

## BIOCERAMICS30 Program at a glance

Friday 26th October		
	Auditorium	Symposium
14:00 – 15:00	Registration open	
15:00 – 15:15	Opening remarks Room: Auditorium	
15:15 – 16:00	Plenary Lecture (PL-01) Room: Auditorium <b><u>Serena Best</u></b> Understanding cellular response to bioactive scaffolds: Effects of calcium phosphate composition and topography	
16:00 – 16:15	Break	
16:15 – 16:45	Keynote Lecture (KN-01) <b><u>Sooraj Nandyala</u></b> Synthesis of bioactive Tellurite-Lanthanide reinforced hydroxyapatite composites for biomedical and luminescence applications	Keynote Lecture (KN-02) <b><u>Kyung-Sik Oh</u></b> Manipulating injection behavior of brushite bone cement via control over the plastic limits of starting powder
16:45 – 17:45	Oral Session 1: Composites (O1~4)	Oral Session 2: Cements (O5~8)
	#0166 <b><u>Kanki Uchida</u></b> Preparation of composite hydrogels consisting of elastin-like polypeptides and hydroxyapatite nanoparticles	#0119 <b><u>Christèle Combes</u></b> Biomimetic bone cement as antibacterial drug delivery system: from microparticles preparation to a composite with optimized properties
	#0018 <b><u>Reece Oosterbeek</u></b> Investigation of phosphate glasses and PLLA/PLCL-PEG blends for the development of novel bioresorbable composite cardiac stents	#0006 <b><u>Jean-Michel Bouler</u></b> Enhancing calcium phosphate cements properties by forming organic/inorganic hybrid materials
	#0025 <b><u>Sungho Lee</u></b> Control of cellular arrangement by siloxane-poly(lactic acid)-vaterite composite fibermats	#0127 <b><u>Michiyo Honda</u></b> Inhibitory effects of zoledronic acid-loaded bioresorbable cement on osteosarcoma
	#0022 <b><u>Takuma Okada</u></b> Microstructure of chitosan-siloxane hybrid mono-fiber	#0132 <b><u>Yoshiyuki Yokogawa</u></b> Neutral containing chitosan and polyol for calcium phosphate cement
17:45 – 18:00	Break	
18:00 – 19:30	Welcome reception Toyoda Auditorium Robby	

Saturday 27th October		
	Auditorium	Symposium
9:00 – 9:45	Plenary Lecture (PL-02) Room: Auditorium <b><u>Jiang Chang</u></b> Bioceramics for bone regeneration and beyond	
9:45 – 10:00	Break	
10:00 – 10:30	Keynote Lecture (KN-03) <b><u>Gowsihan Poologasundarampillai</u></b> Sol-gel derived inks for 3D biofabrication	Keynote Lecture (KN-04) <b><u>Miho Nakamura</u></b> Understanding of cell-bioceramic interactions in terms of materials science
10:30 – 11:45	Oral Session 3: Processing routes (O9~13)	Oral Session 4: Cells/Materials interactions (O14~18)
	#0083 <b><u>Ena Athenea Aguilar-Reyes</u></b> Preparation of PLA/45S5 bioglass composite scaffolds via nonsolvent thermally-induced phase separation method for applications in bone tissue engineering	#0102 <b><u>Akiko Obata</u></b> Osteoblast-like cell responses to silicate ions with different ion structures
	#0038 <b><u>Kazuaki Morizane</u></b> Implantable composite devices with marbling dispersion of fibrous poly-L-lactide and hydroxyapatite/poly-L-lactide to enhance bioactivity and bioresorbability	#0100 <b><u>Elia Marin</u></b> Understanding silicon nitride's biological properties: from inert to bioactive ceramic
	#0028 <b><u>Matthias Ahlhelm</u></b> Evaluating pore forming mechanisms of the freeze foaming process for manufacturing bone mimicking scaffolds	#0086 <b><u>Riku Furuya</u></b> Effects of silicate or phosphate ions on osteoblast-like cell mineralization and collagen synthesis
	#0150 <b><u>Nicola Döbelin</u></b> Pure and Sr-doped $\beta$ -TCP synthesis	#0124 <b><u>Sanae Kagami</u></b> Responses of immune cells to hydroxyapatite ceramics loaded with immunostimulators
	#0075 <b><u>Tomohiko Yoshioka</u></b> Electrochemically assisted sol-gel deposition of bioactive films	#0059 <b><u>In-Seop Lee</u></b> Biomimetic apatite coating as bioactive molecule carrier and their influence on cell behavior
11:45 – 12:45	Lunch & Poster Viewing	
12:45 – 14:15	Poster Session (1) Odd Numbers	

