

# The 60<sup>th</sup> General Session of the Japanese Society for Dental Materials and Devices(JSDMD)-II

October 13 (Saturday) – 14 (Sunday), 2012  
Centennial Hall Kyushu University School of Medicine  
1-1 Maidashi 3-chome Higashi-ku, Fukuoka 812-8582, JAPAN

October 13 (Saturday)

9:25 – 9:30 Opening Remark

9:30 – 11:00 General Presentation (Oral Session)

Hall A

A-1 Effect of in vivo stress distribution on biological apatite orientation in mandible

○Nakano Takayoshi, Fujitani Wataru  
Osaka University

A-2 Evaluation of bone formation guided by DNA/protamine complex with FGF-2 in rat calvarial defect model

○Shinozaki Yosuke<sup>1</sup>, Mori Nana<sup>1</sup>, Ohno Jun<sup>1</sup>, Kido Hirofumi<sup>1</sup>, Hayakawa Tohru<sup>2</sup>, Fukushima Tadao<sup>1</sup>

<sup>1</sup>Fukuoka Dental Collage, <sup>2</sup>Tsurumi University

A-3 A study on reparative dentin formation by soy isoflavone in rats

○Hayashi Keijiro, Handa Keisuke, Koike Toshiyuki, Saito Takashi  
Health Sciences University of Hokkaido

A-4 Trial of bone re-generation of critical-size bone defects formed in rat calvarias by composites consisting of porous apatite particles and collagen

○Hatakeyama Wataru, Taira Masayuki, Kihara Hidemichi, Kondo Hisatomo  
Iwate Medical University

A-5 Micro morphological study of reparative dentin induced by Phosphophoryn/Alginate gel composite in rats

○Koike Toshiyuki, Handa Keisuke, Hayashi Keijiro, Saito Takashi  
Health Sciences University of Hokkaido

A-6 Effect of water-dispersible metal-based nanoparticles on macrophages

○Hashimoto Masanori<sup>1</sup>, Toshima Hirokazu<sup>1</sup>, Yonezawa Tetsu<sup>2</sup>, Kawai Koji<sup>2, 3</sup>, Kaga Masayuki<sup>1</sup>,  
Endo Kazuhiko<sup>1</sup>

<sup>1</sup>Health Sciences University of Hokkaido, <sup>2</sup>Hokkaido University, <sup>3</sup>Miyoshi Oil & Fat Co., Ltd.

Hall A

13:00 – 14:00 Special Lecture

14:00 – 16:30 General Presentation (Oral Session)

A-7 The inhibition of initial bacterial adhesion by adsorption of lactoferrin on materials for the implant-abutment

○Nagano Futami, Hashimoto Masanori, Ida Yusuke, Toshima Hirokazu, Endo Kazuhiko  
Health Sciences University of Hokkaido

A-8 Corrosion behavior of DLC-coated titanium in simulated physiological solutions

○Endo Kazuhiko, Iijima Masahiro, Ida Yusuke, Hashimoto Masanori, Nagano Futami, Toshima Hirokazu, Mizoguchi Itaru

Health Sciences University of Hokkaido

A-9 In vivo osseointegration of pyrocarbon-coated oxygen-diffused Ti implants

○Yamamoto Osamu  
Yamagata University

A-10 In vitro evaluation of marginal fit of the implant-abutment connection by swept-source optical coherence tomography

○Kikuchi Keisuke<sup>1</sup>, Akiba Norihisa<sup>1</sup>, Sumi Yasunori<sup>2</sup>, Minakuchi Shunsuke<sup>1</sup>

<sup>1</sup>Tokyo Medical and Dental University, <sup>2</sup>National Center for Geriatrics and Gerontology

A-11 Bone formation of alendronate immobilized implant towards rat maxillary bone

○Raita Yuki<sup>1</sup>, Hayakawa Tohru<sup>1</sup>, Sato Mitsunobu<sup>2</sup>, Morito Mitsuhiko<sup>1</sup>

<sup>1</sup>Tsurumi University, <sup>2</sup>Kogakuin University

**A-12** Zirconia coating on Zr-Nb alloys by high-temperature oxidation –Effect of high-temperature oxidation on color and thickness of the oxide layer–

○Yu Miao, Kondo Ryota, Su Yataru, Tsutsumi Yusuke, Doi Hisashi, Nomura Naoyuki, Hanawa Takao, Kasugai Syohei

Tokyo Medical and Dental University

**A-13** Mechanical property of octacalcium phosphate (OCP)/apatite-type I collagen composite with various mineral content

○Iijima Mayumi, Wakamatsu Nobukazu, Kamemizu Hideo, Komada Yuuko, Adachi Masanori, Doi Yutaka

Asahi University

**A-14** Antibacterial activity of apatite photocatalyst

○Komada Yuko, Kamemizu Hideo, Fujii Kazuo, Iijima Mayumi, Horiguchi Takashi, Adachi Masanori, Wakamatsu Nobukazu, Hotta Masato, Shibutani Toshiaki, Doi Yutaka

Asahi University

**A-15** Analysis of the aggregated state of a constituent polysaccharide of oral biofilm by QCM method

○Nezu Takashi, Sasaki Kaori, Saitoh Setsuo, Taira Masayuki

Iwate Medical University

**A-16** Antibacterial activity of chitosan film with nano-structure

○Akasaka Tsukasa, Abe Shigeaki, Watari Fumio

Hokkaido University

October 13 (Saturday)

9:30 – 11:00 General Presentation (Oral Session)

Hall B

**B-1** Characteristic evaluation of bonding materials with fluorescence properties

○Hamba Yusuke<sup>1</sup>, Yamagata Shuichi<sup>1</sup>, Akasaka Tsukasa<sup>1</sup>, Uo Motohiro<sup>2</sup>, Iida Junichiro<sup>1</sup>, Watari Fumio<sup>1</sup>

