

# ICCBMT-12



## 12<sup>th</sup> International Conference on the Chemistry and Biology of Mineralized Tissues

Potsdam, Germany  
29 May - 1 June 2017

Program Book

# Sponsors



**EVE & ARTHUR VEIS  
ENDOWMENT FUND**



**JAMES B. BOSKEY  
MEMORIAL FOUNDATION**



**SCANCO MEDICAL**



# Contents

Welcome Message	2
About ICCBMT	4
Maps	7
Conference Program	8
Program Schedule	10

# Welcome Message

On behalf of the organization committee, we warmly welcome you all to the 12th International Conference on the Chemistry and Biology of Mineralized Tissue held at the Kongresshotel Potsdam, Germany from the 29th May to 1st June, 2017.

This Conference was founded by Prof. Arthur Veis in Chicago 1981, together with Prof. William T. Butler and Prof. Melvin Glimcher and it has been held approximately every three years since then. It has become one of the most important scientific gatherings in the field of basic bone and tooth research as well as biomineralization more generally. The Meeting emphasizes physicochemical, biological and clinical topics concerning mineralization processes in vertebrate and invertebrate species. These include, but are not limited to, cell and molecular biology of mineralized tissue formation, hormone and cytokine regulation of mineralized tissues, signaling pathways, structure and function of extracellular components of mineralized tissues, model systems of biomineralization, disorders and pathology of mineralized tissues and development of therapeutic approaches, and, new technologies for studying crystal structure and formation.

This year, we received more than 140 abstracts from 19 countries, including United States, Canada, Mexico, United Kingdom, France, Italy, Netherland, Germany, Austria, Finland, Denmark, Israel, India, China, Japan, Sweden, Spain and Brazil. 50 oral presentations will be held without parallel sessions over four days of this Conference, with the poster session running all day long. Some posters will also be shortly presented in flash talks. We hope that there is plenty of scope and new development for discussion.

Potsdam has the largest World Heritage Site in Germany, along with several important historical and cultural landmarks. As the capital and largest city of the German federal state of Brandenburg, Potsdam directly borders the Germany's capital city, Berlin. Around the city, there are a series of interconnected lakes and cultural landmarks, in particular the parks and palaces of Sanssouci. This city was planned to embrace the ideas in The Age

of Enlightenment, through a careful balance among architecture and landscape, and it was intended as "a picturesque, pastoral dream" which reminded its residents of their relationship with nature and reason. Potsdam was a residence of the Prussian kings and the German Kaiser, until 1918. The Potsdam Conference was held at Palace Cecilienhof in 1945. During the ICCBMT Conference, we do hope you will also have time to explore and enjoy this city, and meanwhile, we are offering two tour options, to Park Sanssouci and to Neuer Garten (Cecilienhof Palace). For those who cannot get enough from science, we offer a free tour in the Max Planck Institute of Colloids and Interfaces, where you can explore our facility and labs of Biomaterials.

We would like to express our gratitude to all members of the committees involved in the organization of this Conference, to all the contributing authors and participants, and to all the fellow students and staff members in the Secretariat, who helped create this Congress. Also, we thank the sponsors listed on the previous page who helped make this Congress a success.

Finally, please take the time to explore Potsdam and to meet as many new colleagues as possible and remember the 12<sup>th</sup> ICCBMT as a friendly experience.

**Anne George, Ariane Berdal and Peter Fratzl**

Co-Chairs of ICCBMT-12



## About ICCBMT

### Eve and Arthur Veis – where it starts

Back in 1978, Prof. Arthur Veis attended a meeting of the American Association for the Advancement of Science (AAAS), and he was disappointed that no paper of biomineralization was presented. On the next morning, he expressed about the idea and the need of having such a meeting to Prof. Bill Butler, who responded with positive feedback and support.



Photo: Prof. Arthur Veis and his beloved wife, Mrs. Eve Veis

With the financial support from National Institutes of Health (NIH), Prof. Arthur Veis began to contact people who might be interested in this field of research. Despite being a new-born academic event, the 1st ICCBMT received overwhelming attention and a number of researchers expressed their desire to be part of it. Prof. Veis decided to have this very first conference in Chicago, and his beloved wife, Eve Veis, played a very important role in organizing this event, including event venues, presentation scheme, poster sessions, accommodation, banquet, registration, etc. Facing a very tight budget, Mrs. Veis made it happen with tremendous success. She

handled all social organization, correspondence and finance, with the help from their lovely children, Judith and Sharon.

