



POSTER PROGRAM

POSTERS

Based on the scored rank as determined by scientific advisory board member reviews of abstracts, a select number of posters have been selected for a 3-minute (2 slides) **Flash Oral Presentation** session that takes place Monday, Tuesday and Wednesday evenings to kick off the regular poster session. This status is indicated by an "F" added to the poster number. Flash presentations will occur in the lecture hall (Zappeion/Megaron Rooms) at 8:00pm.

Following flash presentations, we ask that you visit the Bibliotheque & The Oval Office Rooms to view all posters. Authors will be available for questions on the indicated day.

Poster#	Presenter	Poster Title	Institution
MONDAY			
P1	Raphaela Allgayer	<i>Modeling cardiovascular calcification: in vitro collagen calcification at pathological fetuin A levels replicates characteristic morphology and phases</i>	McGill University, Montréal, QC, Canada
P4-F	Natalie Andras	<i>Exploring site-specific functions of bone sialoprotein in mineralization using conditionally ablated mouse models</i>	The Ohio State University College of Dentistry, Columbus, OH, USA
P7	Dimitra Athanasiadou	<i>Ultrastructural and chemical analysis of aortic valve calcification in a rabbit model</i>	Chalmers University of Technology, Gothenburg, Västergötland, Bohuslän and Halland, Sweden
P10	Lynda Bonewald	<i>Under hypocalcemia, Irisin deletion protects young and aged female mice from bone loss but worsens bone loss in aged compared to young males</i>	Indiana University, Indianapolis, IN, USA
P13	Robert Davies	<i>Surface modification of biomimetic self-assembling peptide scaffolds on their potential to promote de novo nucleation of hydroxyapatite</i>	University of Leeds, Leeds, West Yorkshire, UK
P16	Guillaume Falgayrac	<i>Raman spectroscopy assesment of the mineral produced by human osteoblasts differentiated on the extracellular matrix of bone marrow adipocytes</i>	Univ Lille MABLAB ULR4490, Lille, Nord, France
P19-F	Bernhard Ganss	<i>Evaluating amelotin-coated hydroxyapatite nanoparticles for the remineralization of artificial carious lesions in vitro</i>	University of Toronto, Toronto, ON, Canada
P22-F	Bojana Ginovska	<i>Understanding structure and aggregation of amelogenin under various conditions</i>	Pacific Northwest National Laboratory, Richland, WA, USA
P25	Stéphane Hilliquin	<i>The sacroiliac joint: a sensitive tool to highlight altered bone phenotype in murine models of skeletal disorders</i>	Université Paris Cité, Institut des maladies musculo-squelettiques, Montrouge, Ile-de-France, France
P28	Hemalatha Kanniyappan	<i>Promising strategy to enhance biomineralization for bone repair and regeneration: Bioactive tissue engineered scaffold</i>	UIC College of Medicine Rockford, Rockford, IL, USA

P31	Janet Moradian-Oldak	<i>Triple function of amelogenin peptide-chitosan hydrogel for dentin repair</i>	University Southern California, Los Angeles, CA, USA
P34	Hossein Poorhemati	<i>A computational model accounting for physicochemical aspects of bone mineralization</i>	McGill University, Montréal, QC, Canada
P37-F	Emeline Raguin	<i>Insights into mineral transport within the embryonal chick femur using cryo-FIB SEM 3D volume imaging</i>	Max Planck Institute of Colloids and Interfaces, Potsdam, Brandenburg, Germany
P40	Dawn Raja Somu	<i>Characterization of biomineralization in shark vertebral cartilage</i>	Florida Atlantic University, Boca Raton, FL, USA
P43-F	Adrian Rodriguez-Palomo	<i>Nanostructure of regenerated bone in critical-size defects imaged by X-ray scattering</i>	Aarhus University, Aarhus, Denmark
P46	Anastasiia Sadetskaia	<i>Secondary hyperparathyroidism in nephrectomized rats: changes to osteocyte lacunar volume distribution through an X-ray computed tomography study</i>	Aarhus University, Aarhus, Denmark
P49-F	Victoria Schemenz	<i>Bone matrix and lacuno-canalicular network is altered in a mouse model for Marfan Syndrome</i>	Charité - Universitätsmedizin Berlin, Berlin, Germany
P52-F	Wendy Shaw	<i>Evaluating the role of the N-terminus, histidine-rich region, and C-terminus on the Interaction of amelogenin with hydroxyapatite</i>	Pacific Northwest National Laboratory, Richland, WA, USA
P55-F	Stephan Sutter	<i>In vitro models of calcific aortic valve disease to evaluate the effect of mineral phase on aortic valve cell populations</i>	Cornell University, Ithaca, NY, USA
P58-F	Alyssa Williams	<i>Nanoscale analysis of osteonal bone tissue using 3D electron microscopy</i>	McMaster University, Hamilton, ON, Canada
P61	Stephanie Wong	<i>Alterations of the carbonate environment with Na or K substitution in biomimetic apatites</i>	University of Connecticut Health Center, Farmington, CT, USA
P64	Dina Abdelfattah	<i>Characterisation of Ti implant surfaces: Coated with self-assembling peptide (SAP) P11-4</i>	St James's University Hospital, School of Dentistry, University of Leeds, Leeds, UK

