

2016

**Hiroshima University School of Dentistry, Hiroshima
University Hospital, Institute of Biomedical & Health Sciences**

Research Achievements

2016

Contents

Hiroshima University School of Dentistry, Hiroshima University Hospital, Graduate School of Biomedical & Health Sciences

○ Basic Life Sciences

- [Department of Calcified Tissue Biology](#)
- [Department of Oral Biology](#)
- [Department of Physiology and Oral Physiology](#)
- [Department of Molecular Biology and Biochemistry](#)
- [Department of Oral and Maxillofacial Pathobiology](#)
- Department of Bacteriology
- [Department of Cellular and Molecular Pharmacology](#)
- [Department of Biomaterials](#)
- Department of Mucosal Immunology

○ Applied Life Sciences

- [Department of Periodontal Medicine, and Division of Preventive and Restorative Dentistry \(Department of Periodontics and Endodontics\)](#)
- [Department of Molecular Oral Medicine & Maxillofacial Surgery, Division of Oral and Maxillofacial Surgery and Oral Medicine \(Department of Oral and Maxillofacial Surgery\)](#)
- Department of Oral and Maxillofacial Surgery, and Division of Oral and Maxillofacial Surgery and Oral Medicine (Department of Oral and Maxillofacial Reconstructive Surgery)
- [Department of Advanced Prosthodontics, and Division of Preventive and Restorative Dentistry \(Department of Oral Implant\)](#)
- [Department of Advanced Prosthodontics, and Division of Preventive and Restorative Dentistry \(Department of Prosthetic Dentistry\)](#)
- [Department of Orthodontics and Craniofacial Development Biology, and Division of Oral Health and Development \(Department of Orthodontics\)](#)
- [Department of Oral & Maxillofacial Radiology, Division of Oral and Maxillofacial Surgery and Oral Medicine \(Department of Oral and Maxillofacial Radiology\)](#)

○ Integrated Health Sciences

- [Department of Biological Endodontics, and Division of Preventive and Restorative Dentistry \(Department of Operative and Conservative Dentistry\)](#)
- [Department of Pediatric Dentistry, and Division of Oral Health and Development](#)

(Department of Pediatric Dentistry)

- Department of Dental Anesthesiology, and Division of Oral & Maxillofacial Surgery and Oral Medicine (Department of Dental Anesthesiology and Orofacial Pain Management)
- Department of International Collaboration Development for Dentistry
- Department of Public Oral Health
- Department of Maxillofacial Functional Development
- Department of Oral Health Management
- Department of Anatomy and Functional Restorations
- Department of Medical System and Biomaterial Engineering
- Department of Oral Biology & Engineering
- Central Research Laboratory
- Division of General Dentistry, Department of General Dentistry
- Division of Oral Health and Development, Department of Oral Health
- Division of Oral Health and Development, Department of Special Care Dentistry
- Central Clinical Divisions, Special Dental Clinic Section
- Central Clinical Divisions, Center of Oral Clinical Examination
- Central Clinical Divisions, Dental Technicians Section
- Central Clinical Divisions, Dental Hygiene Section
- Dental Clinic
- Dental Medical Information Section

Department of Calcified Tissue Biology, Basic Life Sciences

(1) Staff and Students

Professor: Yuji Yoshiko

Assistant Professor: Tomoko Minamizaki, Hiroataka Yoshioka, Yuichiro Takei

Research Assistant: Yayoi Sato, Atsuko Tomiyama

Graduate Student: Kaoru Sakurai (Pediatric Dentistry), Yoko Fujino (Special Care Dentistry), Kazuko Kagawa (Advanced Prosthodontics), Saki Okita (Orthodontic Dentistry), Yuko Nakao (Orthodontic Dentistry), Faisal Ahmed, Yasumasa Irie (Pediatric Dentistry), Sarmin Nushrat, Masashi Nakano (Pediatric Dentistry), Shota Ito (Orthodontic Dentistry), Chise Fujimoto

(2) Main Research Activities

- 1 : Bone and tooth formation and mineralization
- 2 : Calcitropic and phosphotropic factors and mineral metabolism
- 3 : Osteonetwork
- 4 : MicroRNA

(3) Research Achievements

A) Original Papers (including Case Reports)

1 : Imaging and mapping of mouse bone using MALDI-imaging mass spectrometry: Fujino Y., Minamizaki T., Yoshioka H., Okada M., Yoshiko Y.: Bone Reports, 5, 280-285, 2016.

B) Review

1 : Nano-architecture of osteocyte lacunae: Minamizaki T., Ahmed F., Yoshiko Y.: Journal of Molecular and Genetic Medicine, 10 (4), 231, 2016.

C) Publications

D) Other Publications

E) Presentation at Scientific Meeting

- 1 : Nano-CT Analysis of Osteocyte Lacunar Anomalies in Klotho-deficient Mice.: Minamizaki T., Yoshioka H., Takei Y., Yoshiko Y.: 121st Annual Meeting of the Japanese Association of Anatomists the General Assembly. Koriyama, Mar. 2016.
- 2 : MicroRNA-125b in bone matrix plays a crucial role in osteoblast-osteoclast communication.: Minamizaki T., Takei Y., Nakao Y., Irie Y., Yoshioka H., Tanimoto K., Kozai K., Yoshiko Y.: 43rd Annual European Calcified Tissue Society Congress. Rome, May 2016.
- 3 : Osteoblasts inhibit osteoclast formation by targeting *Prdm1* via a mechanism underlying matrix vesicle-mediated transfer of miR-125b. Irie Y., Minamizaki T., Nakao Y., Ahmed F., Yoshioka H., Kozai K., Takei Y., Yoshiko Y.: The 34th Annual Meeting of the Japanese Society for Bone and Mineral Research. Osaka, Jul. 2016.
- 4 : Matrix vesicle miRNA-125b suppresses osteoclast formation by targeting *Prdm1*. Irie Y., Minamizaki T., Yoshioka Y., Kozai K., Yoshiko Y. The 2006 Annual Scientific Meeting of the Endocrine Society of Australia, the Society of Reproductive Biology and the Australian and New Zealand Bone and Mineral Society. Gold Coast, 2016.
- 5 : Osteoblasts Inhibit Osteoclast Formation by Targeting *Prdm1* via the Mechanism Underlying Matrix Vesicle-Mediated Transfer of miR-125b.: Irie Y., Minamizaki T., Ahmed F., Nakao Y., Yoshioka H., Tanimoto K., Kozai K., Yoshiko Y.: The American Society for Bone and Mineral Research 2016 Annual Meeting. Atlanta, Sep. 2016.
- 6 : Analysis of osteoblast heterogeneity by single cell RNA-seq.: Okita S, Yoshioka H, Minamizaki T, Tanimoto K, Yoshiko Y.: The 71st Chugoku-Shikoku Sectional Meeting of Japanese Association of Anatomists. Okayama, Oct. 2016.
- 7 : Histomorphometric Analysis of Klotho-Deficient Mice by Nano-CT.: Ahmed F., Minamizaki T., Yoshioka H., Yoshiko Y.: The 71st Chugoku-Shikoku Sectional Meeting of Japanese Association of Anatomists. Okayama, Oct. 2016.
- 8 : Heterogeneity of osteoblasts and their potential for adipogenic transdifferentiation. : Okita S, Yoshioka H, Minamizaki T, Tanimoto K, Yoshiko Y. : The 39th Annual Meeting of the Molecular Biology Society of Japan. Yokohama, Nov. 2016.

F) Special lectures in academic meetings

(4) Status of Receiving Grants-in Aid for Scientific Research, etc.

- 1 : Grants-in-Aid for Scientific Research (C) Continuance: Yoshioka H., Development of bone

regeneration strategies by controlling the epigenetic state of bone lining cells. No. 26462785, ¥1,430,000

- 2 : Grants-in-Aid for Scientific Research (C) New: Minamizaki T., Trials to inhibit bone metastasis by focusing on miRNAs in bone. No. 16K11443, ¥1,430,000

(5) Academic Awards, etc.

- 1 : Minamizaki T.: East-Meet-West Travel Award, 43rd Annual European Calcified Tissue Society Congress. Rome, 2016.

- 2 : Irie Y., et al.: Plenary poster, The 34th Annual Meeting of the Japanese Society for Bone and Mineral Research. Osaka, 2016.

- 3 : Irie Y.: ANZBMS 2016 Travel Award, The 34th Annual Meeting of the Japanese Society for Bone and Mineral Research. Osaka, 2016.

- 4 : Irie Y., et al.: Plenary poster, 2016 Joint Scientific Meeting of the ESA-SRB-ASZBMS 2016. Gold Coast, 2016.

- 5 : Irie Y., et al.: Plenary poster, The American Society for Bone and Mineral Research 2016 Annual Meeting. Atlanta, 2016.

- 6 : Irie Y.: Young Investigator Award, The American Society for Bone and Mineral Research 2016 Annual Meeting. Atlanta, 2016.

(6) Patents

- 1 : Yoshiko Y., Minamizaki T., Yoshioka H., Hirata I., Kozai K., Maeda N., Watanabe K., Kiyofuji T.: Phosphorylated peptide, hard tissue and/or ectopic calcification inhibitor, antibody, and hard tissue and/or ectopic calcification promoter. JPB5950380 (Applicant, Hiroshima University and Raffinee International Co. Ltd.).

- 2 : Yoshiko Y., Minamizaki T., Yoshioka H., Maeda N., Kozai K., Watanabe K.: Applications for Klotho, FGF23 and FGFR in mineralized tissues. JPB5927782 (Applicant, Hiroshima University and Raffinee International Co. Ltd.)

[Return to Contents](#)

Basic Life Sciences

Department of Oral Biology

(1) Staff and Students

Professor : Takashi Uchida

Assistant Professor : Shinji Hiyama, Mineo Watanabe (untill end of the September)

(2) Main Research Activities

- 1 : Morphological and molecular biological studies of the amelogenesis
- 2 : Molecular biological and morphological studies of the mechanism of bone metabolism
- 3 : Referred pain involved with inflammatory cytokines on orofacial regions

(3) Research Achievements

A) Original Papers (including Case Reports)

- 1 : Sasagawa I, Oka S, Mikami M, Yokosuka H, Ishiyama M, Imai A, Shimokawa H, Uchida T. Immunohistochemical and Western Blotting Analyses of Ganoine in the Ganoid Scales of *Lepisosteus oculatus*: an Actinopterygian Fish. *J Exp Zool B Mol Dev Evol.* 326B:193-209, 2016.
- 2 : Sawajiri M, Miyamoto S, Yamanouchi K, Wada S, Srimawong P, Nomura Y, and Uchida T. Drinking high-energy electrolytic water decreases internal radiation exposure caused by the Fukushima Dai-ichi nuclear power plant disaster, *Nuclear Technology & Radiation Protection*, 31:173-178, 2016
- 3 : Kitagawa M, Ando T, Subarnbhesaj A, Uchida T, Miyauchi M, Takata T. N-terminal region of human ameloblastin synthetic peptide promotes bone formation. *Odontology.* 2016 Jun 4. [Epub ahead of print]

B) Review

C) Publications

D) Other Publications

E) Presentation at Scientific Meeting

F) Special lectures in academic meetings

(4) Status of Receiving Grants-in Aid for Scientific Research, etc.

1 : Grant-in Aid-for Scientific Research (C): Shinji Hiyama, The study for the inhibition of osteoclast apoptosis and the regulation of bone resorption by estrogen and estrogen target factors. 15K11010, 2,010 千円

(5) Academic Awards, etc.

(6) Patents

[Return to Contents](#)

Basic Life Sciences

Department of Physiology and Oral Physiology

(1) Staff s and Students

Professor : SUGITA, Makoto

Associate Professor : HIRONO, Chikara

Assistant Professor : KITAGAWA, Michinori

Research Assistant : YAMAMOTO, Kuniyo

Graduate Students : YAMAMOTO, Kuniyo, TERACHI, Momomi

(2) Main Research Activities

- 1 : The molecular and cellular bases of taste perception and coding
- 2 : The neuronal mechanisms underlying the taste-evoked behavioral and emotional responses
- 3 : The molecular mechanisms of ion and fluid transport in salivary glands
- 4 : The molecular mechanisms in development, morphogenesis and functional maintenance of salivary glands and oral tissues
- 5 : Studies on the function and dysfunction of ion channels and transporters

(3) Research Achievements

A) Original Papers (including Case Reports)

- 1 : Different rate-limiting activities of intracellular pH regulators for HCO_3^- secretion stimulated by forskolin and carbachol in rat parotid intralobular ducts : Ueno K., Hirono C., Kitagawa M., Shiba Y., Sugita M. : J. Physiol. Sci., 66, 477-490, 2016.

B) Review

C) Publications

D) Other publication

E) Presentation at Scientific Meeting

- 1 : The architecture and information processing in brainstem bitter taste-relaying neurons defined by genetic tracing : Sugita M., Yamamoto K., Hirono C., Shiba Y. : 17th International Symposium on Olfaction and Taste (Yokohama), 2016.
- 2 : Functional analysis of transcriptional co-factor YAP during salivary gland development in mice : Kitagawa M., Hirono C., Sugita M. : The 58th Annual Meeting of the Japanese Association for Oral Biology (Sapporo), 2016.
- 3 : Rate-limiting activities for intracellular pH regulation during HCO_3^- secretion in rat parotid intralobular ducts : Ueno K., Hirono C., Kitagawa M., Shiba Y., Sugita M. : 2016 NIPS Research Meeting (Okazaki), 2016.

(4) Status of Receiving Grants-in Aid for Scientific Research, etc.

(5) Academic Awards, etc.

(6) Patents

[Return to Contents](#)

Basic Life Sciences

Department of Molecular Biology and Biochemistry

(1) Staff and Students

Professor: Chisa Shukunami

Assistant Professor: Katsumi Fujimoto

Assistant Professor: Hiroshi Yamashita

Assistant Professor (Special Appointment): Yuki Yoshimoto

Graduate Student: Seima Tanaka

(2) Main Research Activities

- 1: Mechanisms regulating in the establishment of the junction between cartilage and tendon/ligament
- 2: The role of Pax1 during formation of vertebral column
- 3: Mechanisms of tendon/ligament formation
- 4: Mechanisms of periodontal ligaments formation
- 5: Pathogenic mechanisms involved in adolescent idiopathic scoliosis
- 6: Mechanisms regulating differentiation of dental pulp stem cells

(3) Research Achievements

A) Original Papers (including Case Reports)

- 1: Tenogenic modulating insider factor: Systematic assessment on the functions of tenomodulin gene: Dex S., Lin D., Shukunami C., and Docheva D: *Gene*, 587, 1-17 , 2016.
- 2: Role of MSX1 in Osteogenic Differentiation of Human Dental Pulp Stem Cells : Goto N., Fujimoto K., Fujii S., Ida-Yonemochi H., Ohshima H., Kawamoto T., Noshiro M., Shukunami C., Kozai K., and Kato Y.: *Stem cells international*, 8035759, 2016.
- 3: Functional Investigation of a Non-coding Variant Associated with Adolescent Idiopathic Scoliosis in Zebrafish: Elevated Expression of the Ladybird Homeobox Gene Causes Body Axis Deformation: Guo L., Yamashita H., Kou I., Takimoto A., Meguro-Horike M., Horike S., Sakuma T., Miura S., Adachi T., Yamamoto T., Ikegawa S., Hiraki Y., and Shukunami C.: *PLoS genetics*, 12, e1005802, 2016.
- 4: Rhythmic expression of DEC2 protein in vivo and vitro: Sato F., Muragaki Y., Kawamoto T., Fujimoto K., Kato Y., and Zhang Y.: *Biomedical Reports*, 4, 704-710, 2016.
- 5: DEC2 is a negative regulator for the proliferation and differentiation of chondrocyte lineage-committed mesenchymal stem cells: Sasamoto T., Fujimoto K., Kanawa M., Kimura J., Takeuchi J., Harada N., Goto N., Kawamoto T., Noshiro M., Suardita K., Tanne K., and Kato Y. *International Journal Molecular Medicine*, 38, 876-884, 2016.

B) Review

- 1: Molecular characterization and function of tenomodulin, a marker of tendons and ligaments that integrate musculoskeletal components: Shukunami C., Yoshimoto Y., Takimoto A., Yamashita H., and Hiraki Y.: Japanese Dental Science Review, 52, 84-92, 2016.
- 2: Ligament formation and regeneration: Yoshimoto Y., Yamashita H., Shukunami C.: Keynote. **4(4)**, 20-25, 2016.

C) Publications

D) Other Publications

E) Presentation at Scientific Meeting

- 1: Establishment of immortalized tenocytic cell line, T2S: Hiroshi Yamashita, Yuki Yoshimoto, Chisa Shukunami: The 7th Bone Science workshop (Okayama), 2016.
- 2: Functional investigation of a non-coding variant of the ladybird homeobox gene associated with adolescent idiopathic scoliosis in zebrafish: Long Guo, Hiroshi Yamashita, Aki Takimoto, Shiro Ikegawa, Yuji Hiraki, Chisa Shukunami: The 34th Annual Meeting of the Japanese Society for Bone and Mineral Research, The 3rd Asia-Pacific Bone & Mineral Research Meeting (Osaka), 2016.
- 3: Establishment and characterization of immortalized tenocytic cell line, T2S: Hiroshi Yamashita, Yuki Yoshimoto, Chisa Shukunami: The 34th Annual Meeting of the Japanese Society for Bone and Mineral Research, The 3rd Asia-Pacific Bone & Mineral Research Meeting (Osaka), 2016.
- 4: Analysis of signaling pathways regulating *Tenomodulin* expression in immortalized tenocytic cell line, T2S: Hiroshi Yamashita, Yuki Yoshimoto, Chisa Shukunami: The 2nd Meeting of Japan Muscle Society (Tokyo), 2016.
- 5: Functional analysis of Scleraxis in the tissue domains for integration of the musculoskeletal system: Yuki Yoshimoto, Aki Takimoto, Tetsushi Sakuma, Hitomi Watanabe, Gen Kondoh, Takashi Yamamoto, Yuji Hiraki, Chisa Shukunami: The 2nd annual meeting of the Japanese society for genome editing (Hiroshima), 2016.
- 6: Effects of radiation on skeletal development: Seima Tanaka and Chisa Shukunami: The 7th Retreat of Phoenix Leader Education Program (Hiroshima Initiative) for Renaissance from Radiation Disaster (Hiroshima), 2016.
- 7: The role of Scleraxis in the formation of tendons and ligaments integrating the musculoskeletal components: Yuki Yoshimoto, Aki Takimoto, Hitomi Watanabe, Gen Kondoh, Yuji Hiraki, Chisa Shukunami: The 4th Society of Skeletal Muscle Cells (Nagoya), 2016.

- 8: Analysis of the regulatory mechanisms underlying cartilage-specific expression of *Chondromodulin-I* in zebrafish : Hiroshi Yamashita : Skeletal Science Retreat 2016 (Shizuoka), 2016.

F) Special lectures in academic meetings

- 1: Molecular mechanisms regulating tendon and ligament formation: Chisa Shukunami: The 37th seminar supported by the scientific foundation of graduate school of Veterinary Medicine, Hokkaido University (Hokkaido), 2016.
- 2: Molecular mechanisms regulating tendon and ligament formation: Chisa Shukunami: The 21st Leading Special Lecture (Fostering Global Leaders in Veterinary Science toward Contributing to “One Health”- Hokkaido University, Program for Leading Graduate Schools (Hokkaido), 2016.
- 3: Mechanisms regulating formation of tissues to integrate the musculoskeletal components: Chisa Shukunami: Seminar for Gastroenterological and Metabolism (Hiroshima), 2016.
- 4: Mechanisms regulating formation and maintenance of tendons/ligaments that integrate the musculoskeletal components: Chisa Shukunami: Workshop “Matrix Connection” - The 48th Annual Meeting of the Japanese Society for Matrix Biology and Medicine (Nagasaki), 2016.
- 5: Regulation of tendon and ligament formation by bHLH transcription factor, Scleraxis: Chisa Shukunami: The 11th Shimanami Bone and Joint Forum (Ehime), 2016.
- 6: Molecular characterization and function of tenomodulin, a marker of tendon/ligaments to integrate the musculoskeletal components: Chisa Shukunami: The 13th Bone Biology Forum (Chiba), 2016.
- 7: Mechanisms governing formation of the Entheses: Chisa Shukunami: The 31th Annual Research Meeting of the Japanese Orthopaedic Association (Fukuoka), 2016.

(4) Status of Receiving Grants-in Aid for Scientific Research, etc.

- 1: Grant-in-Aid for Scientific Research (B): Chisa Shukunami, 26293395. ¥3,000,000
- 2: Grant-in-Aid for Challenging Exploratory Research: Chisa Shukunami, 16K15780. ¥1,100,000
- 3: Grant-in-Aid for Scientific Research (B): Haruhiko Akiyama, Chisa Shukunami, 25293319. ¥100,000
- 4: Grant-in-Aid for Scientific Research (C): Aki Takimoto, Chisa Shukunami, 16K10899. ¥100,000
- 5: Grant-in-Aid for Challenging Exploratory Research: Shigeru Miyaki, Chisa Shukunami, 16K15667. ¥200,000
- 6: Grant-in-Aid for Young Scientists (B): Yuki Yoshimoto, 15K20373 ¥1,200,000
- 7: Grant-in-Aid for Scientific Research (C): Katsumi Fujimoto, 16K09624. ¥200,000
- 8: The Cooperative Research Program of the Institute for Frontier Medical and life Sciences, Kyoto University: Chisa Shukunami, ¥2,000,000

(5) Academic Awards, etc.

Hiroshi Yamashita : Excellent Poster Award (Skeletal Science Retreat 2016)

(6) Patents

[Return to Contents](#)

Basic Life Sciences

Department of Oral and Maxillofacial Pathobiology

(1) Staffs and Students

| | |
|---------------------|--|
| Professor | : Takashi Takata |
| Associate Professor | : Mutsumi Miyauchi |
| Assistant Professor | : Hisako Furusho, Toshinori Ando |
| Researcher | : Chea Chanbora (D4, Graduated in March), |
| Graduate Student | : Shunryo Yanagisawa (D4, graduated in March), Atsuhiko Nagasaki (D3), Shinichi Sakamoto (D2), Hiroki Tsuji (D2), Shrestha Madhu (D2), Naoki Sako (M2), Sakura Yamada (D2, Department of orthodontics) |

(2) Main Research Activities

- 1 : Molecular pathological study on proliferation and development of oral squamous cell carcinoma
- 2 : Experimental pathological study on the mechanism of regeneration of periodontal tissues
- 3 : Experimental pathological study on relationship between odontogenic infection and systemic health condition
- 4 : Study on the criteria of diagnosis and cellular differentiation of odontogenic tumors and salivary gland tumors

(3) Research Achievements

A) Original Papers (including Case Reports)

- 1 : γ -Glutamyltranspeptidase is an endogenous activator of Toll-like receptor 4-mediated osteoclastogenesis: Moriwaki S., Into T., Suzuki K., Miyauchi M., Takata T., Shibayama K., Niida S.: *Sci. Rep.* 24(6):35930, 2016. doi: 10.1038/srep35930.
- 2 : Human odontogenic epithelial cells derived from epithelial rests of Malassez possess stem cell properties: Tsunematsu T., Fujiwara N., Yoshida M., Takayama Y., Kujiraoka S., Qi G., Kitagawa M., Kondo T., Yamada A., Arakaki R., Miyauchi M., Ogawa I., Abiko Y., Nikawa H., Murakami S., Takata T., Ishimaru N., Kudo Y.: *Lab. Invest.* 96(10):1063-75, 2016. doi: 10.1038/labinvest.2016.85.
- 3 : N-terminal region of human ameloblastin synthetic peptide promotes bone formation: Kitagawa M., Ando T., Subarnbhesaj A., Uchida T., Miyauchi M., Takata T.: *Odontology*. 2016. [Epub ahead of print]

- 4 : Effects of C-Terminal Amelogenin Peptide on Proliferation of Human Cementoblast Lineage Cells: Yoshimi Y., Kunimatsu R., Hirose N., Awada T., Miyauchi M., Takata T., Li W., Zhu L., Denbesten P., Tanne K., Tanimoto K.: J. Periodontol. 87(7):820-7, 2016. doi: 10.1902/jop.2016.150507.
- 5 : The C-terminus of amelogenin enhances osteogenic differentiation of human cementoblast lineage cells: Kunimatsu R., Yoshimi Y., Hirose N., Awada T., Miyauchi M., Takata T., Li W., Zhu L., Denbesten P. K., Tanimoto K.: J. Periodontal Res. 2016 doi: 10.1111/jre.12384. [Epub ahead of print]
- 6 : Enhanced Expression of Contractile-Associated Proteins and Ion Channels in Preterm Delivery Model Mice With Chronic Odontogenic *Porphyromonas Gingivalis* Infection: Miyoshi H., Konishi H., Teraoka Y., Urabe S., Furusho H., Miyauchi M., Takata T., Kudo Y.: Reprod. Sci. 23(7):838-46, 2016. doi: 10.1177/1933719115620497.
- 7 : Ameloblastin induces tumor suppressive phenotype and enhances chemosensitivity to doxorubicin via Src-Stat3 inactivation in osteosarcoma: Ando T., Kudo Y., Iizuka S., Tsunematsu T., Umehara H., Shrestha M., Matsuo T., Kubo T., Shimose S., Arihiro K., Ogawa I., Ochi M., Takata T.: Sci. Rep. 2016. in press.
- 8 : Exophytic Verrucous Hyperplasia of the Oral Cavity – Application of Standardized Criteria for Diagnosis from a Consensus Report: Zain R. B., Kallarakkal T. G., Ramanathan A., Kim J., Tilakaratne W. T., Takata T., Warnakulasuriya S., Hazarey V. K., Rich Alison., Hussaini H. M., Jalil A.: Asian Pac. J. Cancer Prev. 17(9):4491, 2016. doi: 10.7314/APJCP.2016.17.(9).4491.
- 9 : Expression of Wilms' tumor 1 (WT1) in ameloblastomas: Bolongna-Molina R., Takeda Y., Kuga T., Chosa N., Kitagawa M., Takata T., Ishisaki A., Mikami T.: J. Oral Sci. 58(3):407-13, 2016. doi: 10.2334/josnuds.15-0546.
- 1 0 : MicroRNA-203 suppresses invasion and epithelial-mesenchymal transition induction via targeting NUA1 in head and neck cancer: Obayashi M., Yoshida M., Tsunematsu T., Ogawa I., Sasahira T., Kuniyasu H., Imoto I., Abiko Y., Xu D., Fukunaga S., Tahara H., Kudo Y., Nagao T., Takata T.: Oncotarget 7(7):8223-39, 2016. doi: 10.18632/oncotarget.6972.
- 1 1 : Phospholipase C-related Catalytically Inactive Protein Is a New Modulator of Thermogenesis Promoted by β -Adrenergic Receptors in Brown Adipocytes: Oue K., Zhang J., Harada-Hada K., Asano S., Yamawaki Y., Hayashiuchi M., Furusho H., Takata T., Irifune M., Hirata M., Kanematsu T.: J. Biol. Chem. 291(8):4185-96, 2016. doi: 10.1074/jbc.M115.705723.
- 1 2 : Distinction Between Cell Proliferation and Apoptosis Signals Regulated by Brain-Derived Neurotrophic Factor in Human Periodontal Ligament Cells and Gingival Epithelial Cells: Kashiwai K., Kajiya M., Matsuda S., Ouhara K., Takeda K., Takata T., Kitagawa M., Fujita T., Shiba H., Kurihara H.: J. Cell. Biochem. 117(7):1543-55, 2016. doi: 10.1002/jcb.25446.
- 1 3 : Interrelationship Between Periapical Lesion and Systemic Metabolic Disorders: Sasaki H., Hirai K., Martins C. M., Furusho H., Battaglini R., Hashimoto K.: Curr. Pharm. Des. 22(15):2204-15, 2016.

- 1 4 : Elevated CD14 (Cluster of Differentiation 14) and Toll-Like Receptor (TLR) 4 Signaling Deteriorate Periapical Inflammation in TLR2 Deficient Mice: Rider D., Furusho H., Xu S., Trachtenberg A. J., Kuo W. P., Hirai K., Susa M., Bahammam L., Stashenko P., Fujimura A., Sasaki H.: *Anat. Rec. (Hoboken)*, 299(9):1281-92, 2016. doi: 10.1002/ar.23383.
- 1 5 : Morbidly obese patient with non-alcoholic steatohepatitis-related cirrhosis who died from sepsis caused by dental infection of *Porphyromonas gingivalis*: A case report.: Omura Y., Kitamoto M., Hyogo H., Yamanoue T., Tada Y., Boku N., Nishisaka T., Miyauchi M., Takata T., Chayama K.: *Hepatol. Res.* 46(3):E210-5, 2016. doi: 10.1111/hepr.12528.
- 1 6 : Application of Online Learning Support System on Short-term Undergraduate International Exchange Programs: Oka H., Takata T.: *Journal of Japanese Dental Education Association*, 32(2):64-71, 2016.
- 1 7 : The relationship between oral health and systemic diseases - Odontogenic infection of *P. gingivalis* is a risk factor of nonalcoholic steatohepatitis (NASH) - : Takata T. : *Kanagawa Shigaku*, 51(1):1-8, 2016.

B) Reviews

- 1 : Part 2 Molecular pathology of cancer, B cancer of organ, 3. Odontogenic tumor: Ando T., Ogawa I., Takata T.: *Molecular pathology of cancer –from pathological diagnosis to search for therapeutic target.* (edited by Fukayama M., Kanai Y., Tanaka S.) *Pathology and Clinical Medicine Special issue vol. 34*, 79-83, 2016.

C) Publications

- 1 : Chapter V Pathology of salivary gland tumors 2 malignant tumors: Ogawa I., Takata T.: *Thorough lecture Saliva · Salivary gland* (edited by Japan Salivary Gland Society), 156-163, 2016.

D) Other Publications

E) Presentation at Scientific Meeting

1) Special lectures in academic meetings

- 1 : The relationship between periodontal disease and systemic health condition - Odontogenic infection of *P. gingivalis* is a risk factor of nonalcoholic steatohepatitis and preterm birth– : Takata T. : *The 23rd annual meeting of the Hiroshima Society of Nutrition and Dietetics (Hiroshima)*, 2016.

- 2 : Implementation report of dental accreditation trial, Dental accreditation trial (Niigata University) - The report from the evaluation committee-: Takata T.: The open symposium for business report in Heisei 27th (Osaka), 2016.
- 3 : Oral administration of liposomal lactoferrin regulates progression of osteolytic diseases like periodontal disease and rheumatoid arthritis: Takata T.: The 16th annual meeting of Japanese Society of Anti-Aging Medicine (Yokohama), 2016.
- 4 : Revised points of WHO classification of odontogenic tumors: Takata T.: The 47th meeting of Kinki branch in the Japanese Society of Oral and Maxillofacial Surgeons (Osaka), 2016.
- 5 : Major revised points of 4th edition of WHO classification of odontogenic tumors: Takata T.: 18th International Congress on Oral Pathology and Medicine & XXV Conference of Indian Association of Oral and Maxillofacial Pathologists (India, Chennai), 2016.
- 6 : Chronic odontogenic infection and systemic health – the relationship between odontogenic infection of *P. gingivalis* and nonalcoholic steatohepatitis (NASH) - : Takata T.: Hiroshima prefecture branch of the Alumni Association of Hiroshima University (Hiroshima), 2016.
- 7 : Development of prognostic/diagnostic examination system of preterm birth targeting serum Galectin-3: Miyauchi M., Takata T.: Bio Japan 2016 (Yokohama), 2016.
- 8 : Symposium: “Application of Lactoferrin in the ageing society” Lactoferrin suppresses chronic inflammation and inflammatory bone destruction such as periodontal disease and rheumatoid arthritis: Takata T.: The 7th annual meeting of Japanese Association for Lactoferrin (Tokyo), 2016.
- 9 : The basis of histopathological diagnosis of salivary gland tumors Symposium “Cytology of salivary gland tumors: for comprehensive understanding”: Ogawa I., Takata T.: The 55th annual autumn meeting of the Japanese Society of Clinical Cytology (Beppu), 2016.

2) Presentation at International Scientific Meeting

- 1 : Key roles of TLR2 in NASH progression by *P.g.*-odontogenic infection: Furusho H., Nagasaki A., Sakamoto S., Miyauchi M., Takata T.: 94th General Session & Exhibition of the International Association for Dental Research, 64th Annual Meeting of JADR (Korea, Seoul), 2016.
- 2 : Ameloblastin induces tumor suppression and chemosensitivity in osteosarcoma: Ando T., Shrestha M., Kudo Y., Tsunematsu T., Ogawa I., Miyauchi M., Takata T.: 18th International Congress on Oral Pathology and Medicine & XXV Conference of Indian Association of Oral and Maxillofacial Pathologists (India, Chennai), 2016.
- 3 : Novel regulation of tumor growth by tissue inhibitor of metalloproteinases (TIMP-1 and 4) in sarcomas: Shrestha M., Ando T., Nishisaka T., Ogawa I., Miyauchi M., Takata T.: 18th International Congress on Oral Pathology and Medicine & XXV Conference of Indian Association of Oral and Maxillofacial Pathologists (India, Chennai), 2016.

- 4 : Heterogeneity of ameloblastoma on cell lines and tissue specimens originated from a single patient: Mikami T., Bologna-Molina R., Kitagawa M., Takata T., Takeda Y.: 18th International Congress on Oral Pathology and Medicine & XXV Conference of Indian Association of Oral and Maxillofacial Pathologists (India, Chennai), 2016.

3) Presentation at Domestic Scientific Meeting

- 1 : Large scale collaborative research on actual condition of odontogenic tumor in Asia: Takata T., Semba I., Naeda H., Takeda Y., Kumamoto H., Kuyama K., Toyosawa S., Nagatsuka H., Miyauchi M., Ikuko O.: The 105th annual meeting of Japanese society of Pathology (Sendai), 2016.
- 2 : A case report of odontogenic carcinoma needed to differentiation from fibrous dysplasia: Hirai C., Jimbo N., Morinaga Y., Kishino M., Toyosawa S., Ogawa I., Takata T., Itoh T.: The 105th annual meeting of Japanese society of Pathology (Sendai), 2016.
- 3 : Odontogenic infection of *Porphyromonas gingivalis* exacerbates pathological progression of non-alcoholic steatohepatitis through activation of hepatic stellate cells: Nagasaki A., Sakamoto S., Furusho H., Miyauchi M., Takata T.: The 49th Hiroshima University Dental Society (Hiroshima), 2016.
- 4 : Elimination of *Porphyromonas gingivalis*-infection by dental treatments is a beneficial impacts on non-alcoholic steatohepatitis progression: Nagasaki A., Sakamoto S., Furusho H., Miyauchi M., Takata T.: The 27th Annual Meeting of the Japanese Society of Oral Pathology (Hiroshima), 2016.
- 5 : Bovine lactoferrin attenuates bone invasion of oral squamous cell carcinoma: Okamoto K., Miyauchi M., Chea C., Imanaka M., Takata T.: The 27th Annual Meeting of the Japanese Society of Oral Pathology (Hiroshima), 2016.
- 6 : Oncogenic role of Tissue Inhibitor of Metalloproteinase-1, TIMP-1, through regulation of YAP in HNSCC: Dyshafilia Charindra., Madhu Shrestha., Ando T., Takata T.: The 27th Annual Meeting of the Japanese Society of Oral Pathology (Hiroshima), 2016.
- 7 : Overexpression of N-cadherin induces anti-apoptosis effects on cancer cells through TRAIL receptors and caspase pathway: Nguyen PT, Nguyen D., Miyauchi M., Fujii M., Takata T.: The 27th Annual Meeting of the Japanese Society of Oral Pathology (Hiroshima), 2016.
- 8 : Detection of KRAS Missense Mutations in Adenomatoid Odontogenic Tumour: Mikami T., Ogawa I., Kitagawa M., Takata T., Bologna-Molina R., Takeda Y.: The 27th Annual Meeting of the Japanese Society of Oral Pathology (Hiroshima), 2016.
- 9 : Odontogenic Infection of *Porphyromonas gingivalis* Exacerbates Pathological Progression of Nonalcoholic steatohepatitis (NASH) through Activation of Hepatic Stellate Cells: Kato M.: Japan Dental Association / Dentsply Sirona, Student Clinician Research Program (SCRIP), Japanese delegate qualifying competition (Tokyo), 2016.

- 1 0 : Key roles of TLR2 in NASH progression by *P.g.*-odontogenic infection: Furusho H., Miyauchi M., Takata T.: The 58th Annual Meeting of Japanese Association for Oral Biology (Sapporo), 2016.
- 1 1 : Extraction of characteristics of liver cancer and periodontitis by exhalation components analysis: Sakumura Y., Tokutake H., Miyauchi M., Ohara K., Hidemi K., Takata T., Shin U., Tanaka A., Sato K.: 8th annual meeting of Japan society for medical application of stable isotope and biogas (Tokyo), 2016.
- 1 2 : Inhibition of Galectin-3 prevents preterm birth caused by odontogenic infection of *Porphyromonas gingivalis*.: Ishida E., Nagao H., Zhao J., Bushida J., Sakamoto S., Nagasaki A., Furusho H., Miyauchi M., Takata T.: The 23rd General Meeting of the Japanese Association for Dental Science (Fukuoka), 2016.
- 1 3 : Dental health guidance for Cambodian children ~ in cooperation with oral health sciences students and international dental course students ~: Iwamoto Y., Iwamoto A., Sumi N., Amano H., Kozai K., Takata T., Sugai M., Kato K.: 55th Hiroshima Prefecture Dental Association 100th Hiroshima University Dental Society (Hiroshima), 2016.

4) Case Reports at Scientific Meeting

- 1 : Palatal tumor (Mucoepidermoid carcinoma, clear cell variant): Ogawa I., Ando T., Nagasaki A., Okamoto K., Tani R., Konishi M., Takata T.: 119th Academic Meeting of Chugoku-Shikoku Branch of the Japanese Society of Pathology (Ube), 2016.
- 2 : A case of ameloblastic carcinoma showing atypical histologic features: Mishima T., Hamana T., Hamada A., Hirota S., Hayashido Y., Miyauchi M., Okamoto T.: The 45th meeting of Chugoku shikoku branch in the Japanese Society of Oral and Maxillofacial Surgeons (Hiroshima), 2016.
- 3 : A case of mucoepidermoid carcinoma derived from glandular odontogenic cyst: Uchisako K., Koizumi K., Higaki M., Ishida Y., Toratani S., Nagasaki A., Ando T., Ogawa I., Okamoto T.: The 45th meeting of Chugoku shikoku branch in the Japanese Society of Oral and Maxillofacial Surgeons (Hiroshima), 2016.
- 4 : Palatal tumor (Pleomorphic adenoma with widespread oncocyctic metaplasia): Sakamoto S., Ogawa I., Kayamori K., Kirimura S., Tomii S., Takata T.: 66th Meeting of Hiroshima Pathological Conference (Hiroshima), 2016.
- 5 : A tumor of maxilla (Ameloblastic carcinoma, secondary type): Chea C., Furusho H., Miyauchi M., Hamana T., Hayashido Y., Ogawa Y., Okamoto T., Takata T.: The 27th Annual Meeting of the Japanese Society of Oral Pathology (Hiroshima), 2016.
- 6 : A case of hybrid odontogenic tumor: Calcifying cystic odontogenic tumor and odontoma showing various developing stages-: Shrestha M., Shrestha A., Dangol A., Maharjan I. M., Ogawa I.,

- Miyauchi M., Takata T.: The 27th Annual Meeting of the Japanese Society of Oral Pathology (Hiroshima), 2016.
- 7 : Parotid gland lesion (Intercalated duct hyperplasia): Sakamoto S., Ogawa I., Obayashi M., Fujiwara M., Takata T.: 121th Academic Meeting of Chugoku-Shikoku Branch of the Japanese Society of Pathology (Hiroshima), 2016.
- 8 : A case of epulis-like melanoma in maxillary gingiva with black-colored metastatic focus: Seino S., Shimasue H., Ohta K., Ando T., Ogawa I., Takechi M.: The 61st Congress of the Japanese Society of Oral and Maxillofacial Surgeons (Makuhari) , 2016.
- 9 : A case of sialolipoma with nodular oncocyctic hyperplasia: Ogawa I., Takahashi T., Tamura M., Nagao T., Takata T.: The 61st Annual Meeting of Japan Salivary Gland Society (Tokyo), 2016.
- 10 : Parotid gland tumor (Myoepithelial carcinoma ex pleomorphic adenoma, non-invasive): Furusho H., Miyauchi M., Sakaida N., Okamura M., Ogawa I., Takata T.: 67th Meeting of Hiroshima Pathological Conference (Hiroshima), 2016.