Following this success, Mrs. Eve Veis and Prof. Arthur Veis had devoted their dedications for several subsequent conferences. Along with Prof. Bill Butler and Prof. Melvin Glimcher, Mrs. Veis served as unofficial Board of Directors for the first three meetings. Her name is remembered with Prof. Arthur Veis by the keynote lecture named after them. Together, this respectful couple attended most ICCBMT meetings.

## History of ICCBMT

ICCBMT aims to bring together world-wide researchers and practitioners in the field of tissue mineralization from both chemical, biological material aspects. As one of the most prestigious conferences on mineralized tissues, ICCBMT has influenced researchers over several continents, including North America, South America, Europe, Asia and Oceania, along these years since 1981, with the past meetings as below:

- Chicago, Illinois, United States in 1981 (ICCBMT - 1)
- Gulf-Shores, Alabama, United States in 1984 (ICCBMT - 2)
- Chatham, Massachusetts, United States in 1988 (ICCBMT - 3)
- Coronado, California, United States in 1992 (ICCBMT - 4)
- Kohler, Wisconsin, United States in 1995 (ICCBMT - 5)
- Vittel, France in 1998 (ICCBMT - 6)
- Ponte Vedra Beach, Florida, United States in 2001 (ICCBMT - 7)
- Banff, Alberta, Canada in 2004 (ICCBMT - 8)
- Austin, Texas, United States in 2007 (ICCBMT - 9)
- Carefree, Arizona, United States in 2010 (ICCBMT - 10)
- Lake Geneva, Wisconsin, United States in 2013 (ICCBMT-11)

We would like the 12th ICCBMT Conference to be as exciting and successful as the previous ones. We expect a lively exchange between all the disciplines from the medical, biological, chemical, physical and engineering sciences involved in research on biomineralization and mineralizing tissues, with particular emphasis on attracting and educating junior scientists in the area.

## ICCBMT Board of Directors

President	Mary MacDougall <i>University of Alabama at Birmingham, United States</i>
Vice President	Janet Moradian-Oldak <i>University of Southern California, United States</i>
Secretary General	Harvey Goldberg <i>University of Western Ontario, Canada</i>
Treasurer	Jeffrey Gorski <i>University of Missouri-Kansas City, United States</i>
Past President	Adele L. Boskey <i>Hospital for Special Surgery, New York City, United States</i>
Past Secretary General / Past Treasurer	Barbara D. Boyan <i>Georgia Institute of Technology, United States</i>
Members	Lynda Bonewald <i>Indiana University School of Medicine, United States</i>
	Michel Goldberg <i>Université Descartes, France</i>
	William J. Landis <i>University of Akron, United States</i>
	Jane B. Lian <i>University of Vermont, United States</i>
	Paul Krebsbach <i>University of California, Los Angeles, United States</i>
Founding President	Authur Veis <i>Northwestern University, United States</i>

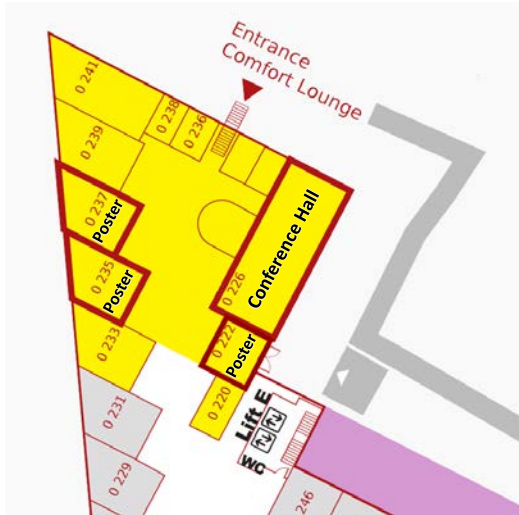
## ICCBMT Local Organization Committee

Anders Jensen	Andreas Roschger	Jan Scharein
Junning Chen	Katja Schulze	Kerstin Gabbe
Lorraine Ferreira	Sebastian Ehrig	Stefan Heinich





