Meeting Schedule

Friday, November 4

- 8:30 Registration
- 9:30 Opening Ceremony (Floor11)
- 9:50 10:50 Keynote Lecture (Floor11)

"Bioactive Dental Materials -

What are they and what can they do for dentistry?" Chair: Speaker: Satoshi IMAZATO (Osaka University) Speaker:Jack L. Ferracane (Oregon Health & Science University)

- 10:50 11:00 Coffee Break
- 11:00 11:30 Invited Lecture 1 (Floor11)

"ABRZ formation at the adhesive-dentin and adhesive-enamel interfaces" Chair: Bor-Shiunn LEE(National Taiwan University) Speaker: Toru NIKAIDO (Asahi University)

11:30 - 12:00 Invited Lecture 2 (Floor11)

"How best to treat root caries in the elderly: promising new approaches focused on dentin collagen and ion dynamics"

Chair: Yu-Chih CHIANG (National Taiwan University Hospital) Speaker: Mikako HAYASHI (Osaka University)

- 12:00 12:10 Coffee Break
- 12:10 13:10 Lunchon seminar (Floor 11) Sponsor: SHOFU INC.

"Bioactive Effect of S-PRG released ions on mineral precipitation and reaction with enamel and dentin"

Speaker: Noriko HIRAISHI (Tokyo Medical and Dental University)

- 13:15 14:27 Oral Presentation (O-1–O-6) (Floor11)
- 14:30 14:45 Coffee Break
- 14:45 15:15 Invited Lecture 3 (Floor11)

"Absorption behavior of released strontium and borate ions

from composite resin fillers"

Chair: Je-Kang DU (Kaohsiung Medical University)

Speaker: Motohiro UO (Tokyo Medical and Dental University, Japan)

15:15 – 15:45 Invited Lecture 4 (Floor11)

"Porous strontium-, magnesium-, and zinc-multidoped hydroxyapatite coatings on titanium using a novel vapour-induced pore-forming atmospheric plasma spraying" *Chair: Motohiro UO (Tokyo Medical and Dental University) Speaker: Bor-Shiunn LEE (National Taiwan University)*

- 15:45 16:35 Poster Discussion (P-01-P-101) (Floor6)
- 16:35 16:45 Coffee Break

16:45 - 17:15	Invited Lecture 5 (Floor11)
"Ar	new integrative approach for next-generation of bone tissue engineering"
Cha	ir: Hsin-Wu MI (Dr.Signal BioTechnology company)
Spec	aker:Takuya MATSUMOTO (Okayama University)

- 17:15 17:45 Invited Lecture 6 (Floor11)
 "Vapor-Phase Fabrication of Scaffolds to Achieve Cell Alignment for Tissue Engineering Applications" *Chair: Takuya MATSUMOTO(Okayama University)*Speaker: Hsien-Yeh CHEN (National Taiwan University)
- 17:45 18:15 Invited Lecture 7 (Floor11)
 "Application of Biomaterials for Oral Tissue Regeneration" Chair: Takuya MATSUMOTO(Okayama University,) Speaker: Min-Huey CHEN (National Taiwan University)

18:15 - 18:30 Coffee Break

18:30 - Welcome Reception (Floor 6, 603)

Saturday, November 5

- 8:30 Registration
- 9:30 10:30 Oral Presentation (O-7-O-10) (Floor11)
- 10:30 10:45 Coffee Break
- 10:45 11:15 Invited Lecture 8 (Floor11)

"Octacalcium phosphate biomaterials: Applicability for hard tissue and related tissue regenerations as a defect filling material"

Chair: Hong-Ping LIN (National Cheng Kung University) Speaker: Osamu SUZUKI (Tohoku University)

11:15 - 11:45 Invited Lecture 9 (Floor11)

"Artificial Intelligence, Automation and the Cell therapy" Chair: Osamu SUZUKI (Tohoku University) Speaker: Hsin-Wu MI (Dr.Signal BioTechnology company)