(4) Status of Receiving Grants-in Aid for Scientific Research

- 1 : Grants-in-Aid for Scientific Research (B) (New): Takata T.: Decision of the sequence on Lactoferrin important for anti-osteoclastogenesis and development of peptide medicine for bone destructive lesions. 25293373. 5,600,000 yen
- 2 : Grants-in-Aid for Scientific Research (C) (New): Miyauchi M.: Comprehensive research on the role of Galectin-3 in the progression of preterm birth induced by periodontal disease. 16K11444. 1,300,000 yen
- 3 : Grants-in-Aid for Encouragement of Young Scientists (B) (New): Furusho H.: Elucidation of the mechanism of NASH exacerbated by odontogenic red complex infection through TLR2 pathway. 16K20437. 900,000 yen
- 4 : Grants-in-Aid for Scientific Research (B) (Continuance, until March): Takata T.: Control of proliferation and bone invasion of oral cancer by using liposomal lactoferrin. 25293373. 3,600,000 yen
- 5 : Grants-in-Aid for Scientific Research (B) (Continuance, until March): Takata T.: A large-scale study on odontogenic tumors in Asia aiming for the revision WHO classification of head and neck tumors. 26305033. 3,600,000 yen
- 6 : Grants-in-Aid for Scientific Research (Challenging Exploratory Research) (Continuance, until March): Takata T.: Development of diagnostic/preventive methods for odontogenic infection induced preterm birth and low birth weight targeting of Galectin-3. 26670802. 1,500,000 yen
- 7 : “Base of knowledge-Aichi” Joint research project of emphasis research program (Continuance, until March): Takata T.: Development of gas sensing device and analysis of relationships between human

respiratory/skin gas and diseases. 1,980,000 yen

- 8 : Grants-in-Aid for Scientific Research (C) (Continuance, until March): Miyauchi M.: Clarification of pathological progression mechanisms nonalcoholic steatohepatitis caused by dental infection of periodontal pathogen. 25462855. 1,000,000 yen
- 9 : Grants-in-Aid for Encouragement of Young Scientists (B) (Continuance, until March): Furusho H.: The role of TLR2 in NASH progression caused by *P. gingivalis* odontogenic infection. 26861574. 1,500,000 yen
- 1 0 : Donated fund from Sanstar Co. Ltd. (Continuance): Takata T. (Study on periodontitis)
- 1 1 : Donated fund for Hiroshima Prefecture tumor registration business (Continuance): Takata T.
- 1 2 : Donated fund from Mitsubishi-Mihara Hospital (Continuance): Takata T. (Study on diagnosis for oral disease)

(5) Academic Awards

- 1 : Hisako Furusho The 64th annual meeting of JADR JADR/GC Encouragement Award
- 2 : Toshinori Ando 18th International Congress on Oral Pathology and Medicine
(IAOP), Poster Award
- 3 : Atsuhiko Nagasaki 49th Hiroshima University Dental Society Research Incentive Award
27th Annual Meeting of the Japanese Society of Oral Pathology
BEST GENERAL POSTER AWARD
- 4 : Madhu Shrestha 18th International Congress on Oral Pathology and Medicine
(IAOP) Oral Paper Prize
- 5 : Minami Kato Japan Dental Association / Dentsply Sirona, Student Clinician Research
Program (SCRIP), Japanese delegate qualifying competition, The 2nd Place
/ 2016 Clinical Research: The 1st Place Award
- 6 : Eri Ishida The 23rd General Meeting of the Japanese Association for Dental Science
The first prize of student poster award
- 7 : Kana Okamoto 27th Annual Meeting of the Japanese Society of Oral Pathology
BEST STUDENT POSTER
- 8 : Dyshafilia Charindra 27th Annual Meeting of the Japanese Society of Oral Pathology
STUDENT POSTER

(6) Patents

[Return to Contents](#)

Basic Life Sciences

Department of Cellular and Molecular Pharmacology

(1) Staff and Students

Professor: Takashi Kanematsu

Assistant Professor: Satoshi Asano, Yousuke Yamawaki

Professor (Special Appointment): Katsuya Morita, Toshiyuki Sasaguri, Minoru Wakamori, Takayuki Tsukuba, Akira Toyofuku, Tamotsu Kiyoshima

Graduate Student: Yuka Maetani, Hiroki So

Collaborator: Kana Oue (Hiroshima University Hospital Medical Staff), Tomomi Sano (Kyushu University)

Research Student: Satomi Shirawachi (5th), Yuri Taniguchi (5th), Satoru Kusaka (4th), Munechika Takaishi (4th)

(2) Main Research Activities

- 1 : Studies on the molecular mechanisms of GABA_A receptor signaling in the central nervous system
- 2 : Studies on the regulatory mechanisms of food intake and energy metabolism
- 3 : Studies on the roles of a new autophagy-related molecule in autophagy pathway
- 4 : Studied on the mechanisms of cell migration regulated by a new molecule
- 5 : Studies on the molecular mechanisms of thermogenesis in brown adipocytes
- 6 : Studies on the relationship between immune systems and depression-like behavior

(3) Research Achievements

A) Original Papers

1 : Phospholipase C-related Catalytically Inactive Protein Is a New Modulator of Thermogenesis Promoted by β -Adrenergic Receptors in Brown Adipocytes : Oue K, Zhang J, Harada-Hada K, Asano S, Yamawaki Y, Hayashiuchi M, Furusho H, Takata T, Irifune M, Hirata M, Kanematsu T. : J Biol Chem. 2016;291(8):4185–96.

2 : Epicatechin downregulates adipose tissue CCL19 expression and thereby ameliorates diet-induced obesity and insulin resistance : Sano T, Nagayasu S, Suzuki S, Iwashita M, Yamashita A, Shinjo T, Sanui T, Kushiyama A, Kanematsu T, Asano T, Nishimura F. : Nutr Metab Cardiovasc Dis. 2016; S0939-4753(16)30200–9.

3 : Immobilization stress-induced anorexia is mediated independent of MyD88 : Hosoi T, Yamawaki Y, Kimura H, Ozawa K : *Neuroreport*. 2016;27(13):974–7.

B) Review

1 : Elimination of intracellular bacteria by autophagic system : Harada K, Kanematsu T : *The Journal of Hiroshima Dental Association*, 2016;43:1–7.

2 : Phospholipase C-related catalytically inactive protein can regulate obesity, a state of peripheral inflammation : Yamawaki Y, Oue K, Shirawachi S, Asano S, Harada K, Kanematsu T: *Jpn Dent Sci Rev*, in press

3 : The potential use of histone deacetylase inhibitors in the treatment of depression : Fuchikami M, Yamamoto S, Morinobu S, Okada S, Yamawaki Y, Yamawaki S : *Prog Neuropsychopharmacol Biol Psychiatry*. 2016;64:320–4.

C) Publications

1 : Basic Principles of Dental Pharmacology (Simplified for Dental Students) : Takashi Kanematsu, Yosuke Yamawaki : Edit- Kiyoshi Ohura, et al. pp.16-22, Suenaga, in press.

E) Presentation at Scientific Meeting

1 : Motor function recovery after spinal cord injury in the Gabaa receptor-defective mice : Aku Fujita, Gentarō Kumagai, Xizhe Liu, Kanichiro Wada, Toshihiro Tanaka, Masato Hirata, Takashi Kanematsu, Yoshikazu Nikaido, Shinya Ueno, Yasuyuki Ishibashi : the ORS 2016 Annual Meeting (Florida, USA), 2016.

2 : Tumor cell migration is regulated by PRIP-mediated phosphatidylinositol turnover : Asano Satoshi, Kanematsu Takashi : The 89th Annual Meeting of The Japanese Pharmacological Society, (Yokohama), 2016.

3 : Role of spinal LPCAT2, an inducible PAF synthesis enzyme on development and maintenance of painful peripheral neuropathy models in mice : Morita Katsuya, Motoyama Naoyo, Kitayama Tomoya, Kanematsu Takashi, Dohi Toshihiro : The 89th Annual Meeting of The Japanese Pharmacological Society, (Yokohama), 2016.

4 : Phospholipase C-related catalytically inactive protein is involved in the neuroinflammation-induced anorexia : Yosuke Yamawaki, Satomi Shirawachi, Takashi Kanematsu : 30th International College of Neuropsychopharmacology (CINP) World Congress, (Seoul), 2016.

5 : Analysis of neuroinflammation in Phospholipase C-related catalytically inactive protein (*Prip*)-knockout mice : Yosuke Yamawaki, Satomi Shirawachi, Takashi Kanematsu : The 4th The Study Meeting for Oral Society (Osaka), 2016.

6 : *Prip* gene deficiency in mice changes the action of GABAergic anesthetic drugs : Masaki Hayashiuchi, Irifune Masahiro, Mitsugi Okada, Takashi Kanematsu : The 33rd Annual Meeting of the Japanese Society for Disability and Oral Health, (Saitama), 2016.

7 : PRIP regulates neuroinflammation-induced anorexia : Yosuke Yamawaki, Satomi Shirawachi, Takashi Kanematsu : The 58th Annual Meetings of Japanese Association for Oral Biology, (Sapporo), 2016.

8 : Suppression of PI3K-dependent breast cancer cell migration by PRIP : Satoshi Asano, Takashi Kanematsu : GAP (Global Academic Program) related meeting, (Hiroshima), 2016.

F) Special lectures in academic meetings

(4) Status of Receiving Grants-in Aid for Scientific Research, etc.

1 : Grant-in-Aid for Scientific Research (C): Kanematsu T.: Study of phospholipid metabolism dysfunction in cancer. Project number 16K11503. Amount 4,680,000 (2016–2018).

2 : Grant-in-Aid for Young Scientists (B): Yamawaki Y.: Stress response mechanisms related in a treatment for major depression focused on microglia. Project number 15K197310. Amount 3,900,000. (2015–2016)

3 : Grant-in-Aid for Young Scientists (B): Asano S., Regulatory mechanisms of cancer metastasis and growth via novel molecule. Project number 15K20372. Amount 3,900,000. (2015–2016)

(5) Academic Awards

1 : Yosuke Yamawaki : JSNP Excellent Presentation Award for CINP 2016 Seoul

[Return to Contents](#)

Basic Life Sciences

Department of Biomaterials

(1) Staff and Students

Professor: Koichi Kato

Assistant Professor: Yuji Nomura, Isao Hirata, Ryo Nishikiori

Graduate Student: Ky Try, Shakya Ajay, Azusa Onishi, Tomoko Arai, Fumiko Nishio, Yuuka Yamauchi,
Satoshi Miyauchi

(2) Main Research Activities

- 1: Biomaterials and biodevices for regenerative medicine
- 2: Study on the interactions between biological systems and biomaterial surfaces
- 3: Development of novel disinfectants for dental materials

(3) Research Achievements

A) Original Papers (including Case Reports)

- 1: Drinking High-Energy Electrolytic Water Decreases Internal Radiation Exposure Caused By The Fukushima Daiichi Nuclear Power Plant Disaster.: Sawajiri M., Miyamoto S., Yamanouchi K., Wada S., Srimawong P., Nomura Y., Uchida T.: Nuclear Technology & Radiation Protection, 31, 173-178, 2016.
- 2: Effect of wettability by surface treatment for zirconia on bonding between zirconia material and indirect composite resin.: Taihei C, Shimoe S, Hirata I, Iwaguro S, Otaku M, Satoda T.: Journal of Nippon Academy of Dental Technology, 37(2), 89-96, 2016.

B) Review

C) Publications

- 1: Kato, T. Nakaji-Hirabayashi, Y. Kobayashi, T. Watanabe., In Synthetic Immunology. Watanabe T, Takahama Y, eds., Springer, 2016, Chapter 9, pp.181-200.

D) Other Publications

E) Presentation at Scientific Meeting

- 1: Epithelial-Mesenchymal Interactions Studied on a 2D Cellular Pattern: Kato K, Nishikiori R, Kubota C, Sakakibara S, Yoshii H: The Fourth Japan-China Symposium on Nanomedicine (Kokura), 2016.
- 2: Identification of surface markers of dental epithelial-like cells derived from induced pluripotent stem cells: Thanh Thanh PD, Abdullah AN, Kato K: The Japanese Society for Dental Materials and Devices·Kinki and Chu-Shikoku area seminar (Osaka), 2016.
- 3: Analysis of chemical interaction between alumina blasted zirconia and functional monomers: Otaku M, Shimoe S, Hirata I, Iwaguro S, Kawamura M, Satoda T.: Nippon Academy of Dental Technology 38th Congress (Nara), 2016.
- 4: Proliferation of mesenchymal stem cells seeded on biodegradable hydroxyapatite–chitosan porous scaffolds: Ariani MD, Salim S, Hirata I, Kato K: The International Dental Materials Congress 2016 (Bali, Indonesia), 2016.
- 5: Effect of Mesenchymal Stem Cells on Mixed Self Assembled Monolayer: Hirata I, Veronica SR, Tania S, Yamauchi Y, Kanawa M, Kato Y, Kato K: The International Dental Materials Congress 2016 (Bali, Indonesia), 2016.
- 6: Induced pluripotent stem cells: A potential cell source for regenerative dentistry: Abdullah AN, Tanimoto K, Kato K: The International Dental Materials Congress 2016 (Bali, Indonesia), 2016.
- 7: Designed SDF-1 chimeric protein for bone tissue regeneration: Date T, Hirata I, Hattori S, Matsuda C, Nakano A, Yamakado N, Tanimoto K, Kato K: The International Dental Materials Congress 2016 (Bali, Indonesia), 2016.
- 8: Optimization of culture conditions for the efficient differentiation of iPS cells into dental epithelial cells: Miyauchi S, Abdullah AN, Nikawa H, Kato K: The International Dental Materials Congress 2016 (Bali, Indonesia), 2016.

F) Special lectures in academic meetings

- 1: Epithelial-Mesenchymal Interactions Studied on a 2D Cellular Pattern. K. Kato, R. Nishikiori, C. Kubota, S. Sakakibara, H. Yoshii. 4th Japan-China Symposium on Nanomedicine (Kitakyushu, Japan) 12-13 May 2016.
- 2: Tooth Formation on a Bioinspired Chip. K. Kato, S. Sakakitani, C. Kubota, H. Yoshii, R. Nishikiori, European Materials Research Society 2016 Fall Meeting (Warsaw, Poland) 19 September 2016.
- 3: The Prospects of Evidence-based Dentistry Enhanced by Diverse Bioanalytical Devices. K. Kato, Forkinas 6 (Jember, Indonesia) 14-15 October 2016.
- 4: Biomolecular and Cellular Patterns on a Chip for Modeling Biological Processes. K. Kato, International Symposium on Biomedical Engineering (Tokyo, Japan) 10-11 November 2016.

- 5: Roles of Polymer Researchers in the Next Generation Tissue ENgineering: K. Kato, Meeting of the Society of Polymer Chemistry, Japan, Hokuriku Branch (Toyama, Japan) 20 January 2016.
- 6: Aanalysis of Stem Cells for Regenerative Medicine: K. Kato, symposium on Analytical Chemistry for Medicine, 65th Anual Meeting of the Japan Society for Analytical Chemistry (Sapporo, Japan) 14 September 2016.

(4) Status of Receiving Grants-in Aid for Scientific Research, etc.

- 1: Grant-in-Aid for Scientific Research (B), Ministry of Education, Culture, Sports, Science and Technology, Representative Kato K.: Kato K.: Design of culture substrate for large-scale preparation of epithelial cell derived from iPS cell.: No. 16H03182. 8,400,000JPY.
- 2: Grant-in-Aid for Scientific Research (C), Ministry of Education, Culture, Sports, Science and Technology, Representative Tanimoto K.: Kato K.: Dynamic control of stem cells from human exfoliated deciduous teeth (SHED) by construction of microenvironment and its application to palate cleft regeneration treatment.: No. 16K11788. 200,000JPY.
- 3: Grant-in-Aid for Scientific Research (B), Ministry of Education, Culture, Sports, Science and Technology, Representative Kurihara H.: Kato K.: Development of periodontal tissue regeneration therapy by 3D tissue transplantation constructed from spherical bone marrow mesenchymal stem cell clusters.: No. 15H05053. 200,000JPY.
- 4: Grant-in-Aid for challenging Exploratory Research, Ministry of Education, Culture, Sports, Science and Technology, Representative Hirata I.: Hirata I.: Development of Resin and Powder mixed biodegradable filament for 3D printing system.: No. 16K15803. 2,600,000JPY.
- 5: Grant-in-Aid for Scientific Research (C), Ministry of Education, Culture, Sports, Science and Technology, Representative Shimoe S.: Hirata I.: Development of new micro-maintenance for expansion of application area of zirconia.: No. 16K11593. 50,000JPY
- 6: Grant-in-Aid for Scientific Research (B), Ministry of Education, Culture, Sports, Science and Technology, Representative Kato K.: Hirata I.: Design of culture substrate for large-scale preparation of epithelial cell derived from iPS cell.: No. 16H03182. 200,000JPY.
- 7: Japan Society for the Promotion of Science, Bilateral Joint Research Projects/Seminars FY2016. Representative K. Kato: 4th Japan-China Symposium on Nanomedicine, Kitakyushu, 12-13 May 2016. 960,000JPY.

(5) Academic Awards, etc.

- 1: Taihei C, Shimoe S, Hirata I, Iwaguro S, Otaku M, Satoda T: Effect of wettability by surface treatment for zirconia on bonding between zirconia material and indirect composite resin.: Journal of Nippon Academy of Dental Technology Young Researcher's Excellent Paper Award, 2016.

- 2: Otaku M, Shimoe S, Hirata I, Iwaguro S, Kawamura M, Satoda T: Analysis of chemical interaction between alumina blasted zirconia and functional monomers.: Nippon Academy of Dental Technology 38th Congress Excellent Presentation Award, 2016.

(6) Patents

- 1: Nomura Y., Umehara R., Takahashi T.: Apparatus for sterilization with functionality and the production technique: (JP2016-247110) (Medical Environment Techno Co., Ltd.)
- 2: Tanaka S., Nomura Y., Nii T.: A pharmaceutical formulation to activate skin and bone, and the manufacturing method (JP2016-257890) (Tanaka Zoen Co., Ltd.)
- 3: Kato Y, Hirata I, Kanawa M: Animal cell culture kit, method for culturing animal cells, method for selective culture of animal cells and cell differentiation method (P6011879, WO2012137830)
- 4: Yoshiko Y, Minamizaki T, Yoshioka H, Hirata I, Kozai K, Maeda N, Watanabe K, Kiyofuji T: Phosphorylated peptide, hard tissue and/or ectopic calcification inhibitor, antibody, and hard tissue and/or ectopic calcification promoter (P5950380)

[Return to Contents](#)

- **Applied Life Science, Department of Periodontal Medicine**
- **Division of Preventive and Restorative Dentistry, Department of Periodontics**

(1) Staffs and Students

Professor: Hidemi Kurihara

Associate Professor: Tsuyoshi Fujita

Associate Professor, Lecturer: Noriyoshi Mizuno

Assistant Professor: Yuushi Uchida, Katsuhiko Takeda, Tomoyuki Iwata,
Kazuhisa Ouhara, Mikihito Kajiya, Shinji Matsuda

Assistant Professor (Special Appointment): Eri Kaneda (-February)

Resident: Mizuho Kittaka (studying abroad), Akihiro Konishi (-March), Eri Kaneda (March), Shu Ishida (-March), Kei Kashiwai, Masahiro Yamakawa, Tetsuya Yoshimoto (-August), Yusuke Aida, Naoko Tokunaga (-March), Keita Takahashi, Kei Takahashi

Graduate Student: Yoshie Niitani (under leave of absence), Masahiko Suzukawa, Ai Okanobu, Manabu Takewaki, Syuichi Munenaga, Keiichi Akutagawa, Nao Komatsu, Yoko Sato, Shinobu Matsui (-June), Minami Yoshioka (under leave of absence), Shinya Sasaki, Yuta Hamamoto, Tasuku Takemura, Daisuke Furutama, Saki Hatano, Shota Motoike

Clinical Trainee: Takayoshi Nagahara, Nobuaki Yamaguchi, Hiroshi Haraga (-May), Akihiro Konishi (April-), Kaoruko Iwabuchi (April-), Yoshiaki Shimasaki (August-)

(2) Main Research Activities

- 1: Immunological study on the onset of periodontics
- 2: Study on periodontal tissue regeneration using bone marrow mesenchymal stem cells
- 3: Study on periodontal tissue regeneration using neurotrophines
- 4: Study on the relationship between periodontal disease and rheumatoid arthritis
- 5: Study on the relationship between periodontal disease and diabetes mellitus
- 6: Study on physiological function and differentiation of the cells derived from periodontal ligament
- 7: Study on prevention for periodontal disease
- 8: Study on gingival hyperplasia

(3) Research Achievements

Original Papers (including Case Reports)

1. Azithromycin recovers reductions in barrier function in human gingival epithelial cells stimulated with tumor necrosis factor- α .

- Miyagawa T, Fujita T, Yumoto H, Yoshimoto T, Kajiya M, Ouhara K, Matsuda S, Shiba H, Matsuo T, Kurihara H.
Arch Oral Biol., 2016 Feb, 62, 64-69 Randomized Placebo-Controlled and Controlled
2. Non-Inferiority Phase III Trials Comparing Trafermin, a Recombinant Human Fibroblast Growth Factor 2, and Enamel Matrix Derivative in Periodontal Regeneration in Intrabony Defects.
Kitamura M, Akamatsu M, Kawanami M, Furuichi Y, Fujii T, Mori M, Kunimatsu K, Shimauchi H, Ogata Y, Yamamoto M, Nakagawa T, Sato S, Ito K, Ogasawara T, Izumi Y, Gomi K, Yamazaki K, Yoshie H, Fukuda M, Noguchi T, Takashiba S, Kurihara H, Nagata T, Hamachi T, Maeda K, Yokota M, Sakagami R, Hara Y, Noguchi K, Furuuchi T, Sasano T, Imai E, Ohmae M, Koizumi H, Watanuki M, Murakami S.
J Bone Miner Res. 2016 Apr;31(4):806-14. doi: 10.1002/jbmr.2738. PubMed PMID: 26547659.
 3. Sequential process in brain-derived neurotrophic factor-induced functional periodontal tissue regeneration
Konishi A, Takeda K, Fujita T, Kajiya M, Matsuda S, Kittaka M, Shiba H, Kurihara H.
Eur J Oral Sci., 2016 Apr, 124(2), 141-50
 4. Mobilization of TLR4 Into Lipid Rafts by *Aggregatibacter Actinomycetemcomitans* in Gingival Epithelial Cells.
Imai H, Fujita T, Kajiya M, Ouhara K, Yoshimoto T, Matsuda S, Takeda K, Kurihara H.
Cell Physiol Biochem., 2016 May, 39, 1777-1786
 5. Distinction Between Cell Proliferation and Apoptosis Signals Regulated by Brain-Derived Neurotrophic Factor in Human Periodontal Ligament Cells and Gingival Epithelial Cells
Kashiwai K, Kajiya M, Matsuda S, Ouhara K, Takeda K, Kitagawa M, Fujita T, Shiba H, and Kurihara H
J Cell Biochem, 2016 July, 117(7), 1543-55
 6. Brain-Derived Neurotrophic Factor Inhibits Intercellular Adhesion Molecule-1 Expression in Interleukin-1 β -Treated Endothelial Cells
Takeda K, Obinata Y, Konishi A, Kajiya M, Matsuda S, Mizuno N, Sasaki S, Fujita T, Kurihara H.
Cell Biochem Biophys., 2016 Sep, 74(3), 399-406
 7. *Porphyromonas gingivalis* infection exacerbates the onset of rheumatoid arthritis in SKG mice.
Masahiro Yamakawa, Kazuhisa Ouhara, Mikihito Kajiya, Syuichi Munenaga, Mizuho Kittaka, Satoshi Yamasaki, Katsuhiko Takeda, Kei Takeshita, Noriyoshi Mizuno, Tsuyoshi Fujita, Eiji Sugiyama, and Hidemi Kurihara
Clinical & Experimental Immunology, 2016 November, 186(2), 177-189
 8. A novel method of sampling gingival crevicular fluid from a mouse model of periodontitis.

- Matsuda S, Movila A, Suzuki M, Kajiya M, Wisitrasameewong W, Kayal R, Hirshfeld J, Al-Dharrab A, Savitri IJ, Mira A, Kurihara H, Taubman MA, Kawai T.
Journal of Immunological Methods, 2016 November, 438, 21-25
9. Brain-Derived Neurotrophic Factor Inhibits Peptidoglycan-Induced Inflammatory Cytokine Expression in Human Dental Pulp Cells.
Takeda K, Tokunaga N, Aida Y, Kajiya M, Ouhara K, Sasaki S, Mizuno N, Fujita T, Kurihara H.
Inflammation, 2016 Nov, Epub ahead of print
10. *Aggregatibacter actinomycetemcomitans* outer membrane protein 29 (Omp29) induces TGF- β -regulated apoptosis signal in human gingival epithelial cells via fibronectin/integrin β 1/FAK cascade.
Yoshimoto T, Fujita T, Kajiya M, Ouhara K, Matsuda S, Komatsuzawa H, Shiba H, Kurihara H.
Cell Microbiol., 2016 Dec, 18, 1723-1738
11. DC-STAMP is an osteoclast fusogen engaged in periodontal bone resorption
Wisitrasameewong W, Kajiya M, Movila A, Rittling S, Ishii T, Suzuki M, Matsuda S, Matsuda Y, Torruella MR, Azuma MM, Egashira K, Freire M, Sasaki H, Wang CY, Han X, Taubman M, Kawai T
Journal of Dental Research, 2017 January, in press
12. Development of new periodontal regenerative therapy with BDNF
Kurihara H, Takeda K, Kajiya M, Matsuda S, Konishi A, Kashiwai K, Sasaki S, Mizuno N, Fujita T.
Journal of the Japan association of dental traumatology, 2016, 11(1), 16-28
13. Development of new periodontal therapy with BDNF (brain-derived neurotrophic factor)
Takeda K, Kajiya M, Matsuda S, Kashiwai K, Sasaki S, Mizuno N, Fujita T, Kurihara H.
Journal of the Japanese society of periodontology, 2016, 58(3), 91-97
14. Road to dental specialist of the japan endodontic association
Uchida Y
Journal of Japan Endodontic Association, 2016 Sep, 3, 163-167

B) Review

C) Publications

D) Other Publications

E) Presentation at Scientific Meeting

1. The analysis of clinical factors of Rheumatoid Arthritis in SKG mice with *Porphyromonas gingivalis*

oral administration

Syuichi Munenaga, Kazuhisa Ouhara, Masahiro Yamakawa, Satoshi Yamazaki, Hidemi Kurihara

The 60th Annual General Assembly and Scientific Meeting of the Japan College of Rheumatology

(2016 April, Yokohama)

2. Periodontal treatment in a sever chronic periodontitis patient with malaligned teeth: A 15-year case report

Takeda K, Kurihara H

The 59th spring meeting of the Japanese society of Periodontology (2016May, Kagoshima)

3. The case report of periodontal regenerative therapy using cone beam CT and 3D model in the patient of aggressive periodontitis"

Kazuhisa Ouhara, Yuushi Uchida, Noriyoshi Mizuno, Tsuyoshi Fujita, Hidemi Kurihara

The 59th spring meeting of the Japanese society of Periodontology (2016May, Kagoshima)

4. Investigation of micro RNA for regulation of cell function on mesenchymal stem cells

Tomoyuki Iwata, Takayoshi Nagahara, Eri Kaneda, Minami Yoshioka, Noriyoshi Mizuno,

Hideki Shiba, Hidemi Kurihara

The 59th spring meeting of the Japanese society of Periodontology (2016May, Kagoshima)

5. Experimental study of novel allograft cell transplantation therapy by using Clumps of MSCs/ECM(C-MSCs) complex

Kei Takeshita, Mikihiro Kajiya, Manabu Takewaki, Nao Komatsu, Souta Motoike, Tsuyoshi Fujita, and Hidemi Kurihara

The 59th spring meeting of the Japanese society of Periodontology (2016May, Kagoshima)

6. The effects of optineurin on periodontal tissue destruction

Shinobu Matsui, Noriyoshi Mizuno, Shinji Matsuda, Mikihiro Kajiya,

Kazuhisa Ouhara, Tsuyoshi Fujita, Hidemi Kurihara

The 59th spring meeting of the Japanese society of Periodontology (2016May, Kagoshima)

7. Evaluation of periodontitis with *Porphyromonas gulae* infection in debetes model mice

Keiichi Akutagawa, Tsuyoshi Fujita, Yuushi Uchida, Tasuku Takemura,

Kazuhisa Ouhara, Mikihiro Kajiya, Shinji Matsuda, Noriyoshi Mizuno, Hidemi Kurihara

The 59th spring meeting of the Japanese society of Periodontology (2016May, Kagoshima)

8. The effect of cryopreservation on bone regenerative capacity of clumps of MSCs/ECM complex

Souta Motoike, Mikihiro Kajiya, Kei Takeshita, Manabu Takewaki, Tomoyuki Iwata, Katsuhiko Takeda,

Kazuhisa Ouhara, Tsuyoshi Fujita, Hidemi Kurihara

The 59th spring meeting of the Japanese society of Periodontology (2016 May, Kagoshima)

9. Effort by Dental hygienists in dental support for HIV positive patients in Hiroshima University Hospital

Okada M, Matsui K, Iwata T, Nakaoka M, Shiba H

- The 59th spring meeting of the Japanese society of Periodontology (2016 May, Kagoshima)
10. Mechanotransduction in 3D culture clumps of a MSC/ECM complex
Nao Komatsu, Mikihito Kajiya, Kei Takeshita, Manabu Takewaki, Souta Motoike, Kazuhisa Ouhara, Katsuhiro Takeda, Tomoyuki Iwata, Tsuyoshi Fujita, Hidemi Kurihara
The 37th Annual Meeting of the Japanese Society of Inflammation and Regeneration (2016 June, Kyoto)
 11. *Porphyromonas gingivalis* infection exacerbates rheumatoid arthritis in mice model.
Masahiro Yamakawa, Kazuhisa Ouhara, Takata Takashi, Hidemi Kurihara
The 94th Annual Meeting of the International Association for Dental Research (2016 June, Seoul, Korea)
 12. The effects of optineurin on periodontal tissue destruction
Shinobu Matsui, Noriyoshi Mizuno, Shinji Matsuda, Manabu Takewaki, Masahiro Yamakawa, Mikihito Kajiya, Kazuhisa Ouhara, Katsuhiro Takeda, Tomoyuki Iwata, Tsuyoshi Fujita, Hidemi Kurihara
The 94th Annual Meeting of the International Association for Dental Research (2016 June, Seoul, Korea)
 13. Elucidation of the role of NR4A1 in drug induced gingival overgrowth
Ai Okanobu, Shinji Matsuda, Mikihito Kajiya, Tsuyoshi Fujita, Hidemi Kurihara
The 49th Hiroshima University Dental Society (2016 July, Hiroshima)
 14. Road to board certified member of the Japanese society of periodontology
Noriyoshi Mizuno
The 8th meeting of the Japanese society of periodontology in Chugoku (2016 July, Matsue)
 15. The reactivity of surface antigen of *Porphyromonas gingivalis* and serum derived from the patient with rheumatoid arthritis
Kazuhisa Ouhara, Shuichi Munenaga, Masahiro Yamakawa, Yuta Hamamoto, Noriyoshi Mizuno, Tsuyoshi Fujita, Hidemi Kurihara
The 8th meeting of the Japanese society of periodontology in Chugoku (2016 July, Matsue)
 16. A case report: Gingival recession treatment utilizing a connective tissue graft
Takayoshi Nagahara, Katsuhiro Takeda, Chika Kozono, Noriyoshi Mizuno, Tsuyoshi Fujita, Hidemi Kurihara
The 8th meeting of the Japanese society of periodontology in Chugoku (2016 July, Matsue)
 17. A case report; inflammation of periodontal tissue was improved by enhancement of patient's motivation for periodontal treatment.
Eri Takano, Yukiko Nagatani, Noriyoshi Mizuno, Miyuki Nakaoka, Hidemi Kurihara
The 8th meeting of the Japanese society of periodontology in Chugoku (2016 July, Matsue)
 18. A case of chronic periodontitis with the painful gum during tooth brushing
Chieko Kawai, Takayoshi Nagahara, Chika Kozono, Eri Takano, Miyuki Nakaoka, Hidemi Kurihara
The 8th meeting of the Japanese society of periodontology in Chugoku (2016 July, Matsue)

19. A case report; establishment of self-care by use of the relationship between systemic disease and periodontitis as a motivation for patient of low-level awareness
Chika Kozono, Kazuhisa Ouhara, Yukiko Nagatani, Chieko Kawai, Eri Takano, Miyuki Nakaoka, Hidemi Kurihara
The 8th meeting of the Japanese society of periodontology in Chugoku (2016 July, Matsue)
20. A case report of apical hard-tissue deposition by root canal treatment
Takayoshi Nagahara, Katsuhiko Takeda, Tomoyuki Iwata, Hideki Shiba
The 37th Annual Scientific Meeting of JEA (2016 July, Nagoya)
21. Elucidation of the role of NR4A1 in drug induced gingival overgrowth
Ai Okanobu, Shinji Matsuda, Mikihito Kajiya, Tsuyoshi Fujita, Hidemi Kurihara
The 58th Annual Meeting of Japanese Association for Oral Biology (2016 August, Sapporo)
22. YAP/TAZ signaling in 3D culture clumps of mesenchymal stem cells/extracellular matrix complex
Nao Komatsu, Mikihito Kajiya, Tsuyoshi Fujita, Hidemi Kurihara
The 58th Annual Meeting of Japanese Association for Oral Biology (2016 August, Sapporo)
23. Development of novel therapy for drug-induced gingival overgrowth targeting NR4A1
Shinji Matsuda, Ai Okanobu, Mikihito Kajiya, Tsuyoshi Fujita, Hidemi Kurihara
The 31th The Japanese Society of Dental Sciences for young investigator (2016 September, Tokyo)
24. The effects of optineurin on osteoblast differentiation
Noriyoshi Mizuno, Shinji Matsuda, Tetsuya Yoshimoto, Tomoyuki Iwata, Mikihito Kajiya, Kazuhisa Ouhara, Katsuhiko Takeda, Tsuyoshi Fujita, Hidemi Kurihara
The 59th fall meeting of the Japanese society of Periodontology (2016 October, Niigata)
25. Investigation of regulatory genes for differentiative commitment to periodontal cells on mesenchymal stem cells
Tomoyuki Iwata, Takayoshi Nagahara, Eri Ikeda, Ryoichi Yagi, Yusuke Aida, Akihiro Konishi, Minami Yoshioka, Shu Ishida, Noriyoshi Mizuno, Hideki Shiba, Hidemi Kurihara
The 59th fall meeting of the Japanese society of Periodontology (2016 October, Niigata)
26. Elucidation of the role of NR4A1 in drug induced gingival overgrowth
Ai Okanobu, Shinji Matsuda, Mikihito Kajiya, Tsuyoshi Fujita, Hidemi Kurihara
The 59th fall meeting of the Japanese society of Periodontology (2016 October, Niigata)
27. Effectiveness of the combination of SRP and brain-derived neurotrophic factor (BDNF) in the treatment of ligature-induced small periodontal defect in dogs
Sasaki S, Takeda K, Takewaki M, Aida Y, Kajiya M, Matsuda S, Mizuno N, Fujita T, Kurihara H.
The 59th fall meeting of the Japanese society of Periodontology (2016 October, Niigata)
28. Case report that improved drug-induced gingival overgrowth with chronic periodontitis performed by initial treatment
Chika Kozono, Shinji Matsuda, Yukiko Nagatani, Miyuki Nakaoka, Hidemi Kurihara
The 59th fall meeting of the Japanese society of Periodontology (2016 October, Niigata)
29. Characterization of Liver Cancer and Periodontal Disease by a Breath Gas Component Analysis
Hiroaki Tokutake, Yuichi Sakumura, Mutsumi Miyauchi, Kazuhisa Ouhara, Hidemi Kurihara, Takashi Takata, Usoku Shin, Akiko Tanaka, Kazuo Sato

- The 8th Annual meeting of Japan society for medical application of stable isotope and biogas
(2016 October, Tokyo)
30. The oriental medicine, magnoliaceae (Kouboku), inhibits the production of methyl mercaptan via mgl mRNA inhibition.
Yoko Sato, Kazuhisa Ouhara, Shuichi Munenaga, Mikihiro Kajiya, Noriyoshi Mizuno, Tsuyoshi Fujita, Hidemi Kurihara
The 145th Meeting of the Japanese Society of Conservation Dentistry (2016 October, Matsumoto)
31. Nobel periodontal tissue regeneration therapy using C-MSCs
Manabu Takewaki, Mikihiro Kajiya, Kei Takeshita, Nao Komatsu, Tomoyuki Iwata, Katsuhiko Takeda, Kazuhisa Ouhara, Tsuyoshi Fujita, Hidemi Kurihara
The 145th Meeting of the Japanese Society of Conservation Dentistry (2016 October, Matsumoto)
32. The oriental medicine, magnoliaceae (Kouboku), inhibits the production of methyl mercaptan via mgl mRNA inhibition.
Yoko Sato, Kazuhisa Ouhara, Shuichi Munenaga, Masahiro Yamakawa, Mikihiro Kajiya, Noriyoshi Mizuno, Tsuyoshi Fujita, Hidemi Kurihara
The 100th Scientific Meeting of Hiroshima Prefecture Dental Association / Hiroshima University Dental Society (2016 October, Hiroshima)
33. Specific gene expression in 3D culture clumps of mesenchymal stem cells/extracellular matrix complex for periodontal regeneration
Nao Komatsu, Mikihiro Kajiya, Kei Takeshita, Manabu Takewaki, Souta Motoike, Kazuhisa Ouhara, Katsuhiko Takeda, Tomoyuki Iwata, Tsuyoshi Fujita, Hidemi Kurihara
The 100th Scientific Meeting of Hiroshima Prefecture Dental Association / Hiroshima University Dental Society (2016 October, Hiroshima)
34. The effect of anti-HIV agents on oral environment and taste function
Shintani T., Yamasaki N., Iwata T., Saito S., Kitagawa M., Ogawa I., Okada M., Mastui K., Hamamoto K., Unei H., Fujita K., Ogawa R., Kinoshita K., Ikeda Y., Fujii T. Shiba H.
The 30th Annual meeting of the Japanese Society for AIDS research (2016 November, Kagoshima)

F) Special lectures in academic meetings

1. New approach for infection control in dental healthcare
Hidemi Kurihara
Kitakyushu dental healthcare safety workshop (2016 March, Kitakyushu)
2. The phylaxis by the oral bacteria control
Takayoshi Nagahara
Yamaguchi Nursing Association (2016 April, Yamaguchi)
3. Nover cell therapy using clumps of MSCs/ECM complex
Mikihiro Kajiya
The 59th spring meeting of the Japanese society of Periodontology (2016 May, Kagoshima)
4. What is Translational Multi-disciplinary Research?
Hidemi Kurihara

- IADR/APR General Session & Exhibition – Seoul, Republic of Korea (2016 June, Seoul, Korea)
5. Change of location for periodontal therapy and new index for periodontitis
Hidemi Kurihara
The 8th meeting of the Japanese society of periodontology in Cyugoku (2016 July, Matsue)
 6. Signal transduction between Basis and clinical application in dental research:
CS-2 "Periodontal regeneration with Brain-derived neurotrophic factor"
Hidemi Kurihara
The 58th Annual Meeting of Japanese Association for Oral Biology (2016 August, Sapporo)
 7. Regeneration/Tissue Engineering
Hidemi Kurihara
American Academy of Periodontology 102nd Annual Meeting (2016 September, San Diego, USA)
 8. Innovations in Periodontics Session 2: Investigation of Novel Preventive Method for Periodontal Disease.
Tsuyoshi Fujita
American Academy of Periodontology 102nd Annual Meeting (2016 September, San Diego, USA)
 9. A long healthy life originating from oral healthy - new comprehension of periodontitis for medical and dental cooperation -
Hidemi Kurihara
The 11th meeting of JAPAN DENTAL HYGIENISTS' ASSOCIATION (2016 September, Hiroshima)
 10. Keynote Lecture
Hidemi Kurihara
The 59th fall meeting of the Japanese society of Periodontology
Meeting for young researcher (2016 October, Niigata)
 11. Basic and clinical medicine of infection in Hiroshima - Past • Present • Future -
Hidemi Kurihara
The 40th Hiroshima research meeting for infectious disease (2016 October, Hiroshima)
 12. Periodontal disease and systemic healthy - Periodontal disease threatening human life -
Hidemi Kurihara
H28th Hiroshima Bioforum (2016 November, Hiroshima)
 13. How do you image the dental healthcare in next generation?
Hidemi Kurihara
Tokyo Dental Collage Seminar for clinical staffs (2016 December, Tokyo)
 14. New dental healthcare in Japan
Hidemi Kurihara
Meeting of Kanagawa Dental Collage (2016 December, Yokosuka)

(4) Status of Receiving Grants-in Aid for Scientific Research.