## Conference Venue (Comfort Lounge)



## Potsdam Area

*A detailed regional map has been included in your conference bag, with places of interest for your visit.*



# Conference Program

<b>Sunday 28 May 2017</b>	<b>Monday 29 May 2017</b>	<b>Tuesday 30 May 2017</b>	<b>Wednesday 31 May 2017</b>	<b>Thursday 1 June 2017</b>
	Registration (08:00-10:00)	Registration (08:00-09:00)		
	Welcome Address (09:00-09:10)	Oral Session 3 (09:00-10:50)	Oral Session 5 (09:00-11:10)	Oral Session 7 (09:30-11:00)
	Oral Session 1 (09:10-11:00)			
	Coffee Break			
	Oral Session 1 Cont. (11:30-12:50)	Oral Session 4 (11:10-13:00)	Oral Session 5 Cont. (11:30-12:50)	Oral Session 7 Cont. (11:30-12:50)
	Buffet Lunch and Poster Discussion			
Registration (15:00-17:00)	Oral Session 2 (15:30-17:00)	Free Time / Tours	Oral Session 6 (15:30-17:00)	Free Time
	Coffee Break		Coffee Break	Coffee Break
	Oral Session 2 Cont. (17:20-18:40)		Oral Session 6 Cont. (17:40-18:40)	Keynote Lecture (16:00-17:00)
	Dinner			Award Ceremony (17:00-18:30)
	Poster Flash Presentation (20:00-20:30)			Congress Dinner (19:00-22:00)
	Poster Session (20:30-22:30)			

# Program Schedule

Monday Morning 29th May, 2017

09:00 – 12:50

## Oral Session 1: Extracellular Matrix Proteins

Chair: Anne George, Chicago, IL, United States

Time	ID	Presenting Author	Title
09:10	1.1	<b>Willi Jahnen-Dechent</b> (RWTH Aachen, Germany)	<b>INTRO</b> + Role of plasma protein Fetuin-A in mineralized matrix metabolism
09:40	1.2	<b>Brian Christensen</b> (Aarhus University, Denmark)	Transglutaminase 2 reactive residues and intramolecular cross-links in osteopontin
10:00	1.3	<b>Xiaofang Wang</b> (Texas A&M University, USA)	The role of FAM20B-catalyzed proteoglycans in Tooth Development
10:20	1.4	<b>Yinghua Chen</b> (University of Illinois, USA)	The ER Ca <sup>2+</sup> sensor STIM1 activates MAP kinase signaling upon DMP1 stimulation in osteoblasts and promotes differentiation by activating cyclin D1
10:40	1.5	<b>Xu Yang</b> (University of Pittsburgh, USA)	Localization of keratin-75 in rodent ameloblasts by immunochemical techniques
Coffee Break			
11:30	1.6	<b>William Landis</b> (University of Akron, USA)	Temporal and spatial correlation between gene expression and mineralization in the avian leg tendon
11:50	1.7	<b>Amsa Ramachandran</b> (University of Illinois, USA)	TRIP-1, an endoplasmic resident protein functions in the extracellular matrices of bone and dentin
12:10	1.8	<b>Jessica Walker</b> (University of Edinburgh, UK)	Polymorph selectivity of coccolith-associated polysaccharides
12:30	1.9	<b>Arthur Veis*</b> (Northwestern University, USA)	The unique biomineralization transcriptome and proteome of the teeth of the Camarodont sea urchin <i>Lytechinus Variegatus</i> (LV)