- 11:45 12:00 Coffee Break
- 12:00 13:00 Lunchon seminar (Floor11) Sponsor: Kuraray Noritake Dental Inc. "Contemporary dental zirconia ceramics as restorative materials" Speaker: Masanao INOKOSHI (Tokyo Medical and Dental University)
- 13:00 14:00 Oral Presentation (O-12-O-16) (Floor11)
- 14:00 14:15 Coffee Break
- 14:15 14:50 Oral Presentation (O-17-O-19) (Floor11)

- 14:50 16:20 BMI Center Session (Floor11)
 - 1. "Synaptic PET imaging in neurodegeneration" Speaker: Ming-Kai Chen (Yale University)
 - "Biocompatible nanomedicine for theranostic imaging of orthotopic cancer models"

Speaker: Chia-Hao SU (Chang Gung University)

- 3. "Frequency coding mechanism in motor behaviors" Speaker: Ming-Kai PAN (National Taiwan University)
- "The development and challenges of molecular imaging in Taiwan in the era of full digital PET" Speaker: Chih-Yi WU (Primo biotechnology, ltd)
- "Fluorescence Correlation Spectroscopy: Instrument development and applications to biomedical research" Speaker: Shaohui HUANG (Chinese Academy of Sciences)
- 6. "NVIDIA Clara Platform for AI Development in Digital Biology and Healthcare" *Speaker: Eddie TC HUANG (NVIDIA)*

16:20 - Closing Ceremony (Floor11)

Friday, November. 4			
Time	Floor 11	Floor 6	
9:30	Opening ceremony		
9:45	Keynote Lecture (9:50-10:50)		
10:00	(Jack L. FERRACANE)		
10:15			
10:30			
10:45	Coffee break		
1 <mark>1</mark> :00	Invited Lecture 1		
11:15	(Toru NIKAIDO)		
11:30	Invited Lecture 2		
11:45	(Mikako HAYASHI)		
12:00	Coffee break		
12:15	Luncheon Seminar(12:10-)		
12:30	Sponsor: SHOFU INC.		
12:45			
13:00			
13:15	Oral Presentation (Section 1&2)		
13:30	01-06 (13:15-14:27)		
13:45			
14:00			
14:15			
14:30	Coffee break		
14:45	Invited Lecture 3 (14:45-)		
15:00	(Motohiro UO)		
15:15	Invited Lecture 4 (15:15-)		
15:30	(Bor-Shiunn LEE)		
15:45		Poster Discussion	
16:00		(-16:35)	
<mark>16:1</mark> 5			
<mark>16:30</mark>	Coffee break		
16:45	Invited Lecture 5		
17:00	(Takuya MATSUMOTO)		
17:15	Invited Lecture 6		
17:30	(Hsien-Yeh CHEN)		
17:45	Invited Lecture 7		
18:00	(Min-Huey CHEN)		
<mark>18:15</mark>	Coffee break		
18:30		Reception	
		(Room 603)	

IDMC 2022 Schedule

Saturday, November. 5				
Time	Floor 11			
9:30	Oral Presentation (Section 3&4)			
9:45	07-011 (9:30-10:30)			
10:00				
10:15				
10:30	Coffee break			
10:45	Invited lecture 8			
<mark>11</mark> :00	(Osamu SUZUKI)			
11:15	Invited lecture9			
11:30	(Hsin-Wu MI)			
11:45	Coffee break			
12:00	Luncheon Seminar (12:00-)			
12:15	Sponsor:			
12:30	Kuraray Noritake Dental Inc.			
12:45				
13:00	Oral Presentation (Section 5&6)			
<mark>13:15</mark>	012-016 (13:00-14:00)			
13:30				
13:45				
14:00	Coffee break			
14:15	Oral Presentation (Section 7)			
14:30	017-019 (14:15-14:50)			
14:45				
15:00	BMI Center Session (14:50-)			
15:15	1-6			
15:30				
15:45				
16:00				
16:15	Closing ceremony(16:20-)			
16:30				