1. Grants-in aid for scientific research: Hidemi Kurihara: #15H05053
2. Grants-in aid for scientific research: Hidemi Kurihara: #15K157665C
3. Grants-in aid for scientific research: Tsuyoshi Fujita:# 15K11389

4. Grants-in aid for scientific research: Tsuyoshi Fujita:# 16K114445B
5. Grants-in aid for scientific research : Noriyoshi Mizuno: #15K11388
6. Grants-in aid for scientific research : Kazuhisa Ouhara : #15K11390
7. Grants-in aid for scientific research :Tomoyuki Iwata: #15K11215
8. Grants-in aid for scientific research: Katsuhiko Takeda:# 16K11831
9. Grants-in aid for scientific research: Shinji Matsuda: #16K11830
10. Grants-in aid for scientific research: Tetsuya Yoshimoto: #16K20671
11. Grants-in aid for scientific research : Kei Kashiwai : #15H06437
12. Grants-in aid for scientific research: Kei Takeshita :# 16H07004
13. Hiroshima University education and research support foundation The year of 2016 grants for education and research (Grants for scientific research by young researcher): Manabu Takewaki
14. General foundation Ryokufukai The year of 2016 education and research prize for encouragement (Grant for young researcher grant): : Kei Kashiwai
15. Hiroshima University the year of 2016 Grant for portent research: Keita Takahashi
16. Hiroshima University the year of 2016 Grant for portent research: Yusuke Aida
17. Research grants: Grants for research received from Hiroshima Prefecture: Hideki Shiba and others, Study on network-construction of dental practice for HIV infection
18. Research Grants on BDNF project by DENTSPLY International Inc.: Hidemi Kurihara
19. 2015-2016 Grants on diagnosis for periodontitis by Shofu Co., Ltd.

(5) Award.

1. Kei Kashiwai
2015Japanese society of periodontology encouragement award
“Distinction between cell proliferation and apoptosis signals regulated by brain-derived neurotrophic factor in human gingival epithelial cells and human periodontal ligament cells”
2. Kei Kashiwai
The 19th Hiroshima university faculty of dentistry the alumni association encouragement award
“Distinction between cell proliferation and apoptosis signals regulated by brain-derived neurotrophic factor in human gingival epithelial cells and human periodontal ligament cells”
3. Nao Komatsu
Award for excellence of the 37th Annual Meeting of the Japanese Society of Inflammation and Regeneration
“Mechanotransduction in 3D culture clumps of a MSC/ECM complex”
4. Tetsuya Yoshimoto
Overseas Research Fellowship
“The role of TGF- β in the initiation of periodontitis”

(6) Patents

1 : Hidemi Kurihara, Kazuhisa Ouhara, Yoriko Iwasaki

MOUTH ODOR INHIBITOR AND ORAL COMPOSITION

(Patent Number : P2016-084311A)

(Patent applicant : Hiroshima University)

[Return to Contents](#)

**Applied Life Sciences, Department of Molecular Oral Medicine & Maxillofacial Surgery
Division of Oral & Maxillofacial Surgery and Oral Medicine, Department of Oral & Maxillofacial Surgery**

(1) Staff and Students

Professor: Tetsuji Okamoto Department Chair: Tetsuji Okamoto (Concurrent appointment)
Associate Professor: Shigeaki Toratani
Clinical Associate Professor: Yasutaka Hayashido
Assistant Professor: Ryouji Tani, Yukio Yoshioka, Kouichi Koizumi, Kohsei Okamoto (~Mar),
Taku Kanda, Kensaku Sumi, Tomoaki Hamana, Sachiko Yamasaki,
Taishi Sakaue (Apr~)
Clinical fellow: Naohiro Kimura, Taishi Sakaue (~Mar), Yuki Taguchi,
Takahiko Fujii, Atuko Hmada, Mirei Suematu, Eri Akagi
Eri Akagi, Shigeru Sakurai (Apr~), Fuyuyoshi Takatsu (Apr~), Hirotaka Takatao (Oct~)
Registered part-time Trainee: Emiko Usui, Isao Takahashi
Graduate Student: Shigeru Sakurai (~Mar), Fuyuyoshi Takatsu (~Mar), Hirotaka Takatao (~Sep)
Mari Hoshino (~Mar), Humitaka Obayashi, Kouji Tsushima, Taeko Fukutani,
Youji Nakase, Mirai Higaki, Suguru Hirota, Kensaku Matsui, Nguyen Quang Tam,
Kaori Uchisako, Seiya Hayashi, Tadayoshi Nobumoto, Takefumi Mishima
Shigeki Sato (~Apr)
Iwao Katayama, Hidemasa Miyata, Yuuichi Arita, Tomohiro Sado,
Visiting Researcher: ROSLI, Siti Nur Zawani

(2) Main Research Activities

1. Gene/molecular diagnosis and therapy for oral cancer and salivary gland tumors. (Cancer stem cells, growth factors, growth factor receptors, invasion and metastasis, tumor angiogenesis, and molecular/gene target therapy).
2. The molecular/genetic diagnosis and therapy for oral and cranio-maxillofacial deformities.
3. Establishment and characterization of human induced pluripotent stem (iPS) cells derived from human pulp cells in serum- and feeder-free cell culture.
4. Generation of human induced pluripotent stem (iPS) cells derived from patients with genetic disorders in the oral and cranio-maxillofacial region in serum- and feeder-free culture to elucidate the molecular mechanism involved in the disease.

5. Purification of biologically active factors from marine organism.
6. Photodynamic therapy for oral cancer.
7. Immune cell therapy for oral cancer by using NK/lymphokine-activated killer (LAK) cells.
8. Jaw and tooth regeneration *in vitro*.
9. Molecular-epidemiological study of oral and maxillofacial disease among residents of Semipalatinsk Nuclear Test Site (SNTS) area in Kazakhstan.

(3) Research Achievements

A) Original Papers (including Case Reports)

1. S. Toratani, R. Tani, T. Kanda, K. Koizumi, Y. Yoshioka, T. Okamoto: Photodynamic therapy using Photofrin and excimer dye laser treatment for superficial oral squamous cell carcinomas with long-term follow up: *Photodiagnosis Photodyn Ther*, 2016 Jun;14:104-10
2. S. Yamasaki, A. Hamada, E. Akagi, H. Nakatao, M. Ohtaka, K. Nishimura, M. Nakanishi, T. Okamoto: Generation of Cleidocranial dysplasia-specific induced pluripotent stem cells in integration-, feeder-, and serum-free culture: *In Vitro Cellular & Developmental Biology-Animal*, 2016 Feb;52(2):252-64
3. Q. Xu, Q. Zhang, Y. Ishida, S. Hajjar, X. Tang, H. Shi, CV. Dang, AD. Le: EGF induces epithelial-mesenchymal transition and cancer stem-like cell properties in human oral cancer cells via promoting Warburg effect: *Oncotarget*, 2016 Dec 1. doi: 10.18632/oncotarget.13771.
4. E. Akagi, S. Yamasaki, A. Hamada, H. Nakatao, F. Obayashi, T. Yasui, Y. Taguchi, M. Ohtaka, K. Nishimura, M. Nakanishi, T. Okamoto: Generation and maintenance of human induced pluripotent stem cells in serum-free and feeder-free culture condition-comparison of various target cells and virus vectors: *Jpn. J. Tissue Cult. Soc. Dent. Res*, 25(1), 21-22, (2016)
5. A. Hamada, H. Nakatao, F. Obayashi, T. Yasui, E. Akagi, S. Yamasaki, S. Toratani, T. Okamoto: Generation of Disease-specific human iPSCs in integration-, feeder-, and serum-free culture: *Jpn. J. Tissue Cult. Soc. Dent. Res*, 25(1), 23-24, (2016)
6. T. Shintani, Rosli S.N.Z., F. Takatsu, YF. Choon, Y. Hayashido, S. Toratani, E. Usui, T. Okamoto: Eldecalcitol (ED-71), an Analog of $1\alpha, 25$ -dihydroxyvitamin D3 as a Potential Anti-cancer Agent for Oral Squamous Cell Carcinomas: *The Journal of Steroid Biochemistry and Molecular Biology*, 164 (11):79-84. 2016.

7. N. Hirose, Y. Matsumura, C. Sumi, C. Concepcion, M. Yanoshita, A. Onishi, H. Ueda, K. Koizumi, T. Okamoto, K. Tanimoto: The Second Report: A Case of Temporomandibular Joint Osteoarthritis with Mandibular Recession and Open Bite: Onset after the Orthodontic Treatment in Adolescence: *The Journal of Hiroshima University Dental Society*, 48(1) 56-62, 2016.
8. S. Ohkura, R. Kunimatsu, S. Toratani, T. Okamoto, T. Tanimoto: A Treatment Case of Severe Mandibular Prognathism with Bimaxillary Orthognatic Surgery: *The Journal of Hiroshima University Dental Society*, 48(1) 63-70, 2016.
9. K. Yoshida, A. Mukai, T. Mukai, A. Oda, T. Takahashi, M. Yamashita, T. Yoshiaka, T. Kanda, Y. Oda, M. Yoshida, M. Okada, M. Irihune: A study of the Current situation of Pre-anesthesia Tests in Dental Patients with Intellectual Disability, and Challenge for the Future: *Journal Japanese Society for Disability and Oral Health*, 37:445-450, 2016.
10. F. Takatsu, T. Shintani, Rosli S.N.Z., E. Usui, T. Okamoto: The study of Antitumor Activity using Eldecalcitol (ED-71), an Analog of $1\alpha,25$ -dihydroxyvitamin D₃ in Oral Squamous Cell Carcinomas: *Jpn. J. Tissue Cult. Soc. Dent. Res*, 25(1), 19-20. 2016.

B) Review article

not applicable

C) Publications

1. Title: Industry-Academia Collaboration, and Human Resource Development- Can the university be the knowledge center of the community - Lifelong learning in the era of declining birthrate and population (editor: Takafumi Uesugi, Masahiro Kagawa, Nozio Kawamura) Chapter 14, pp. 197-209, issue date: September 20, 2016, Publisher: Minerva Shobo Co., Ltd.

D) Other Publications

1. T. Okamoto: Foreword: Stomatology at the crossroad. *Journal of the Japanese Stomatological Society*, 65(1): 69-69, 2016.
2. S. Toratani: Foreword: From agriculture to Medicine. *Japanese Journal of Oral & Maxillofacial Surgeons*. 62: (9) p.431, 2016.

E) Presentation at Scientific Meeting

International Conference (invited speaker)

1. S. Yamasaki, A. Hamada, H. Nakatao, E. Akagi, F. Ohbayashi, T. Yasui, S. Toratani, T. Okamoto, Establishment and characterization of normal and disease-specific human iPSCs in serum-, integration- and feeder-free culture: Plenary Symposium on Infinite Potential of Stem Cells, 2016 World Congress on In Vitro Biology (San Diego, California), June 14, 2016.
2. T. Okamoto: Overview and perspective in 20-years research of my laboratory/clinic; Cellular Endocrinological study of oral stem cells: The 14th International Conference on cellular endocrinology (Hiroshima), 2016.11.13.
3. S. Yamasaki: Establishment and characterization of normal and disease-specific human iPSCs in serum-, integration- and feeder-free culture: The 14th International Conference on cellular endocrinology (Hiroshima), 2016.11.13
4. Y. Hayashido: Integrin-mediated cellular growth, invasion and metastasis of oral squamous cell carcinoma cells: The 14th International Conference on cellular endocrinology (Hiroshima), 2016.11.13.
5. R. Tani: Cell therapy for head and neck cancer with NK/LAK cells: The 14th International Conference on cellular endocrinology (Hiroshima), 2016.11.13.
6. S. Toratani: Photodynamic therapy using Photofrin and excimer dye laser treatment for superficial oral squamous cell carcinoma with long-term follow up: The 14th International Conference on cellular endocrinology (Hiroshima), 2016.11.13

International Meeting

1. S. Yamasaki, H. Nakatao, E. Akagi, A. Hamada, F. Obayashi, T. Fukutani, T. Okamoto: Generation and maintenance of integration-free human induced pluripotent stem cells (hiPSCs) from peripheral blood mononuclear cells in serum-, and feeder-free growth factor defined medium: The 14th International Conference on cellular endocrinology (Hiroshima), 2016.11.13.
2. A. Hamada, S. Yamasaki, E. Akagi, H. Nakatao, F. Obayashi, T. Fukutani, K. Koizumi, T. Hamana, T. Okamoto: Generation of disease-specific human induced pluripotent stem (iPS) cells from dental pulp cells of a patient with Cleidocranial dysplasia in serum-, and feeder-free culture:

The 14th International Conference on cellular endocrinology (Hiroshima), 2016.11.13.

3. E. Akagi, S. Yamasaki, A. Hamada, Y. Taguchi, H. Mukasa, M. Ohtaka, K. Nishimura, M. Nakanishi, T. Okamoto: Reprogramming efficiencies of dental pulp cell-derived hiPS cells with various virus vectors in serum-and feeder-free culture conditions: The 14th International Conference on cellular endocrinology (Hiroshima), 2016.11.13.
4. A. Hamada, S. Yamasaki, E. Akagi, H. Nakatao, M. Ohtaka, K. Nishimura, M. Nakanishi, T. Okamoto: Generation and maintenance of human induced pluripotent stem cells in serum-, and feeder-free culture using Sendai virus vectors: The 14th International Conference on cellular endocrinology (Hiroshima), 2016.11.13.
5. F. Obayashi, A. Hamada, H. Nakatao, T. Fukutani, E. Akagi, S. Yamasaki, T. Kanda, S. Toratani, T. Okamoto: Generation of disease-specific human induced pluripotent stem (iPS) cells from peripheral blood lymphocytes of a patient with Cowden syndrome in serum-, and feeder-free culture: The 14th International Conference on cellular endocrinology (Hiroshima), 2016.11.13.
6. T. Fukutani, A. Hamada, H. Nakatao, F. Obayashi, E. Akagi, S. Yamasaki, T. Kanada, K. Koizumi, S. Toratani, T. Okamoto: Generation of disease-specific human induced pluripotent stem (iPS) cells from peripheral blood lymphocytes of a patient with Von Recklinghausen syndrome in serum-and feeder-free culture: The 14th International Conference on cellular endocrinology (Hiroshima), 2016.11.13.
7. Y. F Choon, Y. Ishida, Y. Fujii, Y. Itoh, T. Okamoto: Cancer cells Effect of Medium Conditioned by hMSCs on Biological Property of CSCs from OSCC Cell Lines in Serum-Free Culture: Department of Oral and Maxillofacial Surgical and Medical Sciences, Faculty of Dentistry, University Malaya, 50603 Kuala Lumpur, Malaysia The 14th International Conference on cellular endocrinology (Hiroshima), 2016.11.13.
8. H. Nakatao, S. Yamasaki, E. Akagi, A. Hamada, M. Ohtaka, K. Nishimura, M. Nakanishi, S. Toratani, T. Okamoto: Existence of rBC2LCN lectin-recognizing glycoprotein-positive cells in squamous cell carcinoma cell lines: 14th International Symposium on Cellular Endocrinology (Hiroshima), 2016.11.13
9. R. Tani, S. Yamasaki, K. Matsui, S. Hirota, M. Higaki, Y. Nakase, H. Sasahara, S. Toratani, T.

- Okamoto: MICA MICA Gene Polymorphism is Associated With an Increased Risk for Oral Squamous Cell Carcinoma: The 14th International Conference on cellular endocrinology (Hiroshima), 2016.11.13.
10. Za wani Rosli, T. Shintani, F. Takatsu, Y. F Choon , E. Usui, Rosnah M. Zain, T. Okamoto: HBp17/FGFBP-1 Expression is Down-regulated by $1\alpha,25(\text{OH})_2\text{D}_3$ through NF- κ B pathway in Oral Squamous Cell Carcinoma Cell Lines: The 14th International Conference on cellular endocrinology (Hiroshima), 2016.11.13.
 11. T. Sakaue, Y. Hayashido, M. Matsuoka, T. Fujii, S. Sakurai, K. Tushima, T. Okamoto: Processing of integrin α v subunit by autophagy in squamous cell carcinoma cells: The 14th International Conference on cellular endocrinology (Hiroshima), 2016.11.13.
 12. Y. Fujii, Y. Ishida, S. Matsumoto, Y. F Choon, T. Okamoto: Cellular and molecular characteristic of CD-133-positive cells derived from OSCC in serum-free cell culture: The 14th International Conference on cellular endocrinology (Hiroshima), 2016.11.13.
 13. Y. Itoh, Y. Fujii, T. Okamoto: Molecular and cellular characteristics of side population cells of oral squamous cell carcinoma cells in serum-free cell culture: The 14th International Conference on cellular endocrinology (Hiroshima), 2016.11.13.
 14. S. Toratani: Photodynamic therapy of superficial oral cancers: The 14th International Conference on cellular endocrinology (Hiroshima), 2016.11.13
 15. T. T Nguyen, Y. Fukui, T. Okamoto: Immunohistochemical expression of HBp17/FGFBP-1, FGF-1, FGF-2, CD34, p53, pRB, and Ki67 in Ameloblastomas: The 14th International Conference on cellular endocrinology (Hiroshima), 2016.11.13.
 16. M. Suematsu, Y. Hayashido, T. Sakaue, T. Fujii, T. Okamoto: Processing of integrin α v subunit by autophagy in squamous cell carcinoma cells: The 14th International conference on cellular endocrinology (Hiroshima), 2016.11.13.
 17. Y. Yoshioka, H. Kojima, T. Okamoto: Purification structure characterization of bioactive substance from marine organisms and application them to novel oral drugs: The 14th International conference on cellular endocrinology (Hiroshima), 2016.11.13.

18. N. Kimura, S. Mimura, M. Hirata, D. Tateyama, M. Hayashida, A. Unezawa, A. Kohara, H. Nikawa, M. Kusuda Furue, T. Okamoto: Growth factor defined culture conditions for human mesenchymal stem cell culturing: The 14th International Conference on cellular endocrinology (Hiroshima), 2016.11.13.
19. T. Shintani, Rosli S.N.Z., F. Takatsu, E. Usui, Y. Hayashido, S. Toratani, T. Okamoto: Eldecalcitol (ED-71), an analog of $1\alpha,25(\text{OH})_2\text{D}_3$ inhibits the growth of squamous cell carcinoma (SCC) cells through down-regulation of Heparin Binding Protein 17/ Fibroblast Growth Factor-Binding Protein 1 (HBp17/FGF-BP1) and FGF-2 expressions: 19th Workshop on Vitamin D (Boston, USA), 2016.

Domestic Meeting presentations

1. F. Obayashi, A. Hamada, H. Nakaytao, E. Akagi, S. Hayashi, S. Yamasaki, T. Kanda, S. Toratani, T. Okamoto: Generation of disease-specific human induced pluripotent stem (iPS) cells from peripheral blood lymphocytes of a patient with Cowden syndrome in serum-, and feeder-free culture: The 70th Annual meeting of the Japanese Stomatological Society (Fukuoka), 2016.4.15-17.
2. S. Sakurai, Y. Hayashido, Y. Yoshioka, T. Hamana, T. Sakaue, M. Suematu, T. Okamoto: Immunohistochemical study of expression of integrin αv and $\beta 8$ in oral squamous cell carcinomas: The 70th Annual meeting of the Japanese Stomatological Society (Fukuoka), 2016.4.15-17.
3. E. Akagi, S. Yamasaki, A. Hamada, H. Nakatao, F. Obayashi, T. Yasui, Y. Taguchi, R. Tani, S. Toratani, T. Okamoto: Generation of human induced pluripotent stem cells in serum-, and feeder-free culture condition -comparison of various somatic cells and virus vectors-: The 70th Annual meeting of the Japanese Stomatological Society (Fukuoka), 2016.4.15-17.
4. A. Hamada, E. Akagi, H. Nakatao, F. Obayashi, T. Yasui, S. Yamasaki, S. Toratani, T. Okamoto: Generation of disease specific iPSCs and their application to disease model study: The 70th Annual meeting of the Japanese Stomatological Society (Fukuoka), 2016.4.15-17.
5. K. Tsushima, M. Matsuoka, Y. Hayashido, T. Okamoto: Biological significance of HDM2 on invasion and proliferation of oral squamous cell carcinoma cell line: The 70th Annual meeting of the stomatological Society. (Fukuoka), 2016.4.15-17.
6. H. Nakatao, S. Yamasaki, E. Akagi, A. Hamada, M. Ohtaka, K. Nishimura, M. Nakanishi, S. Toratani, T. Okamoto: Functional analysis of rBC2LCN lectin which specifically recognize carbohydrate chain of pluripotent stem cell (PSC) in Oral Squamous Cell Carcinoma cell lines: The 70th Annual Meeting of the Japanese Stomatological Society (Fukuoka), 2016.4.15-17.

7. F. Takatsu, T. Shintani, Rosli S.N.Z., S. Toratani, E. Usui, T. Okamoto: A study of antitumor activity using Eldecalcitol (ED-71), an Analog of $1\alpha,25$ -dihydroxyvitamin D3 on Oral Squamous Cell Carcinoma cells: The 70th Annual Meeting of the Japanese Stomatological Society (Fukuoka), 2016.4.15-17.
8. T. Mishima, T. Hamana, A. Hamada, S. Hirota, Y. Hayasido, M. Miyauchi, T. Okamoto: A case of ameloblastic carcinoma with untypical histology: The 45th Annual meeting of the Japanese Journal of Oral & Maxillofacial Surgery (Hiroshima), 2016.5.21.
9. K. Uchisako, K. Koizumi, M. Higaki, Y. Ishida, S. Toratani, T. Andou, I. Ogawa, T. Okamoto: The transformation of premalignant oral lesions; Glandular odontogenic cyst into Central mucoepidermoid carcinoma: The 45th Annual meeting of the Japanese Society of Oral and Maxillofacial Surgeons. (Hiroshima), 2016.5.21.
10. K. Matsui, Y. Yoshioka, S. Yamasaki, S. Sakurai, T. Hamana. Y. Hayashido. S. Toratani, T. Okamoto: Cases of Disseminated Intravascular Coagulation (DIC) and Idiopathic Thrombocytopenic Purpura (ITP) diagnosed by Abnormal Intraoral Hematoma Formation: The 26th Annual meeting of the Japanese Society of Oral Medicine. (Okayama), 2016.9.23-24.
11. A. Mukai, T. Mukai, T. Tamayo, T. Yoshinaka, A. Oda, M. Suematsu, K.yoshida, M. Yoshida, M. Irifune: Behavior adjustment for patients with Rett Syndrome in perioperative anesthesia management for dental treatment: The 33th Annual meeting of the Japanese Society for disability and oral health (Oomiya), 2016.9.30-10.2.
12. T. Nobumoto, T. Kanda, S. Hayashi, I. Oawa, R. Tani, T. Okamoto: A case of eosinophilic granulomatosis with polyangiitis showing IgG4-related disease: The 64th The meeting of Japanese Stomatological Society (Ube), 2016.10.28-29.
13. S. Sato, T. Hamana, T. Sakaue, S. Yamasaki, K. Sumi, T. Kanda, K. Koichi, Y. Yoshioka, R. Tani, Y. Hayashido, S. Toratani, T. Okamoto: Clinical study of primary intraosseous squamous cell carcinoma: The 64thJapanese Stomatological Society (Ube), 2016.10.28-29.
14. N. Hirotake, S. Yamasaki, E. Akagi, A. Hamada, S. Toratani, T. Okamoto: Mechanism Analysis in Oral Squamous Cell Carcinoma with rBC2LCN : Recognizes the Specific Carbohydrate Chain of Pluripotent Stem Cell (PSC): The 53rd annual meeting of Japan tissue culture society for dental

research (Kanazawa), 2016.11.17-18

15. A. Hamada, E. Akagi, H. Nakatao, F. Obayashi, T. Yasui, S. Yamasaki, S. Toratani, T. Okamoto: Generation of various disease specific iPSCs of oral maxillofacial genetic disorder in serum-, and feeder-free condition: The 53rd annual meeting of Japan tissue culture society for dental research (Kanazawa), 2016.11.17-18
16. T. Nakamoto, Y. Suei, T. Yasui, M. Konishi, T. Nagasaki, M. Fujita, N. Kakimoto: A case of aberrant tortuosity of common carotid artery to submandibular area: The 36th Kansai and Kyushu joint regional meeting of Japanese Society of Oral and Maxillofacial Radiology (Fukuoka), 2016.12.10
17. A. Oda, K. Yoshida, T. Mukai, T. Takahashi, T. Yoshinaka, A. Mukai, T. Kanda, Y. Yuki, M. Yoshida, M. Okada, M. Irihune: An Experience Case of Examination of MRI under Intravenous sedation bottom Mental in a disabilities patient with the obesity: 33th Japan society for Disability and Oral Health (Ohmiya), 2016.9.30-10.2.

F) Other lectures

1. T. Okamoto: Genetic screening of the disease of oral cavity and disease-specific induced pluripotent stem cells. Meeting of the Alumni association of Dept. of Oral medicine, Tokushima Univ. (Tokushima) 2016.7.30
2. T. Kanda: The Role of the medical officers in the Ministry of Health, Labor and Welfare. Conference of Yamaguchi Prefecture Hospital dental association. (Yamaguchi) 2016.10.8

(4) Status of Receiving Grants-in Aid for Scientific Research, etc.

1. Grants-in aid for scientific research (B): Tetsuji Okamoto: Grant #15H05043
2. Grant-in-Aid for challenging Exploratory Research: Tetsuji Okamoto: #26670865
3. Grants-in aid for scientific research (C): Tomoaki Hamana: #26463044
4. Grants-in aid for scientific research (C): Yukio Yoshioka: #26463006

5. Grant-in-Aid for Young Scientists(B): Sachiko Yamasaki: #16K20580
6. Grants-in aid for scientific research (C): Toratani Shigeaki: #15K11251
7. Grant-in-Aid for Research Activity start-up: Mirei Suematsu: #15H06434
8. Grant-in-Aid for Research Activity start-up: Atsuko Hamada: #15H06435
9. Grants-in aid for scientific research (C): Tomoaki Shintani: #16K11723
10. Grants-in aid for scientific research (C): Taku Kanda: #16K11687
11. Grant-in-Aid for Research Activity start-up: Eri Akagi: #16H0700300

(5) Academic Awards, etc.

1. E. Akagi, S. Yamasaki, A. Hamada, H. Nakatao, F. Obayashi, T. Yasui, Y. Taguchi, R. Tani, S. Toratani, T. Okamoto: Poster award of the annual meeting Japanese stomatology society (Fukuoka), 2016.4.15–17
2. A. Hamada, E. Akagi, H. Nakatao, F. Obayashi, T. Yasui, S. Yamasaki, S. Toratani, T. Okamoto: Poster award of the annual meeting Japanese stomatology society (Fukuoka), 2016.4.15–17.
3. E. Akagi: 2016 Incentive award of the Alumni association of Oral and maxillofacial surgery, (Hiroshima), 2016.11.13.
4. A. Hamada: 2016 Incentive award of the Alumni association of Oral and maxillofacial surgery, (Hiroshima), 2016.11.13.

(6) Patents

Patent Application Number: 2016-210972

Title of invention: Improvement agents for cancer survival rate, Inventors: Tetsuji Okamoto, Ryouji Tani, Kohichiro Tokumaru, Applicants: Hiroshima Univ. and Nihon Kefir Co., Ltd,

[Return to Contents](#)

- **Applied Life Sciences, Department of Advanced Prosthodontics**
- **Division of Preventive and Restorative Dentistry, Department of Oral Implant**

(1) Staff and Students

Professor: Kazuhiro Tsuga

Associate Professor: Yasuhiko Abe, Mineka Yoshikawa, Takayasu Kubo

Associate Professor/Lecturer: Koh-ichi Kuremoto, Katsunori Koretake

Assistant Professor: Hiroshi Oue, Yohei Okazaki, Shinsuke Okada

Research Associate: Maho Takeuchi, Mariko Maruyama, Takahiro Mori, Aya Hiraoka, Kan Kato

Graduate Student: Yoshifumi Oki, Hiromichi Kawano, Yosuke Takeda, Azusa Kuroki, Miyuki Yokoi,

Akira Kawano, Reiko Kobatake, Miwa Sasaki, Fumiko Nishio

Clinical Trainee: Toru Akutu, Daijirou Kubo, Sachiko Takagi

Administrative staff: Rinko Kurumi

(2) Main Research Activities

- 1 : Elucidation of the effect of prosthodontic treatments on the quality of life of elderly people.
- 2 : Removal prosthodontics and swallowing function of elderly people.
- 3 : Development and clinical application of functional oral rehabilitation utilizing tongue pressure measurement.
- 4 : Development and clinical application of new materials for oral implants.
- 5 : Development of "bio-hybrid" artificial bone made of interconnected porous hydroxyapatite and mesenchymal stem cells.
- 6 : Elucidation of the effect of FGF on bone formation surrounding oral implants.
- 7 : Biomechanics analysis of prostheses and their surrounding bone supported by implants.

(3) Research Achievements

A) Original Papers (including Case Reports)

- 1 : Osseointegration aspects of placed implant in bone reconstruction with newly developed block-type

- interconnected porous calcium hydroxyapatite: Doi K, Kubo T, Makihara Y, Oue H, Morita K, Oki Y, Kajihara S, Tsuga K: *J Appl Oral Sci*, 24: 325-331, 2016.
- 2 : A novel mouthpiece prevents bite injuries caused by intraoperative transcranial electric motor-evoked potential monitoring: Oshita K, Saeki N, Kubo T, Abekura H, Tanaka N, Kawamoto M: *J Anesth*, 30: 850-854, 2016.
 - 3 : Intermittent administration of parathyroid hormone enhances primary stability of dental implants in a bone-reduced rabbit model: Oki Y, Doi K, Makihara Y, Kubo T, Oue H, Tsuga K: *J Oral Sci*, 58: 241-246, 2016.
 - 4 : Sphingomyelin generated by sphingomyelin synthase 1 is involved in attachment and infection with Japanese encephalitis virus: Taniguchi M, Tasaki T, Ninomiya H, Ueda Y, Kuremoto K, Mitsutake S, Igarashi Y, Okazaki T, Takegami T: *Sci Rep*, 6: 37829, 2016.
 - 5 : Molar loss and powder diet leads to memory deficit and modifies the mRNA expression of brain-derived neurotrophic factor in the hippocampus of adult mice: Takeda Y, Oue H, Okada S, Kawano A, Koretake K, Michikawa M, Akagawa Y, Tsuga K: *BMC Neurosci*, 17(1): 81, 2016.
 - 6 : A stability evaluation of a novel titanium dental implant/interconnected porous hydroxyapatite complex under functional loading conditions: Doi K, Kubo T, Kajihara S, Makihara Y, Oue H, Oki Y, Perrotti V, Piattelli, Akagawa Y, Tsuga K: *Dent mater J*, 2016 (in press).
 - 7 : Prediction of pneumonia in acute stroke patients using tongue pressure measurements: Nakamori M, Hosomi N, Ishikawa K, Imamura E, Shishido T, Ohshita T, Yoshikawa M, Tsuga K, Wakabayashi S, Maruyama H, Matsumoto M: *PLOS One*, 11: e0165837, 2016.
 - 8 : The multidisciplinary swallowing team approach decreases pneumonia onset in acute stroke patients: Aoki S, Hosomi N, Hirayama J, Nakamori M, Yoshikawa M, Nezu T, Kubo S, Nagano Y, Nagao A, Yamane N, Nishikawa Y, Takamoto M, Ueno H, Ochi K, Maruyama H, Yamamoto H, Matsumoto M: *PLOS One*, 11: e0154608, 2016.
 - 9 : Tongue thickness evaluation using ultrasonography can predict swallowing function in amyotrophic lateral sclerosis patients: Nakamori M, Hosomi N, Takaki S, Oda M, Hiraoka A, Yoshikawa M, Matsushima H, Ochi K, Tsuga K, Maruyama H, Izumi Y, Matsumoto M: *Clin neurophysiol*, 127: 1669-1674, 2016.

B) Review

C) Publications

D) Other Publications

- 1 : Swallowing function in patients with amyotrophic lateral sclerosis and tongue pressure measurement: Hiraoka A, Yoshida M, Tsuga K: *Home Health Care for the People with Intractable Diseases*, 22(11): 33-35, 2016.

E) Presentation at Scientific Meeting

- 1 : Implant stability under functional loading in reconstructed sites with interconnected porous hydroxyapatite: Makihara Y, Doi K, Kubo T, Oki Y, Tsuga K: *The 11th Scientific Meeting of the Asian Academy of Osseointegration (Bangkok)*, 2016.

- 2 : Novel Porous Titanium Structure as Bone Graft Material: Doi K, Kobatake R, Oki Y, Makihara Y, Naito Y, Kubo T, Tsuga K: The 11th Scientific Meeting of the Asian Academy of Osseointegration (Bangkok), 2016.
- 3 : Intermittent Parathyroid Hormone Administration is Effective to Achieve Favourable Primary Stability and Osseointegration in Rabbit Osteoporosis Model: Oki Y, Doi K, Makihara Y, Kubo T, Tsuga K: The 11th Scientific Meeting of the Asian Academy of Osseointegration (Bangkok), 2016.
- 4 : Evaluation of Implant Stability in Implant/Interconnected Porous Hydroxyapatite Complex Under Functional Loading Location: Doi K, Makihara Y, Oue H, Morita K, Kubo T, Tsuga K: The 94th General Session and Exhibition of the International Association for Dental Research (Seoul), 2016.
- 5 : The relationship between oral torus and oral function in a group of healthy male dentate subjects: Kato K, Morita K, Kawano A, Doi K, Tsuga K: 94th general session & exhibition of the IADR (Seoul), 2016.
- 6 : Relationship between eating posture and maximum tongue pressure: Yoshikawa M, Mori T, Tsuga K: 94th general Session and Exhibition of the IADR (Seoul), 2016.
- 7 : Development of novel porous titanium structure for bone reconstruction material: Kobatake R, Doi K, Oki Y, Makihara Y, Oue H, Kubo T, Tsuga K: The 49th Hiroshima University Dental Association General Meeting (Hiroshima), 2016.
- 8 : Optimization of adsorption amount of polyphosphate to hydroxyapatite: Kato K, Morita K, Doi K, Kubo T, Abe Y, Tsuga K: The 125th Scientific Meeting of Japan Prosthodontic Society (Kanazawa), 2016.
- 9 : Utility of tongue pressure measurement for evaluation of swallowing function in patients with amyotrophic lateral sclerosis: Hiraoka A, Kuroki A, Kawano H, Higa C, Mori T, Maruyama M, Takaki S, Yoshikawa M, Yoshida M, Tsuga K: The 125th Scientific Meeting of Japan Prosthodontic Society (Kanazawa), 2016.
- 1 0 : UV /ozone application for biointerface control of hydroxyapatite: Yasuda K, Okazaki Y, Hiasa K, Abe Y and Tsuga K: The 125th Scientific Meeting of Japan Prosthodontic Society (Kanazawa), 2016.
- 1 1 : Association between buccal mucosa ridging and oral state/oral function: Morita K, Tsuka H, Kato K, Dowaki I, Oda M, Yoshida M, Tsuga K: Annual Scientific Meeting of Japan Prosthodontic Society Kyushu, Chugoku and Shikoku Branch (Kumamoto), 2016.
- 1 2 : Development of novel porous titanium for bone reconstruction: Kobatake R., Doi K., Morita K., Makihara Y., Oki Y., Kubo T., Tsuga K: Annual Scientific Meeting of Japan Prosthodontic Society Chugoku and Shikoku Branch (Kumamoto), 2016.
- 1 3 : Development of novel three dimensional porous titanium bone reconstruction material: Kobatake R., Doi K., Kubo T., Makihara Y., Oki Y., Oue H., Tsuga K: The 46th Conference of Japanese Society of Oral Implantology (Nagoya), 2016.
- 1 4 : The association between the development of torus mandibularis and oral states/occlusal functions in a group of healthy dentate subjects: Morita K, Tsuka H, Kato K, Shintani T, Yoshida M, Shiba H, Tsuga K: The 9th Annual Meeting of The Japanese Society for Evidence and the Dental Professional (Fukushima), 2016.
- 1 5 : Relationship between eating posture and maximum tongue pressure in healthy young and dependent elderly people: Yoshikawa M, Nagakawa K, Tanaka R, Shimada R, Hiraoka A, Mori T, Tsuga K: 6th Congress of European Society for Swallowing Disorders (Milan), 2016.
- 1 6 : Mechanisms for amelogenesis imperfecta caused by ectodermal dysplasia with abnormal

store-operated Ca²⁺ entry: Furukawa Y, Haruyama N, Nikaido M, Nakanishi M, Ryu N, Oh-hora M, Kuremoto K, Yoshizaki K, Takahashi I: The 75th Annual Meeting of the Japanese Orthodontic Society (Tokushima), 2016.

