in older men – the prospective STRAMBO study**  
*Poster Presenter: Pawel Szulc (France)*
- 18:20 **P275 The combination of height loss and back pain which severely limits normal activities are highly predictive of pregnancy associated osteoporosis**  
*Poster Presenter: Elizabeth Orhadje (United Kingdom)*
- 18:25 **P232 Hypercalcemia due to CYP24A1 loss of function mutations. Report of four new cases**  
*Poster Presenter: Symeon Tourmis (Greece)*
- 18:30 **P214 3D Modeling of Hip Dual-Energy X-Ray Absorptiometry (DXA) in post-menopausal women treated with romosozumab**  
*Poster Presenter: Giovanni Adami (Italy)*
- 18:35 **P187 Explainable Deep Learning Approaches for Osteoporosis Risk Screening and Individualized risk evaluation using Large Population-Based Data**  
*Poster Presenter: Jin-Woo Kim (Korea, South)*
- 18:40 **P197 Short- and long-term prognostic models (FRISBEE versus recency-adjusted FRAX®) in the treatment selection of high fracture risk patients**  
*Poster Presenter: Jeroen De Filette (Belgium)*
- 18:45 **P234 Primary hyperparathyroidism in the geriatric population: Bone Density changes after parathyroidectomy**  
*Poster Presenter: Sara Gonnelli (France)*
- 18:50 **P200 Seasonality of Atypical Femoral Fractures and Classic Hip Fractures – Are AFFs summer fractures?**  
*Poster Presenter: Bo Abrahamsen (Denmark)*
- 18:55 **P218 Calf circumference is a predictor of denosumab response in older women with osteoporosis**  
*Poster Presenter: Cecilia Oliveri (Italy)*

**Concurrent Oral Poster Presentations 2: Pathophysiology**

18:00 - 19:00

Endoume 1+2

*Chair: Sonja Gamsjaeger (Austria)*

*Chair: Pawel Szulc (France)*

- 18:00 **P160 Follistatin-compound hFSTΔHBS-FC improves bone and muscle mass during immobilization and ageing and adds to bone effect of bisphosphonates**  
*Poster Presenter: Bram van der Eerden (Netherlands)*
- 18:05 **P063 A microfluidic bone-on-a-chip platform to study the role of citrate in prostate carcinoma tropism to bone**  
*Poster Presenter: Sofia Avnet (Italy)*



- 18:10 **P024 Alcohol-associated liver disease–induced changes in osteocyte lacunar network and bone mineral density distribution of the femoral neck: postmortem assessment using quantitative backscattered electron imaging**  
*Poster Presenter: Jelena Jadzic (Serbia)*
- 18:15 **P153 Exploring the role of transferrin receptor 1 in bone homeostasis.**  
*Poster Presenter: Vanessa Passin (Germany)*
- 18:20 **P158 Exercise inhibits fat infiltration and promotes muscle repair by regulating muscle immune microenvironment**  
*Poster Presenter: Quanzhong Ren (China)*
- 18:25 **P217 Prolonged treatment with irisin counteracts bone loss in the femurs of aged mice**  
*Poster Presenter: Graziana Colaianni (Italy)*
- 18:30 **P030 Detailed mapping of cortical and trabecular mineralization, osteocyte lacunar parameters, and microarchitecture along the superolateral femoral neck in subjects with type 2 diabetes mellitus**  
*Poster Presenter: Aleksandar Cirovic (Serbia)*
- 18:35 **P055 Irisin prevents trabecular bone loss in a mouse model of Multiple Myeloma**  
*Poster Presenter: Roberta Zerlotin (Italy)*
- 18:40 **P231 Identification of genetic and molecular causes of hypophosphatasia**  
*Poster Presenter: Timur Yorgan (Germany)*
- 18:45 **P278 Generation and characterization of the first mouse model of Cole Carpenter Syndrome..**  
*Poster Presenter: Antonio Maurizi (Italy)*
- 18:50 **P204 Zoledronate prevents bone loss in hemiplegic mice**  
*Poster Presenter: Charlotte Logiou (France)*
- 18:55 **P271 Disruption of the osteocyte lacunocanalicular network in osteogenesis imperfecta type XIV**  
*Poster Presenter: Chloe Jones (Austria)*