<sup>1</sup>Hokkaido University, <sup>2</sup>Tokyo Medical and Dental University

**B-2** Capability evaluation of orthodontic retraction spring by finite element method

○Kawamura Jun<sup>1</sup>, Kojima Yukio<sup>2</sup>, Fukui Hisao<sup>1</sup>

<sup>1</sup>Aichi Gakuin University, <sup>2</sup>Nagoya Institute of Technology

**B-3** Evaluation of commercial powder-type denture adhesives – Viscosity characteristics –

○Murata Hiroshi, Kano Hiroshi, Kurogi Tadafumi, Nishimura Masahiro

Nagasaki University

**B-4** A study on analysis of OCT images – Application of 1/e<sup>2</sup> width

○Kurokawa Hiroyasu, Tonegawa Motoka, Iino Masayoshi, Murayama Ryosuke, Shimamura Yutaka, Irokawa Atsushi, Ando Susumu, Miyazaki Masashi

Nihon University School of Dentistry

**B-5** Development of gradient functional bone filling material –mechanical analysis by Finite Element Method–

○Fukase Yasumasa<sup>1, 2</sup>, Sato Takako<sup>1</sup>, Hisada Toshiaki<sup>2</sup>, Yoneyama Takayuki<sup>1</sup>

<sup>1</sup>Nihon University School of Dentistry, <sup>2</sup>Tokyo University

**B-6** Development of laser joining method of thermoplastic resin for denture base and dental alloy

○Naito Daisuke, Kakimoto Kazutoshi, Takahashi Kazuya, Komasa Yutaka

Osaka Dental University

Hall B

14:00 – 16:30 General Presentation (Oral Session)

**B-7** 14K gold alloy with sponge-like surface as a novel material for porcelain-fused-to-metal restorations

○Ida Yusuke, Ohno Hiroki, Kakizaki Mitsugi, Nagano Futami, Hashimoto Masanori, Toshima Hirokazu, Endo Kazuhiko

Health Sciences University of Hokkaido

**B-8** Microstructure and hardening in Ag-20Pd-12Au-14.5Cu alloy subjected to aging treatment

○Kim Yonghwan<sup>1</sup>, Niinomi Mitsuo<sup>1</sup>, Hieda Junko<sup>1</sup>, Nakai Masaaki<sup>1</sup>, Cho Ken<sup>1</sup>, Fukui Hisao<sup>2</sup>

<sup>1</sup>Tohoku University, <sup>2</sup>Aichi-Gakuin University

- B-9 Prevention method of crack generation in laser weld of dental cobalt-chromium alloy casting  
 ○Kusunoki Takayuki, Kakimoto Kazutoshi, Takahashi Kazuya, Komasa Yutaka  
 Osaka Dental University
- B-10 Mechanical properties of Zr/Ag composite wires to prevent artifacts in MRI for medical applications  
 ○Sakai Takahiro, Kondo Ryota, Suyalatu, Migita Satoshi, Tsutsumi Yusuke, Doi Hisashi, Nomura Naoyuki, Hanawa Takao  
 Tokyo Medical and Dental University
- B-11 Effect on mechanical properties by Mo of Co-Cr-Mo-N alloy for dental casting  
 ○Doi Hisashi, Suyalatu, Migita Satoshi, Tsutsumi Yusuke, Nomura Naoyuki, Hanawa Takao  
 Tokyo Medical and Dental University
- B-12 Evaluation of the mechanical properties of Co-Cr and Ti-Al-V alloy specimens fabricated by additive manufacturing: In comparison with dental casting  
 ○Oda Yutaka, Takemoto Shinji, Hattori Masayuki, Yoshinari Masao, Kawada Eiji, Hasegawa Koji, Aichi Tetsuya, Matsumoto Naoya  
 Tokyo Dental College
- B-13 Effects of building atmosphere on the microstructure and mechanical properties of cobalt chromium alloys fabricated by selective laser melting process  
 ○Su Yalatu<sup>1</sup>, Nomura Naoyuki<sup>1</sup>, Nakamoto Takayuki<sup>2</sup>, Doi Hisashi<sup>1</sup>, Tsutsumi Yusuke<sup>1</sup>, Migita Satoshi<sup>1</sup>, Hanawa Takao<sup>1</sup>  
<sup>1</sup>Tokyo Medical and Dental University, <sup>2</sup>Technology Research Institute of Osaka Prefecture
- B-14 Effects of alloying elements on formation of HAp on biomedical  $\beta$ -type titanium alloys through alkali treatment process  
 ○Cho Ken<sup>1</sup>, Niinomi Mitsuo<sup>1</sup>, Nakai Masaaki<sup>1</sup>, Hieda Junko<sup>1</sup>, Fukui Hisao<sup>2</sup>  
<sup>1</sup>Tohoku University, <sup>2</sup>Aichi Gakuin University
- B-15 Electrochemical corrosion behavior of Ti-Nb-Ta-Zr alloy in fluoride-containing solution  
 ○Takemoto Shinji<sup>1</sup>, Nakai Masaaki<sup>2</sup>, Hattori Masayuki<sup>1</sup>, Ichikawa Hiromichi<sup>1</sup>, Igarashi Toshio<sup>1</sup>, Yoshinari Masao<sup>1</sup>, Kawada Eiji<sup>1</sup>, Niinomi Mitsuo<sup>2</sup>, Oda Yutaka<sup>1</sup>  
<sup>1</sup>Tokyo Dental College, <sup>2</sup>Tohoku University
- B-16 The effect of dental prosthesis metal ions in the biological immune system  
 ○Adachi Norimasa, Takayama Eiji, Kurachi Masakazu, Isigami Hajime  
 Asahi University

October 13 (Saturday)

Hall C

9:30 – 15:00 General Presentation (Poster Session) (11:00 – 12:00 Discussion)

[Award Challenge Posters P-1 – P-13]