- 17 : Relationships between oral function and untritional in elderly peolpe requiring long-term care: Kuroki A, Mori T, Okada S, Yoshikawa M, Yoshida M, Tsuga K: Japanese Society for Mastication Science and Health Promotion (Hiroshima) , 2016.

F) Special lectures in academic meetings

- 1 : Functional Management of Oral Health of the Elderly in Japan: Tsuga K: Korean Society of Dental Hygience Conference (Daejeon), 2016.

(4) Status of Receiving Grants-in Aid for Scientific Research, etc.

- 1 : MEXT Grant-in-Aid for Scientific Research (C): Tsuga K: Development of functional oral rehabilitation by sucking candy. (Grant No. 26462951). ¥1,300,000
- 2 : MEXT Grant-in-Aid for Scientific Research (C): Kubo T: Establishment of the implant treatment with acceleration of bone metabolism. (Grant No. 16K11595). ¥1,000,000
- 3 : MEXT Grand-in-Aid for Scientific Research (C): Yoshikawa M: Can early detection and improvement of oral frailty stop general frailty? (Grant No. 16K11887). ¥1,200,000
- 4 : MEXT Grant-in-Aid for Scientific Research (C): Kuremoto K: Development of innovative prevention care of peri-implantitis targeting sphingomyelin and lipid raft. (Grant No. 16K11592). ¥1,560,000
- 5 : MEXT Grant-in- Aid for Young Scientists (B): Oue H: Biological elucidation of cross-talk collapse between oral and brain. (Grant No. 16K20501). ¥1,500,000
- 6 : MEXT Grants-in-Aid for Young Scientists (B): Okada S: Development of non-exposed bone quality diagnostic system enabling clinical evaluation of biological apatite orientation. (Grant No. 16K20540). ¥2,800,000
- 7 : MEXT Grant-in-Aid for Research Activity Start-up: Mori T: Relationship between candy-sucking function and nutritional status in elderly patients with dementia. (Grant No.26861641). ¥780,000
- 8 : MEXT Grant-in-Aid for Research Activity Start-up: Hiraoka A: Clarification of the optimum period of PAP therapy aiming at extension of oral ingestion time of ALS patients. (Grant No. 16H07002). ¥1560,000
- 9 : Ministry of Economy, Trade and Industry Small and Medium Enterprise Agency Strategic Core Technology Advancement Program (Supporting Industry Program): Abe Y: Development of antimicrobial rechargeable fiber for medical and nursing supporter. ¥97,275,000
- 10 : Japan Agency for Medical Research and Development (AMED) Development of Medical Devices through Collaboration between Medicine and Industry: Abe Y: Development and industrialization of antimicrobial tissue conditioner for prevention of oral infection and aspiration pneumonitis in home care dentistry. (Grant No. 27-027). ¥160,000,000

(5) Academic Awards, etc.

- 1 : Hiraoka A: Utility of tongue pressure measurement for evaluation of swallowing function in patients

with amyotrophic lateral sclerosis: The 125th Scientific Meeting of Japan Prosthodontic Society
Performance Award, 2016.

(6) Patents

[Return to Contents](#)

- 2 : Accelerating effects of cellulase in the removal of denture adhesives from acrylic denture bases: Harada-Hada K, Mimura S, Hong G, Hashida T, Abekura H, Murata H, Nishimura M, Nikawa H: *J Prosthodont Res*, 2016. [Epub ahead of print]
- 3 : Evaluation of the efficiency of denture cleaners for removing denture adhesives: Harada-Hada K, Hong G, Abekura H, Murata H: *Gerodontology*, 33(4):453-460, 2016.
- 4 : Multicentered epidemiological study of factors associated with total bacterial count in the saliva of older people requiring nursing care: Tohara T, Kikutani T, Tamura F, Yoshida M, Kuboki T: *Geriatr Gerontol Int*, DOI: 10.1111/ggi.12695, 2016.
- 5 : Factors related to skeletal muscle mass in the frail elderly: Sagawa K, Kikutani T, Tamura F, Yoshida M: *Odontology*, DOI: 10.1007/s10266-015-0231-4, 2016.
- 6 : Prevalence of Tracheotomy and Percutaneous Endoscopic Gastrostomy in Patients with Guillain-Barré Syndrome: Yoshida M, Ikeda J, Urikane Y, Kashiwada T, Kaseda Y, Kohriyama T: *Dysphagia*, DOI: 10.1007/s00455-016-9750-6, 2016.
- 7 : Osseointegration aspects of placed implant in bone reconstruction with newly developed block-type interconnected porous hydroxyapatite: Doi K, Kubo T, Makihara Y, Morita K, Oki Y, Kajihara S, Tsuga K: *J Appl Oral Sci*, 24(4): 325-331, 2016.
- 8 : A stability evaluation of a novel titanium dental implant/interconnected porous hydroxyapatite complex under functional loading conditions: Doi K, Kubo T, Kajihara S, Makihara Y, Oue H, Oki Y, Perrotti V, Piattelli, Akagawa Y, Tsuga K: *Dent mater J*, in press, 2016.
- 9 : Intermittent administration of parathyroid hormone enhances primary stability of dental implants in a bone-reduced rabbit model: Oki Y, Doi K, Makihara Y, Kubo T, Oue H, Tsuga K: *J Oral Sci*, 58(2): 241-246, in press, 2016.
- 10 : Molar loss and powder diet leads to memory deficit and modifies the mRNA expression of brain-derived neurotrophic factor in the hippocampus of adult mice: Takeda Y, Oue H, Okada S, Kawano A, Koretake K, Michikawa M, Akagawa Y, Tsuga K: *BMC Neurosci*, 17(1), 81, 2016.

B) Review

C) Publications

D) Other Publications

E) Presentation at Scientific Meeting

- 1 : Implant stability under functional loading in reconstructed sites with interconnected porous hydroxyapatite: Makihara Y, Doi K, Kubo T, Oki Y, Tsuga K: *The 11th Scientific Meeting of the*

- Asian Academy of Osseointegration (Bangkok), 2016.
- 2 : Intermittent Parathyroid Hormone Administration is Effective to Achieve Favourable Primary Stability and Osseointegration in Rabbit Osteoporosis Model: Oki Y, Doi K, Makihara Y, Kubo T, Tsuga K: The 11th Scientific Meeting of the Asian Academy of Osseointegration (Bangkok), 2016.
 - 3 : Novel Porous Titanium Structure as Bone Graft Material: Doi K, Kobatake R, Oki Y, Makihara Y, Naito Y, Kubo T, Tsuga K: The 11th Scientific Meeting of the Asian Academy of Osseointegration (Bangkok), 2016.
 - 4 : The association between the development of torus mandibularis and oral functions: Morita K, Tsuga K: The 27th Annual Meeting of Japanese Academy of Occlusion & Health (Tokyo), 2016.
 - 5 : The relationship between oral torus and oral function in a group of healthy male dentate subjects: Kato K, Morita K, Kawano A, Doi K, Tsuga K: The 94th general session and exhibition of the International Association for Dental Research (Seoul), 2016.
 - 6 : Evaluation of Implant Stability in Implant/Interconnected Porous Hydroxyapatite Complex Under Functional Loading Location: Doi K, Makihara Y, Oue H, Morita K, Kubo T, Tsuga K: The 94th General Session and Exhibition of the International Association for Dental Research (Seoul), 2016.
 - 7 : Utility of tongue pressure measurement for evaluation of swallowing function in patients with amyotrophic lateral sclerosis: Hiraoka A, Kuroki A, Kawano H, Higa C, Mori T, Maruyama M, Takaki S, Yoshikawa M, Yoshida M, Tsuga K: The 125th Scientific Meeting of Japan Prosthodontic Society (Kanazawa), 2016.
 - 8 : UV/ozone application for biointerface control of hydroxyapatite: Yasuda K, Okazaki Y, Hiasa K, Abe Y and Tsuga K: The 125th Scientific Meeting of Japan Prosthodontic Society (Kanazawa), 2016.
 - 9 : The utility of cellulase in the removal of denture adhesives from acrylic resin bases: Harada K, Mimura S, Hong G, Hashida T, Abekura H, Murata H, Nikawa H, Nishimura M: Annual Scientific meeting of Japan Prosthodontic Society Kyushu, Chugoku and Shikoku Branch (Kumamoto), 2016.
 - 1 0 : Association between buccal mucosa ridging and oral state/oral function: Morita K, Tsuka H, Kato K, Dowaki I, Oda M, Yoshida M, Tsuga K: Annual Scientific meeting of Japan Prosthodontic Society Kyushu, Chugoku and Shikoku Branch (Kumamoto), 2016.
 - 1 1 : The association between the development of torus mandibularis and oral states/occlusal functions in a group of healthy dentate subjects: Morita K, Tsuka H, Kato K, Shintani T, Yoshida M, Shiba H, Tsuga K: The 9th Annual Meeting of The Japanese Society for Evidence and the Dental Professional (Fukushima), 2016.
 - 1 2 : Development of novel porous titanium structure for bone reconstruction material: Kobatake R, Doi K, Oki Y, Makihara Y, Oue H, Kubo T, Tsuga K: The 49th Hiroshima University Dental Association General Meeting (Hiroshima), 2016.
 - 1 3 : Development of novel porous titanium for bone reconstruction: Kobatake R., Doi K., Morita K.,

Makihara Y., Oki Y., Kubo T., Tsuga K: Annual Scientific meeting of Japan Prosthodontic Society Chugoku and Shikoku Branch (Kumamoto), 2016.

- 1 4 : Development of novel three dimensional porous titanium bone reconstruction material: Kobatake R., Doi K., Kubo T., Makihara Y., Oki Y., Oue H., Tsuga K: The 46th Conference of Japanese Society of Oral Implantology (Nagoya), 2016.
- 1 5 : Optimization of adsorption amount of polyphosphate to hydroxyapatite: Kato K, Morita K, Doi K, Kubo T, Abe Y, Tsuga K: The 125th Scientific Meeting of Japan Prosthodontic Society (Kanazawa), 2016.
- 1 6 : Bond strength of polyetheretherketone (PEEK) to adhesive resin cements: Tsuka H, Morita K, Kato K, Makihara Y, Yamamoto Y, Abekura H, Tsuga K: Annual Scientific meeting of Japan Prosthodontic Society Chugoku and Shikoku Branch (Kumamoto), 2016.

F) Special lectures in academic meetings

- 1 : Dysphagia rehabilitation in Japan: Mitsuyoshi Yoshida: The 7th meeting of Korean Dysphagia Society (Seoul), 2016.

G) Others

(4) Status of Receiving Grants-in Aid for Scientific Research, etc.

- 1 : MEXT Grant-in-Aid for Scientific Research (C): Doi K.: Establishment of bone improvement therapy using intelligent artificial bone. No. 15K11160. ¥1,500,000
- 2 : MEXT Grant-in-Aid for Scientific Research (C) : Morita K: Fabrication of porous titanium with honeycomb structure. (Grant No. 16K11594). ¥1,000,000
- 3 : MEXT Grant-in-Aid for Young Scientists (B): Tsuka H.: Development of a new adhesive primer with 3,4-dihydroxyphenylalanine. No. 15K20441. ¥1,900,000
- 4 : MEXT Grant-in-Aid for Young Scientists (B): Makihara Y: Bone regeneration therapy with bone remodeling controlled artificial bone in diabetic conditions. (Grant No.16K20503). ¥1,820,000

(5) Academic Awards, etc.

- 1 : Kobatake R: Development of novel porous titanium for bone reconstruction biomaterial: Educational research promotion award of general incorporated foundation Ryokufukai, 2016.
- 2 : Kobatake R: Development of novel three dimensional porous titanium bone reconstruction material: The 46th Conference of Japanese Society of Oral Implantology, Excellent research presentation

award, 2016.

- 3 : Doi K: Development of Implant/Interconnected Porous Hydroxyapatite Complex as New Concept Graft Material: Encouragement Prize of Hiroshima university faculty of dentistry, alumni association 2016.

(6) Patents

- 1 : Doi K, Kobatake R: Bone reconstruction material: Patent application 2016-104954.

[Return to Contents](#)

Graduate School of Biomedical & Health Sciences, Applied Life Sciences, Department of Orthodontics and Craniofacial Development Biology, and Department of Oral Health and Development (Orthodontics)

(1) Staffs and students

| | |
|-----------------------|--|
| Profess | : Kotaro Tanimoto |
| Associate Professor | : Hiroshi Ueda |
| Lecture | : Masato Kaku, Ryo Kunimatsu |
| Assistant Professor | : Yuki Asakawa, Naoto Hirose, Keisuke Sumi, Yuki Yoshimi |
| Intern | : Yuji Tsuka, Hiromi Sumi, Tetsuya Awada, Nanae Oki, Hirotaka Sugino, Tomomi Date, Yu Matsumura, Kayo Horie |
| Graduate Student | : Takaharu Abe, Saki Okita, Hidemi Gunji, Shoutoku Kojima, Chikako Sumi, Yuko Nakao, Cynthia Concepcion Medina, Aya Kimura, Kengo Nakajima, Makoto Yanoshita, Taeko Yamamoto, Kazuyo Ando, Kouji Iwai, Azusa Onishi, Isamu Kado, Mami Takano, Yuka Yashima, Sakura Yamada, Hiroki So, Yuka Yamauchi, Tomoka Hiraki, Jin Izumino, Syota Ito |
| International Student | : Wu Fang-Chun |
| Professor (part-time) | : Kazuo Tanne, Eiji Tanaka, Ichiro Takahashi |
| Registered Intern | : Kuniaki Tanaka, Kazunori Itatani, Eri Ohtani, Hanaka Shikata, Eri Fujii, Yuki Okamoto, |
| Dental Hygienist | : Miho Okada, Fumi Tokui |

(2) Main academic activity

- 1: Elucidation of pathogenic mechanism in malocclusion and management of oral maxillofacial skeletal growth
- 2: Optimization of tooth movement by orthodontic force
- 3: Establishment of a new orthodontic treatment based on the image and biochemical diagnosis of temporomandibular disorders (TMD)
- 4: Application of regeneration medicine to orthodontic treatment
- 5: Suppression of caries risk in orthodontic treatment
- 6: Evaluation of the contribution of various oral functions to general fitness
- 7: Long term cryopreservation of various tissues and cells

8: Development of new instruments and materials for orthodontic treatment

(3) Research achievement

A) Original Papers (including Case Reports)

1. A case of orthodontic treatment with an atypical pain disorder : Kaku M., Kojima SI., Sumi H., Shikata H., Kojima ST., Yamamoto T., Abonti TH., Yashima Y., Kawata T., Tanimoto K.: *Biomed Res.* 27(2):504-7, 2016.
2. Effect of C-Terminal amelogenin peptide on the proliferation of human cementoblast lineage cells : Yoshimi Y., Kunimatsu R., Hirose N., Awada T., Miyauchi M., Takata T., Wu L., Zhu L., Denbesten P., Tanne K., Tanimoto K.: *J Periodontol.* 87(7):820-7, 2016.
3. Accuracy of a three-dimensional dentition model digitized from an interocclusal record using a non-contact surface scanner : Kihara T., Yoshimi Y., Taji T., Murayama T., Tanimoto K., Nikawa H.: *Eur J Orthod.* 38(4):435-9, 2016.
4. The effect of magnetic field during freezing and thawing of rat bone marrow-derived mesenchymal stem cells : Shikata H., Kaku M., Kojima SI., Sumi H., Kojima ST., Yamamoto T., Yashima Y., Kawata T., Tanne K., Tanimoto K.: *Cryobiology* 73(1):15-9, 2016.
5. Irradiation effects of low temperature multi gas plasma jet on oral bacteria : Abonti TR., Kaku M., Kojima SI., Sumi H., Kojima ST., Yamamoto T., Yashima Y., Miyahara H., Okino A., Kawata T., Tanne K., Tanimoto K.: *Dent Mater J.* 35(5):822-8, 2016.
6. The influence of erupting lateral teeth on maxillary anterior crowding in two Angle Class I malocclusion cases with high and low angles : Ueda H., Masunaga M., Concepción M. C., Tanne K.: *Trends in Orthodontics* 6 (2):105-112, 2016.
7. Change in the mesiodistal axial inclination of the maxillary lateral teeth during the mixed dentition stage : Morphometric analysis of panoramic radiographs from two cases of mild crowding with a high canine.: Masunaga M., Ueda H., Shibaguchi T., Tanne K.: *Trends in Orthodontics* 6 (1):24-30, 2016.
8. Mesiodistal angulation of the lateral teeth to the functional occlusal plane in normal occlusions : Ueda H., Masunaga M., Horie K., Concepción M. C., Tanne K.: *Trends in Orthodontics* 6 (6):302-5, 2016.
9. Phototransducer Investigation of Normal Velopharyngeal Physiology : Michael P. Karnell, Jerald B. Moon, Nakajima K., Deborah S. Kacmarynski.: *J Speech, Language, and Hearing Research* 59:722-731, 2016.
10. Comparison of treatment effects between orthodontic anchor screw and multiloop edgewise technique in open-bite cases : Sugino H., Motokawa M., Kaku M., Matsuda Y., Oki N., Sumi C., Kimura A., Tanimoto K.: *Orthod Waves Jpn Edit* 75(1); 27-35, 2016.

11. An early orthodontic treatment case with Turner's syndrome : Sumi K., Asakawa Y., Yoshimi Y., Awada T., Abe T., Okita S., Nakajima K., Ando K., Kado I., Tanimoto K.: *J. Hiroshima Dent. Asso.* 43; 21-26, 2016.
12. Adult Angle class II maxillary protusion case treated with use of dental implants as an anchorage for upper anterior retraction : Natori A., Kaku M., Tanne K., Tanimoto K.: *J. Hiroshima Univ. Dent. Soc.* 48(1); 71-76, 2016.
13. Two-Stage approach for treatment of two patients with facial asymmetry caused by unilateral condylar hyperplasia : Nakagawa T., Ono S., Ohta K., Kaku M., Othani J., Kojima S., Sumi H., Uetsuki R., Kubozono K., Tanimoto K., Tanne K., Takechi M.: *Jpn. J. Jaw Deform.* 26(1); 48-55, 2016.
14. The second report: A case of temporomandibular joint osteoarthritis with mandibular recession and open bite: onset after the orthodontic treatment in adolescence : Hirose N., Matsumura Y., Sumi C., Yanoshita M., Onishi A., Concepcion Medina Cynthia, Ueda H., Koizumi K., Okamoto T., Tanimoto K.: *J. Hiroshima Univ. Dent. Soc.* 48(1); 56-62, 2016.
15. A treatment case of severe mandibular prognathism with bimaxillary orthognatic surgery : Ohkuma S., Kunimatsu R., Toratani S., Okamoto T., Tanimoto K.: *J. Hiroshima Univ. Dent. Soc.* 48(1); 63-70, 2016.
16. Statistical analysis of familial occurrence of cleft lip and/or palate in Hiroshima University Hospital : Okita S., Sumi K., Mitsuyoshi T., Takaharu A., Tanimoto K.: *J. CHU-SHI. Orthod. Soc.* 28(1); 23-26, 2016.
17. Conventional orthodontic treatment of mandibular hypoplasia in Pierre Robin syndrome : Yamano E., Yamano R., Tanimoto K., Tanaka E.: *J. CHU-SHI. Orthod. Soc.* 28(1); 65-74, 2016.
18. Long-term retention case after treatment of open bite using miniscrew anchorage : Fujii E., Shirakura M., Fujita T., Tsuka Y., Okita S., Tanimoto K.: *J. CHU-SHI. Orthod. Soc.* 28(1); 75-84, 2016.
19. An orthodontic treatment case with Noonan syndrome and impacted supernumerary teeth : Yamamoto T., Kojima S., Kaku M., Kamiya T., Tanimoto K.: *J. CHU-SHI. Orthod. Soc.* 28(1); 105-112, 2016.
20. Statistical investigation of abnormalities of the teeth in cleft lip and/or palate patients : Kimura A., Kunimatsu R., Yoshimi Y., Mitsuyoshi T., Oki N., Awada T., Gunji H., Abe T., Tanimoto K.: *J. Hiroshima Univ. Dent. Soc.* 48(2); 118-123, 2016.
21. A comparative investigation of the physical properties of ceramic brackets : Nakajima K., Kunimatsu R., Sumi K., Tsuka Y., Gunji H., Abe Y., Tsuga K., Tanimoto K.: *J. Hiroshima Univ. Dent. Soc.* 48(2); 124-129, 2016.
22. Statistical investigation of cleft lip and/or palate patients at department of orthodontics Hiroshima University Hospital : Takaharu A., Yoshimi Y., Kunimatsu R., Sumi K., Oki N., Awada T., Gunji H., Tanimoto K.: *Orthod Waves Jpn Edit* 75(2); 118-125, 2016.
23. A case report of oral appliance therapy for obstructive sleep apnea syndrome-Assessment od occlusal changes in the missing teeth dentition after 10 year continuous treatment- : Ueda H., Matsumura Y.,

Iwai K., Concepcion Medina Cynthia, Tanimoto K.: J. Hiroshima Univ. Dent. Soc. 48(2); 160-165, 2016.

B) Review

1. Treatment for jaw deformity in Hiroshima University Hospital-Establishment of contemporary treatment system by team approach- : Tanimoto K. : J. Hiroshima Dent. Asso. 43; 8-13, 2016.
2. An interview with Kotaro Tanimoto. Tanimoto K. : Dental Press J Orthod. 21(4):24-33, 2016.
3. Current status of orthodontic professionals in the Asian Pacific region. Tanne K. : APOS Trends in Orthodontics, Special Issue, 111-130, 2016.
4. Current status of temporomandibular joint disorders and the therapeutic system derived from a series of biomechanical, histological, and biochemical studies. Tanne K., Okamoto Y., Su S-C., Mitsuyoshi T., Asakawa-Tanne Y., Tanimoto K. : APOS Trends in Orthodontics, Special Issue, 58-75, 2016.

C) Publications

D) Other Publications

1. Relay message-Periodic medical examination-. Tanimoto K. : J. Jpn. Cleft Assoc. 41(3), 2016.

E) Presentation at Scientific Meeting

1. Effect of Defactinib on chondrocyte under the excessive mechanical stress: Yanoshita M., Hirose N., Okamoto Y., Awada T., Sumi C., Takano M., Asakawa Y., Tanimoto K.:The 29th Annual Meeting of the Japanese Society for the Temporomandibular Joint (Hakone), 2016.
2. Effect of Semaphorin3A in mandibular condylar cartilage: Sumi C., Hirose N., Okamoto Y., Awada T., Yanoshita M., Takano M., Asakawa Y., Tanimoto K.:The 29th Annual Meeting of the Japanese Society for the Temporomandibular Joint (Hakone), 2016.
3. A case of temporomandibular disorder with occlusal disharmony caused by an inappropriate use of splint: Hirose N., Yanoshita M., Takano M., Sumi C., Okamoto Y., Awada T., Asakawa Y., Tanimoto K.:The 29th Annual Meeting of the Japanese Society for the Temporomandibular Joint (Hakone), 2016.
4. Application of bone regeneration using stem cells from human exfoliated deciduous teeth: Nakajima K., Kunimatsu R., Sumi K., Kojima S., Sumi H., Awada T., Oki N., Abe T., Ando K., Kaku M., Tanimoto K.:The 40th Annual Meeting of the Japanese Cleft Palate Association (Osaka), 2016.

5. A case of surgical orthodontic treatment of mandibular prognathism with multiple tooth loss.: Horie K., Watanabe M., Date T., Nakao Y., Koh M., Ono S., Ota K., Kubozono K., Ueda H., Tanimoto K.: 26th Congress of the Japanese Society for Jaw Deformities (Tokyo), 2016.
6. Two cases of mandibular prognathism with open bite treated with glossectomy.: Date T., Horie K., Nakao Y., Takano M., Kunimatsu R., Ueda H., Tanimoto K.: The 59th CHU-SHIKOKU Orthodontic Society (Kochi), 2016.
7. Three cases of skeletal open bite with congenial myopathy: Horie K., Date T., Nakao Y., Yanoshita M., Sumi C., Onishi A., Hirose N., Ueda H., Tanimoto K.: The 59th CHU-SHIKOKU Orthodontic Society (Kochi), 2016.
8. Effect of a simplified two-piece mandibular advancement appliance for obstructive sleep apnea: Matsumura Y., Ueda H., Nagasaki T., Concepcion Medina C., Iwai K., Tanimoto K.: The 59th CHU-SHIKOKU Orthodontic society (Kochi), 2016.
9. Tongue palate contact changes assessed with electropalatography in patients with skeletal maxillary protrusion after orthognathic surgery: Kojima S, Kaku M, Sumi H, Yamamoto T, Yashima Y, Yasuhara M, Yamamoto I, Tanimoto K.: The 59th CHU-SHIKOKU Orthodontic society (Kochi), 2016.
10. A case report of oral appliance therapy for obstructive sleep apnea syndrome. -Assessment of occlusal changes in the missing teeth dentition after 10 year continuous treatment-.: Ueda H., Matsumura y., Iwai K., Concepción M. C., Tanimoto K.: The 15th Annual Meeting of the Japanese Dental Sleep Medicine (Tokyo), 2016.
11. Effects of baicalin on the metabolism of human cementoblasts lineage cells: Kimura A, Kunimatsu R, Yoshimi Y, Tsuka Y, Awada T, Gunji H, Nakajima K, Takashi T, Tanimoto K.: The 75th Annual Meeting of the Japanese Orthodontic Society (Tokushima), 2016.
12. Effects of amelogenin on proliferation of mesenchymal stem cells derived from different tissues: Ando K., Sumi K., Kinimatsu R., Yoshimi Y., Awada T., Nakajima K., Abe T., Tanimoto K.: The 75th Annual Meeting of the Japanese Orthodontic Society (Tokushima), 2016.
13. Awareness survey concerning orthodontic treatment for the patient in Hiroshima University Hospital: Takano M., Kunimatsu R., Kimura A., Yoshimi Y., Oki N., Gunji H., Yamada S., Mitsuyoshi T., Asakawa Y., Tanimoto K.: The 75th Annual Meeting of the Japanese Orthodontic Society (Tokushima), 2016.
14. Awareness survey concerning teeth alignment and orthodontic treatment: Yamada S., Kunimatsu R., Yoshimi Y., Mitsuyoshi T., Oki N., Gunji H., Okamoto Y., Kimura A., Takano M., Tanimoto K.: The 75th Annual Meeting of the Japanese Orthodontic Society (Tokushima), 2016.
15. Clinical survey on the orthodontic patients of caries risk in Hiroshima University Hospital: Yoshimi Y., Koh M., Kunimatsu R., Date T., Horie K., Nakao Y., Kimura A., Kitagawa M., Ogawa I., Tanimoto K.: The 75th Annual Meeting of the Japanese Orthodontic Society (Tokushima), 2016.

16. Application of bone regeneration using stem cells from human exfoliated deciduous teeth: Nakajima K., Kunimatsu R., Sumi K., Oki N., Abe T., Ando K., Kaku M., Tanimoto K.: The 75th Annual Meeting of the Japanese Orthodontic Society (Tokushima), 2016.
17. Statistical investigation of abnormalities of the teeth in patients with cleft lip and /or palate: Kunimatsu R., Kimura A., Yoshimi Y., Mitsuyoshi T., Oi N., Awada T., Gunji H., Abe T., Okamoto Y., Takano M., Yamada S., Tanimoto K.: The 75th Annual Meeting of the Japanese Orthodontic Society (Tokushima), 2016.
18. A retreatment case of skeletal maxillary protrusion passed over 40 years from first orthodontic treatment: Sugino H., Yoshimi Y., Sumi C., Kimura A., Motokawa M., Tanimoto K.: The 55th Hiroshima Prefecture Dental Association, The 100th Hiroshima University Dental Society(Hiroshima), 2016.
19. Accuracy of surgical splint made by use of in silico orthognathic surgery simulation: Fujikawa Y., Kihara T., Yoshimi Y., Taji G., Mimura S., Sudou T., Tanimoto K., Nikawa H.: The 55th Hiroshima Prefecture Dental Association, The 100th Hiroshima University Dental Society(Hiroshima), 2016.
20. Application of bone regeneration using stem cells from human exfoliated deciduous teeth: Nakajima K., Kunimatsu R., Sumi K., Kojima S., Sumi H., Awada T., Oki N., Abe T., Ando K., Kaku M., Tanimoto K.:The 23rd General Meeting of the Japanese Association for Dental Science (Fukuoka), 2016.
21. Effects of low-level diode laser treatment on the metabolism of human dental pulp cells: Kunimatsu R, Tsuka Y, Gunji H, Yoshimi Y, Awada T, Tanimoto K.: The 23rd General Meeting of the Japanese Association for Dental Science (Fukuoka), 2016.
22. Development of an effective bracket against orthodontic treatment using hydrophilic polymer. Kunimatsu R, Tsuka Y, Sumi H, Yoshimi Y, Nakajima K, Tanimoto K. The 1st Shin-sangyou souritsu Workshop (Hiroshima), 2016.
23. Development of an effective bracket against orthodontic treatment using hydrophilic polymer. Kunimatsu R, Tsuka Y, Sumi H, Yoshimi Y, Nakajima K, Tanimoto K. The 2nd Shin-sangyou souritsu Workshop (Hiroshima), 2016.
24. Heterogeneity of osteoblasts and their potential for adipogenic transdifferentiation: Okita S., Yoshioka H., Minamizaki T., Tanimoto K., Yoshiko Y.: The 39th Annual meeting of molecular biology society of Japan (Yokohama), 2016.
25. 「Assesment of airway expansion by a simplified two-piece mandibular advancement appliance for obstructive sleep apnea」-Comparison between supine X-ray and Computed tomography- : Matsumura Y., Ueda H., Nagasaki S., Cynthia Concepción Medina, Iwai K., Tanimoto K.:The 15th Annual Meeting of the Japanese Dental Sleep Medicine (Tokyo), 2016.
26. Osteoblasts inhibit osteoclast formation by targeting prdm1 via the mechanism underlying matrix vesicle-mediated transfer of miR-125b : Irie Y., Minamizaki T., Nakao Y., Ahmed Faisal, Yoshioka H.,

- Kouzai K., Takei Y., Tanimoto K., Yoshiko Y.: The 34th Annual meeting of the Japanese Society for Bone and Mineral Research (Osaka), 2016.
27. Bone regeneration in artificial jaw cleft by use of MSCs- The role of MSCs in angiogenesis-: Oki N., Sumi K., Abe T., Sugiyama M., Tanimoto K.: American association of orthodontists meeting (Orland, USA), 2016.
 28. Comparison of root resorption between vital and pulpless teeth after orthodontic treatment : Sumi H., Kaku M., Kojima SI., Shikata H., Tanimoto K.: American association of orthodontists meeting (Orland, USA), 2016.
 29. The effect of bone marrow-derived mesenchymal stem cells on osteoclast precursor for bone regeneration of alveolar cleft : Abe T., Sumi K., Oki N., Kinimatsu R., Sugiyama M., Tanimoto K.: The 49th Annual Meeting of the Hiroshima University Dental Society (Hiroshima), 2016.
 30. Changes of the upper airways and sleep breathing on children undergoing Andresen Activator therapy : Concepcion Medina C., Ueda H., Matsumura Y., Iwai K., Tanimoto K.: The 49th Annual Meeting of the Hiroshima University Dental Society (Hiroshima), 2016.
 31. Effect of Nd:YAG laser irradiation on the osteoblasts : Tsuka Y., Kunimatsu R., Gunji H., Nakajima K., Tanimoto K.: The 49 Korean Association Orthodontists (Seoul), 2016.
 32. Construction of hyaline-fibrous cartilage composites using human bone marrow derived mesenchymal stem cells: Sugino H., Kanawa M., Tanimoto K., Kato K.: The 49 Korean Association Orthodontists (Seoul), 2016.
 33. A case of sleep-breathing and upper airway changes using the FKO activator: Concepción M. C., Ueda H., Matsumura Y., Iwai K., Sumi K., Tanimoto K.: The 75th Annual Meeting of the Japanese Orthodontic Society (Tokushima), 2016.
 34. Assessment of temporomandibular joint disorder in children with malocclusion using magnetic resonance (MRI) : Wu FC., Awada T., Ueda H., Oki N., Okita S., Gunji H., Nakao Y., Sumi C., Concepcion C., Nakajima K., Tanimoto K.: The 75th Annual Meeting of the Japanese Orthodontic Society (Tokushima), 2016.
 35. Sleep breathing changes achieved by the use of the FKO activator assessed with an at-home sleep monitor.:Concepción M. C., Ueda H., Matsumura Y., Iwai K., Tanimoto K.:The 15th Annual Meeting of the Japanese Dental Sleep Medicine (Tokyo), 2016.
 36. Designed SDF-1 chimeric protein for bone tissue regeneration : Date T., Hirata I., Hattori S., Matsuda C., Nakano A., Yamakado., Tanimoto K., Kato K.: International Dental Materials Congress (Bali), 2016.
 37. Osteoblasts inhibit osteoclast formation by targeting prdm1 via the mechanism underlying matrix vesicle-mediated transfer of miR-125b: Irie Y., Minamizaki T., Nakao Y., Ahmed Faisal, Yoshioka H., Kouzai K., Takei Y., Tanimoto K., Yoshiko Y.: The 38th Annual meeting of the American Society for Bone and Mineral Research (Atlanta), 2016.

38. MicroRNA-125b in bone matrix plays a crucial role in osteoblast-osteoclast communication : Irie Y., Minamizaki T., Nakao Y., Ahmed Faisal, Yoshioka H., Kouzai K., Takei Y., Tanimoto K., Yoshiko Y.: The 43rd Annual European Calcified Tissue Society Congress (Rome), 2016.

F) Special lectures in academic meetings

1. Tanimoto K.: Inspection of malocclusion in school dental examination - Points of inspection -: Onomichi City Dental General Incorporated Association (Onomichi), 2016.
2. Tanimoto K.: Management of High Caries Risk Case in Orthodontic Treatment - Restoration of Damaged Tooth Enamel by Biomineralization -: The academic seminar of Hiroshima Orthodontic Society (Hiroshima), 2016.
3. Tanimoto K.: Temporomandibular disorders in the aspect of orthodontics – A systematic approach according to the pathologic status -: Sasebo clinical dentistry workshop (Sasebo), 2016.
4. Kaku M.: Strage function of periodontal ligament by tooth bank <basic research and clinical application>: Cooperation joint lecture among three universities (Niigata), 2016.
5. Kaku M.: Strage function of periodontal ligament by tooth bank <basic research and clinical application>: Cooperation joint lecture among three universities (Sendai), 2016.
6. Kaku M.: Inspection and development of the new teeth cleaning appliance without injuring tooth surface: The 2nd Internrtionl meeting of the EX-Polyphosphate (Tokyo), 2016.
7. Kaku M.: Tongue-palatal contact changes in patients with skeletal deformity after orthognathic surgery: The 3rd Electropalatography symposium (Tokyo), 2016.
8. Kaku M.: Stanility and important notice of teeth intrusion using orthodontic anchor screws: The 75th Annual Meeting of the Japanese Orthodontic Society (Tokushima), 2016.

(4) Status of Receiving Grants-in Aid for Scientific Research, etc.

1. Grant-in-aid for Scientific Research (C) : Tanimoto K.: Modulation of stem cells from exfoliated deciduous teeth (SHED) activity by construction of microenvironment and its application to bone regeneration of jaw cleft. 1300,000yen.
2. Grant-in-aid for Scientific Research (C) : Kunimatsu R.: Application to root resorption prevention and elucidation of periodontal tissue metabolic activity mechanism by functionality amelogenin peptide and laser. 2080,000 yen.
3. Grant-in-aid for Scientific Research (C) : Hirose N.: Elucidation of the mechanical stress receptible mechanism by integrins, and establishment of PCR prevention with a integrins inhibitor. 1600,000yen.
4. Grant-in-aid for Scientific Research (B) : Oki N.: Usefulness of mesenchymal stem cells with various differentiation degrees in Maxillary lip and palate cleft closure. 510,000yen.

5. Grant-in-aid for Scientific Research (B) : Sumi K.: The application to jaw cleft treatment by establishment of bone regeneration by use of mesenchymal stem cells and laser. 1500,000yen.
6. Grant-in-aid for Scientific Research (B) : Yoshimi Y.: Application to root resorption prevention and elucidation of periodontal tissue metabolic activity mechanism by drug discovery using amelogenin peptide and Platelet Rich Plasma. 1500,000yen.
7. Grant-in-aid for Scientific Research (B) : Tsuka Y.: Effect of periodontal tissue metabolic activity by laser irradiation during orthodontic teeth movement. 1300,000yen.
8. Grant-in-aid for Scientific Research (B) : Sumi H.: Effects of anti-inflammatory drugs and pulpectomy on root resorption during orthodontic tooth movement. 1000,000yen.
9. Grant-in-aid for Scientific Research (B) : Asakawa Y.: Elucidation of the mechanism of estrogen on cartilage destruction of osteoarthritis and its application to diagnostic methods. 1400,000yen.
10. Grant-in-aid for Scientific Research (start assist) : Awada T.: Development of a new amelogenin peptide immobilization on barrier membrane and application of bone regeneration. 1300,000yen.
11. Collaborative research with Sanster Co., Ltd : Kunimatsu R: Statistical investigation of Oralcare in orthodontic patients. 1,000,000 yen.
12. Grant-in-aid Shin-sangyousouritsu-kennyuukai : Kunimatsu R: Development of an effective bracket for orthodontic treatment using hydrophilic polymer. 1000,000 yen
13. Collaborative research with Unitak Co., Ltd : Kunimatsu R: Application to accelerate orthodontic tooth movement and pain relief effects of hybrid-diode-laser on the orthodontic treatment. 275,000 yen.
14. Industry-Academia Collaboration Young researcher support program : Awada T.: Establishment of bone regeneration using a functional amelogenin peptide drug discovery. 300,000yen.
15. Support fund for study from Hiroshima University : Sugino H.: The construction of two kinds of different cartilage with bioengineering and application to temporomandibular joint restoration. 500,000yen.
16. Support fund for study from Hiroshima University : Date T.: Designed SDF-1 chimeric pprotein for bone tissue regeneration. 500,000yen.
17. Support fund for study from Hiroshima University : Matsumura Y.: Evaluation of the effect on obstructive sleep apnea syndrome by use of a simplified two-piece oral appliance. 500,000yen.
18. Grant-in-Aid for Scientific Research : Kojima S.: Tongue-palatal contact changes in patients with skeletal deformity after orthognathic surgery. 500,000yen.
19. Collaborative research with Unitak Co., Ltd: Kunimatsu R: Development of an effective bracket for orthodontic treatment using hydrophilic polymer. 330,000 yen.
20. Grant-in-aid Fujii of Hiroshima University : Kunimatsu R.: Bone regeneration in the treatment of bone defect in the cleft lip and palate by use of deciduous dental pulp stem cells and diode laser. 1000,000 yen

(5) Academic Awards, etc.

1. Nakajima K. : Application of bone regeneration using stem cells from human exfoliated deciduous teeth.: The 75th Annual Meeting of the Japanese Orthodontic Society, Presentation Award.
2. Abe T. : Hiroshima University, Excellent Student Scholarship 2016.
3. Gunji H. : Hiroshima University, Excellent Student Scholarship 2016.
4. Kojima S. : Hiroshima University, Excellent Student Scholarship 2016.
5. Yoshimi Y. : Hiroshima University school of dentistry alumni association research encouragement prize 2016.