General Session Program

Oral Presentation I(O-1 - O-6) (11th floor): Friday, November 4, 13:15 - 14:27

(Ceramic) Chair: Dan-Jae LIN (China Medical University), Guang HONG (Tohoku University) (Biomaterial (Composit and Regenelation)) Chair: Nai-Chia TENG (Taipei Medical University), Koichi KATO (Hiroshima University)

- O-1 Fibronectin modification of zirconia surface by using glow discharge plasma Lwin Moe Aung¹, Yi-Fan Wu¹, Eisner Salamanca^{1*}, and Wei-Jen Chang^{1,2*} (^{1, 2}Taipei Medical University)
- O-2 Comparison of four-point and biaxial flexural strength for strength-gradient yttria-stabilized zirconia Masanao INOKOSHI^{1*}, Hiroto NAKAI¹, and Shunsuke MINAKUCHI¹ (¹Tokyo Medical and Dental University)
- O-3 Comparison of 3D printed zirconia crown and mechanical cut zirconia crown
 Fa-Jen Wang¹, Yu-Chih Chiang², Cheng-Feng Ho³, Sheng-Hao Hsu⁴, Min-Huey Chen^{5, *}
 (¹National Taiwan University, ^{2,4,5}National Taiwan University and National Taiwan University Hospital, ³Franz biotech research center.)
- O-4 Fish bone inspired design of lamellar-structured calcium phosphate/gelatin composite by slip cast method YuYang JIAO^{1*}, Masahiro OKADA¹, and Takuya MATSUMOTO¹ (¹Okayama University.)
- O-5 Non-animal-derived bioabsorbable polymer for bone regeneration Ko NAKANISHI^{1*}, Tsukasa AKASAKA¹, Kumiko YOSHIHARA², Mariko NAKAMURA³, and Yasuhiro YOSHIDA¹ (¹Hokkaido University, ²AIST, ³Kyushu University)
- O-6 Effect of crystallinity and porosity on *in vitro* bioresorbability of hydroxyapatite Taira SATO^{1*}, Michito MARUTA¹, Hikaru TAKEYAMA^{1,2}, Noboru KAJIMOTO¹, Hirogo MINAMISAWA¹, Eiji FUJII³, Takashi MATSUURA², and Kanji TSURU¹ (^{1, 2} Fukuoka Dental College,³ Industrial Technology Center of Okayama Prefecture)

Oral Presentation II(O-7 - O-11) (11th floor): Saturday, November 5, 9:30 - 10:30 (Clincal)

Chair: Tsung-Chieh YANG (National Taiwan University), Takatsugu YAMAMOTO (Tsurumi University) (Biomaterial (biological)) Chair: Han-Yi E. CHOU (National Taiwan University),, Tatsuhide HAYASHI (Aichi Gakuin University)

- O-7 Development of explainable AI model for decision making of implant drilling protocols Takahiko SAKAI^{1,2*}, Hefei LI¹, Chunwoo LEE¹, Tamaki NAKANO², Satoshi YAMAGUCHI¹, and Satoshi IMAZATO¹ (^{1, 2}Osaka University)
- O-8 Effects of protease inhibitors on dentin erosion: an *in situ* study

Hui YANG^{1*}, Lu SUN¹, Hao YU^{2,3}, Hong GUANG¹

(¹Tohoku University, ²Fujian Key Laboratory of Oral Diseases & Fujian Provincial Engineering Research Center of Oral Biomaterial & Stomatological Key Laboratory of Fujian College and University, School and Hospital of Stomatology, Fujian Medical University, ³Nagasaki University)

- O-9 Modification of core-shell silica hallow spheres with Fe₂O₃@TiO₂ heterojunction catalyst for tooth bleaching Kasimayan UMA¹, Chao-Hui LIU², K.P.O. MAHESH³, Hong-Ping LIN², and Yu-Chih CHIANG^{1,3,*} (¹National Taiwan University, ²National Cheng Kung University, ³National Taiwan University and National Taiwan University Hospital)
- O-10 Nano-scale structural characterization of whitened human tooth enamel Reina TANAKA^{1*}, Masataka HASEGAWA¹, Jun ZHOU¹, Takashi MIYAZAKI¹, and Yo SHIBATA¹ (¹Showa University)
- O-11 Analysis of biological apatite crystal orientation in cortical bone of human hyoid bone using microbeam X-ray diffractometry Masaaki KASAHARA*, Tomoko SOMEYA, Hiroki KAGOURA, and Masayuki HATTORI (Tokyo Dental College)