- P-1 Effects of titanium immobilized with the monoclonal antibody to NHE10 on the differentiation of osteoclast and osteoblast cells  
 ○Shuto Takahiro<sup>1</sup>, Makihira Seicho<sup>1</sup>, Mine Yuichi<sup>2</sup>, Wachi Takanori<sup>1</sup>, Nikawa Hiroki<sup>2</sup>, Terada Yoshihiro<sup>1</sup>  
<sup>1</sup>Kyushu University, <sup>2</sup>Hiroshima University
- P-2 The effect of amorphous calcium phosphate films by radiofrequency magnetron sputtering on TNTZ implants on integration with bone  
 The effect of amorphous calcium phosphate films by radiofrequency magnetron sputtering on TNTZ implants on integration with bone.  
 ○Shiraishi Naru, Narushima Takayuki, Goto Takashi, Niinomi Mitsuo, Suzuki Osam, Sasaki Keiichi  
 Tohoku University
- P-3 Effect of laser emission parameters on mechanical properties of laser-treated cast titanium  
 ○Hayashi Taro, Kurogi Tadafumi, Murata Hiroshi, Shiraishi Takanobu, Watanabe IKuya  
 Nagasaki University
- P-4 Application to dentistry of selective laser melting (SLM) –Mechanical properties and corrosion resistance of the SLMed Co-Cr-Mo alloys–  
 ○Takaichi Atsushi<sup>1</sup>, Suyalatu<sup>1</sup>, Nomura Naoyuki<sup>1</sup>, Nakamoto Takayuki<sup>2</sup>, Hanawa Takao<sup>1</sup>, Igarashi Yoshimasa<sup>1</sup>  
<sup>1</sup>Tokyo Medical and Dental University, <sup>2</sup>Technology Research Institute of Osaka Prefecture
- P-5 Are self-adhesive resin luting cements effective for cementing of FRC post? –Influence of

storage period and thermal cycle-

○Soejima Hirotaka, Takemoto Shinji, Hattori Masayuki, Yoshinari Masao, Kawada Eiji, Oda Yutaka  
Tokyo Dental College

P-6 Characterization of self-cleaning dentures with photocatalytic technology

○Sawada Tomofumi, Kuwabara Atsushi, Kumasaka Tomonari, Ohno Akinori, Kimoto Katsuhiko  
Kanagawa Dental College

P-7 Application of poly-ethoxylated bis-phenol A dimethacrylates for composite resin

○Aoyagi Yusuke, Miyasaka Taira, Aoki Harumi, Isida Yoshiaki  
The Nippon Dental University at Tokyo

P-8 DNA/protamine complex can induce bone-formation

○Toda Masako<sup>1</sup>, Ohno Jun<sup>1</sup>, Ozaki Masao<sup>1</sup>, Hayakawa Tohru<sup>2</sup>, Fukushima Tadao<sup>1</sup>  
<sup>1</sup>Fukuoka Dental College, <sup>2</sup>Tsurumi University

P-9 Evaluation of adhesion between biomaterial and epithelium using human 3D epidermal model.

○Furuhashi Kazunori, Akasaka Tsukasa, Kitagawa Yoshimasa, Watari Fumio  
Hokkaido University

P-10 Fabrication of calcined hydroxyapatite nanocrystals and its application as coating agents for medical materials

○Omori Yuko<sup>1</sup>, Okada Masahiro<sup>1</sup>, Furuzono Tsutomu<sup>2</sup>, Takeda Syouji<sup>1</sup>, Matsumoto Naoyuki<sup>1</sup>  
<sup>1</sup>Osaka Dental University, <sup>2</sup>Kinki University

P-11 Synthesis of carbonate apatite foam that uses beta TCP foam as precursor

○Nikaido Taro<sup>1</sup>, Tsuru Kanji<sup>1</sup>, Melvin Munar<sup>1</sup>, Matsuya Shigeki<sup>2</sup>, Nakamura Seiji<sup>1</sup>, Ishikawa Kunio<sup>1</sup>  
<sup>1</sup>Kyushu University, <sup>2</sup>Fukuoka Dental College

P-12 Fabrication of spheric carbonate apatite using w/o emulsion method

○Nomura Shunsuke<sup>1</sup>, Tsuru Kanji<sup>1</sup>, Matsuya Shigeki<sup>2</sup>, Takahashi Ichiro<sup>1</sup>, Ishikawa Kunio<sup>1</sup>  
<sup>1</sup>Kyushu University, <sup>2</sup>Fukuoka Dental College

P-13 Characteristics of silicate-based cement produced from alginate impression material

○Yamaguchi Nobuaki<sup>1</sup>, Tamaki Yukimichi<sup>1</sup>, Kataoka Yu<sup>1</sup>, Miyazaki Takashi<sup>1</sup>, Zhang Zuta<sup>2</sup>  
<sup>1</sup>Showa University, <sup>2</sup>Beijing Institute of Dental Research, Capital Medical University, School of Stomatology,

P-14 Protective effect on demineralization of bovine enamel by S-PRG filler containing fissure sealant

○Kaga Masayuki<sup>1</sup>, Kakuda Shinichi<sup>1</sup>, Ida Yusuke<sup>2</sup>, Toshima Hirokazu<sup>2</sup>, Hashimoto Masanori<sup>2</sup>, Sano Hidehiko<sup>1</sup>, Endo Kazuhiko<sup>2</sup>  
<sup>1</sup>Hokkaido University, <sup>2</sup>Health Sciences University of Hokkaido

P-15 Flexural properties of glass fiber-reinforced plastic (GFRP) orthodontic wire

○Inami Toshihiro, Tanimoto Yasuhiro, Yamaguchi Masaru, Nishiyama Norihiro, Kasai Kazutaka  
Nihon University at Matsudo

P-16 Effect of amalgam fillings on gene expression profiles in rat blood

○Takahashi Yoshifumi, Tsuruta Shozo, Hasegawa Akihito, Aimu Kouki  
Aichi Gakuin University

P-17 Effect of gutta-percha added with an inorganic antibacterial agent on Porphyromonas gingivalis

○Kuroki Kenjiro, Takahashi Yoshifumi, Tomino Masafumi, Kiriya Takashi, Goto Youichi, Hayashi Tatsuhide, Kawai Tatsushi  
Aichi Gakuin University

P-18 Age-related changes of bone indentation properties in rats

○Inoue Toshiko, Saito Makoto, Yamamoto Masato, Nishimura Fumio, Miyazaki Takashi  
Showa University

P-19 Development of cyclic mechanical loading device for 3D scaffold.