Monday Afternoon 29th May, 2017  
15:30 – 18:40

Oral Session 2: Cell Biology & Genetics

Chair: Jane B. Lian, Burlington, VT, United States

Time	ID	Presenting Author	Title
15:30	2.1	<b>Olivier Duverger</b> (NIH Bethesda, USA)	<b>INTRO</b> + DLX3 in amelogenesis: from understanding the pathogenicity of TDO syndrome to identifying novel genes involved in enamel development and tooth decay risk
16:00	2.2	<b>Coralee Tye</b> (University of Vermont, USA)	Conserved long noncoding RNA expression regulates mesenchymal stromal cell commitment and differentiation to the osteoblast lineage
16:20	2.3	<b>Cristina Manferdini</b> (Rizzoli Orthopaedic Institute, Italy)	Collagen type XV is strictly associated to human mesenchymal stem cells mineralization ability
16:40	2.4	<b>Ariane Berdal</b> (Inserm, Université Paris-Diderot, France)	Ultrastructural cell and mineral phenotype in human FAM20A gene mutations
Coffee Break			
17:20	2.5	<b>Frantisek Spoutil</b> (Academy of Sciences, Czech Republic)	Intrinsically Disordered Proteins Drive Enamel Formation via an Evolutionarily Conserved Self-assembly Motif
17:40	2.6	<b>Mohammad Hassan</b> (University of Alabama, USA)	Epigenetic Remodeling and Modification to preserve Skeletogenesis in vivo
18:00	2.7	<b>Barbara Boyan</b> (Virginia Commonwealth University, USA)	Matrix Vesicle miRNAs Regulate Extracellular Matrix in Growth Plate Chondrocytes
18:20	2.8	<b>Chaoyuan Li</b> (Texas A&M University, USA)	Chondrocytes originated from Meckel's cartilage and mandibular symphysis directly contribute to mandibular bone formation during early development

Monday Night 29th May, 2017

20:00 – 22:30

Monday 29<sup>th</sup> May, 2017

Poster Flash Presentation

Chair: Harvey Goldberg, London, ON, Canada

Time	ID	Presenting Author	Title
20:00	P1F1	<b>Dominick Scott</b> (Université de Montréal)	Role of Poly [E] domains in self-aggregation of BSP
20:05	P1F2	<b>Paul Smeets</b> (Northwestern University)	Artificial remineralization of enamel using magnesium and fluoride-rich solutions
20:10	P1F3	<b>Chaitanya Joshi</b> (MGV KBH Dental College & Hospital)	Don't waste the best: human extracted teeth as an allograft
20:15	P1F4	<b>Yong-Hee Chun</b> (UT Health San Antonio)	Identification of enamel proteins during enamel formation with imaging mass spectrometry
20:20	P1F5	<b>Sidney Omelon</b> (University of Ottawa)	Biological polyphosphate precursors form amorphous calcium phosphate, whitlockite, and apatite
20:25	P1F6	<b>Stéphane Blouin</b> (Ludwig Boltzmann Institute of Osteology)	Mapping of Poisson ratio in bone material at micrometer level by scanning acoustic microscopy
20:30	P1F7	<b>Anne Jantschket</b> (Weizmann Institute of Science)	Biom mineralization in different life stages of Dinoflagellates
20:35	P1F8	<b>Joshua Padovano</b> (University of Illinois at Chicago College of Dentistry)	Osteocalcin-driven DMP1 overexpression affects bone development in a mouse model
20:40	<b>Free Poster Discussion Session</b>		

Tuesday Morning 30th May, 2017  
09:00 – 13:00

Oral Session 3: Osteocyte Networks

Chair: Peter Fratzl, Potsdam, Brandenburg, Germany

Time	ID	Presenting Author	Title
09:00	3.1	<b>Lynda F Bonewald</b> (USM Indianapolis, USA)	<b>INTRO</b> + The role of the aging osteocyte in the musculoskeletal system
09:30	3.2	<b>Dobrawa Napierala</b> (University of Pittsburgh, USA)	Cellular responses to elevated phosphate – molecular mechanisms of phosphate-induced mineralization
09:50	3.3	<b>Andreas Roschger</b> (Max Planck Institute, Germany)	Correlative analysis of the osteocyte network density and bone mineralization
10:10	3.4	<b>Henrik Birkedal</b> (Aarhus University, Denmark)	Canalicular junctions in osteocyte networks revealed by X-ray nanotomography
10:30	3.5	<b>Lior Ofer</b> (Hebrew University of Jerusalem, Israel)	Lost in evolution: novel form of modeling bypasses the need for osteocytes in the adaptation of bones to mechanical loading

