

ORAL PROGRAM

	Speaker	Presentation Title	Institution
Monday Oct 23		'Tribute to Art Veis'	
8:45am	Janet Oldak Chair		University of Southern California, Los Angeles, USA
8:50am	Anne George Session Keynote	<i>Arthur Veis, an educator and visionary leader in calcified tissues and beyond</i>	University of Illinois, Chicago, IL, USA
9:20am	Deborah Veis	<i>Arthur Veis, patriarch of an extensive science family</i>	Washington University School of Medicine, St. Louis, USA
9:40am	Steve Weiner	<i>Art Veis: the discoverer of the first Asp-rich protein in mineralized tissues</i>	Weizmann Institute of Science, Rehovot, Israel
10:00am	Charles Sfeir	<i>Art Veis: the mentor and pioneer on the trail of phosphates and their kinases</i>	University of Pittsburgh, Pittsburgh, USA
10:20am	Stuart Stock	<i>The hard thing about sea urchin teeth: Arthur Veis, proteins and minerals</i>	Northwestern University, Chicago, USA
Monday Oct 23		Oral Session 1 Basic Biomineralization Mechanisms A	
11:10	Henry Margolis Session Keynote and Chair	<i>Role of amelogenin phosphorylation in enamel mineral formation during secretory amelogenesis</i>	University of Pittsburgh, Pittsburgh, USA
11:40	Janet Oldak	<i>Interrogating the multitargeting domain in ameloblastin; implications for its multifunctionality in amelogenesis</i>	University of Southern California, Los Angeles, USA
12:00	Thomas Diekwisch	<i>Effect of polyproline repeat length on enamel crystal formation: Of frogs and bulls</i>	University of Rochester, Rochester, USA
12:20	Xingchen Zhao	<i>High diffusivity pathways and selective ion transport in dental enamel</i>	Northwestern University, Evanston, USA
Monday Oct 23		Oral Session 2 Basic Biomineralization Mechanisms B	
2:40pm	Elena Macías-Sánchez	<i>Three-dimensional study of early mineralization events in fibrolamellar bone</i>	Universidad de Granada, Granada, Spain
3:00pm	Chenglong Li	<i>The role of citrate in extrafibrillar mineralization of bone</i>	Radboud University Medical Center, Nijmegen, Netherlands
3:20pm	Luco Rutten	<i>In-situ model to investigate the effect of collagen overglycosylation on the fibril structure and mineralization</i>	Radboud University Medical Center, Nijmegen, Netherlands
3:40pm	Xiaofang Wang	<i>The critical roles of a novel GTPase regulator, Din, in the homeostasis of MSCs in bones, sutures and teeth</i>	Texas A&M University School of Dentistry, Dallas, USA
Monday Oct 23		Oral Session 3 Basic Biomineralization Mechanisms C	
4:30pm	Raed Said	<i>Effects of circadian clock disruption in dental mineralized tissues formation</i>	University of Saskatchewan, Saskatoon, Canada
4:50pm	Marcos Cruz	<i>Unravelling the relationship between isolated bone matrix vesicles and forming mineral at the nanometer scale</i>	Radboud University Medical Center, Nijmegen, Netherlands
5:10pm	Avathamsa Athirasala	<i>Accelerated biomineralization and osteocyte maturation on-a-chip: A 3D bioprinting and microfluidics approach</i>	Oregon Health & Science University, Portland, USA
5:30pm	Cassandra Villani	<i>Transcriptome analysis indicates a stimulatory role of DMP1 in periodontal ligament stem cells and promotes osteoblast differentiation</i>	University of Illinois, Chicago, IL, USA
5:50pm	Caris Smith	<i>Runx2 is required for hypertrophic chondrocyte mediated cartilage degradation and bone resorption</i>	University of Alabama at Birmingham, Birmingham, AL
Tuesday Oct 24		Oral Session 4 Methods and Techniques in Mineralized Tissue A	
8.50am	Peter Fratzl Session Keynote and Chair	<i>The potential role of internal stresses for the mechanical properties of bone</i>	Max Planck Institute of Colloids and Interfaces, Potsdam, Germany