○Yamada Masakazu<sup>1</sup>, Masuda Taisuke<sup>2</sup>, Anada Takahisa<sup>1</sup>, Honda Yositemo<sup>1</sup>, Takano-Yamamoto Teruko<sup>1</sup>, Suzuki Osamu<sup>1</sup>

<sup>1</sup>Tohoku University Graduate School of Dentistry, <sup>2</sup>Nagoya University

P-20 Literature research regarding toxicity of N, N'-dimethyl-p-toluidine

○Hongo Toshio<sup>1</sup>, Hikage Sakari<sup>2</sup>, Wada Takahiro<sup>1</sup>, Uo Motohiro<sup>1</sup>

<sup>1</sup>Tokyo Medical and Dental University, <sup>2</sup>Health Sciences University of Hokkaido

P-21 Metabolism of N, N'-dimethyl-p-toluidine by saliva, fetal bovine serum or S9

○Hongo Toshio<sup>1</sup>, Hikage Sakari<sup>2</sup>, Takahashi Hidekazu<sup>1</sup>, Iwasaki Naohiko<sup>1</sup>, Wada Takahiro<sup>1</sup>, Uo

Motohiro<sup>1</sup>

- P-22 Influence of titanium on cytotoxicity of metal ion elution from dental alloys  
○Matsuura Ritaro<sup>1</sup>, Mikagi Eriko<sup>1</sup>, Anraku Teruo<sup>1</sup>, Yamamoto Tetsuya<sup>2</sup>  
<sup>1</sup>Yamamoto Precious Metal Co., Ltd., <sup>2</sup>Kochi Medical School, Kochi University
- P-23 Evaluation of a commercial tissue conditioners for application of immediate dentures  
○Minato Teppei, Kurogi Tadafumi, Tanaka Rika, Nishimura Masahiro, Murata Hiroshi  
Nagasaki University
- P-24 Evaluation of cytotoxicity of hard denture relines resins by means of 3D collagen gel culture  
○Takase Kazuma, Nishimura Masahiro, Kurogi Tadafumi, Murata Hiroshi  
Nagasaki University
- P-25 Effect of micro bubble ozone water on oral bacteria  
○Kawase Yuji<sup>1</sup>, Yoshida Takamitsu<sup>2</sup>, Takeuchi Ken<sup>1</sup>, Nagasawa Sakae<sup>1</sup>  
<sup>1</sup>Matumoto Dental University, <sup>2</sup>Indiana University
- P-26 Durability of bactericidal activity in new electrolyzed water prepared by electrolysis with low frequency vibration by long-term storage  
○Nagamatsu Yuki, Tajima Kiyoshi, Kakigawa Hiroshi, Kozono Yoshio  
Kyushu Dental College
- P-27 Interfacial observation of cast joined area between gold alloy implant and silver based alloy  
○Ryukata Ichirou, Hayashi Mikita, Kakumoto Yoshimi, Ishida Yoshinori, Okada Hidetoshi,  
Kawashima Isao  
Ohu University
- P-28 Joint strength of cobalt-chromium alloy welded by various welding methods  
○Mori Hitomi, Shiraishi Takanobu, Watanabe Ikuya  
Nagasaki University
- P-29 Biocompatibility of cyclic pre-calcified nanotubular TiO<sub>2</sub> layer on Ti-6Al-7Nb alloy:  
corrosion behavior and cell proliferation  
○Thuy Duong Thi Nguyen<sup>1</sup>, Hyeoung Ho Park<sup>1, 2</sup>, Il Song Park<sup>1</sup>, Min Ho Lee<sup>1</sup>, Tae Sung Bae<sup>1</sup>  
<sup>1</sup>Chonbuk National Univ., <sup>2</sup>BS. COREM Co.
- P-30 Development of Au-Pd based alloy for biomedical application: magnetic susceptibility and mechanical properties of Au-Pd alloy  
○Inui Shihoko, Uyama Emi, Hamada Kenichi, Asaoka Kenzo  
University of Tokushima
- P-31 Effects of composition, working and heat treatment on magnetic susceptibility of Au-Pt alloy  
○Uyama Emi, Inui Shihoko, Hamada Kenichi, Kawano Fumiaki, Asaoka Kenzo  
University of Tokushima
- P-32 The evaluation of the surface roughness of the low-melting point's silver alloy which have been founded by self-designed trial centrifugal casting apparatus and under their mold's temperature varying  
○Yoshida Takaichi, Yoshida Koichi  
Toho Dental College
- P-33 Biomedical porous titanium alloys prepared by mechanical alloying and powder sintering  
○Ho Wen-Fu<sup>1</sup>, Hsu Hsueh-Chuan<sup>2</sup>, Tsai Ming-Shiun<sup>1</sup>, Kikuchi Hisaji<sup>3</sup>, Kurotani Tomoko<sup>3</sup>, Wu Shih-Ching<sup>2</sup>, Hsu Shih-Kuang<sup>2</sup>  
<sup>1</sup>Da-Yeh University, <sup>2</sup>Central Taiwan University of Science and Technology, <sup>3</sup>Nihon University
- P-34 Enhanced bioactivity of titanium mesh modified by anodic oxidation and cyclic precalcification treatments  
○Tae Sung Bae, J.W. Shin, Il Song Park, M.H. Lee  
Chonbuk National University

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October 14 (Sunday)

Hall A

9:30 – 11:00 General Presentation (Oral Session)

A-17 Influence of acetone on the surface quality of dual-cure type self-etching –Self-adhesive



resin luting cements with different cured mode-

○Han Linrin, Fukushima Masayoshi, Okiji Takashi  
Niigata University

A-18 Evaluation of adhesives for face guard materials

○Churei Hiroshi, Abe Keisuke, Fukasawa Shintaro, Takahashi Hidekazu, Uo Motohiro, Ueno Toshiaki  
Tokyo Medical and Dental University

A-19 Factors influencing on bond strengths of self-adhesive resin cements to tooth substrates