Coffee Break

Tuesday 30<sup>th</sup> May 2017

Tuesday Morning 30th May, 2017 (Continued)  
09:00 – 13:00

Oral Session 4: Mineralization Mechanisms

Chair: Elia Beniash, Pittsburgh, PA, United States

Time	ID	Presenting Author	Title
11:10	4.1	<b>Lia Addadi</b> (Weizmann Institute, Israel)	<b>INTRO</b> + Biomineralization pathways: from ion transport to mineral assembly and deposition in soft skeletal forming tissues
11:40	4.2	<b>Ophélie Gourgas</b> (McGill University, Canada)	Insights into the molecular mechanism of vascular calcification using both in vitro and in vivo models
12:00	4.3	<b>Janet Moradian-Oldak</b> (University of Southern California, USA)	Cooperation between amelogenin and enamelin in forming calcium phosphate is dose dependent
12:20	4.4	<b>Bernhard Ganss</b> (University of Toronto, Canada)	The enamel proteins Amelotin and Odam induce hydroxyapatite mineralization in a collagen matrix
12:40	4.5	<b>Yannicke Dauphin</b> (Museum national d'histoire naturelle, France)	Diversity versus similarity of the structure and composition of modern avian calcified eggshells

**Group Photo - 13:00**

Tuesday 30<sup>th</sup> May 2017



Tuesday Afternoon 30th May, 2017  
14:00 – 19:00

## Exploring Potsdam

### Tour A - Park Sanssouci

14:30 – 17:00

A bus brings us to the entrance of famous Park Sanssouci. Here we will have a guided tour, through Friedenskirche, Great Fountain, historical mill, vineyard terraces, and of course Sanssouci Palace.

Price: 15 €

### Tour B - “Neuer Garten” and Cecilienhof Palace

14:30 – 17:00

“Neuer Garten” is in the north of Potsdam between two beautiful lakes, and it is one of the most beautiful local parks. After bus transfer, a guided trip will take us through the scenic highlights, including a tour through Cecilienhof Palace built by Prince Wilhelm in 1913. In 1945, Cecilienhof Palace became famous for hosting Potsdam Conference.

Price: 21€

### Tour C – Max Planck Institute of Colloids and Interfaces

14:30 – 16:30

For those who cannot get enough from science, we offer a transfer from the congress centre to MPIKG in Golm. We will take a tour through the facility and show you the labs of Biomaterials Department.

Price: free



Tuesday Night 30th May, 2017  
20:00 – 22:30

Poster Flash Presentation

Chairs: Janet Moradian-Oldak, Los Angeles, CA, United States

Time	ID	Presenting Author	Title
20:00	P2F1	<b>Katrein Sauer</b> (Julius Wolff Institut, Charité Universitätsmedizin)	Identifying the structural motif of anosteocytic fish bones (cleithra): layered arrangement of collagen fibrils with varying degrees of mineralization give rise to failure resistance
20:05	P2F2	<b>Heather Hunt</b> (Cornell University)	Collagen matrix alterations lead to bone embrittlement in type 2 diabetic men
20:10	P2F3	<b>Sophia Houari</b> (Université Paris Diderot)	Ferritin: a mediator of fluoride effects on enamel mineralization
20:15	P2F4	<b>Eve Donnelly</b> (Cornell University)	Atypical femoral fractures with long-term bisphosphonate therapy are associated with altered cortical bone composition and reduced fracture resistance
20:20	P2F5	<b>Chang Du</b> (South China University of Technology)	Osteogenesis effect of biomimetic apatite with nano/micro- hierarchical structure
20:25	P2F6	<b>Laurianne Imbert</b> (Hospital for Special Surgery New York)	Effects of PTH treatment on Bone assessed by nanoscale infrared spectroscopy
20:30	P2F7	<b>Elizabeth Guirado</b> (University of Illinois at Chicago)	Role of DMP1 in Impaired Dentin Mineralization of XLH-patients
20:35	P2F8	<b>Annette Merkel</b> (University of Illinois at Chicago)	Endoplasmic chaperone protein GRP-78 interacts with DMP1 and facilitates nuclear translocation
20:40	<b>Free Poster Discussion Session</b>		