(6) Patents

[Return to Contents](#)

- **Applied Life Sciences**
Department of Oral and Maxillofacial Radiology
- **Division of Oral and Maxillofacial Surgery and Oral Medicine**
Department of Oral and Maxillofacial Radiology

(1) Staff and Students

Professor : Keiji Tanimoto, Naoya Kakimoto
Associate Professor : Minoru Fujita
Associate Professor/Lecturer : Yoshikazu Suei, Takashi Nakamoto
Assistant Professor : Toshikazu Nagasaki, Masahiko Ohtsuka, Masahiko Sawajiri,
Masaru Konishi
Graduate Student : Yukimi Yasuhara, Mitsuko Shimizu, Kiyohito Ota, Keiji Harada, Atia Hossain,
Preeyaporn Srimawong

(2) Main Research Activities

- 1: Radiographic diagnosis of oral diseases
- 2: Radiographic study on mandibular osteomyelitis
- 3: Study of radiation dosimetry in X-ray region for diagnosis
- 4: Study on the videofluoroscopic examination of swallowing
- 5: Radiation effects of heavy ion particles on bone metabolism
- 6: Improvement of treatment results in the radiotherapy for oral cancers
- 7: Radiographic study to screen osteoporosis using panoramic radiographs of the jaw

(3) Research Achievements

A) Original Papers

- 1: Usefulness of subtraction technique to detect sclerotic changes in alveolar bone on intra-oral radiographs of oral bisphosphonate-treated patients: Nakamoto T.: The Journal of Hiroshima University Dental Society, 48(2), 107-111, 2016
- 2: Effects of Carbon Ion Irradiation via Periostin on Breast Cancer Cell Invasion of the Microenvironment: Srimawong P, Sawajiri M, Terato H, Maruyama K, Tanimoto K: Journal of Radiology & Radiation therapy 4(1): 1060-7, 2016.

- 3: Drinking high-energy electrolytic water decreases internal radiation exposure caused by the Fukushima Daiichi Nuclear power plant disaster: Sawajiri M, Miyamoto S, Yamanouchi K, Wada S, Srimawong P, Nomura Y, Uchida T: *Nuclear Technology & Radiation Protection*: 31(2), 173-8, 2016.
- 4: The CT and MRI findings of fibrinous sialodochitis Mathews *Journal of Case Reports* : Usami A., Kakimoto N., Aikawa T., Takahata S., Kishino M., Okahata .R, Tsujimoto T., Uchiyama Y., Sasai T., Murakami S. : *Mathews Journal of Case Reports*, 1(2): 019, 2016.
- 5: Effectiveness of diagnosis of videofluoroscopic swallowing study by synchronizing patient movie: Konishi M., Nagasaki T., Yasuhara Y., Tanimoto K.: *The journal of Hiroshima University Dental Society*, 48(2), 112-117, 2016.
- 6: The Characteristics of the Healthy Adults Who Are High in a Value of the Maximal Lingual-Palatal Pressure: Yasuhara Y.: *The journal of Hiroshima University Dental Society*, 48, 44-55, 2016.
- 7: Videofluorographic study of effortful swallowing and K-method swallowing: Hossain A.: *The journal of Hiroshima University Dental Society*, 48(1), 1-19, 2016.

D) Other Publication

- 1: Radiation effects of heavy ion particles on bone metabolism.: Sawajiri M, Nomura Y, Terato H, K Maruyama: 2015 Annual Report of the Research Project with Heavy Ions at NIRS-HIMAC: 108-109, 2016

E) Presentation at Scientific Meeting

- 1 : A case of aberrant tortuosity of common carotid artery to submandibular area: Nakamoto T., Suei Y., Fukutani T., Konishi M., Nagasaki T., Fujita M., Kakimoto N.: *The 36th Kansai and Kyushu joint regional meeting of Japanese Society of Oral and Maxillofacial Radiology (Fukuoka)*. 2016.
- 2 : Irradiation affects breast cancer cell invasion of the microenvironment via Periostin : Srimawong P, Sawajiri M, Terato H, Maruyama K, Tanimoto K : *The 11th Asian congress of oral and maxillofacial radiology (ChiangMai)*, 2016
- 3 : The utility of IDEAL technique on MRI in patients with flap reconstruction for oral cancer treatment. : Usami A, Senda Y, Iwamoto Y, Marutani K, Okahata R, Tsujimoto T, Shimamoto H, Nakatani A, Uchiyama Y, Kakimoto N, Murakami S. : *The 36th annual joint meeting of Kansai and Kyushu of Japanese Society for Oral and Maxillofacial Radiology (Hakata)*, 2016.
- 4 : A case of patient with multiple different tumors or tumor like lesions in maxilla, mandible, zygomatic bone, and frontal sinus. : Kawamoto T, Murakami S, Kakimoto N, Usami A, Horiuchi K. : *The 36th annual joint meeting of Kansai and Kyushu of Japanese Society for Oral and Maxillofacial Radiology (Hakata)*, 2016.

- 5 : Introduction of practical examination after clinical practice of dentistry: Konishi M., Suei Y., Sawajiri M., Nagasaki T., Nakamoto T., Fujita M., Kakimoto N.: The 36th annual joint meeting of Kansai and Kyushu of Japan Society of Oral and Maxillofacial Radiology (Fukuoka), 2016.
- 6 : Analysis of cervical auscultation sound at the time of before or after swallowing : Nagasaki T., Takagi, S., Hiraoka, A., Kawano, H., Yoshikawa, M., Tsuga, K. : The 22nd Annual Meeting of the Japanese Society of Dysphagia Rehabilitation (Niigata), 2016.
- 7 : Analysis of background noise in cervical auscultation sound before/after swallowing : Nagasaki T., Yoshikawa, M., Takagi, S., Hiraoka, A., Kawano, H., Tsuga, K., Izumi, Y. : The 6th European Society for Swallowing Disorders Congress (Milano), 2016.
- 8 : Study in airway expansion of a simplified two-piece mandibular advancement appliance for obstructive sleep apnea : Matsumura Y., Ueda H., Nagasaki T., Cynthia Concepcion Medina, Iwai K., Tanimoto K. : The 15th Annual Meeting of the Japan Academy of Dental Sleep Medicine (Tokyo), 2016.

F) Special lectures in academic meetings

Lecture

- 1 : Diagnosis and Treatment of Early Stage Oral Cancers: Radiotherapy for Early Oral Cancers : Fujita M., The 64th Regional Chapter of The Japanese Society of Oral and Maxillofacial Surgeons (Ube), 2016.
- 2 : Irradiation Effect of Carbon ion on Bone Metabolism : Sawajiri M: Mahidol University lecture to a graduate student in the Master of Science Program in Dentistry (International Program) in Oral and Maxillofacial Radiology (Bangkok), 2016.

Educational lectures

- 1 : The knowledge of oral radiology for pedodontists. : Kakimoto N. : the 35th annual meeting of Kinki of Japanese Society of Pediatric Dentistry (Toyonaka), 2016.

(6) Patents

- 1: Nakamoto T., Asano A., Taguchi A., Hattori M., Andou H.: A computer aided diagnosis system for osteoporosis, and a method to identify the site where the bone density has changed (Patent Number 5935061) (Hiroshima University, Matsumoto Dental University, ASAHI ROENTGEN IND. CO., LTD.)

- **Department of Biological Endodontics,
Integrated Health Sciences and**
- **Department of Endodontics and Operative Dentistry,
Division of Preventive and Restorative Dentistry**

(1) Staff and Students

| | |
|-------------------------------|---|
| Professor | : Hideki Shiba |
| Associate Professor, Lecturer | : Shigeki Suzuki |
| Assistant Professor | : Naoyo Motoyama, Shintaro Nagayasu, Shizu Tsuchiya, Seiji Kobuke |
| Graduate Student | : Jun Nakanishi, Kazuma Yoshida |

(2) Main Research Activities

- 1: Studies on biological regeneration of dentin/pulp complex and periapical tissues
- 2: Studies on biological obturation of root canals at apical areas
- 3: Studies on development of a new intracanal medicament
- 4: Studies on development of a new therapeutic agent for intractable pain

(3) Research Achievements

A) Original Papers (including Case Reports)

- 1: Aggregatibacter actinomycetemcomitans outer membrane protein 29 (Omp29) induces TGF- β -regulated apoptosis signal in human gingival epithelial cells via fibronectin/integrin β 1/FAK cascade: Yoshimoto T., Fujita T., Kajiya M., Ouhara K., Matsuda S., Komatsuzawa H., Shiba H., Kurihara H.: Cell Microbiol., 18, 1723-1738, 2016.
- 2: Sequential process in brain-derived neurotrophic factor-induced functional periodontal tissue regeneration: Konishi A., Takeda K., Fujita T., Kajiya M., Matsuda S., Kittaka M., Shiba H., Kurihara H.: Eur. J. Oral Sci., 124, 141-150, 2016.
- 3: Azithromycin recovers reductions in barrier function in human gingival epithelial cells stimulated with tumor necrosis factor- α : Miyagawa T., Fujita T., Yumoto H., Yoshimoto T., Kajiya M., Ouhara K., Matsuda S., Shiba H., Matsuo T., Kurihara H.: Arch. Oral Biol., 62, 64-69, 2016.
- 4: Distinction between cell proliferation and apoptosis signals regulated by brain-derived neurotrophic factor in human periodontal ligament cells and gingival epithelial cells: Kashiwai K., Kajiya M., Matsuda S., Ouhara K., Takeda K., Takata T., Kitagawa M., Fujita T., Shiba H., Kurihara H.: J. Cell

- Biochem., 117, 1543-1555, 2016.
- 5: N-terminal Dentin Sialoprotein fragment induces type I collagen production and upregulates dentinogenesis marker expression in osteoblasts: Jaha H., Husein D., Ohyama Y., Xu D., Suzuki S., Huang G.T. and Mochida Y.: *Biochem. Biophys. Rep.*, 6, 190-6, 2016.
 - 6: Two-Year Clinical Comparison of Flowable-Type Nano-Hybrid Composite and Paste-Type Composite in Posterior Restoration: Hirata-Tsuchiya S., Yoshii S., Suematsu M., Washio A., Saito N., Urata M., Hanada K., Morotomi T., Kitamura C.: *J. Investig. Clin. Dent.*, 5, 1-5, 2016.
 - 7: The Novel NF- κ B Inhibitor, MTI-II Peptide Anti-Inflammatory Drug, Suppresses Inflammatory Responses in Odontoblast-Like Cells: Nakayama K., Hirata-Tsuchiya S., Okamoto K., Morotomi T., Jimi E., Kitamura C.: *J. Cell. Biochem.*, 117, 2552-2558, 2016.
 - 8: A Small Nuclear Acidic Protein that Inhibits NF- κ B and its Application to Anti-Inflammatory Drugs: Okamoto K., Hirata-Tsuchiya S., Kitamura C., Omoteyama K., Sato T., Arito M., Kurokawa M., Suematsu N., Kato T.: *Endocrinology*, 157, 4973-4986, 2016.
 - 9: Down-regulation of zinc transporter-1 in astrocytes induces neuropathic pain via the brain-derived neurotrophic factor - K⁺-Cl⁻ co-transporter-2 signaling pathway in the mouse spinal cord: Kitayama T., Morita K., Motoyama N., Dohi T.: *Neurochem. Int.*, 101, 120-131, 2016.
 - 10: Epicatechin downregulates adipose tissue CCL19 expression and thereby ameliorates diet-induced obesity and insulin resistance: Sano T., Nagayasu S., Suzuki S., Iwashita M., Yamashita A., Shinjo T., Sanui T., Kushiya A., Kanematsu T., Asano T., Nishimura F.: *Nutr. Metab. Cardiovasc. Dis.*, SO0939-4753(16)30200-9, 2016.

B) Review

- 1: Dentin sialophosphoprotein is a potentially latent bioactive protein in dentin: Suzuki S., Nakanishi J., Yoshida K., Shiba H.: *J. Oral Biosci.*, 58: 134-142, 2016.
- 2: Fine-tuning between BMP and NF- κ B pathways regulates osteoblastic bone formation: Hirata-Tsuchiya S., Fukushima H., Kokabu S., Kitamura C., Jimi E.: *J. Oral Biosci.*, 58, 73-77, 2016.

C) Publications

D) Other Publications

- 1: The prospects of biological endodontics: Shiba H., Kobuke S., Suzuki S.: *Hiroshima. City Dent. Gener. Inc. Assoc. J.*, 23: 2-6, 2016.

E) Presentation at Scientific Meeting

- 1: Activities by Dental hygienists in dental support for HIV positive patients in Hiroshima University Hospital: Okada M, Matsui K, Iwata T, Nakaoka M, Shiba H : The 59th Spring Meeting of The Japanese Society of Periodontology (Kagoshima) , 2016.
- 2: Elucidation of the mechanism whereby dental pulp cell-derived specific factors induce TNF- α production from macrophage: Nagayasu S., Suzuki S., Kobuke S., Nakanishi J., Yoshida K., Shiba H.: The 37th Annual Scientific Meeting of JEA (Nagoya) , 2016.
- 3: A case report of apical hard-tissue deposition by root canal treatment: Nagahara T., Takeda K., Iwata T., Shiba H.: The 37th Annual Scientific Meeting of JEA (Nagoya) , 2016.
- 4: The effect of anti-HIV agents on oral environment and taste function: Shintani T., Yamasaki N., Iwata T., Saito S., Kitagawa M., Ogawa I., Okada M., Mastui K., Hamamoto K., Unei H., Fujita K., Ogawa R., Kinoshita K., Ikeda Y., Fujii T. Shiba H. : The 30th Annual meeting of the Japanese Society for AIDS research (Kagoshima), 2016.
- 5: Anti-inflammatory effects of MTI-II peptides: Hirata-Tsuchiya S., Shiba H.: The 49th Annual meeting of Hiroshima University Dental Society (Hiroshima), 2016.
- 6: Effects of 4-META/MMA-TBB resin at different curing stages on Osteoblasts and gingival epithelial cells: Morotomi T., Hirata-Tsuchiya S., Washio A., Kitamura C.: The 37th Annual Scientific Meeting of JEA (Nagoya), 2016.
- 7: Functional Modification of Cells by Nonsteroidal Anti-Inflammatory Drugs Independent of Cyclooxygenase-Inhibiting Activity: Matsuyama A., Hirata-Tsuchiya S., Washio A., Morotomi T., Kitamura C.: The 144th Meeting of the Japanese Society of Conservative Dentistry (Tochigi), 2016.
- 8: Identify of binding region of Smad4 and NF-kB/p65: Urata M., Matsubara T., Takeuchi H., Nakatomi C., Hirata-Tsuchiya S., Kokabu S., Chou B., Kitamura C., Jimi E.: The 58th Annual Meeting of Japanese Association for Oral Biology (Hokkaido), 2016.
- 9: Role of spinal LPCAT2, an inducible PAF synthesis enzyme on development and maintenance of painful peripheral neuropathy models in mice: Morita K., Motoyama N., Kitayama T., Kanematsu T., Dohi T.: The 89th Annual meeting of the Japanese Pharmacological Society (Yokohama), 2016.
- 10: Role of the novel Platelet-Activating factor (PAF) synthetase LPCAT2 on painful peripheral neuropathy models in mice: Motoyama N., Morita K., Shiba H., Dohi T.: The 36th Annual Meeting of the Japanese Society of Oral Therapeutics and Pharmacology (Niigata), 2016.
- 11: Anti-allodynic effect of spinal LPCAT2, an inducible PAF synthesis enzyme in neuropathic pain models in mice: Motoyama N., Morita K., Kitayama T., Shiba H., Dohi T.: The 49th Annual meeting of Hiroshima University Dental Society (Hiroshima), 2016.
- 12: Exploration of a dental pulp cell-derived specific factor inducing TNF- α production from macrophages: Nagayasu S., Suzuki S., Nakanishi J., Yoshida K., Tsuchiya S., Motoyama N., Kobuke S. and Shiba H. : The 145th Japanese Society of Conservative Dentistry (Nagano), 2016.

- 13: Exploration of a TNF- α -inducing factor produced by pulp cells :Nagayasu S, Suzuki S, Kobuke S, Shiba H.: The 49th Annual meeting of Hiroshima University Dental Society (Hiroshima), 2016.
- 14: Antimicrobial ability of Heparin-LL37 hybrid:Yoshida K., Suzuki S., Nakanishi J., Nagayasu S., Kobuke S. and Shiba H.: The 145th Japanese Society of Conservative Dentistry (Nagano), 2016.
- 15: Proliferative and migratory effects of MSC-delivered ECM:Yoshida K., Suzuki S., Nakanishi J., Kobuke S., Nagayasu S., Shiba H.: The 49th Annual meeting of Hiroshima University Dental Society (Hiroshima), 2016.
- 16: Anti-inflammatory effects of phosphophoryn : Nakanishi J., Suzuki S., Kobuke S., Yoshida K., Nagayasu S., Shiba H.: The 144th Japanese Society of Conservative Dentistry (Utsunomiya), 2016.
- 17: Anti-inflammatory effects of phosphophoryn: Nakanishi J., Suzuki S., Kobuke S., Yoshida K., Nagayasu S., Shiba H. : The 49th Annual meeting of Hiroshima University Dental Society (Hiroshima), 2016.

F) Special lectures in academic meetings

- 1: The biological endodontics that is expected to be realized: Shiba H.: Sasebo clinical dentistry meeting (Sasebo), 2016.
- 2: The point of examination, diagnosis and the treatment of endodontic and periodontal disease: Shiba H.: The 25th general meeting of Alumni association for Oral and Maxillofacial Surgery, Faculty of Medicine, Kagawa University (Takamatsu), 2016.
- 3: Information concerning performance of countermeasure for HIV infection in the Chugoku and Shikoku areas: Shiba H.: The first liaison council of AIDS treatment among AIDS core hospitals in the Chugoku and Shikoku areas (Kochi), 2016.
- 4: Infection control: Shiba H.: Clinical workshop of Japan Endodontic Association (Tokyo), 2016.

(4) Status of Receiving Grants-in Aid for Scientific Research, etc.

- 1: Grant-in-Aid for Scientific Research (B): Shiba H.: Usefulness of the complex of the three regenerative elements as a therapeutic agent for regeneration against endodontic diseases: No. 15H05022, ¥3,500,000
- 2: Research grants: Grants for research received from Hiroshima Prefecture: Study on network-construction of dental practice for HIV infection: ¥3,000,000
- 3: Grant-in-Aid for Scientific Research (C): Suzuki S. Induction of cellular proliferation and differentiation of dental pulp cells by newly identified long non-coding RNA: No. 16K11551, ¥1,400,000
- 4: Grants-in-Aid for Young scientists (B): Tsuchiya S. Development of pulp and hard tissue

regeneration by the novel NF- κ B inhibitor, MTI-II. No.15K20409, ¥ 1,500,000.

- 5: Grants-in-Aid for Young scientists (B): Kobuke S. Development of hard tissue regeneration using recombinant DPP : No. 15K20405, ¥1,400,000.
- 6: Grants-in-Aid for Young scientists (B): Nagayasu S. Exploration of a TNF- α -inducing factor produced by pulp cells : No.268615961A, ¥1,500,000.
- 7: Grant-in-Aid for Scientific Research (C): Motoyama N. Role of the novel Platelet-Activating factor (PAF) synthetase LPCAT2 on chronic pain: No.16K11550, ¥1,400,000
- 8: General foundation Ryokufukai The year of 2016 education and research prize for encouragement (Grant for young researcher grant): Nakanishi J. Anti-inflammatory effects of phosphophoryn: ¥500,000

(5) Academic Awards, etc.

(6) Patents

- 1: Morita K., Dohi T., Motoyama N., Kitayama T., Kanematsu T., Shiraishi S.: Management of chronic pain: translating mechanistic advances and evidence-based research into clinical practice (Basic application No. 5954790

[Return to Contents](#)

Integrated Health Sciences
Department of Pediatric Dentistry
Department of Oral Health and Development
(Pediatric Dentistry)

(1) Staff and Students

| | |
|---------------------|---|
| Professor | : Katsuyuki Kozai |
| Associate Professor | : Chieko Mitsuhata |
| Research Associate | : Yasutaka Kaihara, Meiko Tachikake, Noriko Niizato ;, Yukari Ohara, Yukiko Konishi(~March), Yuko Iwamoto (April~) |
| Physician | : Ryoko Hirata, Nami Matsumoto, Ayumi Shimada : Yuko Iwamoto, Noriko Goto, Nobuyuki Tatsukawa (April~) |
| Graduate Student | : Kaoru Sakurai, Nao Kado, Yasumasa Irie |
| Research Student | : Akira Yamane |
| Clinical Trainee | : Fumiko Hayashi,i |

(2) Main Research Activities

- 1 : Bacteriological research of onset mechanism and prevention of dental caries in children
- 2 : Research in oral environment and dental diseases in abused children
- 3 : Clinical research in oral care in children suffered from systematic diseases
- 4 : Evaluation of psychological stress in dental treatment in children
- 5 : 3-D analysis of dentition and occlusion in children
- 6 : Bacteriological research in periodontal diseases in children
- 7 : Investigation of oral status of Cambodian children

(3) Research Achievements

A) Original Papers (including Case Reports)

- 1 : Ao M., Miyauchi M., Furusho H., Inubushi T., Kitagawa M., Nagasaki A., Sakamoto S., Kozai K., Takata T.: Dental Infection of Porphyromonas gingivalis Induces Preterm Birth in Mice.: PLoS One.: 2015 Aug 31;10(8):e0137249, 2015.

- 2 : Shimada A., Noda M., Matoba Y., Kumagai T., Sugiyama M., Kozai K.: Oral lactic acid bacteria related to the occurrence and/or progression of dental caries in Japanese preschool children: *Biosci Microbiota Food Health*, 34(2):29-36, 2015.
- 3 : Fujii S, Fujimoto K., Goto N., Kanawa M., Kawamoto T., Pan H., Srivatanakul, R. W., Pornprasitwech J., Saskianti T., Suardita K., Nishimura F., Kato Y.: Characteristic expression of MSX1, MSX2, TBX2, and ENTPD1 in dental pulp cells *Biomedical Reports*, 3, 566-572, 2015.
- 4 : Goto N, Ohara Y, Niizato N, Kawagoe M, Furusho H, Mitsuhata C, Takata T, Kozai K.: A Case of Long-term Management for a Patient with Donohue Syndrome, *The Journal of Hiroshima University Dental Society*, 47(2), 163-169, 2015.
- 5 : Kaihara Y., Niizato N., Tachikake M., Mitsuhata C., Kozai K.: Overview of community-based oral health support activities at the shelter care facilities and dental caries prevalence of children during temporary custody: *The Journal of Japanese Society of Dental Welfare*, 21(1), 6-14, 2016.
- 6 : Fujiwara N., Tsuruda K., Iwamoto Y., Kato F., Odaki T., Yamane N., Hori Y., Harashima Y., Sakoda A., Tagaya A., Komatsuzawa H., Sugai M. , Noguchi M.: Significant increase of oral bacteria in the early pregnancy period in Japanese women: *Journal of Investigative and Clinical Dentistry*, 0, 1–8, 2015.

B) Review

- 1 : Kozai K.: Ethics in clinical research -Ethics review system for private dental practitioners-, *Japanese Journal of Clinical Dentistry for Children*, 20(7), 54-58, 2015.
- 2 : Kozai K.: The mission of pediatric dentistry —The report of holding of the 53rd Congress of Japanese Society of Pediatric Dentistry—, *Japanese Journal of Clinical Dentistry for Children*, 20(9), 10-13, 2015.

C) Publications

- 1 : Ishikawa et al. Kozai K., Mitsuhata C., Kaihara Y., Iwamoto Y.:, *IGAKU-SHOIN*, 914-915, 2016.

D) Other Publications

E) Presentation at Scientific Meeting

- 1: Improvement of oral health conditions of Cambodian school children by oral health education :
Iwamoto Y., Iwamoto A., Niizato N., Goto N., Tatsukawa N., Sakurai K., Amano H., Kozai K.: the 10th Biennial Conference of the Pediatric Dentistry Association of Asia (Tokyo), 2016.
- 2: Preliminary Survey for Screening to Predict Abused Children, Sasahara H, Kaihara Y., Hosohara K., Yamasaki K., Nikawa H., Kozai K.: The 10th Biennial Conference of the Pediatric Dentistry Association of Asia (Tokyo), 2016
- 3: Does Lip-Closing Strength Develop in Parallel to Age in Children? "Nogami Y., Saitoh I., Inada E, Kaihara Y., Muarakami D., Takemoto Y., Sawami T., Nosou M., Sakurai K., Matsumoto N., Soda M., Nakajima T., Kozai K., Yamasaki Y., Hayasaki H.: the 10th Biennial Conference of the Pediatric Dentistry Association of Asia (Tokyo), 2016.
- 4: Growth Changes of Alveolar and Palatal Morphology in Infants. A Longitudinal Study. Kihara T., Kaihara Y., Iwamae S., Niizato N., Taji T., Amano H., Kozai K., Nikawa H.: the 10th Biennial Conference of the Pediatric Dentistry Association of Asia (Tokyo) , 2016.
- 5: The Dental Characteristics of Abused Children in Temporary Shelters in Japan.: Niizato N., Kaihara Y(CO), Nii N., Maeshima M., Bansyodani A., Yamasaki K., Kozai K.: the 10th Biennial Conference of the Pediatric Dentistry Association of Asia (Tokyo), 2016.
- 6: Morphological Characteristics of Facial Soft Tissue of Mouth-Breathing Children.: Inada E., Saitoh I., Takeshi Oku., Muarakami D., Kaihara Y., Takemoto Y., Morizono K., Kubota N., Hayasaki H., Yamasaki Y.: the 10th Biennial Conference of the Pediatric Dentistry Association of Asia (Tokyo), 2016.
- 7: Clinical Usage of a Portable 3D Scanner System for the Three-Dimensional Analysis of the Craniofacial Complex.: Kanbara A, Seo M., Amano H., Nishimura R., Iwamoto A., Kihara T., Kaihara Y., Nikawa H., Kozai K.: the 10th Biennial Conference of the Pediatric Dentistry Association of Asia (Tokyo) , 2016.
- 8: A survey of patients visiting the pediatric dentistry clinic of a University Hospital.: Tatsukawa N., Mitsuhata C., Kozai K. : The 35th Congress of the Japan Diabetes Society Chushikoku Branch (Okayama), 2016.
- 9: A case of odontoma 血小板減少症患者の上顎右側乳犬歯部に認めた集合性歯牙腫を全身麻酔下にて摘出した1例 Child with thrombocytopenia: Tachikake M., Mitsuhata C., Ono S., Tada M., Goto N., Niizato N., Kozai K. : the 28th Japanese Society of Pediatric Oral and Maxillofacial Surgery (Hiroshima), 2016.

- 10: Oral conditions of participants of educational summer camps for young type 1 diabetic patients :
Tachikake M., Mitsuata C., Niizato N., Kozai K. : The 62nd Annual Meeting of the Japanese Society of Child Health (Omiya), 2016.
- 11: Early removal of odontoma avoided eruption disturbance of the mandibular first molar : A case report. :Goto N. Mitsuata C., Kozai K. : the 28th Congress of Japanese Society of Pediatric Oral and Maxillofacial Surgery (Hiroshima), 2016.
- 12: Osteoblasts Inhibit Osteoclast Formation by Targeting *Prdm1* via the Mechanism Underlying Matrix Vesicle-Mediated Transfer of miR-125b. :Irie Y., Minamizaki T., Nakao Y., Ahmed F., Yoshioka H., Kozai K., Takei Y.,Yoshiko Y.: The 34th Annual Meeting of Japanese Society of Bone and Mineral Research (Osaka), 2016.
- 13: miR-125b Suppresses Osteoclast Formation by Targeting *Prdm1*: Irie Y., Minamizaki T., Nakao N., Faisal A., Yoshioka H., Kozai K., Tanimoto K., Yoshiko Y.: ESA-SRB-ANZBMS conference(Gold Coast), 2016.
- 14: Osteoblasts Inhibit Osteoclast Formation by Targeting *Prdm1* via the Mechanism Underlying Matrix Vesicle-Mediated Transfer of miR-125b: Irie Y., Minamizaki T., Nakao N., Faisal A., Yoshioka H., Kozai K., Tanimoto K., Yoshiko Y.: American Society for Bone and Mineral Research (ASBMR) 2016 Annual Meeting (Atlanta), 2016.

F) Special lectures in academic meetings

- 1: Hiroshima Prefecture Dental Hygienists' Association The 2nd seminar for community dental health: Development of oral function and support of feeding behavior for infants :Kozai K.: Essor Hiroshima (Hiroshima), 2016.

(4) Status of Receiving Grants-in Aid for Scientific Research, etc.

- 1 : Grant-in-Aid for Scientific Research (Challenging Exploratory Research): Kozai K.: Effects of endocrine disorders on developing dopaminergic system in Brain (No. 24659911), 2016 direct

expenses: ¥800,000, indirect expenses: ¥240,000.

- 2 : Grant-in-Aid for Scientific Research (C): Mitsuata C.: Effects of endocrine disorders on developing dopaminergic system in Brain (No. 16K11803), 2016 direct expenses: ¥1,400,000, indirect expenses: ¥420,000.
- 3 : Grant-in-Aid for Scientific Research (C): Tachikake M.: Effectiveness of PAP and influence to give oral bacteria in children with dysphagia (No. 15K11367) , 2015 direct expenses: ¥710,000, indirect expenses: ¥210,000.
- 4 : Grant-in-Aid for Scientific Research (B): Goto N.: Regulation of osteogenic and odontogenic differentiation in dental pulp stem cells by the MSX1 homeobox transcription factor. (No. 15K20592) , 2016 direct expenses: ¥1,100,000, indirect expenses: ¥200,000.
- 5 : ASBMR2016 Travel Award : Irie Y.: Osteoblasts Inhibit Osteoclast Formation by Targeting Prdm1 via the Mechanism Underlying Matrix Vesicle-Mediated Transfer of miR-125b.: ¥150,000.

(5) Academic Awards, etc.

- 1 : Irie Y. : The 34th Annual Meeting of Japanese Society of Bone and Mineral Research, the Most Excellent Poster Award.
- 2 : Irie Y. : 2016 ESA-SRB-ANZBMS conference Plenary poster Award
- 3 : Irie Y. : 2016 ASBMR Plenary poster Award
- 4 : Irie Y. : 2016 ASBMR Young investigator Award

(6) Patents

[Return to Contents](#)

**Department of Dental Anesthesiology,
Integrated Health Sciences and
Department of Dental Anesthesiology,
Division of Oral & Maxillofacial Surgery and Oral Medicine**

(1) Staff and Students

| | |
|--------------------|--|
| Professor | : Irifune Masahiro, D.D.S., Ph.D. |
| Lecturer | : Yoshida Mitsuhiko, D.D.S., Ph.D. |
| Research Associate | : Shimizu Yoshitaka, D.D.S., Ph.D., Doi Mitsuru, D.D.S., Mukai Akari, D.D.S., Ph.D., Yoshida Keita, D.D.S. |
| Resident | : Miyauchi Miwa, D.D.S., Ph.D., Oue Kana, D.D.S., Ph.D., Yoshinaka Taiga, D.D.S., Ph.D., Takahashi-Uno Tamayo, D.D.S., Ph.D. |
| Graduate Student | : Ogawa Yuya, D.D.S., Maetani Yuka, D.D.S., Kikuchi Yuka, D.D.S., Oda Aya, D.D.S., Mukai Tomohiro, D.D.S., Sasaki Utaka, D.D.S., Imamura Serika D.D.S., Yamashita Mieko, D.D.S. (temporary withdrawal) |
| Clinical Trainee | : Kawahara Michio, M.D., Ph.D., Katayama Sohtaro, D.D.S., Ph.D., Kawahara Toshiya, D.D.S., Nishinakamura Ryo, D.D.S., Yasusaka Masaki, D.D.S., Nakajyo Akiko, D.D.S. |

(2) Main Research Activities

- 1: Study on mechanisms of general anesthetic action
- 2: Study on role of each neuron in an intravenous anesthetic agent-induced anesthetic factor
- 3: Study on a stage of delirium in general anesthesia
- 4: Study on involvement of dopamine neurons in awakening from general anesthesia
- 5: Study on antianxiety effects of sedative drugs
- 6: Study on effects of nitrous oxide on cardiovascular system
- 7: Study on chronic pain
- 8: Study on efficacy of chest compressions in cardiopulmonary resuscitation
- 9: Study on medical emergency during dental treatments

(3) Research Achievements

A) Original Papers (including Case Reports)

- 1: Phospholipase C-related catalytically inactive protein is a new modulator of thermogenesis promoted by β -adrenergic receptors in brown adipocytes.: Oue K, Zhang J, Harada-Hada K, Asano S, Yamawaki Y, Hayashiuchi M, Furusho H, Takata T, Irifune M, Hirata M, Kanematsu: *J Biol Chem.* 291(8), 4185-96, 2016.
- 2: A clinical study of the statistical relationship between autologous blood transfusion and intraoperative management in patients undergoing orthognathic surgery at Hiroshima University Hospital: Uno T, Yoshida K, Oda A, Kikuchi Y, Yoshinaka T, Yamashita M, Mukai A, Shimizu Y, Yoshida M, Irifune M: *Journal of Japanese Dental Society of Anesthesiology*, 44 (1), 9-13, 2016.
- 3: A case of general anesthesia in a patient with an unruptured cerebral aneurysm after an infectious cerebral aneurysm rupture caused by an odontogenic infection: Mukai T, Yoshida K, Oda A, Mukai A, Irifune M: *Journal of Japanese Dental Society of Anesthesiology*, 44 (1), 23-25, 2016..
- 4: The anesthesia management of a patient with Rubinstein-Taybi syndrome and obesity during dental treatment: Mukai A, Yoshinaka T, Uno T, Oda A, Mukai T, Yoshida K, Oda Y, Okada M, Irifune M: *Journal of the Japanese Society for Disability and Oral Health*, 37 (1), 42-47, 2016.
- 5: Perioperative general anesthetic management for a patient with congenital myotonic dystrophy accompanied by mental retardation and attention deficit hyperactivity disorder: Oda A, Yoshida K, Mukai T, Uno T, Yoshinaka T, Mukai A, Yoshida M, Irifune M: *ournal of the Japanese Society for Disability and Oral Health*, 37 (1), 48-53, 2016.
- 6: Perioperative general management for dental treatment in a patient with depression who was being treated with multiple antipsychotic drugs: Maetani Y, Yoshida K, Oda A, Kikuchi Y, Miyahara T, Mukai A, Shimizu Y, Yoshida M, Irifune M: *Journal of Japanese Dental Society of Anesthesiology*, 44 (2), 210-212, 2016.
- 7: A case of intravenous sedation for a patient with interstitial pneumonia, which has a high possibility of acute exacerbation under general anesthesia: Mukai T, Yoshida K, Mukai A, Shimizu Y, Yoshida M, Irifune M: *Journal of Japanese Dental Society of Anesthesiology*, 44 (2), 213-215, 2016.
- 8: Dental treatment under intravenous sedation with midazolam and dexmedetomidine hydrochloride in a patient with posttraumatic stress disorder and a contraindication for propofol: Oda A, Yoshida K, Mukai A, Mukai T, Ishii H, Oue K, Miyahara T, Doi M, Irifune M: *Journal of Japanese Dental Society of Anesthesiology*, 44 (2), 216-218, 2016.
- 9: Perioperative general management in a patient with myelodysplastic syndrome requiring surgery for tongue cancer: Maetani Y, Shimizu Y, Yoshida K, Mukai A, Yoshida M, Irifune M: *Journal of Japanese Dental Society of Anesthesiology*, 44 (3), 324-326, 2016.
- 10: A case report of worsened self-injury behavior and epilepsy attack by an autistic spectrum disorder patient following dental treatment under general anesthesia: Oda Y, Hayashiuchi M, Fujino Y, Matsumoto K, Yasusaka M, Yoshida K, Yoshinaka T, Wakita A, Irifune M, Okada M: *Journal of the Japanese Society for Disability and Oral Health*, 37 (4), 419-425, 2016.

11: A study of the current situation of pre-anesthesia screening tests in dental patients with intellectual disability, and challenges for the future: Yoshida K, Mukai A, Mukai T, Oda A, Takahashi T, Yamashita M, Yoshinaka T, Kanda T, Oda Y, Yoshida M, Okada M, Irifune M: Journal of the Japanese Society for Disability and Oral Health, 37 (4), 445-450, 2016.

B) Review

C) Publications

D) Other Publications

E) Presentation at Scientific Meeting

- 1: The analgesic effect of flurbiprofen with fentanyl or with acetaminophen: Yoshida M, Shimizu Y, Yoshida K, Mukai A, Doi M, Irifune M: 94th General Session & Exhibition of The IADR, Seoul, Republic of Korea, 2016.
- 2: A case of oral surgery under intravenous sedation using midazolam, dexmedetomidine and fentanyl for a patient with diffuse interstitial fibrosing pneumonia: Imamura S, Yoshida K, Mukai T, Kikuchi Y, Maetani Y, Takahashi T, Oue K, Miyauchi M, Shimizu Y, Nishinakamura R, Irifune M: The 31th Scientific Meeting of Dental Anesthesiology in Chugoku and Shikoku Branch (Hiroshima), 2016.
- 3: What happens in the brain in response to noxious stimulation under sedation or general anesthesia?: Irifune M, Yoshinaka T, Ishii H: The 31th Scientific Meeting of Dental Anesthesiology in Chugoku and Shikoku Branch (Hiroshima), 2016.
- 4: Experience of pain therapy for a patient with mixed connective tissue disease who was extracted 12 tooth because of pain caused by trigeminal nerve disorder, an accessory symptom of the disease: Sasaki U, Doi M, Oda A, Maetani Y, Ogawa Y, Yoshinaka T, Ishii H, Mukai A, Yoshida M, Irifune M: The 31th Scientific Meeting of Dental Anesthesiology in Chugoku and Shikoku Branch (Hiroshima), 2016.
- 5: A case of improving symptoms after oral cavity hygiene for a patient with somatic delusion and somatoform disorder: Yano K, Doi M, Yoshino A, Irifune M: The 11th Annual Meeting of Japan Dental Hygienists' Association (Hiroshima), 2016.
- 6: Prip gene deficiency in mice changes the action of GABAergic anesthetic drugs: Hayashiuchi M, Okada M, Kanematsu T, Irifune M: The 33rd Annual Meeting of the Japanese Society for Disability and Oral Health (Omiya), 2016.
- 7: A case of patient with intellectual disability and obesity performed MRI examination under intravenous sedation: Oda A, Yoshida K, Mukai T, Takahashi T, Yoshinaka T, Mukai A, Kanda T,

- Oda Y, Yoshida M, Okada M, Irifune M: The 33rd Annual Meeting of the Japanese Society for Disability and Oral Health (Omiya), 2016.
- 8: Behavioral control for a patient with Rett syndrome during perianesthetic management for dental treatment: Mukai A, Mukai T, Takahashi T, Yoshinaka T, Oda A, Suematsu M, Yoshida K, Yoshida M, Irifune M: The 33rd Annual Meeting of the Japanese Society for Disability and Oral Health (Omiya), 2016.
- 9: Decline of disengaging function in attention network affects the chronicity of glossodynia: Doi M, Yoshimura S, Ishii H, Irifune M: The 44th Annual Meeting of Japanese Dental Society of Anesthesiology (Sapporo), 2016.
- 10: A case of sick sinus syndrome (SSS) found after oral surgery under general anesthesia: Miyaichi M, Sasaki U, Imamura S, Mukai T, Yoshida K, Mukai A, Shimizu Y, Yoshida M, Irifune M: The 44th Annual Meeting of Japanese Dental Society of Anesthesiology (Sapporo), 2016.
- 11: Pharmacologically different effects of various general anesthetics in relation to types of GABA_A receptors: Hayashiuchi M, Yoshinaka T, Oue K, Oda Y, Irifune M: The 44th Annual Meeting of Japanese Dental Society of Anesthesiology (Sapporo), 2016.
- 12: Pain stimulation changed the electroencephalogram toward awakening under general anesthesia induced by GABA_A receptor agonists: Yoshinaka T, Kikuchi Y, Ogawa Y, Hayashiuchi M, Irifune M: The 44th Annual Meeting of Japanese Dental Society of Anesthesiology (Sapporo), 2016.
- 13: Functional regulation of alpha 3 alpha 5 nicotinic acetylcholine receptor by cyclic AMP in relation to formation of dependence: Takahashi T, Irifune M: The 44th Annual Meeting of Japanese Dental Society of Anesthesiology (Sapporo), 2016.
- 14: Perioperative general management of tooth extraction for a patient scheduled for Bentall and Maze operation: Oda A, Yoshida K, Imamura S, Sasaki U, Takahashi T, Mukai A, Yoshida M, Irifune M: The 44th Annual Meeting of Japanese Dental Society of Anesthesiology (Sapporo), 2016.
- 15: A case of an autistic spectrum disorder patient whose self-injury behavior was deteriorated by hospitalization: Oda Y, Hayashiuchi M, Fujino Y, Matsumoto K, Yoshida K, Wakita A, Irifune M, Okada M: The 55th Scientific Meeting of Hiroshima Prefecture Dental Association and 100th Scientific Meeting of Hiroshima University Dental Society (Hiroshima), 2015.