○Hirabayashi Shigeru, Hayakawa Tooru  
Tsurumi University

A-20 Modification effect of silane coupling agents contained poly(fluoro)alkyltrimethoxysilane (Part.14) ?Micro-structure of mixed silane coupling agents having fluorocarbon-

○Nihei Tomotaro<sup>1</sup>, Kunzelmann Karl-Heinz<sup>2</sup>, Ohashi Katsura<sup>1</sup>, Oshikawa Takahiro<sup>1</sup>, Suzuki Toshiyuki<sup>1</sup>, Yoshino Norio<sup>3</sup>, Teranaka Toshio<sup>1</sup>

<sup>1</sup>Kanagawa Dental College, <sup>2</sup>Ludwig-Maximilians-University of Munich, <sup>3</sup>Tokyo University of Science

A-21 Effect of MDP concentration in one-step adhesive on demineralization aspect

○Nishiyama Norihiro, Iwai Hitoshi, Fujita (Nakajima) Kou, Uchida ryoichiro, Tanimoto Yasuhiro, Takahashi Haruyoshi, Yaguchi Takehiro, Shibuya Isao, Ikemi Takuji  
Nihon University School of Dentistry at Matsudo

A-22 withdraw

Hall A

13:00 – 15:45 General Presentation (Oral Session)

A-23 Accelerating the curing of resin composite at the cavity floor

○Yoshikawa Takako<sup>1</sup>, Cho Eitetsu<sup>1</sup>, Tagami Junji<sup>1, 2</sup>

<sup>1</sup>Tokyo Medical and Dental University, <sup>2</sup>GCOE Program; IRCMSTBD

A-24 3D analysis of polymerization shrinkage with air bubble tracing  $\mu$ CT method

○Takemura Yukihiko, Hanaoka Koji, Kawamata Ryota, Teranaka Toshio  
Kanagawa Dental College

A-25 Effects of third-body media and composite resin type on wear resistance of composite resins

○KOOTTATHAPE Natthavoot<sup>1</sup>, Takahashi Hidekazu<sup>1</sup>, Finger J Werner<sup>2</sup>, Kanehira Masafumi<sup>2</sup>

<sup>1</sup>Tokyo Medical and Dental University, <sup>2</sup>Tohoku University

A-26 Physical properties of a glass fiber reinforced composite resin system

○Fukushima Shouichi, Sasaki Keiichi  
Tohoku University

A-27 Effect of polymerization shrinkage of composite resin on a tooth

○Teraoka Fumio<sup>1</sup>, Nakagawa Masafumi<sup>1, 2</sup>, Miyajima Hiroyuki<sup>1</sup>, Inaba Yoji<sup>1</sup>, Imazato Satoshi<sup>1</sup>

<sup>1</sup>Osaka University, <sup>2</sup>Shinosaka College

A-28 Character of resin and fillers in composite resins having different flow properties

○Watanabe Kouichi, Okawa Seigo, Kanatani Mitsugu, Ito Kyosuke, Kaneko Hiromi, Yamaga Yoshiro  
Niigata University

A-29 Vinylesters/polymer mixture system (Part 12) – The theoretical setting time of DVS-DVG/PEMA mixtures –

○Tanaka Jiro<sup>1</sup>, Irie Masao<sup>1</sup>, Hashimoto Yoshiya<sup>2</sup>, Takeda shoji<sup>2</sup>, Matsumoto Takuya<sup>1</sup>

<sup>1</sup>Okayama University, <sup>2</sup>Osaka Dental University

A-30 Effect of different fluorinated monomers on characteristics of experimental soft lining materials: Viscoelasticity, water sorption and solubility

○ Inoue Minoru<sup>1</sup>, Hoshino Yoshihito<sup>1</sup>, Nagasawa Yuko<sup>2</sup>, Hibino Yasushi<sup>2</sup>, Takahashi Hidekazu<sup>1</sup>, Sumi Yasunori<sup>3</sup>, Minakuchi Shunsuke<sup>1</sup>, Nakajima Hiroshi<sup>2</sup>

<sup>1</sup>Tokyo Medical and Dental University, <sup>2</sup>Meikai University, <sup>3</sup>National Center for Geriatrics and Gerontology

A-31 Effect of different monomer components on bonding durability of experimental fluorinated soft lining materials to denture base resin

○Hoshino Yoshihito<sup>1</sup>, Inoue Minoru<sup>1</sup>, Nagasawa Yuko<sup>2</sup>, Hibino Yasushi<sup>2</sup>, Takahashi Hidekazu<sup>1</sup>, Sumi Yasunori<sup>3</sup>, Minakuchi Syunsuke<sup>1</sup>, Nakajima Hiroshi<sup>2</sup>

<sup>1</sup>Tokyo Medical and Dental University, <sup>2</sup>Meikai University, <sup>3</sup> National Center for Geriatrics and Gerontology

**A-32 Evaluation of dynamic mechanical properties of acetal resin**

○Yoshida Kazuhiro, Kurogi Tadafumi, Tanaka Rika, Murata Hiroshi  
Nagasaki University

October 14 (Sunday)

Hall B

9:30 – 11:00 General Presentation (Oral Session)

**B-17 All-ceramic crown prepared by a new method –Improvement in coping fitness–**

○Masuda Takayuki, Komasa Yutaka, Kakimoto Kazutoshi, Inoue Taro, Takahashi Kazuya  
Osaka Dental University

**B-18 HRTEM observation of an adhesive interface between zirconia and porcelain.**

○Ban Seiji<sup>1</sup>, Tsuruki Jiro<sup>2</sup>

<sup>1</sup>Aichi Gakuin University, <sup>2</sup>Kagoshima University Graduate School of Medical and Dental Sciences

**B-19 Bonding strength between zirconia and dental porcelain Part 7 Effect of bonding porcelain**

○Tsuruki Jiro<sup>1</sup>, Noda Makoto<sup>1</sup>, Okuda Yuji<sup>1</sup>, Kono Hiroshi<sup>1</sup>, Kanie Takahito<sup>1</sup>, Arikawa Hiroyuki<sup>1</sup>,  
Ban Seiji<sup>2</sup>