Oral Presentation III(O-12 - O-16) (11th floor): Saturday, November 5, 13:00 - 14:00 (Biomaterial (Titanium)) *Chair: Ting-Hsun LAN (Kaohsiung Medical University), Kanji TSURU (Fukuoka Dental College)* (Organic Material (Adhesive))

Chair: Po-Chun CHANG (National Taiwan University), Shinji TAKEMOTO (Iwate Mesical University)

- **O-12** Electrodeposition of collagen and calcium phosphate on titanium to improve soft tissue adhesion Peng CHEN^{1*}, Motoki URUMA², Maki ASHIDA¹, and Takao HANAWA^{1,3} (^{1, 2}Tokyo Medical and Dental University, ³ Kobe University)
- O-13 The precision dimensional laser (PDL)-treated titanium surface promotes osteointegration Yi-Wen CHEN^{1,2}, Hsin-Han HOU^{1.2.3*}
 (¹National Taiwan University Hospital, Taipei, Taiwan, ^{2, 3}National Taiwan University, Taipei, Taiwan)
- O-14 Immediate soft tissue adhesion and mechanical property of acid-treated titanium wire mesh Masahiro OKADA^{*}, Shi Chao XIE and Takuya MATSUMOTO (Okayama University)
- O-15 Effect of 0.5% chloramine-T on bonding performance and mechanical properties of a chemical-cured adhesive Yunqing LIU ^{1*}, Yitong LI ², Md Refat Readul ISLAM ², Rafiqul ISLAM ¹, Masahiro IIJIMA ³ and Hidehiko SANO ¹ (^{1, 2}Hokkaido University, ³Health Sciences University of Hokkaido)
- O-16 Effects of pretreatments on retention force between PEEK post and resin composite for core build-up Tomoko SOMEYA^{*}, Hiroki KAGOURA, Masaaki KASAHARA and Masayuki HATTORI (Tokyo Dental College)

Oral Presentation IV(O-17 - O-19) (11th floor): Saturday, November 5, 14:15 - 14:46 (Equipment)

Chair: Min-Huey CHEN (National Taiwan University), Satoshi YAMAGUCHI (Osaka University)

- O-17 Aeroacoustic Noise Prediction of the Dental Air-Turbine Handpiece using Supercomputer ChungGang LI1*, Tomomi YAMADA2, Kazunori NOZAKI3, Mikako Hayashi4, and Makoto TSUBOKURA⁵ (^{1,5} Kobe University, ^{2,4} Osaka University, ³ Osaka University Dental Hospital)
- **O-18** An automatic implant identification system using deep learning with artificial X-ray images generated from STL data Zhanyue WANG^{1*}, Kazumichi WAKABAYASHI¹, Tamaki NAKANO¹, Takahiro NISHIYAMA¹, Miyu TANAKA¹, Fangfang JI¹, Masaya NAMIKAWA¹, Tamiya SHINGO¹, Hiroki KUDO¹, Yuta NAKASHIMA², Chenhao LI², Hajime NAGAHARA², and Shoichi ISHIGAKI¹ (^{1, 2}Osaka University)
- O-19 Hydroxyapatite Film Coating by Er:YAG Pulsed Laser Deposition Method for the Decalcification of the Ename Liji Chen¹, Shigeki Hontsu², Satoshi Komasa³, Ei Yamamoto², Yoshiya Hashimoto^{4,*}, and Naoyuki Matsumoto¹

(^{1, 3, 4}Osaka Dental University, ²Kindai University)