TUESDAY

P2	Mohammed Al-Mosawi	<i>New insights into the effects of a metabolic disorder on the crystallography of dental enamel</i>	University of Leeds, Leeds, West Yorkshire, UK
P8-F	Sarah Boyer	<i>Semantic segmentation of enamel caries using convolutional neural networks</i>	Northwestern University, Evanston, IL, USA
P11	Yannicke Dauphin	<i>Inner structure and composition of cultured black pearls from <i>Pinctada margaritifera</i></i>	Museum national d'histoire naturelle (MNHN), Paris, France
P14	Guillaume Falgayrac	<i>Bone diagenesis at early stage followed-up during 12 months by Raman spectroscopy</i>	Univ Lille MABLab ULR4490, Lille, Nord, France
P17	Reham Gonnah	<i>Investigating the role of self-assembling peptides in guided enamel remineralisation on the micro- and nanoscale using synchrotron X-ray techniques</i>	University of Leeds and Diamond Light Source, Leeds, West Yorkshire, UK
P20-F	Asmaa Harfoush	<i>Texture distribution changes in dental enamel with KLK4 mutation: Implications for understanding amelogenesis imperfecta pathogenesis</i>	University of Leeds, School of Dentistry, Leeds, West Yorkshire, UK
P23	Christian Hasberg	<i>Structure-function analysis of Fetuin-A</i>	RWTH Aachen University Hospital, Aachen, NRW, Germany

P26-F	Elis Lira dos Santos	<i>Impact of therapeutic strategies on dentoalveolar phenotype in the murine model of X-linked hypophosphatemia: what about gene therapy?</i>	Université Paris Cité, Montrouge, Ile-de-France, France
P29-F	Aaron Morgan	<i>Miniaturized device for assessing calcification propensity of implant materials using simulated body fluid calcification medium</i>	RWTH Aachen University Hospital, Aachen, NRW, Germany
P32-F	Monzur Murshed	<i>Understanding the craniofacial abnormalities in the C19F variant and two models lacking the conserved functional residues of Matrix Gla protein</i>	McGill University, Montréal, QC, Canada
P35	Ellie Northall	<i>Identification of candidate pathways and pharmacological drugs that mediate pathological skeletal remodelling in spinal osteoblasts</i>	University of Birmingham, Birmingham, West Midlands, UK
P38-F	William Querido	<i>Optical photothermal infrared (O-PTIR) spectroscopy and imaging of bone mineralization at submicron scale</i>	Temple University, Philadelphia, PA, USA
P41	Luca Reicher	<i>Live imaging of mineralization and calcification in cell cultures</i>	RWTH Aachen University Hospital, Aachen, NRW, Germany
P44	Thomas Robinson	<i>Shear-dependent self-assembly of calcium pyrophosphate nanostructures</i>	University of Birmingham, Birmingham, West Midlands, UK
P47-F	Genevieve Romanowicz	<i>Mineralized and vascularized bone-like organoid created with high-throughput bioprinting</i>	University of Oregon, Eugene, OR, USA
P50-F	Benjamin Rudski	<i>Just average: Constructing a 3D digital anatomical atlas of the human distal femur</i>	McGill University, Montréal, QC, Canada
P53	Maximilian Rummler	<i>The patchiness of the osteocyte lacunocanalicular network in trabecular bone of human vertebrae</i>	Max Planck Institute of Colloids and Interfaces, Potsdam, Brandenburg, Germany
P56-F	D. Rick Sumner	<i>Development and initial uses of a rat model of cortical bone matrix maturation during remodeling</i>	Rush University Medical Center, Chicago, IL, USA
P59	Camilla Winkler	<i>Fetuin-A Phosphorylation regulates mineral binding</i>	RWTH Aachen University Hospital, Aachen, NRW, Germany
P62	Mahdi Ayoubi	<i>Morphological characterization of the osteocytes lacunocanalicular network (LCN) at osteolytic tumorous lesions in murine tibia</i>	Cornell University, Ithaca, NY, USA
P65	Marion Merle	<i>Injectable biomimetic mineralized cell-free tissue for biomineralization model and tissue repair</i>	CNRS, Paris, France
P67	Carlos Pinero Robles	<i>Comparative study on the osteogenic potential of subchondral and fibrocartilage cells of the TMJ</i>	University of Pittsburgh, Pittsburgh, PA, USA
WEDNESDAY			
P3	Sylvie Babajko	<i>Dentin mineralization alteration in mice exposed to Di(2-ethylhexyl) phthalate (DEHP), a widespread endocrine disruptor</i>	Université Paris Cité, Paris, France
P6	Miguel Castilho	<i>3D printing of fibrillar collagen scaffolds with native-like organization</i>	Eindhoven University of Technology, Eindhoven, Netherlands
P9-F	Yinghua Chen	<i>Transcriptome profiling of DPSCs stimulated with DPP identifies key signaling networks responsible for odontoblast-specific lineage differentiation</i>	University of Illinois at Chicago, Chicago, IL, USA
P12	Miruna Chipara	<i>Assessing traumatic injuries in a bone ex vivo model</i>	University of Birmingham, Birmingham, West Midlands, UK