<sup>1</sup>Kagoshima University, <sup>2</sup> Aichi Gakuin University

**B-20 Analysis of surface properties of dental zirconia**

○Tarumi Naoyoshi<sup>1, 2</sup>, Watari Fumio<sup>1</sup>

<sup>1</sup>Hokkaido University, <sup>2</sup>Sapporo Dental Laboratory

**B-21 Zirconia frame design for Crown Restoration –a Static analysis–**

○Kuroda Soichi<sup>1</sup>, Yokoyama Daichiro<sup>1</sup>, Sato F<sup>1</sup>, Hase H<sup>1,3</sup>, Shinya Akikazu<sup>1, 2</sup>, Gomi Harunori<sup>1</sup>,  
Shinya Akiyoshi<sup>1</sup>

<sup>1</sup>The Nippon Dental University, School of life Dentistry at Tokyo, <sup>2</sup> University of Turku

**B-22 Effect of zirconia coping design on the strength of all-ceramic crown**

○Goto Shin-ichi, Sugawara Yoshihiro, Maruyama Hiroshi, Ogura Hideo  
The Nippon Dental University

Hall B

13:00 – 15:45 General Presentation (Oral Session)

**B-23 Electrodeposition of type I collagen on titanium surface to improve its soft tissue compatibility.**

○Kyuragi Takeru, Migita Satoshi, Ono Takashi, Hanawa Takao  
Tokyo Medical and Dental University

**B-24 MALDI-TOF-MS and LC-MSMS analysis of bovine periosteal cell proteins**

○Akiyama Mari, Takeda Shoji  
Osaka Dental University

**B-25 SEM observation of biological samples using room temperature ionic liquids**

○Abe Shigeaki, Hyono Atsushi, Akasaka Tsukasa, Watari Fumio, Yonezawa Tetsu  
Hokkaido University

**B-26 Functionalization of Titania Nanotubes: Adsorption and Release of Calcium**

○Nishida Hisataka<sup>1</sup>, Yamamoto Kazuyo<sup>1</sup>, Sekino Tohru<sup>2</sup>

<sup>1</sup>Osaka Dental University, <sup>2</sup>Tohoku University

**B-27 Application of electrical polarization on glass-ceramic block.**

○Nozaki Kosuke, Nagai Akiko, Miura Hiroyuki, Yamashita Kimihiro  
Tokyo Medical and Dental University

**B-28 Formation of the artificial enamel on dentin using the ultrathin apatite sheet**

○Hontsu Shigeki<sup>1</sup>, Yoshikawa Kazushi<sup>2</sup>, Isai Arata<sup>1</sup>, Yamamoto Ei<sup>1</sup>, Kato Nobuhiro<sup>1</sup>, Nishikawa  
Hiroaki<sup>1</sup>, Kusunoki Masanobu<sup>1</sup>, Hashimoto Yoshiya<sup>2</sup>, Yamamoto Kazuyo<sup>2</sup>

<sup>1</sup>Kinki University, <sup>2</sup>Osaka Dental University

**B-29 Effect of short-term immersion in calcium chloride solution on surface hardness of restorative glass ionomer cements**

○Shiozawa Maho, Takahashi Hidekazu, Uo Motohiro, Iwasaki Naohiko, Wada Takahiro  
Tokyo Medical and Dental University

- B-30 A study on in vitro cellular compatibility of synthetic octacalcium phosphate  
 ○Morimoto Shinji, Anada Takahisa, Honda Yoshitomo, Suzuki Osamu  
 Tohoku University
- B-31 Effects of Particle size on the Hardening process and Sealing ability of OCP-mediated cement  
 ○Imamura Yuki, Horikawa Daiki, Nakamura Miho, Nagai Akiko, Yamashita Kimihiro  
 Tokyo Medical and Dental University
- B-32 Preparation of  $\alpha$ -TCP cement containing carbonate apatite  
 ○Matsuya Shigeki<sup>1</sup>, Maruta Michito<sup>1</sup>, Tsuru Kanji<sup>2</sup>, Ishikawa Kunio<sup>2</sup>  
<sup>1</sup> Fukuoka Dental College, <sup>2</sup> Kyushu University
- B-33 The effect of addition of  $\gamma$ PGA on the setting reaction of  $\alpha$ -TCP cement  
 ○Maruta Michito<sup>1</sup>, Matsuya Shigeki<sup>1</sup>, Tsuru Kanji<sup>2</sup>, Ishikawa Kunio<sup>2</sup>  
<sup>1</sup>Fukuoka Dental College, <sup>2</sup> Kyushu University

October 14 (Sunday)

Hall C

9:30 – 15:00 General Presentation (Poster Session) (11:00 – 12:00 Discussion)