9:20am	Lara Estroff	<i>Biominerological signatures of pathological mineralization</i>	Cornell University, Ithaca, USA
9:40am	Anat Akiva	<i>3D correlative live-to-cryo microscopy shows collagen development in zebrafish scale</i>	Radboud University Medical Center, Nijmegen, Netherlands
10:00am	Andreia Sousa da Silveira	<i>Evolutionary materials optimization? Neutron tomography reveals differences in water permeability between osteocytic and anosteocytic bone</i>	Charité-Universitaetsmedizin, Berlin, Germany
Tuesday Oct 24		Oral Session 5 Methods and Techniques in Mineralized Tissue B	
11:00am	Thierry Azaïs	<i>Structural description of CaCO₃ prenucleation clusters through ¹³C MAS-DNP NMR</i>	Sorbonne Université, Paris, France
11:20am	Roland Kröger	<i>Studying collagen mineralization dynamics using in-situ Raman spectroscopy together with in-situ small and wide angle X-ray scattering</i>	University of York, York, UK
11:40am	Katrein Sauer	<i>X-ray primary radiation damage spreads in bone via collagen destruction due to photoelectron ionization and secondary emission self-absorption</i>	Charité-Universitaetsmedizin, Berlin, Germany
12:00pm	Palwinder Kaur	<i>Precision remineralising technologies to advance dental enamel health</i>	University of Leeds, Leeds, UK
12:20pm	Joerg Lindenau	<i>X-Ray microscopy of soft and mineralized tissue</i>	ZEISS Microscopy
Wednesday Oct 25		Oral Session 6 Evolution A	
9:00am	Fabio Nudelman Session Keynote and Chair	<i>Structural and mechanical adaptation of Lingula anatina shells</i>	University of Edinburgh, Edinburgh, Scotland
9:30am	Timothy Bromage	<i>Metabolic profiling of modern and fossilized mineralized tissues: The crystallite/mineral niche</i>	New York University, New York, USA
9:50am	Joseph Deering	<i>Mineral and fiber/organic assemblies in the gekkotan eggshell in 3D as characterized by submicron X-ray tomography and FIB-SEM serial sectioning</i>	McGill University, Montréal, Canada
10:10am	Frederic Marin	<i>The shell calcitic prismatic layer of Pinna nobilis and its protein repertoire</i>	University of Burgundy, Dijon, France
Wednesday Oct 25		Oral Session 7 Evolution B	
11:00am	Adrian Rodriguez-Palomo	<i>Spiralled structure of narwhal tusk studied by multimodal hierarchical imaging</i>	Aarhus University, Aarhus, Denmark
11:20am	Ron Shahar	<i>New insights into the nature of osteodentin</i>	The Hebrew University, Rehovot, Israel
11:40am	Philippe Ganot	<i>Specific genes for calcification of the red coral corallium rubrum: Identification and evolution deduced from tissue expression and phylogeny</i>	Centre Scientifique de Monaco, Monaco, Monaco
12:00pm	Thorbjørn Erik Køppen Christensen	<i>Amorphous phase distribution in the side of the stomatopod dactyl club</i>	MAX IV, Lund, Sweden
Wednesday Oct 25		Oral Session 8 Human Pathologies A	
2:00pm	Olivier Duverger Session Keynote and Chair	<i>A unique type of syndromic amelogenesis imperfecta sheds light on the mechanism that leads to enamel rod decussation</i>	NIDCR/NIH, Bethesda, USA
2:30pm	Monzur Murshed	<i>Heterozygous variants in MGP lead to endoplasmic reticulum stress causing spondyloepiphyseal dysplasia</i>	McGill University, Montréal, Canada
2 50pm	Robin van der Meijden	<i>Aortic valve mineralization: A detailed look using correlative Raman-EM imaging</i>	Radboud University Medical Center, Nijmegen, Netherlands
3:10 pm	Nicola Partridge	<i>Comparison of the effects of PTH (1-34), PTHrP (1-36) and abaloparatide (ABL) on the murine osteoblast transcriptome</i>	New York University, New York, USA
3:30pm	Netta Vidavsky	<i>Zinc in microscopic calcifications isolated from thyroid fine needle aspiration may serve as a biomarker of thyroid nodule malignancy</i>	Ben-Gurion University of the Negev, Beer Sheva, Israel
Wednesday Oct 25		Oral Session 9 Human Pathologies B	
4:20pm	David Kohn	<i>Compromises in osteocyte lacunar canalicular network with diabetes and correlations with matrix properties</i>	University of Michigan, Ann Arbor, USA
4:40pm	Eve Donnelly	<i>The paradox of fragile but dense bones in Type 2 diabetes</i>	Cornell University, Ithaca, USA