P15	Brittany Foley	<i>Biomimetic mineralization using seriated ALP-functionalized multilayer systems</i>	Université de Technologie de Compiègne and Sorbonne Université, Paris, France
P18-F	Mebin George Varghese	<i>Unraveling the complexity of cave bear molars: The influence of enamel distribution and enamel-dentine junction shape</i>	Institute of Biotechnology, University of Helsinki, Viikinkaari, Helsinki, Finland
P21	Abshar Hasan	<i>Environmental pH modulates organic-inorganic interactions to regulate hierarchical mineralization</i>	University of Nottingham, Nottingham, UK
P24	Ryan Lee Chan	<i>DNA assemblies guide calcium phosphate mineralization</i>	University of Toronto, Toronto, ON, Canada
P27	Mikayla Moody	<i>Developing a novel bone explant model to investigate physiological influences on bone health</i>	University of Connecticut Health Center, Farmington, CT, USA
P30-F	Antonio Nanci	<i>Structural and molecular characterization of an Scppp1 knock out mouse</i>	Université de Montréal, Montréal, QC, Canada
P33	Madawi Alkeheli	<i>The ability of recombinant amelogenin protein compared to poly glycolic acid to regenerate lost dental tissue in immature teeth with pulp necrosis</i>	King Abdulaziz University, Jeddah, Saudi Arabia
P36-F	Sarah Peters	<i>Matrisome proteomic profiling between young and old dentin identifies age- and sex-differences</i>	The Ohio State University College of Dentistry, Columbus, OH, USA
P39-F	Nicole Sempertegui	<i>Bone matrix mineral content regulates early-stage metastasis by altering mesenchymal stem cell fate</i>	Cornell University, Ithaca, NY, USA
P42	Charles Sfeir	<i>The effects of CK2 alpha 1 conditional knockout on mineralization of skeletal bone and teeth</i>	University of Pittsburgh, Pittsburgh, PA, USA
P45-F	Susanna Sova	<i>What regulates the enamel matrix distribution? Normal and abnormal enamel distribution in human molars</i>	University of Helsinki, Helsinki, Uusimaa, Finland
P48	Stuart R. Stock	<i>Microstructure quantification of shark vertebral mineralized cartilage</i>	Northwestern University, Chicago, IL, USA
P51	Sermin Utku	<i>The consequences of dehydration-hydration on bone anisotropy and implications on the sublamellar organization of mineralized collagen fibrils</i>	Yeditepe University, Istanbul, Türkiye
P54-F	Vilma Väänänen	<i>X-ray microtomography imaging of gene expression in mineralizing tissues</i>	University of Helsinki, Helsinki, Uusimaa, Finland
P57	Nina Kølln Wittig	<i>Influence of measurement parameters on determination of osteocyte lacunar morphology with laboratory X-ray micro-CT</i>	Aarhus University, Aarhus, Denmark
P60	Zhiming Wu	<i>Aberrations of the crosslink of collagen type I and bone structure organization in osteogenesis imperfecta</i>	UMC Utrecht, Utrecht, Netherlands
P63-F	Liyang Zhong	<i>An in vitro model for preferential gap zone collagen mineralization</i>	University of Toronto, Toronto, ON, Canada
P66	Birgitta Stolze	<i>Laser Based and Image-guided Sample Preparation for Advanced Hard Tissue Histology and Tissue Isolation</i>	LLS ROWIAK LaserLabSolutions GmbH, Hannover, Germany