Poster Discussion (P-01 - P-101) (6th floor): Saturday, November 5 15:45 - 16:35

- P-1 The effects of cold atmospheric plasma on the inflammatory reaction in human gingival fibroblast cells induced by lipopolysaccharide Young-IL JEONG¹, Myoung-Ju KIM², Min-Suk KOOK^{2,*} and, Byung-Hoon KIM^{1,*} (¹Chosun University, ²Chonnam National University)
- P-2 Evaluation of Polishing Systems for CAD/CAM Polymer-Infiltrated Ceramic-Network Restorations Satoki KAWASHIMA^{1*}, Carlos A. JURADO², Hidehiko WATANABE¹, Akimasa TSUJIMOTO³ (¹Oregon Health & Science University, ²Texas Tech University Health Sciences Center El Paso Woody L. Hunt, ³University of Iowa College of Dentistry,)
- P-3 An Invention for Improving Intra Oral Radiograph Taking with Bio-Design Concept Theodore KAO ^{1*}, Nai-Yun TUNG ^{1,2}, and Shih-Kai WANG ^{1,3} (¹National Taiwan University Hospital, ²International Academia of Biomedical Innovation Technology, ³National Taiwan University)
- P-4 Applicability of neutral electrolyzed water for cleaning orthodontic appliances Yuki NAGAMATSU^{1*}, Yasuhiko AKAMA², Hiroshi IKEDA¹, and Hiroshi SHIMIZU³ (^{1, 2}Kyushu Dental University, ³Fukuoka Dental College,)
- P-5 D-En-Air project: Comfortable Dental Care Environment through Air Quality Control Kazunori NOZAKI^{1*}, Shigehisa AKIYAMA¹, Hiroshi HANAMOTO¹, Michiko KAIHOTSU⁴, Kazuma KOKOMOTO¹, Jumpei MURAKAMI¹, Shumei MURAKAMI², Eriko NAMBU¹, Shota NAKAMURA⁵, Yuichi OHSITA³, Takashi SAKAMOTO², Shinichi SEKINE^{2,6}, Yi ZHENG⁴, Tomomi YAMADA², Ryotaro YOKONO⁴, and Mikako HAYASHI^{1,2} (¹Osaka University Dental Hospital, ^{2, 3, 5}Osaka University, ⁴ Technology Innovation Center, Daikin Industries, Ltd., ⁶ Otemae Junior College)
- P-6 Analysis of mandibular lateral deviation on posteroanterior cephalograms using a deep learning algorithm Shota OKAZAKI¹, Yuichi MINE^{1*}, Yuki YOSHIMI², Shota ITO², Shiho URABE¹, Kotaro TANIMOTO³, and Takeshi MURAYAMA¹ (^{1, 3}Hiroshima University, ²Hiroshima University Hospital)
- P-7 Mechanical evaluation of face guards fabricated by stereolithographic three-dimensional printing Takahiro WADA^{1*}, Aya TAKAMURA¹, Momoko ADACHI¹, Maho SHIOZAWA², Hiroshi CHUREI³, and Motohiro UO¹ (^{1, 2, 3}Tokyo Medical and Dental University)
- P-8 A new evaluation method for gingival quality with optical property analysis Shingo TAMIYA ^{1*}, Kazumichi WAKABAYASHI ¹, Masayuki OSUMI ², Hiroki KUDO ¹, Takahiro NISHIYAMA ¹, Ki FANGFANG ¹, Zhanyue WANG ¹, Miyu TANAKA ¹, Masaya NAMIKAWA ¹, Takashi NAKAMURA ³, and Shoichi ISHIGAKI ¹. (¹ Osaka University, ² Office Color Science, ³Otemae College)
- P-9 Multi-faceted analysis of changes in translucency and color tone from the cervical region to the incisal region of natural teeth Factors affecting translucency and color tone changes Masaya NAMIKAWA^{1*}, Kazumichi WAKABAYASHI¹, Masayuki OSUMI², Takahiro NISHIYAMA¹, Miyu TANAKA¹, Fangfang JI¹, Zhanyue WANG¹, Tamiya SHINGO¹, Hiroki KUDO¹, Takashi NAKAMURA³, and Shoichi ISHIGAKI¹