## NI Seminar and Gathering

19:00 - 20:00

Sormiou

*Chair: Franziska Knopf (Germany)*

*Chair: Ursula Heilmeyer (Germany)*

*Chair: Tim Rolvien (Germany)*

- 19:00 **P117: Glutamine supplementation in high fat diet improves bone and metabolic parameters in obese mice**  
*Poster Presenter: Martina Džubanová (Czech Republic)*
- 19:10 **P128: Omega-6 Arachidonic acid is increased in Osteoarthritis Bone Marrow Adipose Tissue and negatively impacts osteogenesis.**  
*Poster Presenter: Léa Loisy (Switzerland)*
- 19:20 **P064: Characterization of circulating and tumor infiltrating neutrophils in a murine model of osteosarcoma**  
*Poster Presenter: Diane Ji Yun Yoon (France)*



- 19:30 **P266: Neuropathic and nociplastic pain are common in adult chronic nonbacterial osteitis (CNO)**  
*Poster Presenter: Anne Leerling (Netherlands)*
- 19:40 **P203: Modelling the initial effects of systemic glucocorticoids (GCs) on absolute changes in total left hip BMD in GC treatment-naive and unopposed adults using linear regression**  
*Poster Presenter: Benjamin Bakke Hansen (Denmark)*
- 19:50 **Discussion**

## Main Congress - Tuesday, 28 May 2024

### Concurrent Symposium 3: New Insights of Molecular Biology

08:00 - 09:00

Endoume 1+2

*Chair: Eleni Douni (Greece)*

*Chair: Teresita Bellido (United States)*

- 08:00 **Osteocyte transcriptome mapping – insights into control of the skeleton**  
*Speaker: Peter Croucher (Australia)*
- 08:25 **Discussion**
- 08:30 **miRNA signaling in bone remodeling**  
*Speaker: Hanna Taipaleenmaki (Germany)*
- 08:55 **Discussion**

### Concurrent Symposium 3: Inflammation and Bone

08:00 - 09:00

Callelongue

*Chair: Anna Maria Teti (Italy)*

*Chair: Gudrun Stenbeck (United Kingdom)*

- 08:00 **Bone involvement in Inflammatory arthritides**  
*Speaker: Georg Schett (Germany)*
- 08:25 **Discussion**
- 08:30 **Inflammation beyond arthritis – the case of osteomyelitis**  
*Speaker: Cristina Sobacchi (Italy)*
- 08:55 **Discussion**

### Concurrent Oral Presentations 3: Disease Trajectories and Assessment

09:05 - 10:05

Callelongue

*Chair: Mattias Lorentzon (Sweden)*

*Chair: Sekib Sokolovic (Bosnia - Herzegovina)*



- 09:05 **COP25 Abdominal aortic calcification assessed in DXA-derived images using machine learning predicts increased injurious falls risk in older adults: the Manitoba Bone Mineral Density Registry**  
*Abstract Presenter: Marc Sim (Australia)*
- 09:15 **COP26 Dissecting the genetic architecture of trabecular bone score: a genome-wide association study in 45 thousand individuals.**  
*Abstract Presenter: Haojie Lu (Netherlands)*
- 09:25 **COP27 Assessment of Romosozumab (Romo) Treatment on Spine Bone Strength Using Biomechanical Computed Tomography (CT) Virtual Stress Tests**  
*Abstract Presenter: Jen Timoshanko (United Kingdom)*
- 09:35 **COP28 Longitudinal course of volumetric hip BMD and macrostructure in postmenopausal T2D women with and without diabetic retinopathy versus controls - a prospective 5-year-quantitative computed tomography-(qCT)-study**  
*Abstract Presenter: Ursula Heilmeyer (Switzerland)*
- 09:45 **COP29 Accumulation of Advanced Glycation End products and Microarchitecture of Bone Tissue in Subjects with or without Type 2 Diabetes Mellitus**  
*Abstract Presenter: Helena Bardenfleth (Denmark)*
- 09:55 **COP30 A 5-yr longitudinal study of body composition tissue-specific change with aging and the association with loss of muscle strength and physical performance**  
*Abstract Presenter: Yi Yuan (China)*