14:15 – 14:45	Keynote Lecture (KN-05) <b><u>Anna Tampieri</u></b> Bio-inspired nano-ceramics instructing cells for tissue regeneration	Keynote Lecture (KN-06) <b><u>Min-Hua Chen</u></b> CpG DNA complexed with apatite nanoparticles as a potent vaccine adjuvant via microneedle technology
14:45 – 15:45	Oral Session 5: Biomimetics (O19~22)	Oral Session 6: Drug delivery (O23~26)
	#0106 <b><u>Hasnat Zamin</u></b> Bioactivity assessment of PVDF-precursors of apatite composite thin films	#0010 <b><u>Elise Verron</u></b> Gallium stimulates in vivo calcium phosphate-mediated bone reconstruction
	#0034 <b><u>Mihiro Takasaki</u></b> Artificial cross-lamellar structures similar to calcareous shells	#0049 <b><u>Ipek Karacan</u></b> Multifunctional-dual drug delivery PLA coating for bone implants
	#0062 <b><u>Ryo Hamai</u></b> Comparative study of apatite formation on copolymer modified with different anionic functional groups in simulated body environment	#0129 <b><u>Michele Iafisco</u></b> Calcium phosphates nanoparticles for the delivery of cardiovascular therapeutic agents through inhalation
	#0064 <b><u>Takuya Yoshioka</u></b> Impartation of apatite-forming ability to hydrophobicized cellulose nanofiber by combination with apatite nuclei	#0142 <b><u>Ram Prasad Sekar</u></b> Ceramic core and polymer shell nanoparticles as bone substitute material for sequential delivery of therapeutic agents
15:45 – 16:00	Break	
16:00 – 17:00	Oral Session 5-2: Surface engineering and coatings (O27~30)	Oral Session 6-2: Calcium phosphate bioceramics (O31~34)
	#0068 <b><u>Hanna Tiainen</u></b> Antibacterial sol-gel coating for bone scaffolds based on the dark catalytic effect of titanium dioxide	#0044 <b><u>Osamu Suzuki</u></b> Effect of OCP on the crosstalk between osteoclasts and osteoblasts
	#0179 <b><u>Iulian Antoniac</u></b> Hydroxyapatite coatings on Mg-Zn-Mn magnesium alloys for potential orthopaedic applications using electrophoretic deposition	#0087 <b><u>Alessio Adamiano</u></b> Conversion of fish bone into calcium phosphate based materials for biomedical applications
	#0111 <b><u>Takeshi Yabutsuka</u></b> XPS study on preparation of bioactive apatite nuclei precipitated fiber reinforced PEEK	#0104 <b><u>Arief Cahyanto</u></b> Compressive strength evaluation and phase analysis of pulp capping materials based on carbonate apatite-SCPC using different concentration of SCPC and calcium hydroxide
	#0020 <b><u>Xingzhu Liu</u></b> Chemical growth and apatite-forming ability of rod-like rutile titania layers with tailored facets on titanium substrate	#0185 <b><u>Shintaro Oyama</u></b> Comparison of alpha-TCP scaffolds fabricated by binder jetting method and commercially available TCP substitutes in vivo

Sunday 28th October		
	Auditorium	Symposion
9:00 – 9:45	Plenary Lecture (PL-03) Room: Auditorium <b><u>Soichiro Itoh</u></b> Electrical polarization of apatite ceramics and living bones to facilitate new bone formation -from the principle to the practical-	
9:45 – 10:00	Break	
10:00 – 10:30	Keynote Lecture (KN-07) <b><u>Christophe Drouet</u></b> Low temperature calcium phosphate processing: a new path to face biomedical challenges	Keynote Lecture (KN-08) <b><u>Takuya Matsumoto</u></b> Cell nanofragment inspired from bone mineralization in secondary ossification center
10:30 – 11:45	Oral Session 7: Calcium phosphate bioceramics (O35~39)	Oral Session 8: Nanomaterials (O40~44)
	#0137 <b><u>Kaori Iwanami-Kadowaki</u></b> Novel EPD coating of HAp/Col realizes strong adhesion to substrate metal	#0165 <b><u>Daiki Takata</u></b> Enzyme immobilization on silica nanoparticle vesicles
	#0040 <b><u>Patrícia Sato</u></b> Preparation of calcium phosphate glasses containing Nb <sub>2</sub> O <sub>5</sub> and TiO <sub>2</sub>	#0055 <b><u>Maki Nakamura</u></b> Interaction of calcium phosphate with gold nanocrystals coated with polyethylene glycol
	#0014 <b><u>Poon Nian Lim</u></b> The race between tissue integration and bacteria colonisation on silver, silicon co-substituted apatite	#0145 <b><u>Xiaopei Wu</u></b> Elucidating the osteoinductive effect of extracellular phosphate on stem cells by using β-tricalcium phosphate nanoparticles model
	#0003 <b><u>Maxence Bourjol</u></b> Innovative solutions in order to produce multi bioceramic implants by 3D printing	#0085 <b><u>Shota Yamada</u></b> Synthesis of spherical phosphate-containing mesoporous silicas for improving their reaction behaviors in simulated body fluid
	#0046 <b><u>Upsorn Boonyang</u></b> Microstructural investigation of calcium phosphate to fluoroapatite in the different precursor solution under hydrothermal process	#0021 <b><u>Yingchao Han</u></b> Quantitative detection of hydroxyapatite nanoparticles in vitro and in vivo
11:45 – 12:45	Lunch & Poster Viewing	
12:45 – 14:15	Poster Session (2) Even Numbers	