(¹Osaka University, ²Office Color Science, ³Otemae College)

- P-10 Laser-produced microtopography and changes in surface chemical composition of titanium implants reduce oral biofilm formation Andrei C. IONESCU^{1*}, Du-Cheng TSAI², Fuh-Sheng SHIEU³, and Eugenio BRAMBILLA¹ (¹University of Milan, ^{2, 3}National Chung Hsing University)
- P-11 Tensile properties of Ni-free stainless steel orthodontic wires Masaki ASAKURA *, Tatsuhide HAYASHI, Takeshi GOTO, Soichiro HAMAJIMA, Hiroyasu KATAOKA, and Tatsushi KAWAI (Aichi Gakuin University)
- P-12 Surface characteristics of Ti-6Al-4V adhesive Yaming WANG^{1*}, Shichao XIE¹, Masahiro OKADA¹, and Takuya MATSUMOTO¹ (¹Okayama University)
- P-13 Simultaneous melting of zirconia and titanium with LASER 3D printing Kensuke IGARASHI, Masahiro IGARASHI, and Kazuo OHKUMA (The Nippon Dental University School of Life Dentistry at Niigata)
- P-14 Bond strength of three veneering porcelain materials to Co-Cr alloy Tomofumi SAWADA^{1*}, Kenta YAMANAKA², Akihiko HATANAKA¹, Kaori SASAKI¹, Kazuya ASAKAWA¹, Akihiko CHIBA², and Shinji TAKEMOTO¹ (¹Iwate Medical University, ²Tohoku University)
- P-15 Wear behavior of cast titanium against bovine teeth and crown materials Hiroki KAGOURA*, Tomoko SOMEYA, Masaaki KASAHARA, and Masayuki HATTORI (Tokyo Dental College)
- P-16 QCM analyses and animal studies to clarify the bone compatibility of zirconia implants Masatsugu HIROTA^{1*} and Tohru HAYAKAWA² (^{1, 2}Tsurumi University)
- P-17 Effects of poloxamer additives on strength, injectability of beta-tricalcium phosphate cement Yeeun KIM*, Kazumitsu SEKINE and Kenichi HAMADA (Tokushima University)
- P-18 Elastic fibers in bovine periosteum Mari AKIYAMA^{1*} (¹Osaka Dental University)
- P-19 Cytocompatibility of yttria-stabilized zirconia polycrystalline with L929 cells -basis of evaluation of soft tissue adhesion Michiko NAKAISHI-TERADA^{1*}, Peng CHEN¹, Maki ASHIDA¹, and Takao HANAWA^{1,2}
 (¹Tokyo Medical and Dental University, ²Kobe University)
- P-20 Evaluation of cell proliferation ability on surface-modified zirconia using atomic layer deposition Tatsuhide HAYASHI *, Masaki ASAKURA, Masakazu MATSUBARA, Yasuaki UEMATSU, Akimichi MIEKI, and Tatsushi KAWAI (Aichi Gakuin University)