### Concurrent Oral Presentations 3: Osteoclast Biology, Osteoarthritis

09:05 - 10:05

Endoume 1+2

*Chair: Jeroen Geurts (Switzerland)*

*Chair: Nick van Gastel (Belgium)*

- 09:05 **COP31 Zfp687 deficiency causes altered skeletal growth due to impaired osteoclast differentiation**  
*Abstract Presenter: Sharon Russo (Italy)*
- 09:15 **COP32 Cell-autonomous osteoclast iron deficiency leads to osteopenia**  
*Abstract Presenter: Tiago Carvalho Oliveira (Germany)*
- 09:25 **COP33 bone marrow adipose tissue-mediated lipolysis regulates aberrant bone formation in hand Osteoarthritis**  
*Abstract Presenter: Léa Loisy (Switzerland)*
- 09:35 **COP34 Genetic modulation of WNT1 expression alters subchondral bone remodeling and osteophyte formation during post-traumatic osteoarthritis in mice**  
*Abstract Presenter: Weixin Xie (Germany)*
- 09:45 **COP35 Inactivation of Cxcl9 protects from cartilage deterioration and osteophyte formation in experimental osteoarthritis**  
*Abstract Presenter: Antonia Donat (Germany)*
- 09:55 **COP36 Chondrocyte specific inactivation of Piezo1 attenuates osteoarthritis development**  
*Abstract Presenter: Assil-Ramin Alimy (Germany)*



**Break**

10:05 - 10:30

Other Areas

**Plenary Symposium 4: High Resolution Imaging in Bone**

10:30 - 11:30

Callelongue

*Chair: Richard Eastell (United Kingdom)*

*Chair: Alex Ireland (United Kingdom)*

10:30                    **Leveraging HR-pQCT and advanced computational techniques to gain deeper insights into bone health**  
*Speaker: Danielle Whittier (Canada)*

10:55                    **Discussion**

11:00                    **Is it justified to use HR-pQCT in clinical practice?**  
*Speaker: Mattias Lorentzon (Sweden)*

11:25                    **Discussion**

**Coffee Break**

11:30 - 12:00

Other Areas

**Basic Science Update 2: Spatial Imaging and Transcriptomics**

12:00 - 13:00

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*Chair: Peter Croucher (Australia)*

*Chair: Hanna Taipaleenmaki (Germany)*

12:00                    **Spatial imaging and transcriptomics**  
*Presenter: Ralph Müller (Switzerland)*

12:45                    **Discussion**

**Big Clinical Session: Aging and Cellular Senescence**

12:00 - 13:00

Callelongue

*Chair: Gustavo Duque (Australia)*

*Chair: Bente Langdahl (Denmark)*

12:00                    **From cellular senescence via biomarkers to senolytics**  
*Speaker: Johannes Grillari (Austria)*

12:25                    **Discussion**

12:30                    **Excellence in Research Lecture: Cellular senescence and the skeleton**  
*Speaker: Sundeep Khosla (United States)*





12:55 Discussion

**Break**

13:00 - 13:15

Other Areas

**Plenary Oral Presentations 3: Innovative Concepts**

13:15 - 14:15

Callelongue

*Chair: Alejandro Frangi (United Kingdom)*

*Chair: Ralph Müller (Switzerland)*

- 13:15 **PLO13 CRISPR-toolbox for identification and validation of bone-specific enhancers**  
*Abstract Presenter: Regina Margarete Grün (Germany)*
- 13:25 **PLO14 Improved skeletal dynamics in adults treated with palopegteriparatide (TransCon PTH) for hypoparathyroidism: 52-week analysis of phase 3 PaTHway trial**  
*Abstract Presenter: Aliya Khan (Canada)*
- 13:35 **PLO15 Mapping osteoblastic bone formation in vivo at the single organelle resolution**  
*Abstract Presenter: Kai Chen (Australia)*
- 13:45 **PLO16 Acute effects of GLP-1 and GIP on human bone turnover**  
*Abstract Presenter: Nina Hansen (Denmark)*
- 13:55 **PLO17 Single cell sequencing reveals a novel osteoblast-derived cell population supporting breast cancer bone metastasis**  
*Abstract Presenter: Jennifer Zarrer (Germany)*
- 14:05 **PLO18 Zoledronate after denosumab discontinuation: is repeated administrations more effective than single infusion in preserving bone mineral density?**  
*Abstract Presenter: Giorgia Grassi (Italy)*

**Awards & Closing Ceremony**

14:15 - 14:45

Callelongue

14:15 *Speaker: Peter Pietschmann (Austria)*