- P-35 Modification of self-curing acrylic resin –Effect of LEB irradiation on polymer particles–  
 ○Ito Kyosuke<sup>1</sup>, Okawa Seigo<sup>1</sup>, Kanatani Mitsugu<sup>1</sup>, Kaneko Hiromi<sup>1</sup>, Yamaga Yoshio<sup>1</sup>, Nomura Akiko<sup>2</sup>, Nomura Shuichi<sup>1</sup>, Watanabe Kouichi<sup>2</sup>  
<sup>1</sup>Niigata University, <sup>2</sup>Meirin College
- P-36 The effect of difunctional methacrylates on flexural properties of self-cured resin  
 ○Yamamoto Yoshie, Maruo Yukinori, Irie Masao, Nishigawa Goro, Tamada Yoshiyuki, Matsumoto Takuya, Minagi Shogo  
 Okayama University
- P-37 Powderization of bamboo extracts and evaluation of antibacterial activity of dental materials incorporating the powdered bamboo extracts  
 ○Tanaka Daiki<sup>1</sup>, Teraoka Fumio<sup>1</sup>, Nakagawa Masafumi<sup>1, 2</sup>, Imazato Satoshi<sup>1</sup>  
<sup>1</sup>Osaka University, <sup>2</sup>Shinosaka College
- P-38 Effect of rotation-revolution mixer for powder-liquid type denture lining material on mechanical properties  
 ○Yamaga Yoshio, Okawa Seigo, Kanatani Mitugu, Ito Kyosuke, Kaneko Hiromi, Nomura Shuichi, Watanabe Kouichi  
 Niigata University
- P-39 The stress analysis of metal-supported restorations with hybrid composites using strain gauge  
 ○Nakagawa Masafumi<sup>1, 2</sup>, Teraoka Fumio<sup>2</sup>, Imazato Satoshi<sup>2</sup>  
<sup>1</sup>Shinosaka College, <sup>2</sup>Osaka University
- P-40 Effect on the application of light-cured glazing agents applied to denture base acrylic resins  
 ○Aoki Harumi, Miyasaka Taira, Aoyagi Yusuke, Ishida Yoshiki, Ando Nobuo  
 Nippon Dental University at Tokyo
- P-41 Application of frost shattering technique in fiberglass reinforced thermoplastic for face guard material  
 ○Abe Keisuke<sup>1</sup>, Churei Hiroshi<sup>1</sup>, Takahashi Hidekazu<sup>2</sup>, Ueno Toshiaki<sup>1</sup>  
 Tokyo Medical and Dental University
- P-42 A new method for the measurement of polymerization shrinkage of self-cured resin  
 ○Maruo Yukinori, Yamamoto Yoshie, Irie Masao, Nishigawa Goro, Tamada Yoshiyuki, Matsumoto Takuya, Minagi Shogo  
 Okayama University
- P-43 Occlusal wear of dental synthetic resin for crown and bridge  
 ○Kakuta Kiyoshi, Ogura Hideo  
 The Nippon Dental University
- P-44 Influence of the polymerization method for flexural strength of dual-cured composite resin cement  
 ○Iwasaki Naohiko, Takahashi Hidekazu, Asakawa Yuya, Shiozawa Maho  
 Tokyo Medical and Dental University
- P-45 Improvement of bond strengths between fiber-reinforced composite posts and composite resin by ultraviolet light irradiation



- Asakawa Yuya<sup>1</sup>, Takahashi Hidekazu<sup>1</sup>, Iwasaki Naohiko<sup>1</sup>, Kobayashi Masahiro<sup>2</sup>, Uo Motohiro<sup>2</sup>  
<sup>1</sup>Tokyo Medical and Dental University, <sup>2</sup>Chiba Institute of Technology
- P-46 Effect of thermal stress on the color of layered resin composite  
 ○Ando Susumu, Iino Masayoshi, Takimoto Masayuki, Tujimoto Akimasa, Tsubota Keishi, Kurokawa Hiroyasu, Miyazaki Masashi  
 Department of Operative Dentistry, Nihon University
- P-47 Effect on the application of light-cured glazing agents for composite resin  
 ○Ishida Yoshiki, Miyasaka Taira, Aoki Harumi, Aoyagi Yusuke, Ando Nobuo  
 The Nippon Dental University at Tokyo
- P-48 The influence of size and shape of filler on the fatigue strength of dental resin composite  
 ○Nomura Kei<sup>1</sup>, Yamanaka Keita<sup>1</sup>, Nishikawa Izuru<sup>1</sup>, Kato Takahiro<sup>2</sup>, Anraku Teruo<sup>2</sup>, Takahashi Hidekazu<sup>3</sup>  
<sup>1</sup>Osaka Institute of Technology, <sup>2</sup>Yamamoto Precious Metal Co., Ltd., <sup>3</sup>Tokyo Medical and Dental University
- P-49 Influence of filler particle size on optical transmittance and polishing property of composite resin  
 ○Kuroshima Hiroyuki<sup>1</sup>, Sato Yuji<sup>1, 2</sup>, Kato Takahiro<sup>1, 2</sup>, Yamauchi Junichi<sup>1</sup>, Yamada Bunichiro<sup>1</sup>, Anraku Teruo<sup>1</sup>  
<sup>1</sup>Yamamoto Precious Metal Co., Ltd., <sup>2</sup>Kochi University of Technology
- P-50 Influence of filler particle size on mechanical properties and durability of composite resin  
 ○Sato Yuji<sup>1, 2</sup>, Kuroshima Hiroyuki<sup>1</sup>, Kato Takahiro<sup>1, 2</sup>, Yamauchi Junichi<sup>1</sup>, Yamada Bunichiro<sup>1</sup>, Anraku Teruo<sup>1</sup>  
<sup>1</sup>Yamamoto Precious Metal Co., Ltd., <sup>2</sup>Kochi University of Technology
- P-51 Effect of surface treatment of SUS444 alloy filler and 4-META content in base-resin on setting property of magnetic resin composite material  
 ○Soma Hiroko, Miyagawa Yukio  
 The Nippon Dental University
- P-52 The characteristics of the high elastomeric vinyl polysiloxane impression material: GC SOFTFLEX  
 ○Ohta Miyuki, Shinozaki Yutaka, Kamohara Hiroshi, Sakuma Tetsuro  
 GC Corporation
- P-53 Development of a repairing liquid containing silane coupling agent for hybrid resins  
 ○Kimura Hiroaki, Kato Takahiro<sup>1, 2</sup>, Saigo Kazuhiko<sup>2</sup>, Yamada Bunichiro<sup>1</sup>, Yamauchi Junichi<sup>1</sup>, Anraku Teruo<sup>1</sup>  
<sup>1</sup>Yamamoto Precious Metal Co., Ltd., <sup>2</sup>Kochi University of Technology
- P-54 Effect of self-adhesive resin cement, immersion temperature and surface treatment agent on bond strength to nanozirconia  
 ○Shinya Kyoko, Shinya Akihiro, Shinya Akiyoshi  
 The Nippon Dental University
- P-55 Effect of an experimental hydrophilic primer in 4-META/MMA-TBB dentin bonding system  
 ○Soeno Kohyoh, Taira Yohsuke, Sawase Takashi  
 Nagasaki University
- P-56 Preservation stability of surface treatment with adhesion-promoting monomer to pure gold  
 ○Kadoma Yoshinori  
 Tokyo Medical and Dental University
- P-57 Influence of environmental conditions on bond strength of single-step adhesives  
 ○Yokokawa Miho<sup>1</sup>, Nojiri Kie<sup>1</sup>, Takenaka Hirotaka<sup>1</sup>, Shiratsuti Koji<sup>1</sup>, Tsubota Keishi<sup>1, 2</sup>, Rikuta Akitomo<sup>1, 2</sup>, Masutani Shigeyuki<sup>1</sup>, Miyazaki Masashi<sup>1, 2</sup>  
 Nihon University School of Dentistry
- P-58 Effects of retention bead size and adhesive thickness on the bond strength of resin for crown and bridge  
 ○Kato Takahiro<sup>1, 2</sup>, Saigo Kazuhiko<sup>2</sup>, Yamada Bunichiro<sup>1</sup>, Yamauchi Junichi<sup>1</sup>, Anraku Teruo<sup>1</sup>  
<sup>1</sup>Yamamoto Precious Metal Co., Ltd., <sup>2</sup>Kochi University of Technology
- P-59 Effects of surface treatments on phase transformation of dental zirconia  
 ○Shih-Ching Wu<sup>1</sup>, Huei-Jyuan Liao<sup>1</sup>, Pai-Ling Chang<sup>2</sup>, Chi Pan<sup>2</sup>, Wen-Fu Ho<sup>3</sup>, Hsueh-Chuan Hsu<sup>1</sup>, Shih-Kuang Hsu<sup>1</sup>, Pei-Chun Tsai<sup>1</sup>  
<sup>1</sup>Central Taiwan University of Science and Tech, <sup>2</sup>Tao-Yuan General Hospital, <sup>3</sup>Da-yeh University