Tuesday 30<sup>th</sup> May 2017

Wednesday Morning 31st May, 2017  
09:00 – 12:50

Oral Session 5: Structural & Functional Characterization

Chair: Nico Sommerdijk, Eindhoven, Netherland

Time	ID	Presenting Author	Title
09:00	5.1	<b>Roland Kröger</b> (University of York, UK)	<b>INTRO +</b> Revisiting the collagen/mineral assembly pattern in bone: the possible role of cross-fibrillar mineralization
09:30	5.2	<b>Henry P Schwarcz</b> (McMaster University, Canada)	Transmission electron microscopic study of mineralization of collagen in newborn mice
09:50	5.3	<b>Alexander Boys</b> (Cornell University, USA)	Characterization of compositional gradients in the meniscal entheses by Raman spectromicroscopy
10:10	5.4	<b>Anat Akiva</b> (Eindhoven University of Technology, Netherland)	Unraveling the process of collagen mineralization
10:30	5.5	<b>Marie Alberic</b> (Max Planck Institute, Germany)	Repair and regeneration of sea urchin spines
10:50	5.6	<b>Lukas Ludescher</b> (University Leoben, Austria)	In-situ SAXS study of de-hydration and re-hydration of human dentine

Wednesday 31<sup>st</sup> May 2017

Coffee Break

Wednesday Morning 31st May, 2017 (Continued)  
09:00 – 12:50

Oral Session 5: Structural & Functional Characterization

Chair: Nico Sommerdijk, Eindhoven, Netherland

Time	ID	Presenting Author	Title
11:30	5.7	<b>Sebastian Ehrig</b> (Max Planck Institute, Germany)	Curvature control of bone tissue growth in-vitro
11:55	5.8	<b>Pascal R. Buenzli</b> (Monash University, Australia)	Bone mineral density distribution as a footprint of bone physiology in growth, health, and disease
12:10	5.9	<b>Tengteng Tang</b> (University of British Columbia, Canada)	Structural properties of hypermineralized tissue in aged human proximal femur
12:30	5.10	<b>Steve Weiner</b> (Weizmann Institute, Rehovot, Israel)	Bone Structure in Three Dimensions: Lamellae and Trabeculae

Wednesday 31<sup>st</sup> May 2017

Wednesday Afternoon 31st May, 2017  
15:30 – 18:40

Oral Session 6: Metabolic and Hereditary Diseases

Chair: Mary MacDougall, Birmingham, AL, United States

Time	ID	Presenting Author	Title
15:30	6.1	<b>Marc McKee</b> (McGill University, Canada)	<b>INTRO</b> + Osteopontin accumulation in the osteocyte lacuno-canalicular network contributes to the defective bone mineralization of X-linked hypophosphatemia
16:00	6.2	<b>Ceren Tuzmen</b> (Carnegie-Mellon University, USA)	Crosstalk between sensory neuropeptides regulating heterotopic ossification in tendon
16:20	6.3	<b>Adele L Boskey</b> (Hospital for Special Surgery, New York, USA)	Effects of long-term alendronate treatment on mineral properties in ovariectomized mice
16:40	6.4	<b>Joan C. Marini</b> (NICHD/NIH Bethesda, USA)	Bone with uncleavable Type I collagen c-propeptide has abnormal development of multiple bone cell populations and increased bone matrix mineralization
Coffee Break			
17:40	6.5	<b>Nadja Fratzl-Zelman</b> (Ludwig Boltzmann Institute of Osteology, Austria)	IFITM5 mutation in atypical OI Type VI is associated with lack of PEDF within the bone matrix, osteoidosis, hypermineralization and impaired endochondral ossification
18:00	6.6	<b>Wendy J. Shaw</b> (Pacific Northwest National Lab, USA)	Structural effects of Amelogenin on hydroxyapatite due to naturally occurring mutations
18:20	6.7	<b>Claire Bardet</b> (Université Paris Descartes, France)	Alveolar bone versus cementum: tissue specific response to X-linked hypophosphatemic rickets