5:00pm	Nadja Fratzl-Zelman	<i>Alterations in bone matrix mineralization caused by the coexistence of osteogenesis imperfecta and hypophosphatasia</i>	Ludwig Boltzmann Institute of Osteology, Vienna, Austria
5:20pm	Marta Cerruti	<i>Physico-chemical characterization of minerals in cardiovascular tissues of senior body donors sheds light on cardiovascular calcification progression</i>	McGill University, Montréal, Canada
Thursday Oct 26		Oral Session 10 Animal Models A	
8:50am	Derk Joester Session Keynote and Chair	<i>Large scale comparison of mineralized tissues in wildtype and mutant mouse jaws: from semantic segmentation to extraction of metrics</i>	Northwestern University, Evanston, USA
9:20am	Harvey Goldberg	<i>Osteopontin-derived phosphopeptide inhibits in vivo calcium oxalate formation in <i>Drosophila melanogaster</i></i>	University of Western Ontario, London, Canada
9:40am	The Nghia Nguyen	<i>Role of Claudin-10 in amelogenesis</i>	Université Paris Cité Dental School, Montrouge, France
10:00am	Tia Calabrese	<i>Tooth root organoids as models to study dental tissue regeneration</i>	University of Pittsburgh, Pittsburgh, USA
10:20am	Tegnteng (Toni) Tang	<i>Lactation is associated with changes in mouse bone cellular and sub-cellular network architecture</i>	McMaster University, Hamilton, Canada
Thursday Oct 26		Oral Session 11 Animal Models B	
11:10am	Brian Foster	<i>Native and recombinant bone sialoprotein improves alveolar bone healing in mice</i>	The Ohio State University, Columbus, USA
11:30am	Pierre Moffatt	<i>Crispr-engineered conditional knock-in mouse model to study osteogenesis imperfecta type V</i>	McGill University, Shriners Hospitals for Children, Montréal, Canada
11:50am	Marc McKee	<i>Attaching organic fibers to mineral: The case of the avian eggshell</i>	McGill University, Montréal, Canada
12:10pm	Carole Le Henaff	<i>Deletion of Prkar1a subunit in osteoblasts cause severe bone pathology with impairment of osteoblast differentiation and increased osteoclast activity</i>	New York University, New York, USA
Thursday Oct 26		Oral Session 12 Applied and Translational Science	
2:00pm	Judith Schaart Session Keynote and Chair	<i>Development of a bone-on-a-chip to study bone formation in health and disease</i>	Radboud University Medical Center, Nijmegen, Netherlands
2:30pm	Robert Dzhaniev	<i>Application of the mineral-binding protein fetuin-A for the detection and treatment of calcified lesions</i>	RWTH Aachen University Hospital, Aachen, Germany
2:50pm	Vivian Merk	<i>Interfibrillar mineralization of three-dimensional chitin scaffolds derived from mushrooms</i>	Florida Atlantic University, Boca Raton, USA
3:10pm	Ibrahim Hoja	<i>A novel biofilm inhibitor & TTO modulate dental bacteria involvement & enhance tertiary dentin formation to synergistically prevent & delay caries</i>	University of Saskatchewan, Saskatoon, Canada
3:30pm	Sara Gamea	<i>Development of protein-based matrices for enamel regeneration</i>	King's College London, London, UK
4:30pm	<p style="text-align: center;"><i>Eve and Arthur Veis Plenary Speaker</i></p> <p style="text-align: center;">MELINDA J. DUER, FRSC, PhD Professor of Biological and Biomedical Chemistry Department of Chemistry, University of Cambridge, UK</p> <p style="text-align: center;"><i>Using solid-state NMR spectroscopy to understand calcified tissues in health and disease</i></p>		

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