P-60 Connecting between zirconia coping and veneering ceramic-Comparison of glass-connecting agent with resin-bonding agent-

○Yoshihara Kentaro, Sakakibara Ryo, Suzuki Takayoshi, Ban Seiji, Kawai Tatsushi, Nakamura Yoshinori, Tanaka Yoshinobu  
Aichi-Gakuin University

P-61 Thickness dependence of color of base dentine porcelains for zirconia ceramics

○Watanabe Daichi, Tokuda Eri, Iwai Kaori, Shiraishi Takanobu, Watanabe Ikuya  
Nagasaki University

P-62 Optical properties of effect porcelains for all-ceramic crown restorations

○Shiraishi Takanobu, Ikeda Kahori, Watanabe Ikuya  
Nagasaki University

P-63 Adsorption characteristics of phosphoric acid ester monomer for zirconia surface

○Tamada Yoshiyuki, Nagaoka Noriyuki, Hayakawa Satoshi, Irie Masao, Nishigawa Goro, Maruo Yukinori, Yoshida Yasuhiro, Matsumoto Takuya, Osaka Akiyoshi, Minagi Shogo  
Okayama University

P-64 Antibacterial effects of trial temporary cement with HY agent, Tannic acid, SrF<sub>2</sub> and ZnF<sub>2</sub>

○Aida Etsuko, Suzuki Hideaki, Tanimura Hideki, Aida Masahiro, Ikemi Takuji  
Nihon University School of Dentistry at Matsudo

P-65 Application of  $\alpha$ -TCP/Te-CP cement to pulp capping materials

○Takeda Shinpei, Kawano Satoshi, Kamiyama Chikako, Doi Yutaka, Yoshida Takakazu  
Asahi University

P-66 Characterization of calcium phosphate deposited on magnesium and its alloys by applying polarity inversion electrolysis

○Okawa Seigo, Ito Kyosuke, Kaneko Hiromi, Yamaga Yoshiyo, Watanabe Kouichi, Kanatani Mitsugu  
Niigata University

P-67 Effects of colloidal silica concentration of porosity of the phosphate-bonded investment set and burn-out compacts

○Bae Jiyoung, Asaoka Kenzo  
University of Tokushima

P-68 Surface roughness and surface free energy of restorative dental materials

○Ohashi Katsura, Nihei Tomotaro, Oshikawa Akihiro, Suzuki Toshiyuki, Teranaka Toshio  
Kanagawa Dental College

P-69 Evaluation of Additive Manufacturing Co-Cr Alloy Crown

○Shinya Akiyoshi<sup>1</sup>, Shinya Akihiro<sup>1</sup>, Kobayashi S.<sup>1</sup> Miyazaki Yoji<sup>1</sup>, Niu Dongping<sup>3</sup>, Zheng Gang<sup>4</sup>  
<sup>1</sup>The Nippon Dental University, <sup>2</sup>SANWA DENTAL, <sup>3</sup>Beijing Liaison Dental <sup>4</sup>Beijing University

P-70 Trial for electrical welding of titanium and stainless steel alloy wires for orthodontics

○Nakao Noriko, Matsunaga Junko, Watanabe Etsuko, Yoshida Noriaki, Watanabe Ikuya  
Nagasaki University

P-71 Shear bond strengths of resin cements to the ceria stabilized zirconia/alumina nano-composite ceramics treated with several surface modifications

○Sato Kotaro, Fujishima Akihiro, Hotta Yasuhiro, Miyazaki Takashi  
Showa University

P-72 A new method to fabricate zirconia copings using Nd:YVO<sub>4</sub> laser -Determination of laser irradiation condition and machining accuracy-

○Kazama Miku, Ohkuma Kazuo, Ogura Hideo  
The Nippon dental University

P-73 Examination of zirconia frame design -Finite element analysis -

○Yokoyama Daiichiro<sup>1</sup>, Shinya Akikazu<sup>1,2</sup>, Kuroda Soichi<sup>1</sup>, Hase Hideaki<sup>1,3</sup>, Sato F.<sup>1</sup>, Gomi Harunori<sup>1</sup>, Shinya Akiyoshi<sup>1</sup>

<sup>1</sup>The Nippon dental University, <sup>2</sup>University of Turku, <sup>3</sup>Fukuoka Dental College

P-74 Model studies on bleaching with apatite photocatalyst

○Kamemizu Hideo, Noda Yoko, Komada Yuko, Iijima Mayumi, Wakamatsu Nobukazu, Adachi Masanori, Hotta Masato, Doi Yutaka  
Asahi University