F) Special lectures in academic meetings

(4) Status of Receiving Grants-in Aid for Scientific Research, etc.

- 1: Grant-in-Aid No. 26463073 for Scientific Research (C) from the Ministry of Education, Culture, Sports, Science, and Technology of Japan (Continued): Yoshida M: Clarification of mechanisms of orofacial neuropathic pain and establishment of its treatment. ¥1,100,000.
- 2: Grant-in-Aid No. 15K11313 for Scientific Research (C) from the Ministry of Education, Culture, Sports, Science, and Technology of Japan (Continued): Irifune M: Development of a novel general anesthetic method applying enhancement of descending pain inhibitory system: application of 5-HT

receptor ligands. ¥300,000.

- 3: Grant-in-Aid No. 60760329 for Start-up Research from the Ministry of Education, Culture, Sports, Science, and Technology of Japan (Continued): Oue K: Study of brown adipocyte to control obesity. ¥1,000,000.

(5) Academic Awards, etc.

- 1: Oue K: The 19th Scientific Encouragement Award from The Alumni Association of School of Dentistry, Hiroshima University.

(6) Patents

[Return to Contents](#)

Integrated Health Sciences

Department of Public Oral Health

(1) Staffs and Students

Professor : Masaru Sugiyama
 Associate Professor : Maki Nosou, Atsushi Shimazu (Department)
 Assistant Professor : Eri Fukada, Yuko Kurawaki
 Graduate Student : Yuka Wakabayashi, Maruyama rika, Tomoko Kawano, Sanae Miyoshi, Yukiko Nagashima, Yuumi Endo, Yoshino Kaneyasu,
 Undergraduate Student: Natsuki Orishige, Airi Matsushige, Rina Akagi, Momoko Okizono, Yuki Akimori, Yui Shiraoka, Ayaka Takahashi, Kaede Takeuchi, Chika Kuwahara, Rina Hayashi (4th grade student), Hinano Takada, Kanako Oda, Mariko Nakamura, Mika Motoshige, Mari Matsumura (3rd grade student)

(2) Main Research Activities

- 1 : Study on oral care
- 2 : Study on the oral functions in the elderly
- 3 : Experimental study on the mechanism of growth and regeneration of periodontal tissues
- 4 : Study on the activities of oral health at school

(3) Research Achievements

A) Original Papers (including Case Reports)

1 : How long does Mutans Strptococci Survive on the Lip of the Plastic Bottle? : -A Study on Transmission of Cariogenic Bacteria via Polyethylene Terephthalate (PET) Bottle-: Hana Okazaki, Masaru Ohara, Rumi Nishimura, Eri Fukada, Kumiko Hara, Mitsugi Okada, Hideaki Amano : J. Hiroshima Univ. Dent. Soc., 48, 20-26, 2016.

2 : CD44high/ALDHhigh head and neck squamous cell carcinoma cells exhibit mesenchymal characteristics and GSK3beta-dependent cancer stem cell properties. Seino S, Shigeishi H, Sugiyama M, Takechi M, J Oral Pathol & Med (2016) 45, 180-188.

3 : Risk factors for oral human papillomavirus infection in healthy individuals: A systematic review and meta-analysis. Shigeishi H, Sugiyama M, J Clin Med Res 2016, 8, 721-729.

4 : Professional oral health care reduces the duration of hospital stay in patients undergoing orthognatic

surgery. Shigeishi H, Sugiyama M, Takechi M, Biomedical Reports 4, 55-58, 2016.

5 : Preoperative oral health care reduces postoperative inflammation and complications in oral cancer patients. Shigeishi H, Ohta K, Sugiyama M, Takechi M, Experimental and Therapeutic Medicine 12, 1922- 1928, 2016.

6 : Snail-induced CD44high cells in HNSCC with high ABC transporter capacity exhibit potent resistance to cisplatin and docetaxel. Hashikata M, Shigeishi H, Sugiyama M, Takechi M, Int J Clin Exp Pathol 2016, 9, 7908-7918.

7 : Higher prevalence and gene amplification of HPV16 in oropharynx as compared to oral cavity. Shigeishi H, Sugiyama M, Takechi M, <http://dx.doi.org/10.1590/1678-775720160009>.

B) Review

C) Publications

1 : Latest Dental Technical Terms Dictionary for the Dental Hygienist. a pocket edition : Ohta K, Sugiyama M(editor:Kashiwa G. et al) : Quintessence Publishing.(Tokyo),2016.

2 : Chapter 2-9. Salivary gland disease 「oral surgery」 (second edition). Shigeishi H,Sugiyama M : Suenaga Bookstore.(Kyoto), p166-179, 2016.

3 : Chapter 3-16. Salivary calculus extraction surgery. 「oral surgery」 (second edition). Sugiyama M, Shigeishi H : Suenaga Bookstore.(Kyoto), p255-258, 2016.

D) Other Publications

1 : . Choose oral humectant at the request of patients ~ Comparative evaluation in inpatient patients in palliative care units - : Susumu Hashitani, Midori Fujii, Sakyu Kino, Tomoko Kawano, Miyuki Tsuji, Kaori Kasuga, Hitomi Kanemura, Maiko Yuasa, Eri Hiranaka, Rie Hiyoshi, Akari Nimura, Sachiko Okayama, Takamichi Yanagisawa Nurse specialist Vol.36.No.6,2016.

E) Presentation at Scientific Meeting

1 : Relationship between oral health status and behavior in the birth order of the school children. : Shimazu A., Nosou M., Fukada E., Nishimura R., Sugiyama M. : 12th International Conference of Asian Academy of Preventive Dentistry (Tokyo), 2016.

2 : Development of new dental caries preventive agent for root caries: Shimazu A.: 4th TR promotion joint forum · life science technology exchange meeting (Fukuoka), 2016.

3 : Effectiveness of communication teaching materials prepared based on analysis of dental health

- guidance: Shimazu A., Yamashiro E., Abe A., Sugiyama M.: 48th Annual Meeting of the Japanese Society for Medical Education (Osaka), 2016.
- 4 : Effectiveness of communication teaching materials prepared based on the analysis of dental health guidance and the importance of nonverbal communication: Shimazu A., Sasahara H., Nosou M., Sugiyama M.: 35th Annual Meeting of Japanese Society of Dental Education (Osaka), 2016.
- 5 : Recognition of medical examination results of junior high school students and awareness about dentistry and presence of consultation at dental clinic: Kato N., Shimazu A., Matsushige A., Sugiyama M.: 11th Academic Conference of the Japanese Dental Hygiene Association (Hiroshima), 2016.
- 6 : Examination of the factors considered important in establishing good communication by dental health guidance: Yamashiro E., Shimazu A., Abe A., Sugiyama M.: 11th Academic Conference of the Japanese Dental Hygiene Association (Hiroshima), 2016.
- 7 : Efficacy of communication teaching materials based on analysis of questionnaire on dental health guidance: Abe A., Shimazu A., Yamashiro E., Sugiyama M.: 11th Academic Conference of the Japanese Dental Hygiene Association (Hiroshima), 2016.
- 8 : Questionnaire survey on children's birth order and awareness about dental caries and dental care for parents with elementary school students.: Matsushige A., Shimazu A., Sugiyama M.: 27th Annual Meeting of the Society for Kinki-Chugoku-Shikoku Oral Health (Osaka), 2016.
- 9 : Questionnaire survey for parents of elementary school students about child's birth order, oral condition and dentistry consciousness: Matsushige A., Shimazu A., Sugiyama M.: 100th Hiroshima University Dental Association jointly-sponsored 55th Hiroshima Prefecture Dental association society (Hiroshima), 2016.
- 10 : Does lip-closing strength develop in parallel to age in children? : Yukiko Nogami, Issei Saitoh, Emi Inada, Yasutaka Kaihara, Daisuke Murakami, Yoshihiko Takemoto, Tadashi Sawami, Maki Nosou, Kaoru Sakurai, Nami Matsumoto, Miki Soda, Tsutomu Nakajima, Katsuyuki Kozai, Youichi Yamasaki, Haruaki Hayasaki. : 10th Biennial Conference of the Pediatric Dentistry Association of Asia in conjunction with 54th Annual Conference of the Japanese Society of Pediatric Dentistry.(Tokyo), 2016.
- 11 : Efforts of Hiroshima University, Faculty of Dentistry, School of Oral Health Science, Course of Oral Engineering: Takuya Kihara, Rumi Nishimura, Tsuyoshi Taji, Atsue Matsumoto, Eri Fukada, Masaru Sugiyama, Hiroki Nikawa: The 35th Annual Conference of the Japanese Dental Education Association (Osaka) ,2016.
- 12 : Problem-Solving Oriented Training Program for Advanced Medical Personnel: Efforts of Hiroshima University, Faculty of Dentistry, School of Oral Health Science, Course of Oral Science: Rumi Nishimura, Takuya Kihara, Atsue Matsumoto, Eri Fukada, Tsuyoshi Taji, Hiroki Nikawa, Masaru Sugiyama: The 35th Annual Conference of the Japanese Dental Education Association

(Osaka) ,2016.

- 13 : An objective method of measuring hardness of toothbrush bristles and changes of the hardness after use: Yoshino Kaneyasu, Eri Fukada, Rumi Nishimura, Atsushi Shimazu, Hideaki Amano, Masaru Sugiyama : The 49th general meeting of Hiroshima University Dental Society (Hiroshima) ,2016.
- 14 : Evaluation of swallowing by the intraoral pressure measurement: Eri Fukada, Rumi Nishimura, Masaru Sugiyama, Hideaki Amano: The 11th Annual Meeting of the Japan Society for Dental Hygiene (Hiroshima) ,2016.
- 15 : Relationship between diaper and swallowing function of local elderly: Sanae Miyoshi, Motoyoshi Morishita, Rumi Nishimura, Eri Fukada, Tomoko Yamane, Natsuko Hiramoto, Kumiko Hara, Yasuka Ito : The 11th Annual Meeting of the Japan Society for Dental Hygiene (Hiroshima) ,2016.
- 16: Relationships of dental hygienists using thickened foods at hospitals and facilities: Yuri Sawada, Rumi Nishimura, Eri Fukada, Kumiko Hara, Hideaki Amano: The 11th Annual Meeting of the Japan Society for Dental Hygiene (Hiroshima) ,2016.
- 17 : Summer International Communication Program at Taipei Medical University: Rumi Nishimura, Eri Fukada, Kumiko Hara, Hideaki Amano, Masaru Sugiyama: The 11th Annual Meeting of the Japan Society for Dental Hygiene (Hiroshima) ,2016.
- 18 : Problem-Solving Oriented Training Program for Advanced Medical Personnel: Team medical program in the nursing facility: Eri Fukada, Rumi Nishimura, Atsue Matsumoto, Takuya Kihara, Tsuyoshi Taji, Hiroki Nikawa, Masaru Sugiyam: The 100th Regular Meeting of Hiroshima University Dental Society (Hiroshima) ,2016.
- 19 : Problem-Solving Oriented Training Program for Advanced Medical Personnel: Operation support program by the dental technician: Takuya Kihara, Rumi Nishimura, Tsuyoshi Taji, Atsue Matsumoto, Eri Fukada, Masaru Sugiyama, Hiroki Nikawa: The 100th Regular Meeting of Hiroshima University Dental Society (Hiroshima) ,2016.
- 20 : Activities of discharge conference demonstrated training for dental hygienist students : Rumi Nishimura, Atsue Matsumoto, Eri Fukada, Yoshie Niitani, Hideaki Amano: The 7th Annual Conference of the Japanese Dental Hygiene Education (Tokyo) ,2016.
- 21 : A case of Kissing Molar : Sakyō Kino, Susumu Hashitani, Yusuke Zushi, Tomoko Kawano, Takamichi Yanagisawa The 47th (Public Corporation) Japan Oral Surgery Society Kinki Section Scientific Meeting (Osaka),2016.
- 22 : Partnership in hospital dentistry Initiatives of Oral Managing System (POMS) : Kasuga Kaori, Tomoko Kawano, Kanemura Hitomi, Miyuki Tsuji, Maiko Yuasa, Eri Hiranaka Susumu Hashitani, Takamichi Yanagisawa The 11th Annual Meeting of the Japan Society for Dental Hygiene (Hiroshima), 2016.
- 23 : Partnership in hospital dentistry Initiatives and prospects of oral managing system (POMS) : Tomoko Kawano, Kaori Kasuga, Hitomi Kanemura, Miyuki Tsuji, Maiko Yuasa, Eri Hiranaka Hyogo

Prefecture Academic Forum Members Research Presentation (Hyogo),2016.

- 24 : Patient discomfort during tooth excision of lower jaw and oral mucosal protection effect by oral moisturizer : Susumu Hashitani, Sakyo Kino, Narumi Sawai, Yusuke Zushi, Tomoko Kawano, Takamichi Yanagisawa The 61st Organization (Organization) Japan Oral Surgery Society General Meeting / Academic Conference. (Chiba) 2016.
- 25 : Relationship between Subjective Symptoms of Cough and Swallowing Function in Independent Elderly People : Miyoshi S : The 11 th Annual Scientific Meeting of the Japan Dental Hygiene Association: (Hiroshima), 2016.
- 26 : Introduction of the IT system and study development in Hyogo Dental College:Yukiko Nagashima,Aki Kobayashi,Akari Kakuda,Teruyo Komura : The 7th Annual Conference of the Japanese Dental Hygiene Education (Tokyo) ,2016.
- 27: : Association of clinicopathological factors with HPV16 infection in oral cavity and oropharynx. : Shigeishi H, Sugiyama M, Takechi M : The 27th Annual Meeting of the Japanese Society of Oral Pathology.(Hiroshima),2016.

F) Symposium of academic conference, special lecture

- 1 : About the crisis management consciousness of faculty and staff - from the actual survey -: Shimazu A.: 48 th Annual Meeting of Chugoku-Shikoku Society of School Health Association (Fukuyama), 2016.
- 2 : Kawano T : The role of dental hygienist in community inclusive care (community-based medical care) - What is dental hygienist necessary for super aged society - The 3rd Hyogo Dental Hygiene Science Forum (Hyogo) Symposium Chairperson,2016.11.13
- 3 : Kawano T : National Hospital Dental Hygienist Liaison Committee Report 3rd Hyogo Dental Hygienic Science Forum (Hyogo) 2016.11.13
- 4 : Kawano T : Takarazuka Regional Comprehensive Care System Three Young Leaves-raising Association Dental Hygienist Division Core Meeting

G) Contribution to Community

- 1 : Sugiyama M : Hiroshima Prefecture Dental Hygiene Liaison Committee. 「The promotion meeting for the examinations of periodontal disease by the simple saliva test.」
- 2 : Shimazu A : Oral health activity in Junior High School Students in Hiroshima (Hiroshima), 2016.
- 3 : Shimazu A : Dental Examination for Infants (Higashi-Hiroshima), 2016.
- 4 : Shimazu A : Dental Examination for Acidity and Alkalinity (Hiroshima), 2016.
- 5 : Shimazu A : Research and analysis Projects with Hiroshima City elementary and junior high school

- nurse teachers (Hiroshima), 2016.
- 6 : Shimazu A : UN Unitar Hiroshima, JICA Hiroshima “UN Peace Day” (Hiroshima), 2016.
- 7 : Fukada E • Kurawaki Y, : Assessment of oral function at special nursing home “Kosei-En” ,2016.
- 8 : Fukada E, : Program for high school students: Hiroshima University Faculty of Dentistry: Hiroshima University (Hiroshima) 2016.8.2.
- 9 : Fukada E, : Program for junior high-school student: Hiroshima University Faculty of Dentistry: Hiroshima University (Hiroshima), 2016.8.18.
- 10 : Fukada E, : Program for kids from elementary schools, Dental Kids, “Let’s Be a Dentist!”: Hiroshima University Faculty of Dentistry: Hiroshima University (Hiroshima) , 2016.8.19.
- 11 : Fukada E, : ”Oral health seminar” : Hiroshima University Hospital(Hiroshima),2016.8.23.
- 12 : Fukada E, : ”Lecture of the oral health in Minami-ku” : Hiroshima,2016.9.5.
- 13 : Fukada E, : Problem-Solving Oriented Training Program for Advanced Medical Personnel: The “Cultivating Practical Medical Personnel Team Contributing Healthy Longevity” Initiative. The 1st summer program “Training of discharge conference demonstrated” :Hiroshima University (Hiroshima),2016.09.17.
- 14 : Fukada E, : Lecture for the class for diabetics : Hiroshima Teishin Hospital(Hiroshima),2016.10.20.
- 15 : Fukada E, : Refresher course for dental Hygienists : Hiroshima University(Hiroshima),2016.12.22.
- 16 : Nosou M, Fukada E : Dental health activity in special needs schools of Hiroshima city, Hiroshima, 2016.
- 17 : Nosou M, Fukada E : Dental health activity in junior high schools of Hiroshima city, Hiroshima, 2016.
- 18 : Nosou M, Fukada E : Dental health activity in elementary schools of Hiroshima city, Hiroshima, 2016.
- 19 : Nosou M, : Secretary at Hiroshima Branch of Children's Cancer Association of Japan, Hiroshima, 2016.
- 20 : Kawano T : Elderly people in social welfare corporation Takarazuka Japan National Council of Social Welfare independence support open space, (Hyogo), 2016.6.18
- 21 : Kawano T : Takarazuka City Hospital diabetes course "Diabetes and periodontal disease" (Hyogo)2016.6.20
- 22 : Kawano T : Takarazuka Higashi Community Center Takarazuka Higashi Community Center in the Town "Mouth is Important!" (Hyogo)2016.10.6
- 23 : Kawano T : Takarazuka City Hospital NST Workshop "Importance of Oral Care at NST" (Hyogo)2016.11.10
- 24 : Miyoshi S : Takehara Hospital nurse workshop: Lecture "Foundations of oral care" (Hiroshima) 2016.1.22
- 25 : Miyoshi S : Takehara Municipal Dietary Improvement Promotion Committee Workshop: Lecture "Mouth Health Supporting the Elderly's Food" (Hiroshima) 2016.4.21
- 26 : Miyoshi S : Lifestyle disease prevention lecture (Takehara one-two health course): Lecture "Health is

- from the mouth" (Hiroshima) 2016.7.29
- 27 : Miyoshi S : Genki Leader Training Course: Lecture "How to eat function - About mouth health" (Hiroshima) 2016.8.25
- 28 : Miyoshi S : The 11 th Annual Scientific Meeting of the Japanese Society of Dental Hygiene, Workshop (Japanese Dental Hygienist Association Home / Facility Oral Care Committee): Case Report "Oral Care and Family Support in Frontotemporal Dementia Elderly" (Hiroshima) 2016.9. 17
- 29 : Miyoshi S : Hiroshima Prefecture Dental Hygienist Association, Kure · Takehara District Workshop: Lecture "A place where you can take advantage of experience of dental hygienist - Region and home" (Hiroshima) 2016.12.11
- 30 : Miyoshi S : Hiroshima Central Region Health Council, 2nd Home Nutrition and Oral Care Collaboration Promotion Committee Information "Takehara City Oral Gymnastics Outline for Preventing Nursing Care" (Hiroshima) 2016.12.15
- 31 : Miyoshi S : Dental Health Activities in Takehara Municipal Care Prevention Project (Hiroshima) 2016
- 32 : Miyoshi S : Hiroshima Central Region Health Council: Committee for Promotion of Home Nutrition and Oral Care Collaboration.
- 33 : Miyoshi S : Takehara · Toyota Dental Hygiene Liaison Committee Secretary.

(4) Status of Receiving Grants-in Aid for Scientific Research, etc.

- 1 : Grants-in-Aid for Scientific Research (Scientific Research (C)) : Sugiyama M : Study on the mechanisms of acquisition of stem cell characters in cancer cells related to HPV-16 E6. (No. 15K11290). ¥1,105,000.
- 2 : Grants-in-Aid for Scientific Research (Scientific Research (C)) : Sugiyama M : Control of kinetics of stem cells from human exfoliated deciduous tooth (SHED) by construction of micro-environment and application of the cells to bone regenerative treatment in the cleft palate. . (No. 16K11290). ¥200,000.
- 3 : Research grant: Sugiyama M. (Research Director), Shimazu A., Matsumoto A., Fukada E., Nishimura R., Clinical trial to examine the utility of rotating toothbrush for nursing care. Matsumoto Mold ¥432,000.
- 4 : Bridge Research and Development Seeds FY2008 (ARO next generation medical center, Kyushu University): Shimazu A. (research leader), Development of new dental caries preventive agent for root caries. ¥1,600,000.
- 5 : Grant-in-Aid for Young Scientists (B): Fukada E : Establishment of diagnostic system for sucking and swallowing using intraoral pressure measurement.(No. 16K20502).¥1,300,000.

(5) Academic Awards, etc.

- 1 : The research into the effectiveness of dental health examination including the simple saliva test for the office worker. Uekawa K, Yamasaki K, Fukada E, Sugiyama M, Arakawa S : 27th Annual Meeting of the Society for Kinki-Chugoku-Shikoku Oral Health (Osaka), 2016.

(6) Patents

[Return to Contents](#)

Integrated Health Sciences

Department of Maxillofacial Functional Development

(1) Staff and Students

Professor : AMANO Hideaki

Research Associate : TSURUDA Keiko

NISHIMURA Rumi

IWAMOTO Akiko

Graduate Student : MAEHARA Tomoko

MAYSUDA Saki

CHOU JAN

(2) Main Research Activities

- 1: Clinical research of the growth and development of dento-maxillofacial complex in children
- 2: Study on the Dentistry for children and disabilities
- 3: Study on the School dental health
- 4: Study on the activation of the function of salivary glands
- 5: Study on the methods for Oral health care
- 6: Study on the education program for Oral health
- 7: Study on the development of oral function
- 8: Study on the intra-oral pressure for swallowing
- 9: Study on education program for graduate dental hygienists
- 10: Study on the Mechanism of Aggregatibacter actinomycetemcomitans-CDT complex formation and secretion

(3) Achievements

A) Original Papers (including Case Reports)

1 : Inhibitory effects of antibiofilm compound 1 in Staphylococcus aureus biofilms. Shrestha L, Kayama S, Sasaki M, Kato F, Hisatsune J, Tsuruda K, Koizumi K, Tatsukawa N, Yu L, Takeda K, Sugai M.: Microbiology and Immunology, 2016 Mar(60),148-59,2016.

2 : How long does Mutans Strptococci Survive on the Lip of the Plastic Bottle?

-A Study on Transmission of Cariogenic Bacteria via Polyethylene Terephthalate(PET) Bottle-: Hana Okazaki, Masaru Ohara, Rumi Nishimura, Eri Fukada, Kumiko Hara, Mitsugi Okada, Hideaki Amano : J. Hiroshima Univ. Dent. Soc., 48, 20-26, 2016.

B) Review

1 : To train the leading person of the next-generation for dental welfare - as a member of school for the dental hygienist - : Jpn. J.D.W. , 21, 1-5, 2016

C) Publications

1 : Pocket edition latest dental term dictionary for dental hygienists : (Kaya et al. edition) Amano et al. : Quintessence Pub.(Tokyo), 2016

D) Other Publications

E) Presentation at Scientific Meeting

1 : Relationship between oral health status and behavior in the birth order of the school children: Atsushi Shimazu, Maki Nosou, Eri Fukada, Rumi Nishimura, Masaru Sugiyama: The 65th general meeting of Japanese Society for Oral Health in conjunction with the 12th Asian Academy of Preventive Dentistry(Tokyo),2016.05.27-29

2 : Identification of processing enzyme for *Aggregatibacter actinomycetemcomitans*-CDT holotoxin, Keiko Tsuruda: The 65th general meeting of Japanese Society for Oral Health in conjunction with the 12th Asian Academy of Preventive Dentistry(Tokyo) ,2016.05.27-29

3 : Clinical Usage of a Portable 3D Scanner system for the Three-Dimensional Analysis of the Craniofacial complex: Anna Kanbara, Michika Seo, Hideaki Amano, Rumi Nishimura, Akiko Iwamoto, Takuya Kihara, Yasutaka Kaihara, Hiroki Nikawa, Katsuya Kouzai: The 10th Biennial Conference of the Pediatric Dentistry Association of Asia in conjunction with the 54th Annual Conference of the Japanese Society of Pediatric Dentistry (Tokyo) ,2016.05.26-28

4 : Improvement of Oral Health Conditions of Cambodian School Children by Oral Health Education: Y. Iwamoto, A. Iwamoto, N. Niizato, N. Goto, N. Tasukawa, K. Sakurai, H. Amano. K. Kozai: The 10th Biennial Conference of the Pediatric Dentistry Association of Asia in conjunction with the 54th Annual Conference of the Japanese Society of Pediatric Dentistry (Tokyo) ,2016.05.26-28

5 : Efforts of Hiroshima University, Faculty of Dentistry, School of Oral Health Problem-Solving Oriented Training Program for Advanced Medical Personnel: 1st Science, Course of Oral Engineering: Takuya Kihara, Rumi Nishimura, Tsuyoshi Taji, Atsue Matsumoto, Eri Fukada, Masaru Sugiyama, Hiroki Nikawa: The 35th Annual Conference of the Japanese Dental Education

Association(Osaka),2016.07.01-02

6 : Problem-Solving Oriented Training Program for Advanced Medical Personnel: Efforts of Hiroshima University, Faculty of Dentistry, School of Oral Health Science, Course of Oral Science: Rumi Nishimura, Takuya Kihara, Atsue Matsumoto, Eri Fukada, Tsuyoshi Taji, Hiroki Nikawa, Masaru Sugiyama: The 35th Annual Conference of the Japanese Dental Education Association (Osaka),2016.07.01-02

7 : Oral health education to Cambodian children cooperated with the students from Cambodia: M. Hashimoto, C. Fukuoka, A. Iwamoto, Y. Iwamoto: The 35th Annual Conference of the Japanese Dental Education Association (Osaka),2016.07.01-02

8 : An objective method of measuring hardness of toothbrush bristles and changes of the hardness after use: Yoshino Kaneyasu, Eri Fukada, Rumi Nishimura, Atsushi Shimazu, Hideaki Amano, Masaru Sugiyama: The 49th general meeting of Hiroshima University Dental Society(Hiroshima),2016.07.02

9 : Processing of enzyme for *Aggregatibacter actinomycetemcomitans*-CDT holotoxin: Keiko Tsuruda, Shohei Fukada, Motoyuki Sugai: The 49th general meeting of Hiroshima University Dental Society(Hiroshima),2016.07.02

10 : A survey on the actual situation of behavioral management methods in dental clinic for the disabilities by Dental hygienist: Tomoko Maehara, Hideaki Amano.: The 11th Annual Meeting of the Japan Society for Dental Hygiene(Hiroshima) ,2016.09.17-19

11 : Evaluation of swallowing by the intraoral pressure measurement: Eri Fukada, Rumi Nishimura, Masaru Sugiyama, Hideaki Amano: The 11th Annual Meeting of the Japan Society for Dental Hygiene (Hiroshima),2016.09.17-19

12 : Relationship between diaper and swallowing function of local elderly: Sanae Miyoshi, Motoyoshi Morishita, Rumi Nishimura, Eri Fukada, Tomoko Yamane, Natsuko Hiramoto, Kumiko Hara, Yasuka Ito : The 11th Annual Meeting of the Japan Society for Dental Hygiene (Hiroshima),2016.09.17-19

13: Relationships of dental hygienists using thickened foods at hospitals and facilities: Yuri Sawada, Rumi Nishimura, Eri Fukada, Kumiko Hara, Hideaki Amano: The 11th Annual Meeting of the Japan Society for Dental Hygiene (Hiroshima),2016.09.17-19

14 : Summer International Communication Program at Taipei Medical University: Rumi Nishimura, Eri Fukada, Kumiko Hara, Hideaki Amano, Masaru Sugiyama: The 11th Annual Meeting of the Japan Society for Dental Hygiene (Hiroshima),2016.09.17-19

15 : A survey on the actual situation of behavioral management methods in dental facilities for the disabilities: Tomoko Maehara, Hideaki Amano.: The 33rd Annual Meeting of the Japanese Society for Disability and Oral Health(Saitama), 2016.9.30-10.2.

16 : Problem-Solving Oriented Training Program for Advanced Medical Personnel: Team medical program in the nursing facility: Eri Fukada, Rumi Nishimura, Atsue Matsumoto, Takuya Kihara, Tsuyoshi Taji, Hiroki Nikawa, Masaru Sugiyam: The 100th Regular Meeting of Hiroshima University Dental Society(Hiroshima),2016.10.30

17 : Problem-Solving Oriented Training Program for Advanced Medical Personnel: Operation support program by the dental technician: Takuya Kihara, Rumi Nishimura, Tsuyoshi Taji, Atsue Matsumoto, Eri Fukada, Masaru Sugiyama, Hiroki Nikawa: The 100th Regular Meeting of Hiroshima University Dental Society(Hiroshima),2016.10.30

18 : Oral health guidance for Cambodian children ~Coactivity together with the students of International Dental Course and Oral Health Science in the school of dentistry in Hiroshima Univ. ~ : Yuko Iwamoto, Akiko Iwamoto, Nao Kado, Hideaki Amano, Katsuyuki Kozai, Takashi Takata, Koichi Kato: The 100th Regular Meeting of Hiroshima University Dental Society(Hiroshima),2016.10.30

19 : Activities of discharge conference demonstrated training for dental hygienist students : Rumi Nishimura, Atsue Matsumoto, Eri Fukada, Yoshie Niitani, Hideaki Amano: The 7th Annual Conference of the Japanese Dental Hygiene Education (Tokyo),2016.12.10-11

F) Lectures

1 : Rumi Nishimura: Problem-Solving Oriented Training Program for Advanced Medical Personnel: The “Cultivating Practical Medical Personnel Team Contributing Healthy Longevity” Initiative. The 1st summer program “Training of discharge conference demonstrated”: Hiroshima University(Hiroshima),2016.09.17

2 : Rumi Nishimura: Lecture for the class for diabetics: Hiroshima Teishin Hospital (Hiroshima) ,2016.10.20

3 : Rumi Nishimura: “Lecture of the Mouth exercises” : Hiroshima University Shiragikukai: Hiroshima University(Hiroshima),2016.10.21

4:Rumi Nishimura: Refresher course for dental hygienists: Hiroshima University (Hiroshima),2016.12.22

G) Social Contributions

1 : Keiko Tsuruda, Akiko Iwamoto, Rumi Nishimura: Program for high school students: Hiroshima University Faculty of Dentistry: Hiroshima University(Hiroshima)2016.08.02

2 : Keiko Tsuruda, Akiko Iwamoto, Rumi Nishimura: Program for junior high-school student: Hiroshima University Faculty of Dentistry: Hiroshima University(Hiroshima)2016.08.18.

3 : Keiko Tsuruda, Akiko Iwamoto, Rumi Nishimura: Program for kids from elementary schools, Dental Kids, “Let’s Be a Dentist!”: Hiroshima University Faculty of Dentistry: Hiroshima University (Hiroshima), 2016.08.19

4:Rumi Nishimura: Assessment of oral function at special nursing home “Kosei-En”(Hiroshima), 2016.

5 : Rumi Nishimura: The oral care of persons requiring nursing care at Hiroshima University Hospital, 2016.

6: Akiko Iwamoto: 9th Dentistry Activity Support in Cambodia, 2016.3

7: Hideaki Amano: Program of Teacher's license update class: Hiroshima University (Hiroshima),

2016.08.05

(4) Status of Receiving Grants-in Aid for Scientific Research, etc.

1: Entrusted (joint) research: Rumi Nishimura: Operability evaluation (1815KA7259)

(5) Academic Awards, etc.

1: Akiko Iwamoto: First prize, Poster Session of students: The 35th Annual Conference of the Japanese Dental Education Association (Osaka),2016.07.01-02

(6) Patents

[Return to Contents](#)

Integrated Health Sciences

Department of Oral Health Management

(1) Staffs

Professor: Toshinobu TAKEMOTO

Lecturer: Atsue MATSUMOTO

Research associate: Yoshie NIITANI

Graduate student

Doctor course: Yukiko NAGATANI (Until Mar.)

Master course: Natsumi INO, Aki UEMUKAI (Until Mar.), Yuki EMURA, Miku ISHIKAWA
(From Apr.), Mayu FUJISHIRO (From Apr.)

Research student Yukiko NAGATANI (From Apr.)

Graduation thesis student: Yumi OHSUGI, Mamiko KUSUNOKI, Mio TERAMOTO, Yuuka
NAKAMURA, Tomomi MURAKAWA, Haruka YASUDA, Naoko SUGIHARA
(From Oct.), Maya HAMANO (From Oct.), Kumiko MATSUI (From Oct.), Kaori
YAMAGUCHI (From Oct.), Yuki YAMASAKI (From Oct.)

(2) Research Fields

- 1 : Dental hygienists education
- 2 : Research about dental hygienists occupation
- 3 : Career formation of students
- 4 : The efficacy of oral relaxation method
- 5 : Relation between saliva flow and emotion
- 6 : Education about counseling
- 7 : Infection control in dentistry
- 8 : Research about halitosis

(3) Achievements

D) Other Publications

- 1 .[It can be pulled right now. It's useful at a site. Pocket edition latest dental term dictionary for dental hygienists.][ja]:(Matsumoto A: Contributor): Quintessence Publishers (Tokyo), 2016.

- 2 : [Oral prophylaxis and oral health instruction][ja]: The newest series of textbook for dental hygienists (Matsumoto A: Contributor):Edited by the Japan Association for Dental hygienists Education, Ishiyaku Publishers (Tokyo), 2016.
- 3 : [Basic theory and practical process for prosthodontics dentistry][ja]: The newest series of textbook for dental hygienists (Matsumoto A: Contributor): Edited by the Japan Association for Dental hygienists Education, Ishiyaku Publishers (Tokyo), 2016.

E) Presentations at Scientific Meeting

2) Presentations at scientific meeting

- 1 : Complexities of (inter-)professional identity formation: The voices of dental hygienists : Imafuku R, Nagatani Y , Ogawa T.: An International Association for Medical Education (Barcelona), 2016.
- 2 : [Problem-Solving Oriented Training Program for Advanced Medical Personnel][ja]: Efforts of Hiroshima University, Faculty of Dentistry, School of Oral Health Science, Course of Oral Science: Nishimura R, Kihara K, Matsumoto A, Fukada E, Taji T, Nikawa H, Sugiyama M: The 35th Annual Conference of the Japanese Dental Education Association (Osaka), 2016.
- 3 : [Problem-Solving Oriented Training Program for Advanced Medical Personnel: Efforts of Hiroshima University, Faculty of Dentistry, School of Oral Health Science, Course of Oral Engineering][ja]: Kihara T, Nishimura R, Taji T, Matsumoto A, Fukada E, Sugiyama M, Nikawa H: The 35th Annual Conference of the Japanese Dental Education Association (Osaka), 2016.
- 4 : [Undergraduate education and career is to cultivate the professionalism of the dental hygienist][ja] : Nagatani Y, Obayashi T, Takemoto T, Ogawa T : The 48th Annual Meeting of the Japan Society for Medical Education (Osaka), 2016.
- 5 : [Problem-Solving Oriented Training Program for Advanced Medical Personnel: Team medical program in the nursing facility][ja]: Fukada E, Nishimura R, Matsumoto A, Kihara T, Taji T, Nikawa T, Sugiyama M: The 100th Regular Meeting of Hiroshima University Dental Society (Hiroshima), 2016.
- 6 : [Problem-Solving Oriented Training Program for Advanced Medical Personnel: Operation support program by the dental technician][ja]: Kihara T, Nishimura R, Taji T, Matsumoto A, Fukada E, Sugiyama M, Nikawa H: The 100th Regular Meeting of Hiroshima University Dental Society

(Hiroshima), 2016.

- 7 : [Activities of discharge conference demonstrated training for dental hygienist students][ja] : Rumi Nishimura, Matsumoto A, Fukada E, Niitani N, Amano H: The 7th Annual Conference of the Japanese Dental Hygiene Education (Tokyo), 2016.
- 8 : [Communication of dental hygienists depends on professionalism][ja] : Nagatani Y, Taji T, Takemoto T, Ogawa : The 8th Meeting of the Japanese Association of Health Communication (Tokyo), 2016.

3) Other Presentations

○Graduation thesis presentation of School of Oral Health Science 2016 (Hiroshima), 2016.

- 1 . [The effect of learning in the course for “Yogo teacher” to the career other than “Yogo teacher”][ja]: Teramoto M.
- 2 . [Research about measuring method of the volume of saliva from minor salivary glands][ja]: Yasuda H.
- 3 . [Research about removing bacteria by alcohol wiping][ja]: Nakamura Y.
- 4 . [Survey of the consciousness of dentists and dental hygienists about amendment of dental hygienists act][ja]: Kusunoki M.
- 5 . [The difference in stress stress factors between dentists and dental hygienists][ja]: Ohsugi Y.
- 6 . [Consideration about labor-force participation ratio of Japanese dental hygienists –comparison between Japan, USA and Sweden-][ja]: Murakawa T.