- P-21 Fabrication of apatite coated titanium oxide nano-tubes in SBF Hisataka NISHIDA^{1,2*}, Satoshi KOMASA³, and Tohru SEKINO¹ (¹Osaka University, ^{2,3}Osaka Dental University)
- P-22 Application of QCM method to improved titanium surface evaluation Yuichiro TASHIRO¹, Tatsushi NAITO¹, Takumi MATSUMOTO¹, Akiko MIYAKE², and Satoshi KOMASA¹ (^{1, 2}Osaka Dental University)
- P-23 Human mesenchymal stem cells responses cultured on polycaprolactone surface treated by plasma reactive ion etching
 Inho BAE, Ji-Hun SEOK, and Byung-Hoon KIM*
 (Chosun University)
- P-24 Characterization of extracellular vesicles isolated from dedifferentiated fat cell's conditioned media Yusuke NISIGUCHI¹, Mamoru UEDA², Hirohito KUBO³, and Yoshiya HASHIMOTO² (^{1, 2, 3}Osaka Dental University)
- P-25 Regulation of bone-related cell differentiation by synthetic BMP-2 peptide and RANKL-binding peptide Takahiro SHUTO^{1*}, Yuichi MINE², and Akina TANI³ (^{1,3}Osaka Dental University, ²Hiroshima University)
- P-26 Emodin-loaded thermoresponsive hydrogel for the treatment of periodontitis in rat-ligature model Seong-Hee MOON ^{1,2}, Seong-Jin SHIN ^{2,3}, Seung-Han OH ^{1,2}, and Ji-Myung BAE ^{1,2,4*} (^{1, 2, 4}College of Dentistry, Wonkwang University, ³Dankook University)
- P-27 Characterization of a strontium-releasing phosphate-based bioactive glass for bone regeneration Hirohiko SAKAI^{1*}, Fan DENG¹, Jun-Ichi SASAKI¹, Haruaki KITAGAWA^{1,2}, Tomoki KOHNO², Gabriela ABE², Linghao XIAO², and Satoshi IMAZATO^{1,2} (^{1, 2}Osaka University)
- P-28 Adsorption and release behavior of antibacterial agent in octacalcium phosphate (OCP) and its related materials Danupong CHAIARIYAKUL¹, Ryo HAMAI¹, Yukari SHIWAKU¹ and Osamu SUZUKI^{1*} (¹Tohoku University)
- P-29 Fabrication of vascularized bone-like tissues by using BMSC/DPSC constructs Aonan LI^{1,*}, Jun-Ichi SASAKI¹, Gabriela ABE² and Satoshi IMAZATO^{1,2} (^{1, 2} Osaka University)
- P-30 Development of a novel cell labelling method by the substrate-mediated intracellular delivery of molecular beacon Jun-Ichiro JO^{1, 2*}, Yuki MURATA², and Yasuhiko TABATA² (¹Osaka Dental University, ²Kyoto University)
- P-31 Do the materials that activate the antioxidant responsive element (ARE) region act as ROS? Miki HORI ^{1*}, Kotaro FUJIMOTO¹, Mari MASUDA², Tatsuhide HAYASHI¹, and Tatsushi KAWAI¹ (^{1, 2}Aichi-Gakuin University, Junior College)
- **P-32** Effect of hydroxyapatite coating by Er: YAG pulsed laser deposition on the bone formation efficacy by polycaprolactone porous scaffold

Ye ZHANG¹, Jun-Ichiro JO¹, Liji CHEN², Shigeki HONTSU³, and Yoshiya HASHIMOTO^{1*} (^{1, 2}Osaka Dental University, ³Kindai University)