14:15 – 14:45	Keynote Lecture (KN-09) <b><u>Hamed Benghuzzi</u></b> Quantitative assessment of MRC-5 cellular membrane integrity upon exposure to hydroxyapatite sintered at various temperatures	Keynote Lecture (KN-10) <b><u>Rui Reis</u></b> Tissue engineering and precision medicine strategies to regenerate mineralized human tissues
14:45 – 16:00	Oral Session 9: Scaffolds/Tissue engineering (O45~49)	Oral Session 10: Calcium phosphate bioceramics (O50~54)
	#0041 <b><u>Cyril d'Arros</u></b> High chemical reactivity of HA/ $\beta$ -TCP smart calcium phosphate bioceramic for tissue engineering	#0047 <b><u>Masahiro Okada</u></b> Hydration structure of apatite and its relation to bone mineral formation
	#0107 <b><u>Honghyun Park</u></b> Biomedical potential of organic/inorganic hybrid microgel for bone tissue engineering	#0023 <b><u>Sandra Pina</u></b> Functionalized bioceramics towards regeneration of musculoskeletal disorders
	#0056 <b><u>Viviana Ribeiro</u></b> Enzymatically crosslinked SF/SF- $\beta$ -TCP scaffolds incorporating Sr- and Zn-ions as hierarchical structures for osteochondral tissue engineering applications	#0039 <b><u>Takayuki Nonoyama</u></b> Area-selective osteoconduction of HAp-patterned tough hydrogel by acidic gel stamping
	#0136 <b><u>Youfa Wang</u></b> Preparation and characterization of HA/Gel/ $\beta$ -TCP microspheres composite porous scaffold	#0031 <b><u>Tansza Putri</u></b> Fabrication of porous $\beta$ -TCP block by heating $\beta$ -TCP granules bridged with DCPD
	#0043 <b><u>Tomoya Sato</u></b> Comparison of bioactive property of bone substitute materials by 3D culture and in vivo implantation	#0070 <b><u>Ayako Oyane</u></b> Fluoride-incorporated apatite coating for tooth surface modification by laser irradiation in supersaturated solutions
16:00 – 16:15	Break	
16:15 – 17:15	Oonishi Award Ceremony / Award Lecture Room: Auditorium <b><u>Hajime Ohgushi</u></b> Cellular differentiation onto the surface of bioceramics	
18:30 – 20:30	Banquet/Dinner 28F Sky Banquet "Crystal Room", ANA Crowne Plaza Hotel Grand Court Nagoya	

Monday 29th October		
	Auditorium	Symposium
9:00 – 9:30	Keynote Lecture (KN-11) <b>Ian Dunkley</b> A histological assessment of the mechanism of early-stage healing of a biphasic calcium phosphate in an in vivo rabbit model	Keynote Lecture (KN-12) <b>Gavin Jell</b> Bone tissue engineering with Si and Co releasing bioactive glasses: moving the focus away from mineralization
9:30 – 10:00	Oral Session 11: In vivo evaluation (O55~56)	Oral Session 12: Glass/Glass-ceramics (O57~58)
	#0133 <b>Yuelian Liu</b> Bone morphogenetic protein-2 incorporated beta-tricalcium phosphate enhanced bone regeneration in critical-sized bone defects in rats	#0079 <b>Takuya Zenji</b> Silver-doped bioactive glasses with cotton-wool-structure for skin wound healing
	#0097 <b>Rie Ohno</b> In vivo evaluation of apatite-fiber scaffolds with enhanced mechanical property using a rat calvarial defect model	#0108 <b>Sianny Kurnia</b> Sintering temperature effect on hardness of self-synthesized porcelain made from natural Sumatran sand without kaolin
10:00 – 10:15	Break	
	Oral Session 11-2: Bioinert ceramics & Porous material (O59~61)	Oral Session 12-2: Surface engineering (O62~64)
10:15 – 11:00	#0101 <b>Alfredo Rondinella</b> Bioceramics are not bioinert: the role of oxide and non-oxide bioceramics on the oxidation of UHMWPE components in artificial joints	#0109 <b>Hiroki Chigama</b> Cytotoxicity of antibacterial metal-doped raw silk fabric
	#0120 <b>Kazuki Nakanishi</b> Transparent, superflexible doubly cross-linked polyvinylpolymethylsiloxane aerogels and xerogels for superinsulation	#0134 <b>Taishi Morishima</b> Wettability and durability of Si-O coatings on zirconia substrate by rf-magnetron plasma sputtering
	#0171 <b>Kazuo Yagi</b> Material design and creation of new FRP artificial bone material using biodegradable resin and bone induction material	#0052 <b>Yusuke Inagaki</b> Nano coating with silicate-substituted strontium apatite (SrSiP) improve osteogenesis around artificial ligament
11:00 – 11:15	Break	
11:15 – 12:00	Plenary Lecture (PL-04) Room: Auditorium <b>Julian Jones</b> Therapeutic silica nanoparticles	
12:00 – 12:30	General Assembly Student Award Ceremony Closing remarks	