F) Lectures

- 1 : The status of dental hygienist in Japan & Dental hygienist education in Hiroshima University: Takemoto T.: Special lecture, Airlangga University (Surabaya, Indonesia), 2016.
- 2 : Infection control process in dental practice: Takemoto T.: Special lecture, Airlangga University (Surabaya, Indonesia), 2016.
- 3 : [Lecture about mouth, group instruction of tooth][ja]: Atsue Matsumoto .: Child-care course of a community program of the nursery school, Mimyo Nursery School (Hiroshima) : 2016.
- 4 : [Oral care for pregnant woman and new born infant: Part 1-12][ja]: Atsue Matsumoto,,: School for pregnant women in Gynecology department of Hiroshima University Hospital (Hiroshima) , 2016.
- 5 : [Let’s begin mouth exercises][ja]: Atsue Matsumoto, The 47th Shiragikukai general meeting , (Hiroshima) , 2016.
- 6 : [Education about medically compromised patient support in Hiroshima University, Faculty of

- Dentistry, School of Oral Health Science, Course of Oral Science][ja]: Atsue Matsumoto , Yoshie Niitani , The meeting which considers dental hygienic education (Tokyo), 2016.
- 7 : [Seminar for the health of mouth and teeth][ja]: Seminar of oral health guidance for patients in Hiroshima University Hospital, [ja]:Atsue Matsumoto, Hiroshima University Hospital (Hiroshima) , 2016.
- 8 : [Problem-Solving Oriented Training Program for Advanced Medical Personnel: The “Cultivating Practical Medical Personnel Team Contributing Healthy Longevity” Initiative][ja]: Atsue Matsumoto, Yoshie Niitani :The 1st summer program “Training of discharge conference demonstrated”:
Hiroshima University (Hiroshima), 2016.
- 9 : Refresher course for dental hygienists: Atsue Matsumoto: Hiroshima University (Hiroshima) ,2016.
- 10 : [Dental Hygiene Education][ja]: Niitani Y: JADHE program 3rd for teachers in dental hygienists schools (Kanagawa), 2016.
- 11 : [Cooperation with Registered Dietitians][ja]: Niitani Y: JADHE program 5 for teachers in dental hygienists schools (Tokyo), 2016.

G) Social Contributions

- 1 : Problem-Solving Oriented Training Program for Advanced Medical Personne, “Cultivating Practical Medical Personnel Team Contributing Healthy Longevity” , Operation commissioner: Atsue Matsumoto , (Tokyo), 2016.
- 2 : Renewal seminar for teacher’s license: Takemoto T, Hiroshima University (Hiroshima), 2016.
- 3 : Entrusted (joint) research: Atsue Matsumoto: Operability evaluation : Matsumoto- Dia and mold CO., Ltd, (Hiroshima), 2016.
- 4 : Experience-based learning for Midori-machi junior high school student.: “Dental hygienist” :Atsue Matsumoto, (Hiroshima), 2016.
- 5 : High school student open class: Matsumoto A, Yoshie Niitani, 2015.
- 6 : Secretary of the regional association of Kinki , Chugoku and Shikoku area for Japanese Society for Dental Health: Matsumoto A (Osaka), 2016.
- 7 : Vice secretary-general of The Japan Society for Dental Hygiene.: Matsumoto A, Japan Society for Dental Hygiene (Tokyo), 2016.
- 8 : Editorial board chair of The Journal of Japan Society for Dental Hygiene.: Matsumoto A, Japan Society for Dental Hygiene (Tokyo), 2016.
- 9 : Peer review of The Journal of Japan Society for Dental Hygiene.: Matsumoto A, Japan Society for Dental Hygiene (Tokyo), 2016.
- 10 : Commendation selection commissioner of art and science of The Journal of Japan Society for Dental Hygiene.: Matsumoto A, Japan Society for Dental Hygiene (Tokyo), 2016.

- 11 : Program for kids from elementary schools, Dental Kids, “Let’s Be a Dentist!”: Hiroshima University Faculty of Dentistry (Hiroshima), 2016.
- 12 : Program for junior from Junior high schools, Dental Junior, “Let’s Be a Dentist!”: Hiroshima University Faculty of Dentistry (Hiroshima), 2016.
- 13 : Member of Dental Hygienists’ Examination committee: Niitani Y: Foundation of Promoting Dental Care and Training (Tokyo), 2016.
- 14 : Educational committee of Japanese Association for Dental Hygienists Education, Niitani Y : JADHE (Tokyo), 2015.

(4) Status of Receiving Grants-in Aid for Scientific Research, etc.

- 1: Entrusted (joint) research (Matsumoto- Dia and mold CO., Ltd): Atsue Matsumoto: Operability evaluation (1815KA7259)

[Return to Contents](#)

Integrated Health Sciences

Department of Anatomy and Functional Restorations

(1) Staff and Students

Professor : Takahiro Satoda

Associate Professor : Saiji Shimoe

Graduate Students : Hidehito Nagadouri, Mai Ohtaku, Yusuke Kobayashi, Aoi Kawamura, Ayaka Kihara, Tzu-Yu Peng(Taiwan)

Undergraduate Student : Miyu Taniguchi, Aya Sakai, Honoka Igawa, Haruki Syouga, Chinatu Fukuoka
Risa Ito, Miyu Takaki, Yuki Kuronotsubo, Yousuke Imaizumi,
Yuki Wakabayashi, Kana Kobayashi, Hiroto Takenaka

Research Student : Shogo Iwaguro

(2) Main Research Activities

- 1 : Development of Effective model for anatomy education
- 2 : Morphological Research on masticatory neuronal network
- 3 : Study on dental materials for esthetic
- 4 : Study on new clinical application using novel dental ceramic
- 5 : Study on objective evaluation using the three-dimensional image

(3) Research Achievements

A) Original Papers (including Case Reports)

- 1 : Effect of wettability by surface treatments for zirconia on bonding between zirconia material and indirect composite resin : Chihiro Ohira, Saiji Shimoe, Isao Hirata, Shogo Iwaguro, Kai Otaku, Takahiro Satoda, Journal of Nippon Academy of Dental Technology, Vol.37, (2), pp.89-96, 2016.

B) Review

C) Publications

- 1 : The newest series of textbooks for dental technologist-Oral and Maxillofacial Anatomy : 112-160, II

Oral Anatomy, Takahiro Satoda, Ishiyaku Publishers, Inc, Tokyo, 2016

- 2 : The newest series of textbooks for dental technologist-Dental Materials Science: Takayuki Yoneyama, Nikawa Hiroki, Saiji Shimoe, Hideo Matsumura, Hideyuki Imai et al, Ishiyaku Publishers, Inc (Tokyo), 201, 2016~.
- 3 : THE NIPPON Dental Review Special Issue, 2016-The Issue of Adhesion Answer to clinical question : Hideo Matsumura, Toru Nikaidou (eds.), 155, HYORON Publishers, Inc (Tokyo), 2016.

D) Other Publications

- 1 : Takahiro Satoda : 「Message from Anatomist for Nutritionist」 Nutrition Care Vol.9 No.4, P. 8, Medica publisher, Osaka, 2016 (in Japanese)

E) Presentation at Scientific Meeting

- 1 : Functional model of the Inner Ear: Takahiro Satoda, Memori Minoda, Natsumi Ikuta, Saiji Shimoe, The 121st Annual Meeting of the Japanese Association of Anatomists (Koriyama), 2016. 3.28-30
- 2 : Simulation of swallowing function using 3D handmade model: Honoka Igawa, Saiji Shimoe, Takahiro Satoda, The 49th Annual Meeting of Hiroshima University Dental Society (Hiroshima), 2016,7,2
- 3 : Analysis of chemical interaction between alumina-blasted zirconia and functional monomers : Mai Otaku, Saiji Shimoe, Isao Hirata, Shogo Iwaguro, Midori Kawamura, Takahiro Satoda, The 38th the meeting of the Nippon Academy of Dental Technology (Nara), 2016.
- 4 : Analysis of tooth for morphology recognition in beginning and in intermediate posterior tooth carving using three-dimensional digital images : Haruki Shoga, Saiji Shimoe, Takuya Kihara, Ayaka Kihara, Takahiro Satoda, The 38th the meeting of the Nippon Academy of Dental Technology (Nara), 2016.
- 5 : Effect of performing time on polishing to Y-TZP zirconia ceramic : Miyu Taniguchi, Saiji Shimoe, Yusuke Kobayashi, Mai Otaku, Hiroki Nishida, Satoda Takahiro, The 38th the meeting of the Nippon Academy of Dental Technology (Nara), 2016.
- 6 : Effect of opaque resin on bonding between zirconia and denture base resin : Chinatsu Fukuoka, Saiji Shimoe, Isao Hirata, Shogo Iwaguro, Mai Otaku, Takahiro Satoda, The 38th the meeting of the Nippon Academy of Dental Technology (Nara), 2016.
- 7 : Examination of casting method to prevention of casting porosity -Part1: Spruing thickness and lost wax- : Aya Sakai, Saiji Shimoe, Shogo Iwaguro, Yusuke Kobayashi, Takahiro Satoda, The 38th the meeting of the Nippon Academy of Dental Technology (Nara), 2016.
- 8 : Functional model of Swallowing: Honoka Igawa, Saiji Shimoe, Takahiro Satoda, The 15th Annual Meeting of Co-medical Function and Structure Association (Kyoto), 2016.9.16
- 9 : Functional model of Swallowing: Honoka Igawa, Saiji Shimoe, Takahiro Satoda, The 71st Annual Meeting of Japanese Association of Anatomist, Cyugoku-Shikoku regional meeting (Okayama), 2016.10.22

- 10 : The surgery support by jawbone model produced in combination slice data obtained from CT and MRI : Shogo Iwaguro, Yukihiro Takayama, Ryoji Kato, Saiji Shimoe, The 18th the meeting of Japanese Academy of Oral and Maxillofacial Rehabilitation Technology (Tokushima), 2016.12.3.
- 11 : The numerical progress of manufacturing surgery support solid model and case expect maxillofacial region in Hiroshima University Hospital central-dental-laboratory : Yukihiro Takayama, Shogo Iwaguro, Ryoji Kato, Saiji Shimoe, The 18th the meeting of Japanese Academy of Oral and Maxillofacial Rehabilitation Technology (Tokushima), 2016.12.3.

(4) Status of Receiving Grants-in Aid for Scientific Research, etc.

- 1 : Grant-in-Aid for Scientific Research(C): (representative) Saiji Shimoe, (member) Takahiro Satoda, Isao Hirata: Development of the new micro-retention for expansion of clinical application of zirconia. (No.16K11593), ¥1,400,000

(5) Academic Awards, etc.

- 1 : Chihiro Ohira, Shimoe Saiji, Isao Hirata, Iwaguro Shogo, Mai Otaku, Takahiro Satoda :The Nippon Academy of Dental Technology Young Researcher's Best Paper Award in 2016 「Effect of wettability by surface treatments for zirconia on bonding between zirconia material and indirect composite resin」 ,2016.9.11
- 2 : Mai Otaku, Saiji Shimoe, Isao Hirata, Shogo Iwaguro, Midori Kawamura, Takahiro Satoda : The 38th the meeting of the Nippon Academy of Dental Technology Best Presentation Award 「 Analysis of chemical interaction between alumina-blasted zirconia and functional monomers」 ,2016.9.11
- 3 : Midori Kawamura : The 18th Student's Carving Contest, Gold Award, 2016.3.23
- 4 : Mayaka Ide : The 18th Student's Carving Contest, Gold Award, 2016.3.23

(6) Patents

Integrated Health Sciences

Department of Medical System and Biomaterial Engineering

(1) Staff and Students

Professor : Takeshi Murayama
Associate Professor : Mitsuhiro Tamamoto
Graduate Student : Memori Minoda, Yuuta Masuhara, Moe Matsuo
Graduation Research Students : Shunsuke Suzuki, Hiroki Yanase, Shota Imai, Marina Gurita, Momoko Kawada, Kousei Tabira

(2) Main Research Activities

- 1: Application of manufacturing system technologies (e. g., CAD/CAM, 3-d printing) to dentistry
- 2: 3-d modeling and computer simulation in dentistry
- 3: Simulation-based analysis of work processes in dental technology
- 4: Development and clinical applications of oral appliances for treatment and protection
- 5: Study on esthetic dentistry
- 6: Study on dental education
- 7: Study on sports dentistry (mouthguards)

(3) Research Achievements

A) Original Papers (including Case Reports)

- 1: Application of CAD/CAM technology to dentistry: Murayama T.: Journal of Nippon Academy of Dental Technology, 36(1), 31-33 , 2016.
- 2: Accuracy of a three-dimensional dentition model digitized from an interocclusal record using a non-contact surface scanner: Kihara T., Yoshimi Y., Taji T., Murayama T., Tanimoto K., Nikawa H.: The European Journal of Orthodontics, 38(4), 435-439, 2016.

B) Review

C) Publications

- 1: Collection of the state examination and key for dental technicians (2017 edition): Tamamoto M. (Edited by Japan Society for Education of Dental Technology): Ishiyaku Pub., Inc., 2016.

D) Other Publications

- 1: Investigation on the application of additive manufacturing to facial prostheses: Murayama T., Nishida M., Eguchi T., Tamamoto M.: ACTIVITY REPORT 2015 of Technical Committee on Integrated Manufacturing Systems, The Japan Society of Precision Engineering, 81-102, 2016.
- 2: An efficient search method for active schedule in job shop scheduling: Eguchi T., Iio T., Murayama T.: ACTIVITY REPORT 2015 of Technical Committee on Integrated Manufacturing Systems, The Japan Society of Precision Engineering, 25-29, 2016.
- 3: Job shop scheduling with automatic and manual operations for meeting due dates and minimizing overtime: Eguchi T., Daido T., Murayama T.: ACTIVITY REPORT 2015 of Technical Committee on Integrated Manufacturing Systems, The Japan Society of Precision Engineering, 30-35, 2016.
- 4: Lead time minimization by search based on backward scheduling: Eguchi T., Togo K., Murayama T.: ACTIVITY REPORT 2015 of Technical Committee on Integrated Manufacturing Systems, The Japan Society of Precision Engineering, 36-40, 2016.

E) Presentation at Scientific Meeting

- 1: An efficient search method for active schedule: Eguchi T., Iio T., Murayama T.: 2015 Annual Conference of Manufacturing Systems Division, 67-68(Noda), 2016.
- 2: Job shop scheduling method using a genetic algorithm incorporating heuristic rules – efficiency by incorporating local searching-: Ohama Y., Eguchi T., Murayama T.: Annual Conference of Japan Society for Design Engineering Chugoku Branch (Hiroshima), No.33, 13-16 (Hiroshima), 2016.
- 3: Creating 3-d models from videos for fabricating facial prostheses: Matsuo M., Murayama T., Eguchi T., Tamamoto M.: 38th Meeting of the Nippon Academy of Dental Technology(Nara), 2016.
- 4: Bonding method between the mouth guard sheet materials: Suzuki S., Tamamoto M., Murayama T.: 38th Meeting of the Nippon Academy of Dental Technology(Nara), 2016.
- 5: An efficient search method for active schedule with consideration to idle time: Eguchi T., Iio T., Murayama T.: Scheduling Symposium 2016, 147-151(Osaka), 2016.
- 6: Job shop scheduling with capacity adjustment with consideration to the constraint of the number of operators: Eguchi T., Daido T., Ohama Y., Murayama T.: 2016 Annual Congress of The Japan Society of Mechanical Engineers, No.16-1, 1-6(Fukuoka), 2016.
- 7: Creating 3-d models from videos for fabricating facial prostheses: Matsuo M., Murayama T., Higuchi S., Eguchi T., Tamamoto M.: 100th Regular Meeting of Hiroshima University Dental Society (Hiroshima), 2016.
- 8: Bonding method between the mouth guard materials: Suzuki S., Tamamoto M., Murayama T.: 100th Regular Meeting of Hiroshima University Dental Society (Hiroshima), 2016.

F) Special Lectures in Academic Meetings

1: Murayama T.: Fundamentals of dental CAD/CAM systems (2016 Workshop on Dental Technique Practices for Trainers, Japan Society for Education of Dental Technology) (Osaka), 2016.

(4) Status of Receiving Grants-in Aid for Scientific Research, etc.

(5) Academic Awards, etc.

(6) Patents

[Return to Contents](#)

Integrated Health Sciences

Department of Oral Biology & Engineering

(1) Staff and Students

Professor : Hiroki Nikawa

Associate Professor : Tsuyoshi Taji

Lecturer : Hisako Sasahara

Assistant Professor : Takuya Kihara, Sumiyo Mimura, Takahiro Shuto

(Special Appointment)

Education and Research Support Staff : Kaori Taguchi, Yoshiya Fujikawa ,
Yumi Hamamoto (-H28.3)

Research Student : Kazuko Kawahara (H28.4-)

Graduate Student : Sachiko Sawa, Yukihiro Takayama, Satoshi Miyauchi, Shun Ichikawa,
Tatsumi Hashida, Yoshiya Fujikawa, Satoru Yaguchi, Natsumi Saizaki,
Konomi Hirota, Ai Fujii, Keisuke Fujita

Undergraduate Student : Yumi Ueta, Sakura Omori, Marika Kanda, Mai Tsuyama, Riona Doi,
Maki Hashimoto, Risako Hiura, Miori Fujii,
Misa Matsumura, Satoko Yamada, Tomoya Suehiro, Kazuki Sanetoshi,
Yurina Akita, Rei Ito, Kimika Endo, Mina Ishida, Mako Shinoda, Yuki Kono

(2) Main Research Activities

- 1 : Study on candidal biofilms and denture plaque
- 2 : Study on dental caries and probiotics
- 3 : Design for cationic antimicrobial peptides
- 4 : Study on mechanisms of the alveolar bone resorption
- 5 : Development of bone-resorption inhibitors
- 6 : Study on dental implant materials
- 7 : Collaborative research about allergy
- 8 : Study on digital dentistry
- 9 : Collaborative research about aortic aneurysm
- 10 : Development of oral function devices
- 11 : Analysis of food texture

(3) Research Achievements

A) Original Papers (including Case Reports)

- 1 : Accelerating effects of cellulase in the removal of denture adhesives from acrylic denture bases : Harada-Hada K, Mimura S, Hong G, Hashida T, Abekura H, Murata H, Nishimura M, Nikawa H.: Journal of Prosthodontic Research, 352,1-8,2016.
- 2 : Accuracy of a three-dimensional dentition model digitized from an interocclusal record using a non-contact surface scanner : Kihara T, Yoshimi Y, Taji T, Murayama T, Tanimoto K, Nikawa H.: The European Journal of Orthodontics, 38(4), 435-439, 2016.
- 3 : Bone morphogenetic protein 4 promotes craniofacial neural crest induction from human pluripotent stem cells : Mimura S, Suga M, Okada K, Kinehara M, Nikawa H, Furue MK.: The International Journal of Developmental Biology, 60, 21-28, 2016.
- 4 : Fluoresceination of *Lactobacillus rhamnosus* through the expression of green fluorescent protein : Mimura S, Ohara M, Hayashi I, Okada M, Nikawa H.: International Journal of Research in Engineering and Science, 4, 76-85, 2016.
- 5 : Differentiation of osteoblast and osteoclast cells on hydrogenated-tetrahedral amorphous carbon coated titanium : Shuto T, Nakatani T, Okamoto K, Saizaki N, Mimura S, Kunitsugu S, Nikawa H.: Journal of Photopolymer Science and Technology, 29(3), 413-418, 2016.
- 6 : Human odontogenic epithelial cells derived from epithelial rests of Malassez possess stem cell properties : Tsunematsu T, Fujiwara N, Yoshida M, Takayama Y, Kujiraoka S, Qi G, Kitagawa M, Kondo T, Yamada A, Arakaki R, Miyauchi M, Ogawa I, Abiko Y, Nikawa H, Murakami S, Takata T, Ishimaru N, Kudo Y.: Laboratory Investigation, 96, 1063-1075, 2016.

B) Review

C) Publications

D) Other Publications

E) Presentation at Scientific Meeting

- 1 : Clinical usage of a portable 3D scanner system for the three-dimensional analysis of the craniofacial complex : Anna Kanbara, Michika Seo, Hideaki Amano, Rumi Nishimura, Akiko Iwamoto, Takuya Kihara, Yasutaka Kaihara, Hiroki Nikawa, Katsuyuki Kozai : 10th Biennial Conference of the Pediatric Dentistry Association of Asia (Tokyo), 2016.
- 2 : Application of three-dimensional digital models for the mixed dentition analysis: accuracy and

- precision : Yasutaka Kaihara, Takuya Kihara, Hideaki Amano, Hiroki Nikawa, Katsuyuki Kozai :
10th Biennial Conference of the Pediatric Dentistry Association of Asia (Tokyo), 2016.
- 3 : Growth changes of alveolar and palatal morphology in infants: a Longitudinal study : Takuya Kihara,
Yasutaka Kaihara, Satoko Iwamae, Noriko Niizato, Hideaki Amano, Katsuyuki Kozai, Hiroki
Nikawa : 10th Biennial Conference of the Pediatric Dentistry Association of Asia (Tokyo), 2016.
- 4 : Preliminary Survey for Screening to predict Abused Children : H Sasahara, Y Kaihara , K Hosohara ,
K Yamasaki, H Nikawa, Katsuyuki Kozai : 10th Biennial Conference of the Pediatric Dentistry
Association of Asia (Tokyo), 2016.
- 5 : Differentiation of Osteoblast and Osteoclast Cells on Hydrogenated-Tetrahedral Amorphous Carbon
Coated Titanium : Takahiro Shuto, Tatsuyuki Nakatani, keishi Okamoto, Natsumi Saizaki, Sumiyo
Mimura, Shinsuke Kunitsugu, Hiroki Nikawa : The 33th International Conference of Photopolymer
Science and Technology/Materials & Processes for Advanced Microlithography, Nanotechnology
and Phototechnology (Chiba), 2016.
- 6 : Optimization of culture conditions for the efficient differentiation of iPS cells into dental epithelial
cells : Satoshi Miyauchi, Aimi Naim Abdullah, Hiroki Nikawa, Koichi Kato : International Dental
Materials Congress 2016 (Legian, Bali, Indonesia), 2016.

F) Symposium and special lecture

(4) Status of Receiving Grants-in Aid for Scientific Research, etc.

- 1 : Grants-in-Aid for Scientific Research (Scientific Research (B)) : Hiroki Nikawa (Head), Tsuyoshi
Taji (Co-investigators), Research Project Number: 15H05027. ¥2,800,000
- 2 : Challenging Exploratory Research : Hiroki Nikawa, Research Project Number: 15K157665B.
¥200,000
- 3 : Challenging Exploratory Research : Hiroki Nikawa, Research Project Number: 26670838. ¥600,000
- 4 : Grants-in-Aid for Scientific Research (Scientific Research (C)) : Tsuyoshi Taji (Head), Hiroki
Nikawa (Co-investigators), Research Project Number: 26462921. ¥1,100,000
- 5 : Donation from Shikoku nyugyou corporation to Hiroki Nikawa. ¥300,000

(5) Academic Awards, etc.

(6) Patents

- 1 : Hiroki Nikawa : BACTERIOCIN DERIVED FROM LACTOBACILLUS RHAMNOSUS (NO.
5907490) (Hiroshima University)

- 2 : Hiroki Nikawa : (US Patent) ANTIBACTERIAL AGENT COMPOSITION AND ANTIVIRAL AGENT COMPOSITION COMPRISING SILICON – CONTAINING COMPOUND; ANTIBACTERIALIZING METHOD, CLEANING/MOUTH RINSING METHOD; METHOD FOR FIXING ANTIBACTERIAL AGENT AND ANTIVIRAL AGENT (NO.9278107 B2) (Hiroshima University)
- 3 : Hiroki Nikawa : (US Patent) BACTERIOCIN DERIVED FROM LACTOBACILLUS RHAMNOSUS (NO.9314498) (Hiroshima University)
- 4 : Hiroki Nikawa : (Korean Patent) ANTIBACTERIAL AGENT COMPOSITION AND ANTIVIRAL AGENT COMPOSITION COMPRISING SILICON – CONTAINING COMPOUND; ANTIBACTERIALIZING METHOD, CLEANING/MOUTH RINSING METHOD; METHOD FOR FIXING ANTIBACTERIAL AGENT AND ANTIVIRAL AGENT (NO.10-1649387) (Hiroshima University)
- 5 : Hiroki Nikawa : (Korean Patent) Method of Fixing Antibacterial Agent and Article Obtained by The Method (NO.10-1681522) (Hiroshima University)
- 6 : Hiroki Nikawa : (Korean Patent) Prophylactic, Ameliorating Or Therapeutic Agent For Oral Diseases (NO.10-1690090) (Hiroshima University)
- 7 : Hiroki Nikawa : (Malaysian Patent) Method of Fixing Antibacterial Agent and Article Obtained by The Method (NO.MY-157613-A) (Hiroshima University)

[Return to Contents](#)

Central Research Laboratory

(1) Staff and Students

Director : Chisa Syukunami (by-work)

Assistant Professor : Ikue Hayashi

(2) Main Research Activities

- 1 : Proteomic analysis using mass spectrometry
- 2 : Structural analysis of biologically active substances

(3) Research Achievements

A) Original Papers (including Case Reports)

- 1: Fluoresceination of *Lactobacillus rhamnosus* through the expression of green fluorescent protein : Mimura S., Ohara M., Hayashi I., Okada M., Nikawa H: International Journal of Research in Engineering and Science, 4, 76-85 (2016).
- 2: Long-term effects of radiation exposure on leukocyte telomere lengths and related biomarkers among atomic survivors : Hayashi T., Lustig A., Shterev I., Geyer S., Shi A, Yoshida K., Kajimura J., Hayashi I., kyouzumi S., Kusunoku Y., Ohishi W., Nakachi K., Weng N. : Nagasaki Medical Journal,91, 241-245 (2016)
- 3: Two Cases of *Clostridium tertium* Infection and Successful Identification of the Organisms by Matrix-Assisted Laser Desorption-Ionization Time-of-Flight Mass Spectrometry Analysis: Joichi Y., Kayama S., Hayashi I., Onodera M., Furushimo M., Koba Y., Yokozaki M., Ohge H., Sugai M: Annals of Laboratory Medicine, 36, 281-283 (2016).

B) Review

C) Publications

D) Other Publications

E) Presentation at Scientific Meeting

- 1: Evaluation of aggregation mechanism of *Staphylococcus aureus* showing unique aggregation activity : Kutsuno S., Hisatsune J., Yu L., Hayashi I., Sugai M : The 69th Chugoku-Shikoku Annual Meeting of Japanese Society for Bacteriology (Takamatsu) 2016.
- 2: Two cases of *Clostridium tertium* infection and successful identification of the organisms by MALDI-TOF mass analysis : Zyoichi Y., Kayama S., Hayashi I., Onodera M., Furushimo M., Koba Y., Yokozaki M., Ohge M., Sugai M: The 32nd World Congress of Biomedical Laboratory Science (Kobe) 2016.
- 3: *Mycobacterium abscessus* in blood culture of a patient with a long-term indwelling CVC : Furushimo M., Koba Y., Zyoichi Y., Onodera M., Hayashi I., Kayama D., Ohge H., Yokozaki M., Sugai M : The 32nd World Congress of Biomedical Laboratory Science (Kobe) 2016.
- 4: Radiation effects on immune and inflammatory markers among atomic-bomb survivors : Hayashi T, Yoshida K, Hayashi I, Kajimura J, Kyoizumi S, Nakachi K, Kusunoki Y : 15th Molecular Preventive Environmental Medicine Symposium (Shimotsuke) 2016.
- 5: Influenza vaccine response in 2011-2013 among Hiroshima atomic-bomb survivors : Hayashi T, Lynch HE, Geyer SM, Yoshida K, Furudoi K, Sasaki K, Morishita Y, Nagamura H, Maki M, Hu Y, Hayashi I, Kyoizumi S, Kusunoki Y, Ohishi W, Fujiwara S, Shterev I, Nikolich-Zugich J, Murasko D, Sempowski GD, Nakachi K : 62nd Annual Meeting of the Radiation Research Society (Waikoloa) 2016.
- 6: Impact of early life exposure in ionizing radiation on influenza vaccine response in an elderly Japanese cohort : Lynch HE., Hayashi T, Geyer SM., Yoshida K., Furudoi K., Sasaki K., Morishita Y., Nagamura H., Maki M., Hu Y., Hayashi I., Kyoizumi S., Kusunoki Y., Ohishi W., Fujiwara S., Shterev I., Nikolich-Zugich J., Murasko D., Sempowski GD., Nakachi K : International Congress of Immunology (Melbourne) 2016.
- 7: A novel transcriptional regulator of biofilm from a clinically isolated super biofilm-forming *S. aureus* : Yu L., Hisatsune J., Hayashi I., Mizumachi E., Sato Y., Kato F., Pier G.B., Sugai M : 17th International Symposium on Staphylococci and Staphylococcal Infections (Souel) 2016.

(4) Status of Receiving Grants-in Aid for Scientific Research, etc.

- 1: Research project, Grant-in-Aid for Scientific Research (C): Hayashi I: Functional analysis of novel acetyltransferase derived from cariogenic bacteria and application to the caries prevention: (No. 15K110110A) 250,000JPY
- 2: Research project, Grant-in-Aid for Scientific Research (B): Hayashi I (share holder): Elucidation of the restoration control structure of the radiation-induced DNA damage through the chromatin remodeling :(No.15H0281901) 200,000JPY.
- 3: Japan Society for the Promotion of science, Interchange business between two countries: Hayashi I

(share holder): Comparative molecular epidemiology study of inflammation-related disease development between radiation-exposed populations in Latvia and Japan (15039901-000134)

(5) Academic Awards, etc.

(6) Patents

[Return to Contents](#)

Division of General Dentistry

Department of General Dentistry

(1) Staff and Students

Professor :

Assistant Professor : Hiromi Nishi, Taiji Obayashi, Masaru Ohara

Graduate Student : Takayuki Oto, Nami Kikushige

(2) Main Research Activities

1. Research in patient-centered dentistry based on narrative approach
2. Research in general dentistry
3. Examination of postgraduate dental training program
4. Research in health communication strategy
5. Research in clinical education
6. Research in assessment of clinical skills
7. Research in development and standardization of simulated patients
8. Research in taste disorder of patients receiving chemotherapy

(3) Research Achievements

A) Original Papers (including Case Reports)

1. Preoperative oral health care reduces postoperative inflammation and complications in oral cancer patients. Shigeishi H, Ohta K, Fujimoto S, Nakagawa T, Mizuta K, Ono S, Shimasue H, Ninomiya Y, Higashikawa K, Tada M, Ishida F, Okui G, Okumura T, Fukui A, Kubozono K, Yamamoto K, Ishida Y, Seino S, Hashikata M, Sasaki K, Naruse T, Rahman MZ, Uetsuki R, Nimiya A, Takamoto M, Dainobu K, Tokikazu T, Nishi H, Sugiyama M, Takechi M. *Experimental and Therapeutic Medicine*. 12(3):1922-1928. 2016
2. TNF- α -induced IL-6 and MMP-9 expressions in immortalized ameloblastoma cell line established by hTERT. Ohta K, Naruse T, Ishida Y, Shigeishi H, Nakagawa T, Fukui A, Nishi H, Sasaki K, Ogawa I, Takechi M. *Oral Disease*. 21(1):106-12. 2016
3. Factors affecting motivation to clinical training of dental trainees:Oto T., Nakayama A., Iwashita Y., Matsumoto Y., Yoshida R., Taguchi N.: The Journal of Japanese Society of the General Dentistry, 8(1), 15-19, 2016.
4. How Long does Mutans Streptococci Survive on the Lip of the Plastic Bottle?: Okazaki H, Ohara M, Nishimura R, Fukada E, Hara K, Okada M, Amano H. *J Hiroshima Univ. Dent*. 48: 20-26, 2016
5. Fluoresceination of *Lactobacillus rhamnosus* through the expression of green fluorescent protein. Mimura S, Ohara M, Hayashi I, Okada M, Nikawa H. *IJRES* 4: 76-85. 2016.

B) Review

C) Publications

D) Other Publications

1. Hiroshima Breast Cancer Complications Guidebook. NPO Corporation Hiroshima Pink Ribbon Project

E) Presentation at Scientific Meeting Original Papers (including Case Reports)

1. Oral bacteria linked to risk of stroke.: ○Nishi H, Hosomi N, Nakamori M, Shintani T, Ohta K, Shigeishi H, Obayashi T, Shiba H, Sugiyama M, Ohge H, Kurihara H.: The 61th Congress of the Japanese Society of Oral and Maxillofacial Surgeons.(Makuhari), 2016.
2. Oral care in chemoradiotherapy of pharyngeal cancer.:○Ueda T, Nishi H, Hamamoto T, Hirakawa K.: The 40th Congress of the Japan Society for Head and Neck Cancer.(Saitama), 2016.
3. HPV16 infection and clinicopathological indicators in the oral cavity and the pharynx.:○Shigeishi H, Sugiyama M, Ohta K, Nishi H, Takechi M.: The 27th Annual Meeting of the Japanese Society of Oral Pathology. (Hiroshima), 2016.
4. Current situation and problems on oral care of nurses in critical area.: ○Morishita T, Okamoto M, Kawabori M, Okazaki K, Kirishima A, Ototani J, Miura A, Iiboshi R, Yano K, Nishi H, Kurihara H.: The meeting for the study of Hiroshima University Hospital Nursing Group.(Hiroshima), 2016
5. Study on the depth of the reflection and the portfolio progress : Obayashi T, Nishi H, Ohara M.: The Japanese Society of General Dentistry 9th annual meeting. (Okayama), 2016.
6. What students learned in the isolated islands:Oto T, Nakayama A, Iwashita Y, Matsumoto Y, Yoshida R, Taguchi N.: The 48th Annual Meeting of the Japan Society for Medical Education. (Otsuki), 2016.
7. What learned from community based clinical clerkship in remote islands and its impact on the future. :Oto T, Nakayama A, Iwashita Y, Matsumoto Y, Yoshida R, Taguchi N.: The 35th Meeting of Japanese Dental Education Association, (Suita), 2016.
8. Rapid detection of mutans streptococci using FACScan: Ohara M.: The Japanese Society of General Dentistry 9th annual meeting. (Okayama), 2016.

F) Implementation of Seminars / Workshops

1. The 8th Oral Care Seminar: Latest surgical treatment of colorectal cancer. Lecturer:Dr. Hiroyuki Egi. 2016.
2. The 9th Oral Care Seminar: Basic knowledge and clinical practice of hepatobiliary pancreatic disease. Lecturer:Dr. Tuyoshi Kobayashi. 2016.
3. The 10th Oral Care Seminar: Basic knowledge and clinical practice of organ transplant. Lecturer: Dr.Kouhei Ishiyama. 2016.

4. The 11th Oral Care Seminar: Points of anticoagulant and antiplatelet drug. Lecturer:Dr. Takayuki Hidaka. 2016.
5. The 12th Oral Care Seminar: Arteriosclerosis. Lecturer:Dr. Tatsuya Maruhashi. 2016.
6. The 13th Oral Care Seminar: Infective endocarditis after dental treatment. Lecturer:Dr. Ken Ishibashi. 2016.
7. The 14th Oral Care Seminar: Basic knowledge of cardiac insufficiencyheart failure for dental treatment. Lecturer:Dr. Toshiro Kitagawa. 2016.

G)Lecturer • Symposiast

1. Lecturer:Nishi H. Regional alliances. ~Points requiring attention in systemic disease~. Hiroshima Dental Association.(Hiroshima), 2016.
2. Lecturer:Nishi H. Points of oral care and background. Kajikawa Hospital (Hiroshima), 2016.
3. Symposiast:Nishi H. future perspective of oral care in acute care hospital. The 31st Annual Meeting of Japanese Society for InfectionPrevention and Control.(Kyoto), 2016.
4. Lecturer:Nishi H. Prevention of infection by oral bacteria control. The Workshop of Board Certified Infection Control Pharmacy Specialist. (Fukuoka), 2016.
5. Lecturer:Nishi H. Prevention of infection by oral bacteria control. The Workshop of Board Certified Infection Control Pharmacy Specialist. (Tokyo), 2016.
6. Lecturer:Nishi H. Let's make dental hygienist Contact Form! The 11th Japan dental Hygienists' Association. (Hiroshima), 2016.

H) Attending of Lectures, Seminars, and Workshops

1. Nishi H.: The 226th ICD seminar: The 31st Annual Meeting of Japanese Society for Infection Prevention and Control.(Kyoto), 2016.
2. Nishi H.: Panel Discussion 5 :The 64th Annual Meeting of the Japanese Society of Chemotherapy.(Kobe), 2016.
3. Nishi H, Obayashi T.: The 39th Seminar on Antibacterial Agents Proper Use.: The Japanese Society of Chemotherapy.(Tokyo), 2016.
4. Nishi H.: JMP training seminar.: SAS Institute Japan Co., Ltd.(Tokyo), 2016.

I) Implementation of OSCE, CSA

1. 2nd Advanced OSCE for Postgraduate Trainees 2015-2016
2. 1st Advanced OSCE for Postgraduate Trainees 2016-2017

(4) Status of Receiving Grants-in Aid for Scientific Research, etc.

1. Grant-in-Aid Scientific Research, Scientific Research (C). Nishi H. Elucidation of DNA

recognition mechanism in oral mucosal cells and regulation of oral mucosal inflammation.
Program No 26463010, 1,100,000Yen.

(5) Academic Awards, etc.

1. Oto T : The 8th Incentive Award for the Presentation at international Academic Meetings, Japanese Dental Education Association, 2016.

(6) Patents

[Return to Contents](#)

Division of Oral Health and Development Department of Department of Oral Health

(1) Staff and Students

Professor: Hideaki Amano, Masaru Sugiyama, Toshinobu Takemoto, Hiroki Nikawa

(* Chief: Masaru Sugiyama (by-work)

Associate Professor: Tsuyoshi Taji, Mitsuhiro Tamamoto

Associate Professor/Lecturer: Hisako Sasahara, Atsue Matsumoto, Atsushi Shimazu (Department)

Assistant Professor: Yoshie Niitani, Rumi Nishimura, Eri Fukada

Assistant Professor (Special Appointment): Akiko Iwamoto, Yuko Kurawaki

Education and Research Support Staff: Minako Ogawa, Naomi Nakashima, Sanae Miyoshi

Please refer to the research achievements of each department.

Integrated Health Sciences

- Department of Public Oral Health: Masaru Sugiyama, Atsushi Shimazu, Eri Fukada, Yuko Kurawaki
- Department of Maxillofacial Functional Development: Hideaki Amano, Rumi Nishimura,
Akiko Iwamoto, Minako Ogawa,
Naomi Nakashima, Sanae Miyoshi
- Department of Oral Health Management: Toshinobu Takemoto, Atsue Matsumoto, Yoshie Niitani
- Department of Medical System and Biomaterial Engineering: Mitsuhiro Tamamoto
- Department of Oral Biology & Engineering: Hiroki Nikawa, Tsuyoshi Taji, Hisako Sasahara

(2) Main Research Activities

(3) Research Achievements

A) Original Papers (including Case Reports)

B) Review

C) Publications

D) Other Publications

E) Presentation at Scientific Meeting

F) Special lectures in academic meetings

(4) Status of Receiving Grants-in Aid for Scientific Research, etc.

(5) Academic Awards, etc.