- P-33 Assessment of the Osteogenic Potential of Rat-derived Adipose Mesenchymal Stem Cells under Xeno-free conditions Yuzhu SUN¹, Jun-ichiro JO¹, and Yoshiya HASHIMOTO¹ (¹Osaka Dental University)
- P-34 Analysis of mineralization mechanisms of plasma membrane nanofragments for rapid *in vitro* bone tissue engineering Emilio Satoshi HARA^{1*}, Masahiro OKADA¹, and Takuya MATSUMOTO¹ (¹Okayama University)
- P-35 Comparative study of dissolution and biodegradable properties of octacalcium phosphate (OCP) obtained through different preparation Susumu SAKAI¹, Ryo HAMAI¹ and Osamu SUZUKI^{1*} (¹Tohoku University)
- P-36 Identification and evaluation of initial dentin mineralization from material science perspective Risa ANADA^{1, 2*}, Emilio Satoshi HARA¹, Noriyuki NAGAOKA³, Masahiro OKADA¹, Hiroshi KAMIOKA² and Takuya MATSUMOTO¹ (^{1, 2, 3}Okayama University)
- P-37 Surface immobilization of BMP-7 for promoting osteogenesis at tissue-material interface Archana MOOTHA ^{1*}, and Koichi KATO ^{1,2} (^{1, 2}Hiroshima University)
- P-38 Developing Angiophilic Implant Organoid for Rapid Osteointegration Da-Yo Yuh ^{1*}, Yu-Chih Lo^{2,3}, Jia-Few Shyu² and Ting-Han Chang ⁴ (^{1, 2, 3}National Defense Medical Center, ⁴National Yang-Ming Chiao-Tung University)
- P-39 A bioactive nano-sized DCPD/siliceous mesocellular foams composite for indirect pulp capping Hsiao-Wen YEH¹³, Chih-Yu CHIEN², Bharathi Priya LOHANATHAN¹, Kuan-Ting LAI¹, Yo-Shiuan FAN¹⁴, Osamu SUZUKI⁵, Hong-Ping LIN *⁴, and Yu-Chih CHIANG*¹ (¹National Taiwan University and National Taiwan University Hospital, ²National Taiwan University, ³Tri-Service General Hospital, National Defense Medical Center, ⁴National Cheng Kung University, ⁵Tohoku University)
- P-40 Unique bone growth pattern on innovative laser treated titanium implant surface Tao CHIANG (Bioamte Implant Academy Institute)
- P-41 Development of PLA/β-Tricalcium Phosphate with Fibronectin in 3D-Printed Scaffold for Bone Regeneration Eisner SALAMANCA ¹⁺, Cheuk Sing CHOY ^{2, 3+}, Ting-Chia TSAO ¹, Pin-Han WANG ¹, Odontuya DORJ¹, Yan-Qiao ZHAO¹, Wei-An LIN ¹, Yi-Fan WU ^{1*} and Wei-Jen CHANG ^{1,4*} (¹Taipei Medical University, ²En Chu Kong Hospital, ³Yuanpei University, Dental Department, Shuang-Ho Hospital, Taipei Medical University)
- P-42 Differentiation of iPS cells into periodontal ligament cell-like cells Yufan WU¹, Kengo IWASAKI^{2*}, and Yoshiya HASHIMOTO¹

(^{1, 2}Osaka Dental University)

- P-43 Fabrication of hydrophilic implant material using plasma tretment Satoshi KOMASA¹, Hisataka NISHIDA², YOSHIYA Hashimoto³, and Joji OKAZAKI¹ (^{1,3}Osaka Dental University, ²Osaka University, ISIR-SANKEN)
- P-44 Preparation of a single-side mineralized dECM membrane for application as periodontal ligament Mika SUZUKI¹, Tsuyoshi KIMURA^{1*}, Yoshihide HASHIMOTO¹, Masahiro OKADA², Takuya MATSUMOTO², Naoko NAKAMURA³ and Akio KISHIDA¹ (¹ Tokyo Medical and Dental University, ²Okayama University, ³Shibaura Inst. Tech)
- P-45 A novel drug releasable dental materials using nano-structured silica particles Shigeaki ABE ^{1*}, Mahdis NESABI ¹, Sirus SAFAEE ¹, Sayaka IWATA ¹, Yuko ERA ², Yuya YATOH ², Atsushi HYONO ², Alirza VALANEZHAD ¹, and Ikuya WATANABE ² (¹Nagasaki University, ²Saitama Prefectural University, ³National Institute of Tech., Asahikawa College
- P-46 Cell viability and osteogenic ability of additively manufactured zirconia Hiroto NAKAI¹, Masanao INOKOSHI^{1,*}, Kosuke NOZAKI² and Shunsuke MINAKUCHI¹ (^{1, 2}Tokyo Medical and Dental University)
- P-47 Influence of femtosecond laser irradiation on crystallography of highly translucent dental zirconia Kaiqi XU¹, Masanao INOKOSHI^{1*}, Hengyi LIU¹, and Shunsuke MINAKUCHI¹ (¹Tokyo Medical and Dental University)
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 (¹ Kanagawa Dental University, ²Nihon University School of Dentistry at Matsudo, ³Kanto Gakuin University)
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