Wednesday 31<sup>st</sup> May 2017

## Wednesday Night 31st May, 2017

20:00 – 22:30

### Poster Flash Presentation

Chair: Jeffrey Gorski, Kansas City, MO, United States

Time	ID	Presenting Author	Title
20:00	P3F1	<b>Zhaoyong Zou</b> (Max Planck Institute of Colloids and Interfaces)	Mechanistic Insight into the Influence of Additives on the Phase Separation of Amorphous Calcium Carbonate from Solution
20:05	P3F2	<b>Matthias Widbiller</b> (University Hospital Regensburg)	Dentin as a source of endogenous bioactive proteins for dental pulp tissue engineering
20:10	P3F3	<b>Anders Jensen</b> (Max Planck Institute of Colloids and Interfaces)	Local structure and mobility of H <sub>2</sub> O in ACC
20:15	P3F4	<b>Vaibhav Sharma</b> (All India Institute of Medical Sciences)	The unstructured proteins in biological structures : the case of human tooth
20:20	P3F5	<b>Xuefeng Zhao</b> (University of California San Diego)	A next-gen genetically-engineered fibrous dysplasia mouse model driven by GNAS
20:25	P3F6	<b>Mizuho Yamazaki</b> (Nihon University School of Dentistry at Matsudo)	Inflammatory cytokines regulate human AMTN gene transcription in gingival epithelial cells
20:30	P3F7	<b>Anushree Vijaykumar</b> (University of Connecticut)	Interactions between FGF and Wnt/ $\beta$ -catenin signaling pathways during in vitro differentiation of dental pulp.
20:35	P3F8	<b>Luciana Trino</b> (São Paulo State University)	Biofunctionalization of titanium surfaces by osteogenic peptides
20:40	<b>Free Poster Discussion Session</b>		

Wednesday 31<sup>st</sup> May 2017

Thursday Morning 1st June, 2017

09:30 – 12:50

Oral Session : Translational/Bioinspirational Research

Chair: Barbara D. Boyan, Richmond, VA, United States

Time	ID	Presenting Author	Title
09:30	7.1	<b>Jian Q Feng</b> (Texas A&M College of Dentistry, USA)	<b>INTRO</b> + Applications of the cell lineage tracing technique in bone and teeth development studies
10:00	7.2	<b>Paulo Noronha Lisboa-Filho</b> (São Paulo State University, Brazil)	Bone repair with Raloxifene and bioglass nanoceramic composite
10:20	7.3	<b>Sunita P. Ho</b> (University of California San Francisco, USA)	Multiscale form and function reveals insights into human renal biomineralization
10:40	7.4	<b>Håkan Nygren</b> (University of Gothenburg, Sweden)	Magnesium oxide, hydroxyapatite and bone healing
Coffee			
11:30	7.5	<b>Rachel J Waddington</b> (Cardiff University, UK)	Biological responses of bone marrow stem cells to depleted dentine matrix
11:50	7.6	<b>Luna Goswami</b> (KIIT University, India)	A modified polysaccharide-based hydrogel for enhanced osteogenic maturation and mineralization independent of differentiation factors
12:10	7.7	<b>Ophir Klein</b> (University of California San Francisco, USA)	A FAK-YAP-mTOR signaling axis regulates stem cell-based dental renewal in mice
12:30	7.8	<b>Luiz Eduardo Bertassoni</b> (Oregon Health and Science University, USA)	Towards multi-scale engineering of biomimetic bone microenvironments - pre-vascularized, cell-laden high-density bone-derived hydrogels mineralized on the nanoscale

Thursday 1<sup>st</sup> June 2017

Thursday Afternoon 1st June, 2017  
16:00 – 17:00

## Eve and Arthur Veis Keynote Lecture

Chairs: Anne George, Ariane Berdal, Peter Fratzl

Time	Presenting Author	Title
16:00 – 17:00	<b>David J. Mooney*</b> (Harvard SEAS, USA)	<b>Soft materials to build hard tissues</b>

## Award Ceremony 17:00 – 18:30

Thursday 1<sup>st</sup> June 2017





# Eve and Arthur Veis Keynote Lecture 2017

is given by:

## Prof. David J. Mooney



David is the Pinkas Family Professor of Bioengineering in the Harvard School of Engineering and Applied Sciences, and a Core Faculty Member of the Wyss Institute. His laboratory designs biomaterials to make cell and protein therapies effective and practical approaches to treat disease. He is a member of the National Academy of Engineering, the National Academy of Medicine, and the National Academy of Inventors. He has won numerous awards, including the

Clemson Award from the SFB, MERIT award from the NIH, Distinguished Scientist Award from the IADR, Phi Beta Kappa Prize for Excellence in Undergraduate Teaching, and the Everett Mendelsohn Excellence in Mentoring Award from Harvard College. His inventions have been licensed by twelve companies, leading to commercialized products, and he is active on industrial scientific advisory boards.