(6) Patents

[Return to Contents](#)

Division of Oral Health and DEVELOPMENT Department of Special Care Dentistry

(1) Staffs and Students

| | |
|---------------------|--|
| Professor | : Mitsugi Okada (~Sep) (※) Head of Dentistry |
| Assistant Professor | : Yuki Oda (lecture in Hospital) |
| Resident | : Taro Kojima (~Mar), Masaki Hayashiuchi (Apr~), Yoko Fujino (Apr~Jul), Koichiro Matsumoto(~Oct) |
| Clinical Staff | : Masaki Hayashiuchi(~Mar), Yoko Fujino(~Mar), Koichiro Matsumoto(~Sep), Chiaki Furutani(Apr~) |
| Research Student | : Masaki Hayashiuchi(~Mar), Yoko Fujino(~Mar), Koichiro Matsumoto(~Sep) , Chiaki Furutani(Apr~) |
| Clinical Trainee | : Megumi Iwamoto, Fumiko Hayashi, Chisato Mantoku, Hiroshi Ootsubo, |

(2) Main Research Activities

- 1: A study on caries risk of patients with disabled
- 2: A study on risk of periodontal disease of patients with disabled
- 3: A study on dental problems of patients with disabled
- 4: A study on PBL task for dental problem of patients with mental retardation
- 5: A study on periodontal diseases of patients with disabled
- 6: A study about the influence of *Lactobacillus Rhamnosus* on patients caries risk with disabled
- 7: A study about the influence of *Lactobacillus Rhamnosus* on patients periodontal risk with disabled

(3) Research Achievements

A) Original Papers (including Case Reports)

- 1: Five-year longitudinal study of dental caries risk associated with *Streptococcus mutans* and *Streptococcus sobrinus* in individuals with intellectual disabilities. Oda Y, Hayashi F, Wakita A, Nagatani Y, Okada M. J Oral Sci.; doi: 10.2334/josnused.16-0325. 2016.
- 2: Fluoresceination of *Lactobacillus rhamnosus* through the expression of green fluorescent protein. Mimura S, Ohara M, Hayashi I, Okada M, Nikawa H. International Journal of Research in Engineering and Science; 4 (9). 70-76. 2016.
- 3: The anesthesia Management of a Patient with Rubinstein-Taybi Syndrome and Obesity during Dental Treatment. Mukai A, Yoshinaka T, Uno T, Oda A, Mukai T, Yoshida K, Oda Y, Okada M, Ififune M. Journal of the Japanese Society for Disability and Oral Health; 37(1): 42-47. 2016.

- 4: A Case Report of Worsened Self-injury Behavior and Epilepsy Attack by an Autistic Spectrum Disorder Patient following Dental Treatment under General Anesthesia. Oda Y, Hayashiuchi M, Fujino Y, Matsumoto K, Yasusaka M, Yoshida K, Yoshinaka T, Wakita A, Irifune M, Okada M. Journal of the Japanese Society for Disability and Oral Health; 37(4): 419-425. 2016.
- 5: A Study of the Current Situation of Pre-anesthesia Screening Tests in Dental Patients with Intellectual Disability, and Challenges for the Future. Yoshida K, Mukai A, Oda A, Takahashi T, Yamashita M, Yoshinaka T, Kanda T, Oda Y, Yoshida M, Okada M, Irisune M. Journal of the Japanese Society for Disability and Oral Health; 37(4): 445-450. 2016.
- 6: Molecular Mechanisms of Reception and Inhibition in Mouse TAS2R Bitter Taste Receptors. Matsumoto K. The Journal of Hiroshima University Dental Society; 48(2): 130-140. 2016.

B) Review

C) Publications

D) Other Publications

Hiroshima Prefecture Special Needs Dental Clinical Manual

Hiroshima Prefecture · Hiroshima Prefecture Dental Hygiene Liaison Committee, OKADA MITSUGI

E) Presentation at Scientific Meeting

1. Custom-made tooth brushing instruction using visual support for students in special support school

Wakita A, Oda Y, Arima T, Hada Y, Hirai Y, Nakaoka M, Ueda Y, Okada M

The 11 Annual Meeting of the Japan Dental Hygienists Association (HIROSHIMA) SEPTEMBER 2016

2. Investigation on Consciousness of clinical practice students toward special needs dentistry

Okini T, Wakita A, Nakaoka M, Oda Y, Okada M

The 11 Annual Meeting of the Japan Dental Hygienists Association (HIROSHIMA) SEPTEMBER 2016

3. A case report of autism patient who acted self-injured behavior after general anesthesia for dental treatment

Oda Y, Kojima T, Hayashiuchi M, Fujino Y, Matsumoto K, Wakita A, Okada M

The 33rd Japanese Society for Disability and Oral Health (SAITAMA)

NOVEMBER 2016

4. Report about change before and after the custom-made tooth brushing instruction using visual support for students in special support school

Wakita A, Oda Y, Nakaoka M, Fuzita T, Ueda Y, Okada M

The 33rd Japanese Society for Disability and Oral Health (SAITAMA)

NOVEMBER 2016

5. Pharmacological effects of general anesthetics altered by the change of subunit composition

of GABA_A receptors : Hayashiuchi M, Yamawaki Y, Oue K, Harada K, Asano S, Irifune M, Okada M, Kanematsu T : 6th Hiroshima Conference on Education and Science in Dentistry (Hiroshima), 2015.

6. Report about the validity of clinical practice for dental hygienist students in special care dentistry-Changes of their conscious before and after the practice-

Nakaoka M, Wakata A, Tokikazu T, Oda Y, Okada M

The 33st Japanese Society for Disability and Oral Health (SAITAMA)

NOVEMBER 2016

7. *Prip* gene deficiency in mice changes the action of GABAergic anesthetic drugs

Hayashiuchi M, Okada M, Kanematsu T, Irifune M

The 33rd Annual Meeting of the Japanese Society for Disability and Oral Health (Omiya), 2016

8. Pharmacologically different effects of various general anesthetics in relation to types of GABA_A receptors

Hayashiuchi M, Yoshinaka T, Oue K, Oda Y, Irifune M

The 44th Annual Meeting of the Japanese Dental Society of Anesthesiology (Sapporo), 2016

9. Pain stimulation changed the electroencephalogram toward awakening under general anesthesia induced by GABA_A receptor agonists

Yoshinaka T, Kikuchi Y, Ogawa T, Hayashiuchi M, Irifune M

The 44th Annual Meeting of the Japanese Dental Society of Anesthesiology (Sapporo), 2016

10. A case report of autism patient whose acted self-injured behavior got worse after general anesthesia for dental treatment

Oda Y, Hayashiuchi M, Fujino Y, Matsumoto K, Yoshida K, Wakita A, Irifune M, Okada M

The 55st Hiroshima Prefecture Dental Association, The 100st Hiroshima University Dental Society (HIROSHIMA) OCTOBER 2016

11. Report about change before and after the custom-made tooth brushing instruction using visual support for students in special support school

Wakita A, Oda Y, Nakaoka M, Arima T, Hada Y, Hirai Y, Fuzita T, Komatsu T, Noumi K, Ueda Y, Kawahara M, Doe K, Okada M

The 55st Hiroshima Prefecture Dental Association, The 100st Hiroshima University Dental Society (HIROSHIMA) OCTOBER 2016

(4) Status of Receiving Grants-in Aid for Scientific Research, etc.

(5) Academic Awards, etc.

(6) Patents

[Return to Contents](#)

Central Clinical Divisions Special Dental Clinic Section

(1) Staff and Students

Chief Professor : Kotaro Tanimoto

Assistant Professor : Yukimi Yasuhara

(2) Main Research Activities

- 1: Perceptual Evaluation of Cleft Palate Speech
- 2: Clinical Application of Electropalatography
- 3: Research for improvement in articulation problem
- 4: Research for relation between lingual pressure and the function of speech/swallowing

(3) Research Achievements

A) Original Papers (including Case Reports)

1. The Characteristics of the Healthy Adults Who Are High in a Value of the Maximal Lingual-Palatal Pressure: Yasuhara Y.: The Journal of Hiroshima University dental society, 48, 44-55, 2016.

B) Review

C) Publications

D) Other Publications

- 1: The process of rehabilitation: Yasuhara Y.: Hiroshima Pref. special needs dental practice manual: Hiroshima pref. • Hiroshima pref. dental hygienist liaison council: 123-128, 2016.

E) Presentation at Scientific Meeting

- 1: The Characteristics of the Healthy Adults Who Are High in a Value of the Maximal Lingual-Palatal Pressure(1): Yasuhara Y.: The 22nd Annual Meeting of the Japanese Society of Dysphagia Rehabilitation (Niigata), 2016.
- 2: The Characteristics of the Healthy Adults Who Are High in a Value of the Maximal Lingual-Palatal Pressure(2): Yasuhara Y.: The 22nd Annual Meeting of the Japanese Society of Dysphagia Rehabilitation (Niigata), 2016.

- 3: Tongue palate contact changes assessed with electropalatography in patients with skeletal maxillary protrusion after orthognathic surgery : Kojima S, Kaku M, Sumi H, Yamamoto T, Yashima Y, Yasuhara M, Yamamoto I, Tanimoto K.: The 59th CHU-SHIKOKU Orthodontic society (Kochi), 2016.

F) Special lectures in academic meetings

Lecture

- 1: Research on Inter-professional Collaboration - from the viewpoint of Speech Therapist: Yasuhara Y.: The 7th Annual Meeting of the Japan society of dental hygiene education (Tokyo), 2016.
- 2: Assessment and actuality of Dysphagia Rehabilitation: Yasuhara Y.: Hiroshima pref. community-based health care and nursing mutual security project: Workshop of the swallowing functional training (Kure) 2016.
- 3: Assessment and actuality of Dysphagia Rehabilitation: Yasuhara Y.: Hiroshima pref. community-based health care and nursing mutual security project: Workshop of the swallowing functional training (Fukuyama) 2016.

(4) Status of Receiving Grants-in Aid for Scientific Research, etc.

(5) Academic Awards, etc.

(6) Patents

[Return to Contents](#)

Central Clinical Divisions

Center of Oral Clinical Examination

(1) Staffs and Students

Director: Hideki Shiba
Associate Professor: Ikuko Ogawa (Clinic)
Lecturer: Masae Kitagawa (Clinic)
Research Associate: Tomoaki Shintani
Technician: Rie Miyata

(2) Main Research Activities

- 1 : Diagnostic pathological study on head and neck lesions.
- 2 : Study on test and treatment in metal allergy and dry mouth.
- 3 : Molecular pathological study on development and progression of oral squamous cell carcinoma.
- 4 : Study on molecular target therapy to oral cancer targeted with HBp17/FGFBP.
- 5 : Study on function of cementoblast specific genes in human cementoblast.

(3) Research Achievements

A) Original Papers (including Case Reports)

- 1: Eldecalcitol (ED-71), an analog of $1\alpha, 25$ -dihydroxyvitamin D₃ as a potential anti-cancer agent for oral squamous cell carcinomas: Shintani T., Rosli S.N.Z., Takatsu F., Choon Y.F., Hayashido Y., Toratani S., Usui E., Okamoto T.: *The Journal of Steroid Biochemistry and Molecular Biology*, 164(11), 79-84, 2016.
- 2: Human odontogenic epithelial cells derived from epithelial rests of Malassez possess stem cell properties: Tsunematsu T., Fujiwara N., Yoshida M., Takayama Y., Kujiraoka S., Qi G., Kitagawa M., Kondo T., Yamada A., Arakaki R., Miyauchi M., Ogawa I., Abiko Y., Nikawa H., Murakami S., Takata T., Ishimaru N., Kudo Y.: *Lab Invest*, 96(10), 1063-75, 2016.
- 3: Expression of Wilms' tumor 1 (WT1) in ameloblastomas: Bologna-Molina R., Takeda Y., Kuga T., Chosa N., Kitagawa M., Takata T., Ishisaki A., Mikami T.: *J Oral Sci*, 58(3), 407-13, 2016.

- 4: Distinction between cell proliferation and apoptosis signals regulated by brain-derived neurotrophic factor in human periodontal ligament cells and gingival epithelial cells: Kashiwai K., Kajiya M., Matsuda S., Ouhara K., Takeda K., Takata T., Kitagawa M., Fujita T., Shiba H., Kurihara H.: *J Cell Biochem*, 117(7), 1543-55, 2016.
- 5: MicroRNA-203 suppresses invasion and epithelial-mesenchymal transition induction via targeting NUA1 in head and neck cancer: Obayashi M., Yoshida M., Tsunematsu T., Ogawa I., Sasahira T., Kuniyasu H., Imoto I., Abiko Y., Xu D., Fukunaga S., Tahara H., Kudo Y., Nagao T., Takata T.: *Oncotarget*, 7(7), 8223-39, 2016.
- 6: N-terminal region of human ameloblastin synthetic peptide promotes bone formation: Kitagawa M., Ando T., Subarnbhesaj A., Uchida T., Miyauchi M., Takata T.: *Odontology*, 2016. in press.
- 7: TNF- α -induced IL-6 and MMP-9 expression in immortalized ameloblastoma cell line establishes by hTERT: Ohta K., Naruse T., Ishida Y., Shigeishi H., Nakagawa T., Fukui A., Nishi H., Sasaki K., Ogawa I., Takechi M.: *Ora Dis*, 2016. in press.
- 8: Ameloblastin induces tumor suppressive phenotype and enhances chemosensitivity to doxorubicin via Src-Stat3 inactivation in osteosarcoma: Ando T., Kudo Y., Iizuka S., Tsunematsu T., Umehara H., Shrestha M., Matsuo T., Kubo T., Shimose S., Arihiro K., Ogawa I., Ochi M., Takata T.: *Sci. Rep*, 2016. in press.
- 9: The study of antitumor activity using eldecalcitol (ED-71), an analog of 1 α ,25-dihydroxyvitamin D3 in oral squamous cell carcinomas: Takatsu F., Shintani T., Rosli S.N.Z., Usui E., Okamoto T.: *Journal of Japan Tissue Culture Society for Dental Research*, 25(1), 19-20, 2016.

B) Reviews

- 1: Part 2 Molecular pathology of cancer, B cancer of organ, 3. Odontogenic tumor; Molecular pathology of cancer –from pathological diagnosis to search for therapeutic target. (edited by Fukayama M., Kanai Y., Tanaka S.): Ando T., Ogawa I., Takata T.: *Pathology and Clinical, Medicine Special issue*, vol. 34, 79-83, 2016.

C) Publications

- 1: Chapter V Pathology of salivary gland tumors 2 malignant tumors; Thorough lecture Saliva • Salivary gland (edited by Japan Salivary Gland Society): Ogawa I., Takata T.: *Kanehara-shuppan (Tokyo)*, 156-63, 2016.

D) Other Publications

- 1: Let's study saliva (1): Ogawa I.: DHstyle, 10(4), 66-69, 2016.
- 2: Let's study saliva (2): Ogawa I.: DHstyle, 10(5), 44-47, 2016.
- 3: Let's study saliva (3): Kitagawa M.: DHstyle, 10(6), 64-68, 2016.
- 4: Let's study saliva (4): Kitagawa M.: DHstyle, 10(7), 44-49, 2016.
- 5: Let's study saliva (5): Ogawa I.: DHstyle, 10(8), 38-41, 2016.
- 6: Let's study saliva (6): Ogawa I.: DHstyle, 10(9), 40-43, 2016.
- 7: Let's study saliva (7): Kitagawa M.: DHstyle, 10(11), 46-50, 2016.
- 8: Let's study saliva (8): Kitagawa M.: DHstyle, 10(12), 30-34, 2016.
- 9: Let's study saliva (9): Ogawa I.: DHstyle, 10(13), 58-62, 2016.

E) Presentation at Scientific Meeting

- 1: Eldecalcitol (ED-71), an analog of $1\alpha,25(\text{OH})_2\text{D}_3$ inhibits the growth of squamous cell carcinoma (SCC) cells through down-regulation of heparin binding protein 17/ fibroblast growth factor-binding protein 1 (HBp17/FGF-BP1) and FGF-2 expressions: Shintani T., Rosli S.N.Z., Takatsu F., Usui E., Hayashido Y., Toratani S., Okamoto T.: 19th Workshop on Vitamin D (Boston, USA), 2016.
- 2: Heterogeneity of ameloblastoma on cell lines and tissue specimens originated from a single patient: Mikami T., Bologna-Molina R., Kitagawa M., Takata T., Takeda Y.: 18th International Congress on Oral Pathology and Medicine & XXV Conference of Indian Association of Oral and Maxillofacial Pathologists (Chennai, India), 2016.
- 3: HBp17/FGFBP-1 expression is down-regulated by $1\alpha,25(\text{OH})_2\text{D}_3$ through NF- κ B pathway in oral squamous cell carcinoma cell lines: Rosli S.N.Z., Shintani T., Takatsu F., Usui E., Hayashido Y. and Okamoto T.: The 14th International Conference on cellular endocrinology (Hiroshima), 2016.
- 4: Detection of KRAS missense mutations in adenomatoid odontogenic tumour: Mikami T., Ogawa I., Kitagawa M., Takata T., Bologna-Molina R., Takeda Y.: The 27th Annual Meeting of the Japanese Society of Oral Pathology (Hiroshima), 2016.
- 5: A tumor of maxilla (Ameloblastic carcinoma, secondary type): Chea C., Furusho H., Miyauchi M., Hamana T., Hayashido Y., Ogawa Y., Okamoto T., Takata T.: The 27th Annual Meeting of the Japanese Society of Oral Pathology (Hiroshima), 2016.
- 6: A case of hybrid odontogenic tumor: Calcifying cystic odontogenic tumor and odontoma showing various developing stages: Shrestha M., Shrestha A., Dangol A., Maharjan I. M., Ogawa I.,

- Miyauchi M., Takata T.: The 27th Annual Meeting of the Japanese Society of Oral Pathology (Hiroshima), 2016.
- 7: The influence on oral environment and taste function in patients treated with anti-HIV agents: Shintani T., Yamasaki N., Iwata T., Saitou S., Kitagawa M., Ogawa I., Okada M., Matsui K., Hamamoto K., Unei H., Fujita K., Ogawa Y., Kinoshita K., Ikeda Y., Kurihara H., Fujii T., Shiba H.: The 9th Annual Meeting of Japanese Society for Evidence and the Dental Professional (Koriyama), 2016.
- 8: The influence on oral environment and taste function in patients treated with anti-HIV agents: Shintani T., Yamasaki N., Iwata T., Saitou S., Kitagawa M., Ogawa I., Okada M., Matsui K., Hamamoto K., Unei H., Fujita K., Ogawa Y., Kinoshita K., Ikeda Y., Fujii T., Shiba H.: The 30th Annual Meeting of the Japanese Society for AIDS research (Kagoshima), 2016.
- 9: Examination of resin allergy and out-of-hospital collaboration: Kitagawa M., Shintani T., Ogawa I., Shiba H.: The 55th Annual Meeting of Hiroshima Dental Association and the 100th Annual Meeting of Hiroshima University Dental Society (Hiroshima), 2016.
- 10: The study of antitumor activity using eldecalcitol (ED-71), an analog of 1 α ,25-dihydroxyvitamin D3 in oral squamous cell carcinomas: Takatsu F., Shintani T., Rosli S.N.Z., Toratani S., Usui E. Okamoto T.: The 70th Annual Meeting of The Japanese Stomatological Society (Fukuoka), 2016.
- 11: Relationship between mandibular torus and oral condition or oral function: Morita K., Tsuka H., Kato K., Shintani T., Yoshida M., Shiba H., Tsuga K.: The 9th Annual Meeting of Japanese Society for Evidence and the Dental Professional (Koriyama), 2016.
- 12: Pathogenicity of oral bacteria in stroke patients: Nishi H., Shintani T., Ohta K., Shigeishi H.: The 61th Congress of the Japanese Society of Oral and Maxillofacial Surgeons (Chiba), 2016.
- 13: A case report of odontogenic carcinoma needed to differentiation from fibrous dysplasia: Hirai C., Jimbo N., Morinaga Y., Kishino M., Toyosawa S., Ogawa I., Takata T., Itoh T.: The 105th Annual Meeting of Japanese Society of Pathology (Sendai), 2016.
- 14: Large scale collaborative research on actual condition of odontogenic tumor in Asia: Takata T., Semba I., Naeda H., Takeda Y., Kumamoto H., Kuyama K., Toyosawa S., Nagatsuka H., Miyauchi M., Ikuko O.: The 105th Annual Meeting of Japanese Society of Pathology (Sendai), 2016.
- 15: Palatal tumor (Mucoepidermoid carcinoma, clear cell variant): Ogawa I., Ando T., Nagasaki A., Okamoto K., Tani R., Konishi M., Takata T.: 119th Academic Meeting of Chugoku-Shikoku Branch of the Japanese Society of Pathology (Ube), 2016.

- 16: A case of mucoepidermoid carcinoma derived from glandular odontogenic cyst: Uchisako K., Koizumi K., Higaki M., Ishida Y., Toratani S., Nagasaki A., Ando T., Ogawa I., Okamoto T.: The 45th Meeting of Chugoku-Shikoku Branch in the Japanese Society of Oral and Maxillofacial Surgeons (Hiroshima), 2016.
- 17: Palatal tumor (Pleomorphic adenoma with marked oncocytic metaplasia): Sakamoto S., Ogawa I., Kayamori K., Kirimura S., Tomii S., Takata T.: 66th Meeting of Hiroshima Pathological Conference (Hiroshima), 2016.
- 18: Parotid gland lesion (Intercalated duct hyperplasia): Sakamoto S., Ogawa I., Obayashi M., Fujiwara M., Takata T.: 121th Academic Meeting of Chugoku-Shikoku Branch of the Japanese Society of Pathology (Hiroshima), 2016.
- 19: A case of epulis-like melanoma in maxillary gingiva with black-colored metastatic focus: Seino S., Shimasue H., Ohta K., Ando T., Ogawa I., Takechi M.: The 61st Congress of the Japanese Society of Oral and Maxillofacial Surgeons (Makuhari), 2016.
- 20: A case of sialolipoma with nodular oncocytic hyperplasia: Ogawa I., Takahashi T., Tamura M., Nagao T., Takata T.: The 61st Annual Meeting of Japan Salivary Gland Society (Tokyo), 2016.
- 21: Parotid gland tumor (Myoepithelial carcinoma ex pleomorphic adenoma, non-invasive): Furusho H., Miyauchi M., Sakaida N., Okamura M., Ogawa I., Takata T.: 67th Meeting of Hiroshima Pathological Conference (Hiroshima), 2016.

F) Special lectures in academic meetings

- 1: Diagnostic criteria (Current situation and controversial issues). Symposium “Histologic characteristics and diagnostic criterion for oral squamous cell carcinoma and its precursor and/or initial lesions”: Ogawa I.: The 105th Annual Meeting of Japanese Society of Pathology (Sendai), 2016.
- 2: The basis of histopathological diagnosis of salivary gland tumors Symposium “Cytology of salivary gland tumors: for comprehensive understanding”: Ogawa I., Takata T.: The 55th Annual Autumn Meeting of the Japanese Society of Clinical Cytology (Beppu), 2016.
- 3: Histopathological diagnosis of early stage of oral cancer –Current situation and controversial issues – Workshop “Diagnosis and treatment of early stage of oral cancer”: Ogawa I.: The 64th Meeting of Chugoku-Shikoku Branch of Japanese Stomatology Society (Ube), 2016.

(4) Status of Receiving Grants-in Aid for Scientific Research, etc.

- 1: Grants-in-Aid for Scientific Research (C): Shintani T.: Developmental study on treatment for oral cancer treated with ED-71, vitamin D analog, which is a therapeutic agent for osteoporosis. 16K11723, 2,200,000 yen.
- 2: Japanese Association for Dental Science · Grants-in-Aid for 2016 Project Research: Ogawa I.: Establishment of genomic pathology for genetic examination in dentistry. 100,000 yen.
- 3: J Japanese Association for Dental Science · Grants-in-Aid for 2016 Project Research: Kitagawa M.: Establishment of genomic pathology for genetic examination in dentistry. 100,000 yen.

(5) Academic Awards, etc.

(6) Patents

[Return to Contents](#)

Central Clinical Divisions

Dental Technicians Section

(1) Staff and Students

Director of Dental Technicians Section : Hiroki Nikawa (Prof.)
Assistant Chief Dental Technician : Ryoji Kato
Supervisor Dental Technician : Eisaku Habu, Yoshihiro Otani, Syogo Iwaguro,
Dental Technician : Yukihiro Takayama, Meiji Yamamoto, Masanobu Yamamoto

(2) Main Research Activities

- 1 : Management of the patients' information by the use of implanted devices in the denture.
- 2 : Radioprotective prostheses for irradiation therapies
- 3 : Clinical analysis of superstructure of implant.
- 4 : Esthetic dentistry
- 5 : Accuracy of castings
- 6 : Information processing in the dental laboratory
- 7 : Study on dental composite materials for esthetic

(3) Research Achievements

A) Original Papers (including Case Reports)

- 7 : Human odontogenic epithelial cells derived from epithelial rests of Malassez possess stem cell properties: Tsunematsu T, Fujiwara N, Yoshida M, Takayama Y, Kujiraoka S, Qi G, Kitagawa M, Kondo T, Yamada A, Arakaki R, Miyauchi M, Ogawa I, Abiko Y, Nikawa H, Murakami S, Takata T, Ishimaru N, Kudo Y.: Laboratory Investigation, 96,1063-1075, 2016
- 8 : Accuracy of a three-dimensional dentition model digitized from an interocclusal record using a non-contact surface scanner :Kihara T, Yoshimi Y, Taji T, Murayama T, Tanimoto K, Nikawa H.: The European Journal of Orthodontics, 38(4), 435-439 ,2016

B) Review

C) Publications

D) Other Publications

E) Presentation at Scientific Meeting

- 1: Application of three-dimensional digital models for the mixed dentition analysis: accuracy and precision: Yasutaka Kaihara, Takuya Kihara, Hideaki Amano, Hiroki Nikawa, Katsuyuki Kozai: 10th Biennial Conference of the Pediatric Dentistry Association of Asia (Tokyo), 2016

(4) Status of Receiving Grants-in Aid for Scientific Research, etc.

(5) Academic Awards, etc.

(6) Patents

[Return to Contents](#)

Central Clinical Divisions

Dental Hygiene Section

(1) Staff and Students

Director of Dental Hygiene Section : Hidemi Kurihara

Chief Dental Hygienist : Miyuki Nakaoka

Dental Hygienists : Yoriko Iwasaki, Atsuko Wakita, Yukiko Nagatani, Kanako Yano, Tomoko Tokikazu, Miho Okada, Kana Dainobu, Chieko Kawai, Maiko Kawagoe, Chika Kozono, Yuri Kuramoto, Eri Takano, Yuki Emura, Megumi Takamoto(Till February), Ayano Tomoike(Till March), Ayumi Nakai(Till March), Ayano Ito(Childcare leave AlternateTill March), Yurie Nakano(From April), Yuka Wakabayashi(From January), Fumi Tokui(From April), Natumi Ino(From April), Miku Ishikawa(From April), Yuika Mizota(From April), Kotomi Tetsumori(Maternity leave From August), Ayaka Kai(Childcare leave Alternate, From August), Kanako Matsui(Maternity leave From October), Tomomi Okino

Dental Assistants : Keiko Kodani, Yuko Matsuda, Kazue Hamamoto(Till September), Mariko Ozaki(From November, Till December)

(2) Main Research Activities

(3) Research Achievements

A) Original Papers (including Case Reports)

1 : Preoperative oral health care reduces postoperative inflammation and complications in oral cancer patients : Shigeishi H. , Ohta K., Fujimoto S., Nakagawa T., Mizuta K., Ono S., Shimasue H., Ninomiya Y., Higashikawa K., Tada M., Ishida F., Okui G., Okumura T., Fukui A., Kubozono K., Yamamoto K., Ishida Y., Seino S., Hashikata M., Sasaki K., Naruse T., Zeshaanrahman M., Uetsuki R., Nimiya A., Takamoto M., Dainobu K., Tokikazu T., Nishi H., Sugiyama M., Takechi M. : Experimental and therapeuticmedicine, 12, 1922-1928, 2016.

2 : Comparative Verification of VITA Easysshade[®] Advance 4.0 to Some Conventional Dental Shade Guide : Abe Y. , Okazaki Y., Dainobu K., Iwaguro S., Kato R., Yasuda K., Morimoto S., Ishida E. ,Tsuga, K. : The Journal of Hiroshima University Dental Society, 48, 27-35, 2016.

3 : A Case Report of Worsened Self-injury Behavior and Epilepsy Attack by an Autistic Spectrum Disorder Patient following Dental Treatment under General Anesthesia : Oda Y., Hashiuti M., Fujino Y., Matsumoto K., Yasusaka M., Yoshida K., Yoshinaka T, Wakita A., Irifune M., Okada M. : Reprinted

from Disability and Oral Health, Vol.37, No.4, 419–425, 2016.

4 : Five-year longitudinal study of dental caries risk associated with Streptococcus mutans and Streptococcus sobrinus in individuals with intellectual disabilities : Oda Y., Hayashi F., Wakita A., Nagatani Y., Okada M. : Journal of Oral Science, 2016.

B) Review

C) Publications

D) Other Publications

1 : Hiroshima Prefecture Special Needs Dental Clinical Manual : Takamoto M., Wakita A., Yano K. : Hiroshima Prefecture · Hiroshima Prefecture Dental Hygiene Liaison Committee (Hiroshima) , 2016.

2 : DVD, acquisition of methods and skills in Special care dentistry that can be utilized to visit from tomorrow : Wakita A. : Japan Visiting Dental Association, 2016.

3 : Special feature on ICT level up : Points of infection control in dental care : INFECTION CONTROL: Nakaoka M., Matsui K. : Medical publishing (Osaka), Vol.25 No.11, P88 - 92, 2016.

E) Presentation at Scientific Meeting

1 : Activities by Dental hygienists in dental support for HIV positive patients in Hiroshima University Hospital : Okada M., Matsui K., Iwata T., Nakaoka M., Shiba H. : The 59th Spring Meeting of The Japanese Society of Periodontology (Kagoshima), 2016.

2 : A case of chronic periodontitis with the painful gum during tooth brushing : Kawai C., Nagahara T., Kozono C., Takano E., Nakaoka M., Kurihara H. : The 8th Chugoku regional clinical workshop (Matsue), 2016.

3 : A case report; inflammation of periodontal tissue was improved by enhancement of patient's motivation for periodontal treatment. : Takano E., Nagatani Y., Kawai C., Mizuno T., Nakaoka M., Kurihara H. : The 8th Chugoku regional clinical workshop (Matsue), 2016.

4 : A case report: Gingival recession treatment utilizing a connective tissue graft : Nagahara T., Takeda K., Kozono C., Mizuno T., Fujita T., Kurihar H. : The 8th chugoku regional clinical workshop (Matsue), 2016.

5 : Survey on tooth shade-matching of dental residents-Comparison between visual color matching and dental spectrophotometer - : Yano K., Mineoka A., Kuramoto Y., Shiba H. : The 49th Hiroshima University Dental Society (Hiroshima), 2016.

6 : Dental hygienist interventlon is an effective treatment for the oral symptoms with delusional disorder

and somatoform disorder: two case report : Yano K., Doi M., Irifune M. : The 31th Meeting of the Japanese Society of Psychosomatic Dentistry (Morioka), 2016.

7 : Survey on tooth shade-matching of dental residents-Changes in consciousness by use of dental spectrophotometer-:Kuramoto Y., Yano K., Mineoka A.: The 27th annual meeting of Japan Academy of Esthetic Dentistry (Sapporo) ,2016.

8 : Remineralization of teeth treated with a combination of 10% urea peroxide and CPP-ACP-containing paste: A Case Report : Yano K., Mineoka A., Kuramoto Y., Kunimathu R. : The 27th annual meeting of Japan Academy of Esthetic Dentistry (Sapporo) ,2016.

9 : Dental hygienist intervention for the oral symptoms with delusional disorder and somatoform disorder: A case report : Yano K., Doi M., Yoshino A., Irifune M. : The11 Annual Meeting of the Japan Dental Hygienists Association (Hiroshima), 2016.

1 0 : Custom-made tooth brushing instruction using visual support for students in special support school : Wakita A., Oda Y., Arita T., Hada Y., Hirai Y., Nakaoka M., Ueda Y., Okada M. : The11 Annual Meeting of the Japan Dental Hygienists Association (Hiroshima), 2016.

1 1 : Investigation on Consciousness of clinical practice students toward special needs dentistry : Okino T., Wakita A., Nakaoka M., Oda Y., Okada M. : The11 Annual Meeting of the Japan Dental Hygienists Association (Hiroshima), 2016.

1 2 : Report about change before and after the custom-made tooth brushing instruction using visual support for students in special support school : Wakita A., Oda Y., Nakaoka M., Fuzita T., Ueda Y., Okada M. : The 33st Japanese Society for Disability and Oral Health (Saitama), 2016.

1 3 : A case report of autism patient who acted self-injured behavior after general anesthesia for dental treatment : Oda Y., Kojima T., Hayashiuti M., Fujino Y., Matsumoto K., Wakita A., Okada M. : The 33st Japanese Society for Disability and Oral Health (Saitama), 2016.

1 4 : Report about the validity of clinical practice for dental hygienist students in special care dentistry-Changes of their conscious before and after the practice- : Nakaoka M., Wakita A., Tokikazu T., Oda Y., Okada M. : The 33st Japanese Society for Disability and Oral Health (Saitama), 2016.

1 5 : Report about change before and after the custom-made tooth brushing instruction using visual support for students in special support school : Wakita A., Oda Y., Nakaoka M., Arima T., Hada Y., Hirai Y., Fuzita T., Komatsu T., Noumi K., Ueda Y., Kawahara M., Doe K., Okada M. : The55st Hiroshima Prefecture Dental Association, The100st Hiroshima University Dental Society (Hiroshima), 2016.

1 6 : Case report that improved drug-induced gingival overgrowth with chronic periodontitis performed by initial treatment : Kozono C., Matsuda S., Nagatani Y., Nakaoka M., Kurihara H. : The 59 th Autumn meeting Of the Japanese society of periodontology (Niigata), 2016.

1 7 : The present condition and subject for nurses' oral care in Critical domain-Initiatives and a change of bacterial count in oral cavity for the unity of oral care technique-: Morishita T., Okamoto M., Kawahori M., Okazaki K., Kirishima A., Ototani J., Miura A., Iiboshi R., Yano K., Nishi H., Kurihara H. :

Hiroshima university hospital nursing study presentation (Hiroshima), 2016.

F) Lecture

1 : Oral care in Special care dentistry : Wakita A. : Hiroshima prefecture regional medical care nursing comprehensive securing business Education at Hiroshima Oral Health Center· Research function development project Hiroshima prefecture dental health care service provision difficult person consultation physician training workshop (Hiroshima), 2016.

2 : Acquisition of methods and skills by handicap that can be utilized to visit from tomorrow, : Wakita A. : Visiting Dental Association Visiting Dental Hygienist Course in Japan (Tokyo), 2016.

3 : Standard precaution in Dental care : Nakaoka M. : Workshop of infection control in Osaka Dental University (Osaka), 2016.

4 : Hand hygiene and Personal protective equipment : Kozono C., Niitani Y. : Strategic Promotional Program for Cultivation of Core Professionals in Targeted Growth Fields by the Ministry of Education, Culture, Sports, Science and Technology (Surabaya), 2016.

5 : Prevention of Infection by oral care : Yano K., Takamoto M. : Kajikawa Hospital nurse workshop (Hiroshima), 2016.

6 : Oral care by Interprofessional Collaboration for medically compromised patient-The Roles and the Future of Dental hygienist - : Yano K. : The 11 Annual Meeting of the Japan Dental Hygienists Association (Hiroshima), 2016.

7 : The Current Status of Whitening in Japan : Yano K. : Taipei Medical University Orthodontic dentistry lecture (Taipei) ,2016.

8 : Oral care : Yano K. : NST Education Certified Facility Training (Hiroshima), 2016.

[Return to Contents](#)

Dental Clinic

(1) Staff and Students

Director : Takamune Hino

Assistant Professor : Masaru Ohara

(2) Main Research Activities

- 1 : Pathogenesis of the periodontal diseases
- 2 : A study on the drug-resistant bacteria from nosocomial infection

(3) Research Achievements

A) Original Papers (including Case Reports)

1. How Long does Mutans Streptococci Survive on the Lip of the Plastic Bottle? – A Study on Transmission of Cariogenic Bacteria via Polyethylene Terephthalate (PET) Bottle -, Hana Okazaki, Masaru Ohara, Rumi Nishimura, Eri Fukada, Kumiko Hara, Mitsugi Okada and Hideaki Amano, The Journal of Hiroshima University Dental Society, [48\(1\)](#), pages 22-26, 2016

B) Review

C) Publications

D) Other Publications

E) Presentation at Scientific Meeting

1. Rapid detection of mutans streptococci FACScan. Masaru Ohara. The 9th Research Seminar in General Dental Medicine. (Okayama), Nov. 2016.
2. Examination about the progress of a personal portfolio and the depth of recollect. Taiji Obayashi, Hiromi Nishi, Masaru Ohara. The 9th Research Seminar in General Dental Medicine. (Okayama), Nov. 2016.

F) Seminar, Workshop, etc.

1. Advanced OSCE for residents: 2016/9/10(Sat)

(4) Status of Receiving Grants-in Aid for Scientific Research, etc.

(5) Academic Awards, etc.

(6) Patents

1. Utility Model Registration: RN:3182420, Masaru Ohara, Takamune Hino

[Return to Contents](#)

Dental Medical Information Section

(1) Staff and Students

Director : Katsuyuki Kozai(Co.)
Professor : Hideaki Amano (Co.)
Assistant Professor : Masahiko Ohtsuka (Co.), Takeshi Tanaka
Technician : Tokue Yanagida (Co.)

(2) Main Research Activities

1 : Research on development and management of healthcare and welfare information system.
2 : Research on Medical Informatics.

(3) Research Achievements

A) Original Papers (including Case Reports)

1 : The necessity of the standard specifications of hospital webpage that guarantees web accessibility of visually impaired person: Tanaka T, Tsukuma H and Ikeuchi M: Japan Journal of Medical Informatics, 36(1), 25-31, 2016.
2 : The recognition and present situation of Web Accessibility in university hospitals and local public hospitals: Tanaka T et al.: Japan Journal of Medical Informatics 36(Suppl.), 410-413, 2016.
3 : A Survey of Implementing Data Items of Patient Profile Information at Japanese Hospitals : Kurihara Y et al.: Japan Journal of Medical Informatics 36(Suppl.), 1086-1088, 2016.

B) Review

None.

C) Publications

None.

D) Other Publications

None.

E) Presentation at Scientific Meeting

1 : A Survey of recognition of medical institutes on Web Accessibility of Visually Impaired Person: Tanaka T et al.: The 17th meeting of Japan Society for Low-Vision Research and Rehabilitation (Niigata, Japan), 2016.

2 : A Reasonable Accommodation on Webpages of Hospital for Visually Impaired Patients: Tanaka T et al.: The 54th Academic Meeting of Japan Society for Healthcare Administration (Tokyo, Japan), 2016.

3 : The recognition and present situation of Web Accessibility in university hospitals and local public hospitals: Tanaka T et al.: The 36th Joint Conference on Medical Informatics (Yokohama, Japan), 2016.

4 : A Survey of Implementing Data Items of Patient Profile Information at Japanese Hospitals : Kurihara Y et al.: The 36th Joint Conference on Medical Informatics (Yokohama, Japan), 2016.

F) Special lectures in academic meetings

None.

(4) Status of Receiving Grants-in Aid for Scientific Research, etc.

1 : MEXT KAKENHI Grant-in-aid for Scientific Research(C), No. 15K004380. 850 thousand JPY.

2 : MEXT KAKENHI Grant-in-aid for Scientific Research(C), No. 16K004610. 50 thousand JPY.

(5) Academic Awards, etc.

None.

(6) Patents

None.