Thursday 1<sup>st</sup> June 2017

## Travel Award Recipients for 12<sup>th</sup> ICCBMT 2017

To encourage and support the new generation of scientists in tissue biomineralization, Conference Early Career Researcher (ECR) travel awards are given out to those outstanding candidates who are current postgraduate students, postdocs or early career faculty members. The awards were decided by a selection panel in the Organizing Committee.

Thursday 1<sup>st</sup> June 2017

Alexander Boys	Cornell University, USA
Anat Akiva	Eindhoven University of Technology, NL
Andreas Roschger	Max Planck Institute of Colloids and Interfaces, DE
Anne Jantschke	Weizmann Institute of Science, IL
Annette Merkel	University of Illinois at Chicago, USA
Anushree Vijaykumar	University of Connecticut, USA
Ceren Tuzmen	Carnegie Mellon University, USA
Chaitanya Joshi	MGV KBH Dental College & Hospital, IN
Chang Du	South China University of Technology, CN
Chaoyun Li	Texas A&M College of Dentistry, USA
Claire Bardet	Paris Descartes University, FR
Cristina Manferdini	Rizzoli Orthopaedic Institute, IT
Dominick Scott	Université de Montréal, CA

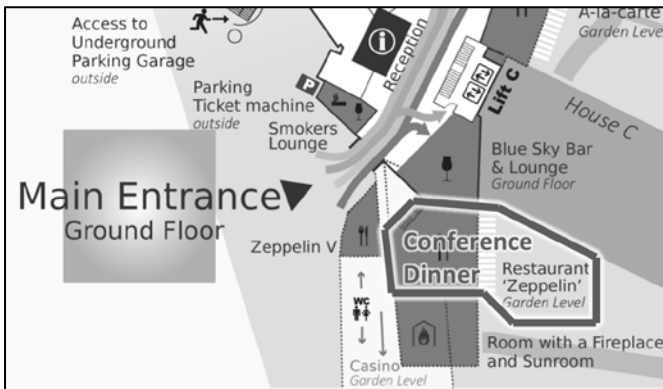


Elizabeth Guirado	University of Illinois at Chicago, USA
Frantisek Spoutil	Institute of Molecular Genetics Brno, CZ
Heather Hunt	Cornell University, USA
Josua Padovano	University of Illinois at Chicago, USA
Laurianne Imbert	Hospital for Special Surgery New York, USA
Lior Ofer	Hebrew University, IL
Luciana Trino	São Paulo State University, BR
Luiz Bertassoni	Oregon Health and Science University, USA
Lukas Ludescher	Montanuniversität Leoben, AT
Matthias Widbiller	University Hospital Regensburg, DE
Mizuho Yamazaki	Nihon University, JP
Olivier Duverger	NIH - National Institute of Arthritis and Musculoskeletal and Skin Diseases, USA
Ophelie Gourgas	McGill University, CA
Paul Smeets	Northwestern University, USA
Sophia Houari	Université Paris Diderot, FR
Stéphane Blouin	Ludwig Boltzmann Institute of Osteology, AT
Tenteng Tang	University of British Columbia, CA
Vaibhav Sharma	All India Institute of Medical Sciences, IN
Xu Yang	University of Pittsburgh, USA
Xuefeng Zhao	University of California San Diego, USA
Yuichi Ikeda	University of Toronto, CA

Thursday Night 1st June, 2017  
19:00 – 22:30

## Conference Dinner

Please join us for Conference Dinner. It is located in the south wing of the hotel, in Restaurant 'Zeppelin' at Garden Level.



Thursday 1<sup>st</sup> June 2017



Notes:

