Research Achievements 2012
Contents

Hiroshima University Faculty 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 Dental and Medical 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 Department of Preventive and Restorative Dentistry (Periodontics and Endodontics)
- Department of Molecular Oral Medicine & Maxillofacial Surgery, Department of Oral & Maxillofacial Surgery and Oral Medicine (Oral and Maxillofacial Surgery)
- Department of Oral and Maxillofacial Surgery, and Department of Oral & Maxillofacial Surgery and Oral Medicine (Oral and Maxillofacial Reconstructive Surgery)
- Department of Advanced Prosthodontics, and Department of Preventive and Restorative Dentistry (Implants and Prosthodontics)
- Department of Advanced Prosthodontics, and Department of Preventive and Restorative Dentistry (Prosthetic Dentistry)
- Department of Orthodontics and Craniofacial Development Biology, and Department of Oral Health and Development (Orthodontics)
- Department of Oral & Maxillofacial Radiology, Department of Oral & Maxillofacial Surgery and Oral Medicine (Oral and Maxillofacial Radiology)

Integrated Health Sciences

- Department of Dental Science for Health Promotion, and Department of Preventive and Restorative Dentistry (Operative and Conservative Dentistry)
- Department of Pediatric Dentistry, and Department of Oral Health and Development (Pediatric Dentistry)
- Department of Dental Anesthesiology, and Department of Oral & Maxillofacial
Surgery and Oral Medicine (Dental Anesthesiology)
• 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
- Department of Advanced General Dentistry, General Dentistry
- Department of Oral Health and Development, Preventive Dentistry
- Department of Oral Health and Development, Special Care Dentistry
- Central Clinical Sections, Special Dental Clinic Section
- Central Clinical Sections, Center of Oral Clinical Examination
- Central Clinical Sections, Dental Technicians Section
- Central Clinical Sections, Dental Hygiene Section
- Dental Clinic
- Dental Medical Information Section

※ New organization names based on the reorganization of graduate schools in April 2012 are used for Annual Report 2012.
Department of Calcified Tissue Biology, Basic Life Sciences

(1) Staffs and Students

Professor: Yuji Yoshiko (promoted from Associate Prof. on Oct. 1)
Associate Professor:
Assistant Professor: Tomoko Minamizaki, Hirotaka Yoshioka
Graduate Student: Yukiko Konishi (Pediatric Dentistry)
Undergraduate Student: Maya Mohri, Aoi Nozu, Yasumasa Irie, Azusa Ohnishi, Kiriko Kubo, Masahiro Nishimura

(2) Main Research Activities
1. Bone and tooth formation and mineralization.
2. Calcitropic and phosphotropic factors and mineral metabolism
3. Osteonetwork (Cross-talk between bone and other tissues/organs).

(3) Research Achievements

A) Original Papers (including Case Reports)

B) Review

C) Publications

D) Other Publications

E) Presentation at Scientific Meeting
2. Transient but not constitutive activation of ERK is necessary for the unique action of FGF23 in Bone. Minamizaki T., Konishi Y., Yoshioka H., Kozai K., Yoshiko Y. American Society of Bone and Mineral
Research 2013 Annual Meeting (Minneapolis), 2012.

(4) Status of Receiving Grants-in Aid for Scientific Research, etc.
2. Grants-in-Aid for Young Scientists (B). Minamizaki T. The study of mineral metabolism disorder in calcified tissue: Focus on de novo action of PTH. No. 23792105. ¥2,080,000.
4. Ono pharmaceutical Co. Research Grant. Yoshiko Y. The unraveling of the molecular bases involved in mineralization. ¥3,000,000.
6. JST A-STEP. Yoshiko Y. Analysis of (p)ASARM as a regulator of the bone-vascular axis in a mouse model. No. AS232Z02363G ¥1,006,000.

(5) Academic Awards, etc.

(6) Patent.
1. PCT. Phosphorylated peptide, hard tissue and/or ectopic calcification inhibitor, antibody, and hard tissue and/or ectopic calcification promoter. Yoshiko Y., Minamizaki T., Yoshioka H., Hirata I., Kozai K., Maeda N., Kiyofuji T. JP2012/067351.
Department of Physiology and Oral Physiology, Basic Life Sciences

(1) Staffs and Students

Professor: SUGITA, Makoto
Associate Professor: HIRONO, Chikara
Assistant Professor: KITAGAWA, Michinori
Research Assistant: YAMAMOTO, Kuniyo
Graduate Students: YAMAMOTO, Kuniyo

(2) Main Research Activities

1: Molecular physiological study on function of ion channels and ion transporters
2: The neuronal mechanisms underlying the taste-evoked behavioral and emotional responses
3: The role of cell communication in proliferation and differentiation of the oral epithelium and salivary glands
4: Study on the system mechanisms of mastication and swallowing

(3) Research Achievements

A) Original Papers (including Case Reports)


B) Review

C) Publications

D) Other publication

E) Presentation at Scientific Meeting


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

1: Grant-in-Aid for Scientific Research (Challenging Exploratory Research): Sugita M., The neuronal mechanisms underlying the taste-evoked emotional responses. 24659826. ¥1,200,000.


(5) Academic Awards, etc.

(6) Patents

Return to Contents
Department of Dental and Medical Biochemistry, Basic Life Sciences

(1) Staff and Students

Professor: Yukio Kato
Associate Professor: Mitsuhide Noshiro
Assistant Professor: Takeshi Kawamoto, Katsumi Fujimoto
Assistant Professor (Special Appointment): Kazuko Kitayama
International Student: Veronica Ronald
Administrative Staff: Misano Kuramoto

(2) Main Research Activities

1: Basic and clinical aspects of mesenchymal stem cells
2: Differentiation of chondrocytes
3: Molecular clocks

We cloned novel bHLH transcription factors (Dec1 and Dec2), which play roles in differentiation of mesenchymal stem cells (MSC) into chondrocytes, adipocytes, myoblasts and osteoblasts. Furthermore, Dec1 and 2 are involved in core feedback loops of the transcriptional and translational control in molecular clock systems (Honda-S et al. Nature, 2002). In addition, we developed the super-expansion method for MSC and found many molecular markers for MSC.

(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.
1: Grant-in-Aid for Scientific Research (B): Yukio Kato, 10112062. 3,900 千円
2: Grant-in-Aid for challenging Exploratory Research: Yukio Kato, 23659918. 1,400 千円
3: Grant-in-Aid for Scientific Research (C): Katsumi Fujimoto, 22592067. 800 千円
4: Grant-in-Aid for Scientific Research (C): Mitsuhide Noshiro, 22590223. 900 千円
5: Grant-in-Aid for Scientific Research (C): Takeshi Kawamoto, 22592068. 800 千円
6: Grant-in-Aid for Young Scientists (B): Kazuko Kitayama, 23792096. 900 千円
7: Grant-in-Aid for Scientific Research (B): Masahiro Nishimura, Yukio Kato, 22390367. 100 千円
8: Grant-in-Aid for Scientific Research (C): Hiroshi Ohtake, Takeshi Kawamoto, 24590622. 80 千円

(5) Academic Awards, etc.

(6) Patents

Return to Contents
Department of Oral and Maxillofacial Pathobiology,
Basic Life Sciences

(1) Staffs and Students

Professor : Takashi Takata
Associate Professor : Mutsumi Miyauchi
Assistant Professor : Toshihiro Inubushi, Hisako Furusho
Visiting Researcher: Nurina Febriyanti Ayuningtyas
Secretary: Yuko Masuda
Graduate Student: Intan Suraiya Merican Binti Aljunid Merican (D4), Takaaki Tsunematsu (D3), Mariko Ohbayashi (D3), Toshinori Ando (D2), Ajiravudh Subarnhesaj (D2), Nurina Febriyanti Ayuningtyas (D2), Syunryo Yanagisawa (D1), Chea Chanbora (D1)

(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 the mechanism of destruction of periodontal tissues
4 : Study on the criteria of diagnosis and cellular differentiation of odontogenic tumors and salivary gland tumors

(3) Research Achievements

A) Original Papers


B) Case reports

C) Special lectures in academic meetings

D) Presentation at International Scientific Meeting


E) Presentation at Domestic Scientific Meeting


2. Dental infection of *P. gingivalis* induces progression of NASH Furusho H., Miyauchi M., Hyogo H., Cyayama K., Takata T. The 21st society for digestive organs and free radical research (Kyoto), Mar. 3. 2012.


21. Geminin escapes from ubiquitin-mediated degradation by Aurora-A induced phosphorylation during


F) Case Reports at Scientific Meeting

(4) Status of Receiving Grants-in-Aid for Scientific Research, etc.
4. Donated fund from Ito ultrasound Ltd., Continuance: Takashi Takata: Study on the influence of ultrasonic irradiation on periodontal tissue.
5. Donated fund from Sanstar Co. Ltd.: Takashi Takata.
6. Donated fund from Sanstar Co. Ltd.: Takashi Takata.
9. Donated fund for Hiroshima Prefecture tumor registration business. Continuance: Takashi Takata
cancer.

11. Donated fund from Hiroshima University (Research fellowship for Young scientists). New: Toshihiro Inubushi


14. Hiroshima University Supporting Committee Grant for students. New: Min Ao

15. Grant from Hiroshima University Alumni Association. New: Obayashi Mariko

16. Ryoku Fuu Kai Research Grant for young investigators. New: Min Ao

17. Hiroshima University hospital grant funding for clinical research. New: Mutsumi Miyauchi: The effect of periodontitis on pathological progression of NASH -Study on relationship between infection of periodontal pathogen and clinical manifestation using liver biopsy materials-.

(5) Academic Awards, etc.


2. Tsunematsu Takaaki. Poster Award. The 54nd Annual Meeting of Japanese Association for Oral Biology (Fukushima), Sept.15.2012.


5. Shinichi Sakamoto. 2013 IADR David B. Scott Fellowship

Return to Contents
**Department of Bacteriology, Basic Life Sciences**

(1) Faculty members and students

Professor : Motoyuki Sugai  
Assistant Professor : Fuminori Kato, Shizuo Kayama, Junzo Hisatsune  
Co-Researcher : Keiko Tsuruta (Oral Health Care Major)  
                   Ikue Hayashi (Faculty of Density)  
Researcher : Chika Arai (From April)  
            Kazuhisa Koizumi M2 (Pharmacy, Kimura Eye & Int. Med. Hospital)  
Graduate Student : Shima Morioka D7, Kanao Kobayashi D5 (From Dept. Urology), Wataru Shimizu D5 (From Dept. Surgery 1), Norifumi Shigemoto D3 (From Dept. Surgery 1), Itsugun Ko D4 (From Pediatric Dentistry), Ryuichi Kuwabara D4, Taro Kojima D3, Yuko Iwamoto D3 (From Pediatric Dentistry),  
                   Yoshiie Harino D2 (Clinical Laboratory, Hiroshima City Asa Hospital), Shrestha Looniva D2, Yu Liansheng D1

(2) Main Research Interests

1: Research on peptidoglycan hydrolases  
2: Drug resistance mechanism of nosocomial pathogens and molecular epidemiology  
3: Research on bacterial toxins modifying signal transduction  
4: Functional study of virulence factors of periodontopathogenic bacteria  
5: Comparative genomic analysis of staphylococci  
6: Gene expression analysis of *S. aureus*

(3) Research Accomplishments

A) Original Papers (including Case Reports)

1. Tight junction dysfunction in the stratum granulosum leads to aberrant corneum barrier function in claudin-1-deficient mice. Tomoko Sugawara, Noriko Iwamoto, Masaya Akashi, Taro Kojima, Junzo Hisatsune, Motoyuki Sugai, Mikio Fuurse *Journal of Dermatological Science*. online, 2013

2. Dental infection of *Porphyromonas gingivalis* exacerbates high fat diet-induced steatohepatitis in mice. Hisako Furusho, Mutsumi Miyauchi, Hideyuki Hyogo, Toshihiro Inubushi, Min Ao, Kazuhisa Ouhara, Junzo Hisatsune, Hidemi Kurihara, Motoyuki Sugai, S. Nelson Hayes, Takashi Nakahara, Hiroshi


C) Books

D) Other Publications

E) Presentation at Scientific Meeting

1. 広島県における Imipenem 感受性 Meropenem 耐性 Klebsiella pneumoniae (ISMRK) の出現と動向. 桑原隆一、篠本憲文、鹿山鎭男、小野寺一、横崎典哉、大毛宏喜、菅井基行. 第 23 回 日本臨床微生物学会総会 01/21 横浜

2. Imipenem 感受性 Meropenem 耐性 Klebsiella pneumoniae (ISMRK) の薬剤感受性迅速検査の落とし穴. 播野俊江、鹿山鎭男、桑原隆一、桜山誠也、篠本憲文、大毛宏喜、菅井基行. 第 23 回 日本臨床微生物学会総会 01/21 横浜

3. Imipenem 感受性 Meropenem 耐性 Klebsiella pneumoniae (ISMRK) が保有する耐性プラスミドの解析. 篠本憲文、桑原隆一、鹿山鎭男、大毛宏喜、菅井基行. 第 23 回 日本臨床微生物学会総会 01/21 横浜

4. 広島県における Imipenem 感受性 Meropenem 耐性 Klebsiella pneumoniae (ISMRK) の出現と検出方法. 桑原隆一、篠本憲文、鹿山鎭男、小野寺一、横崎典哉、大毛宏喜、菅井基行. 第 29
5. 大腸皮膚症由来 Staphylococcus pseudintermedius 表皮剥脱毒素 ExpB 産生株の全ゲノム配列解析。久恒順三、平川英樹、伊徳慶太、西藤公司、大島健志朗、服部正平、菅井基行。第6回 日本ゲノム微生物学会年会 03/10 東京

6. The role in Staphylococcus aureus skin-infection, a novel cell wall protein Skip. 久恒順三、村上輝明、小島太郎、達川伸行、林幾江、山田作夫、加藤文紀、菅井基行。第85回 日本細菌学会総会 03/27 長崎

7. SptA regulates pathogenicity in Staphylococcus aureus. 加藤文紀、菅井基行 第85回 日本細菌学会総会 03/27 長崎


10. Effects of automutanolysin (Aml) on Streptococcus mutans infection in rats. Yiqun Hu, Yuko Iwamoto, Shizuo Kayama, Fuminori Kato, Hitoshi Komatsuzawa, Keiko Tsuruda, Katsuyuki Kozai, Motoyuki Sugai. 第85回 日本細菌学会総会 03/27 長崎


12. 西日本において初めて分離された blaNDM 保有大腸菌の性状解析。鹿山鎭男、桑原隆一、繁本憲文、小野寺一、横崎典哉、大毛宏喜、菅井基行。第86回 日本感染症学会総会・学術講演会 04/25 長崎

13. 近畿地区で分離されたイミペネ感受性メロペネ耐性肺炎桿菌ならびに大腸菌の解析。繁本憲文、鹿山鎭男、桑原隆一、三浦徹也、小野寺一、横崎典哉、大毛宏喜、菅井基行。第86回 日本感染症学会総会・学術講演会 04/25 長崎

14. 表層蛋白質 Skip の Staphylococcus aureus 皮膚感染における役割。久恒順三。第6回 細菌学若手コロッセウム 08/08 八王子
15. 新規転写因子 SptA による黄色ブドウ球菌の病原性因子制御機構. 加藤文紀. 第 6 回 細菌学若手コロッセウム 08/08 八王子

16. Imipenem-susceptible Meropenem-resistant Enterobacteriaceae の出現. 鹿山鎮男. 第 6 回 細菌学若手コロッセウム 08/08 八王子

17. Effect of automutanolysin (Aml) on Streptococcus mutans infection in rats. Yiqun Hu, Shizuo Kayama, Fuminori Kato, Keiko Tsuruda, Yuko Iwamoto, Yuko Tomita, Panida Thanysrisung, Hitoshi Komatsuzawa, Katsuyuki Kozai, Motoyouki Sugai. 第 65 回日本細菌学会中国・四国支部総会 10/20 徳島

18. IPM に感受性（中間耐性）を示すメタロ-β-ラクタマーゼ産生 Enterobacteriaceae の出現. 鹿山鎮男, 桑原隆一, 小野寺一, 横崎典哉, 大毛宏喜, 菅井基行. 第 41 回薬剤耐性菌研究会 10/25 岐阜

19. 広島県における ESBL 産生菌の分子疫学解析（第 3 期調査）. 桑原隆一, 鹿山鎮男, 菅井基行. 第 60 回日本化学療法学会西日本支部総会 11/05 福岡

20. Imipenem 感受性 Meropenem 耐性 Klebsiella pneumoniae (ISMRK) による肺炎で Arbekacin が有効であった 1 例. 桑原隆一, 万力麻美, 沖本聡史, 桑本憲文, 鹿山鎮男, 菅井基行. 第 82 回日本感染症学会西日本地方会学術集会 11/05 福岡

21. 広島県における Imipenem 感受性 Meropenem 耐性 Klebsiella pneumoniae (ISMRK) の検出増加. 鹿山鎮男, 桑原隆一, 桑本憲文, 木場由美子, 小野寺一, 横崎典哉, 大毛宏喜, 菅井基行. 第 82 回日本感染症学会西日本地方会学術集会 11/05 福岡

22. IPM に中間耐性を示す Klebsiella 属が所有する新規メタロ-β-ラクタマーゼ blaIMP-34. 繁本憲文, 鹿山鎮男, 桑原隆一, 小野寺一, 横崎典哉, 大毛宏喜, 菅井基行. 第 60 回日本化学療法学会西日本支部総会 11/05 福岡

23. 全身播種した市中感染型 MRSA 感染症由来株の解析. 久恒順三, 萩谷英大, 塩田澄子, 菅井基行. 第 32 回広島感染症研究会 11/10 広島

24. 西日本において初めて分離された blaNDM 保有大腸菌の解析. 鹿山鎮男, 桑原隆一, 桑本憲文, 小野寺一, 横崎典哉, 大毛宏喜, 菅井基行. 第 32 回 広島感染症研究会 11/10 広島

25. 広島県における ESBL およびメタロ-β-ラクタマーゼ産生腸内細菌科の増加. 桑原隆一, 桑本
F) Invited speakers, Symposist and others

1. 「黄色ブドウ球菌の比較ゲノムからみえてきた皮膚疾患由来株の特徴」 宮崎大学 IR 推進セミナー 若手細菌学者による病原性細菌研究の新展開

(4) Research grants.

2: Grant-in-Aid for Scientific Research for Young Investigator B from the Ministry of Educatio, Science, Sports and Culture of Japan : Kato, F.
3: Grant-in-Aid for Scientific Research for Young Investigator B from the Ministry of Educatio, Science, Sports and Culture of Japan : Hisatsune, J.
5: lactobacillus study group scholarship : Sugai, M

(5) Awards

(6) Patents
Department of Cellular and Molecular Pharmacology, Basic Life Sciences

(1) Staff and Students

Professor: Takashi Kanematsu
Associate professor: Katsuya Morita
Assistant professor: Tomoya Kitayama, Kae Harada
Research Associate: Satoshi Asano, Jun Zhang, Saori Yonedo
Graduate student: Toshiya Okumura, Hiroto Tanaka
Undergraduate student (Advanced Dental Research course): Yuya Ogawa (6th), Nami Kikushige (6th), Nozomi Hinada (6th), Kousuke Yokobayashi (5th), Tomohiro Mukai (5th), Seiya Hayashi (5th), Hanae Ikeda (5th), Sakura Yamada (5th), Takashi Ryoke (4th), Furutama Daisuke (4th), Sayaka Asano (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 molecular mechanisms controlling insulin secretion
3: Studies on the regulatory mechanisms of food intake and energy metabolism
4: Studies on the roles of a new autophagy-related molecule in autophagy pathway
5: Physiological and pathophysiological roles of neurotransmitter transporters and nucleoside transporters.
6: Studies on the mechanisms for neuropathic pain and the development of novel medicaments.

(3) Research Achievements

A) Original Papers


B) Reviews

C) Publications


D) Other Publications

E) Presentation at Scientific Meeting

1 : Analysis of PRIP roles in lipolysis: Okumura T., Harada K., Tanaka H., Mizokami A., Hirata M., Kamata N., Kanematsu T.; The 7th KOREA-JAPAN Conference on Cellular Signaling for Young Scientists, (UNIST, Korea), 2012

2 : PRIP1 and PRIP double knockout mice a different phenotype in the pain signaling: Kitayama T., Morita K., Kanematsu T.; The 85<sup>th</sup> Annual Meeting of The Japanese Pharmacological Society, (Kyoto), 2012.
6 : Hyperalgesia of phospholipase C-related but catalytically inactive protein type 1 knockout mice is induced by the impairment of GABAergic transmission in the spinal cord: Migita1 K., Tomiyama M., Yamada J., Nikaido Y., Kanematsu T., Hirata M., Ueno S.; The 35th Annual Meeting of the Japan Neuroscience Society, (Nagoya), 2012
11 : The role of N-acetylneuraminic acid on the cell surface of Fusobacterium nucleatum : Saori Y.; Proceedings The 54th Annual Meeting of Japanese Association for Oral Biology,, (Koriyama), 2012.
13 : GABA<sub>A</sub> receptor via phospholipase C-related but catalytically inactive protein type 1 in the spinal cord participate in abnormal pain sensation: Migita1 K., Tomiyama M., Yamada J., Nikaido Y., Kanematsu T., Hirata M., Ueno S.; Neuroscience 2012, (New Orleans, USA), 2012
15 : PRIP represses GABARAP-mediated interaction between KIF5 and insulin-containing vesicles : Asano S.,


F) Special lectures in academic meeting

1: Modulation of autophagy in PRIP-KO cells: Harada K., Umebayashi H., Hirata M., Kanematsu T.; The 7th KOREA-JAPAN Conference on Cellular Signaling for Young Scientists, (UNIST, Korea), 2012


(4) Grants


(5) Academic Awards


(6) Patents

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Department of Biomaterials, Basic Life Sciences

(1) Staffs and Students

Professor: Koichi Kato
Assistant Professor: Yuji Nomura, Isao Hirata, Ryo Nishikiori
Graduate Student: Yusuke Aida (Dept. Periodontal Med.), Aimi Naim (Dept. Orthodontics),
Takahiro Sugino (Dept. Orthodontics), Tomomi Date (Dept. Orthodontics)
Undergraduate Student: Mizuki Takahashi, Sho Nishimoto, Kotaro Watanabe, Chiharu Kubota,
Hisanobu Kamio, Fumiko Nishio, Yuka Yamauchi, Satoshi Miyauchi (Dept. Oral Biol. & Eng.)

(2) Main Research Activities

1: Technology development for the mass-production of cells used in stem cell-based regenerative medicine and for the standardization of the processes.
2: Creation of tissue engineering scaffolds through designing protein molecules and their assembled structures.
3: Modification of dental implants based on materials surface chemistry.
4: Development of novel disinfectants for dental materials.

(3) Research Achievements

A) Original Papers

B) Review


C) Publications

1: The forever challenge for artificial organs (2) - Replacement of biological functions - Artificial substances for medical use; Current Artificial Organs: Kato K.: Haru Publication.


D) Presentations at Scientific Meetings


7: Effect of macromolecular crowding on antigen-antibody interactions at solid-liquid interfaces: Hirata


E) Invited lectures


3: Antibody microarrays for stem cell immunophenotyping: Kato K.: 3rd Japan-Taiwan Symposium on Nanomedicine (Kyoto), 2012.


5: Technologies necessary for dissemination of regenerative medicine: From the biomaterials point of view: Kato K.: 3rd Scientific Meeting of Alumni of Faculty of Dentistry, Hiroshima University (Hiroshima), 2012.


7: Toward dissemination of regenerative medicine - Biomaterials and biodevices for stem cell manipulation: Kato K.: Seminar at the Institute for Materials Chemistry and Engineering, Kyushu University (Fukuoka), 2012.

8: Bioengineering approaches for stem cell-based regenerative medicine: Kato K.: Special lecture, China
Medical University (Taichung, Taiwan), 2012.

9 : Biomaterials and biodevices for stem cell regulation and analysis: Kato K.: 1st Young Investigators' Meeting for Molecular Nanomedicine (Nagoya), 2012.

10 : Chase a dream for regenerative medicine: Kato K.: 45th Hiroshima University Kasumi Festival (Hiroshima), 2012.

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

1 : Grant-in-Aid for Scientific Research (C), Ministry of Education, Culture, Sports, Science and Technology: Nomura Y., Research and development of the dental material having a functional antibacterial action: No. 24592917. 1,900,00 JPY.

2 : Gran-in-Aid for Young Scientists (B), Ministry of Education, Culture, Sports, Science and Technology: Hirata I., Effect of self-assembled monolayers on the growth and differentiation of mesenchymal stem cells in a serum-free medium: No. 23792282. 1,400,000 JPY.

3 : Grant-in-Aid for Scientific Research (B), Ministry of Education, Culture, Sports, Science and Technology: Kato K., Designing modular biomaterials for functional regulation of neural progenitor cells. No. 2300164. 1,900,00 JPY.


5 : Grant-in-Aid for Scientific Research, Challenging Exploratory Research: Kato K., Designing protein-based scaffolds for periodontal tissue regeneration: No. 24659877. 2,900,000 JPY.

6 : Cooperative Research Program of Institute for Frontier Medical Sciences, Kyoto University, Japan: Kato K., Fabrication of micropatterned, cell culture substrates for studying epithelial- mesenchymal interactions. 2,000,000 JPY.

7 : S-Innovation (Strategic Promotion of Innovative Research and Development): Kato. K., Creation of tissue engineering scaffolds for organ regeneration based on technologies for spatially-controlled positioning and induction of cells: 846,000 JPY.

(5) Patents

1 : Fujita K., Nomura Y., Nguyen Tran Nguyen: Composition for treating tumor and method for producing the same (JPA_2010043006) (Hiroshima University and Iryo Kankyo Techno, Co. Ltd.)

2 : Nomura Y., Nakamura M.: Disinfection-bleaching device and management system of the device (JPA_2010043006) (Nakamura M. and Nomura Y.)

3 : Nomura Y., Omura Y., Miyazawa K.: Simple liquid spray device (JPA_2011016554) (Iryo Kankyo Techno, Co. Ltd.)
Department of Mucosal Immunology, Basic Life Sciences

(1) Staffs

Professor: Ichiro Takahashi
Associate Professor: Kei Tobiume

(2) Main Research Activities

1: Immunobiological analysis of the mucosal immune system
2: Molecular analysis of host defense against oxidized stress

(3) Research Achievements

A) Text book (in japanese)


D) Presentation at Scientific Meeting

1: Takahashi I. Molecular and cellular mechanisms for the creation and maintenance of the constitutive physiological inflammation driven by symbiotic environmental bacteria resident in the colonic macrophages. The CREST program “The Creation of Basic Medical Technology to Clarify and Control the Mechanisms Underlying Chronic Inflammation”. The second fiscal year evaluation meeting organized by Professor Masayuki Miyasaka, an Executive Chief Program Director, October 10, 2012, Tokyo, Japan.

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

1. Grant for the Co-laboratory Research from the Institute of Medical Science, The University of Tokyo: Takahashi, I: Molecular and cellular mechanism for the induction and maintenance of mucosal memory T cells. (No. 2010-3-305) ¥ 1, 000, 000.

2. The CREST program “The creation of basic medical technology to clarify and control the mechanisms underlying chronic inflammation”. Subject title “Understanding of chronic inflammation for the development of new therapeutic strategies for intestinal inflammatory diseases”. Takahashi, I. Section
title “Molecular and Cellular Mechanisms for the Creation and Maintenance of the Constitutive Physiological Inflammation Driven by Symbiotic Environmental Bacteria Resident in the Colonic Macrophages.” sponsored by Japan Science and Technology Agency. (No. 1812JD7040) ¥13, 910, 000.
Department of Periodontal Medicine, Applied Life Science
Department of Preventive and Restorative dentistry
(Periodontics and Endodontics)

(1) Staffs and Students
Professor: Hidemi: Kurihara
Associate Professor: Hiroyuki Kawaguchi (-March), Hideki Shiba (April-)
Associate Professor, Lecturer: Tsuyoshi Fujita (May-)
Assistant Professor: Noriyoshi Mizuno, Yuushi Uchida, Katsuhiro Takeda, Tomoyuki Iwata, Kazuhisa
Ohara, Shinji Matsuda (studying abroad), Mikihito Kajiya (May-)
Resident: Yasuko Kitamoto, Takayoshi Nagahara, Fumino Ogawa
Graduate Student: Yoriko Iwasaki, Yoshiie Niitani, Takeshi Ueda, Tomoko Hatakeyama (under leave of absence), Naoko Katagiri, Mizuho Kittaka, Akihiro Konishi, Tsuyoshi Miyagawa, Kenji Wada, Kabir MD Ahamedul, Irma Josefine Savitri, Shu Ishida (under leave of absence and studying abroad), Haruka Imai, Yusuke Obinata, Eri Kaneda, Takako Fujita, Ryoichi Yagi, Khung Rathvisal, Daisuke Ito, Kei Kashiwai, Masahiro Yamakawa, Tetsuya Yoshimoto, Yusuke Aida, Naoko Tokunaga, Keita Takahashi, Kei Takahashi, NGUYEN, QUOC TRUONG
Clinical Trainee: Minako Ueshige (September-)

(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 physiological function and differentiation of the cells derived from periodontal ligament or dental pulp
5: Study on pathogenicity of periodontopathogenic bacteria
6: Study on interaction between periodontopathogenic bacteria and host cells
7: Clinical study on endodontal-periodontal therapy
8: Study on interaction between stress and periodontics

(3) Research Achievements

A) Original Papers (including Case Reports)


B) Review


C) Publications

D) Other Publications

E) Presentation at Scientific Meeting
1. Neutrophils respond to hypoxia through NADPH oxidase and PI3K/AKT/HIF-1α.: T. NAGAHARA, H. HASTURK, T.E. VAN DYKE, and A. KANTARCİ; American Association for Dental Research (Tampa, USA), March 2012
2. A case report of aggressive periodontitis with family history improved by flap operation and occlusal splint: N. Mizuno, H. Shiba, H. Kawaguchi, H. Kurihara; The 55nd spring meeting of the Japanese society of Periodontology (Sapporo), May 2012
5. Influence on osteogenesis in mesenchymal stem cells by humoral factor from gingival fibroblasts: E Kaneda, T Iwata, Tsuyoshi Fujita, S Ishida, H Shiba, H Kawaguchi, H Kurihara; The 55th spring meeting of the Japanese society of Periodontology (Sapporo), May 2012
8. P. gingivalis dental infection is a risk factor forNASH: Furusho Hisako, Miyauchi Mutsumi, Aomin, Inubushi Toshihiro, Ouhara Kazuhisa, Kurihara Hidemi, Takata Takashi; The 55th spring meeting of the Japanese society of Periodontology (Sapporo), May 2012
9. Amphotericin B regulates the expression of inflammatory cytokines in human gingival epithelial
cells: H. Imai, T. Fujita, K. Ouhara, Y. Uchida, T. Miyagawa, H. Shiba, H. Kurihara; The 45th meeting of The Hiroshima University Dental Society (Hiroshima), June 2012

10. Adhesion of Bone Marrow Stem Cells to Dentin surface.: Wada K, Uchida Y, Ueda T, Kawaguchi H, Kurihara H.; The 45th meeting of The Hiroshima University Dental Society (Hiroshima), June 2012


15. The examination of halitosis in the Hiroshima University Hospital: Kauzhisa Ouhara, Tetsuya Yoshimoto, Masae Kitagawa, Takako Fujita, Naoko Tokunaga, Ryouichi Yagi, Yoriko Iwasaki, Tomoaki Shintani, Ikuko Ogawa, Tsuyoshi Fujita, Hideki Shiba, Hidemi Kurihara; The 7th clinical meeting of the Japanese society of Periodontology (Matsue), July 2012


18. A case report of chronic periodontitis maintained good condition of periodontal tissue for 4 years and 6 months after shift to SPT by periodontal initial treatment and: A. Kouchi, N. Mizuno, M. Nakaoka, H. Kurihara.; The 7th clinical meeting of the Japanese society of Periodontology (Matsue), July 2012

19. A case report of generalized aggressive periodontitis improved periodontal tissue by periodontal initial treatment: Y. Nagatani, N. Mizuno, M. Nakaoka, H. Kurihara; The 7th clinical meeting of the Japanese society of Periodontology (Matsue), July 2012


26. Brain-derived neurotrophic factor (BDNF) enhances mRNA expressions of hyaluronic acid synthases through a trkB signaling pathway in HGF: N. Katagiri, K. Takeda, A. Konishi, M. Kittaka, T. Fujita, S. Matsuda, H. Shiba, H. Kurihara; The 96th meeting of Hiroshima University Faculty of Dentistry (Hiroshima), October 2012


28. The profiling of cytokine in the fluid from cystic periapical lesion: Kazuhisa Ouhara, Yasuko Kitamotom, Masae Kitagawa, Tomoaki Shinntani, Ikuko Ogawa Tsuyoshi Fujita, Hideki Shiba, Hidemi Kurihara; The 96th meeting of Hiroshima University Faculty of Dentistry (Hiroshima), October 2012


30. Biological basic study on maintenance of multipotency in mesenchymal stem cell: Ishida S, Iwata T, Shiba H, Kaneda E, Kawaguchi H, Kurihara H; The 22nd general meeting of the Japanese association for Dental Science (Osaka), November 2012

31. Brain-derived neurotrophic factor (BDNF) enhances mRNA expressions of hyaluronic acid synthases through a trkB signaling pathway in HGF: N. Katagiri, K. Takeda, A. Konishi, M. Kittaka, T. Fujita, S. Matsuda, H. Shiba, H. Kurihara; The 22nd general meeting of the Japanese association for Dental
32. The treatment by selective antibiotics against cystic periapical lesion: Kazuhisa Ouhara, Yasuko Kitamotom, Masae Kitagawa, Tomoaki Shinntani, Ikuko Ogawa Hideki Shiba, Kawaguchi, Hidemi Kurihara; The 22nd general meeting of the Japanese association for Dental Science (Osaka), November 2012

33. Affects of human defensin-2 and cathelicidin-type peptide LL-37 on biofilm formation by oral bacteria; S. Matsuda, MH. Napimoga, RB. Gonçalves, J Hirschfeld, Z Tongbo, J Sun and Toshihisa Kawai; The II International Conference on Antimicrobial Research - ICAR2012 (Lisbon, Portugal), November 2012


35. Action to dentistry for the HIV-positive patients in the Hiroshima University Hospital: Kanako Matsui, Hideki Shiba, Fumiko Kagiura, Kazue Kinoshita, Noboru Takada, Seiji Saito, Teruhisa Fujii; The 26th Annual Meeting of the Japanese Society for AIDS Research (Yokohama), November 2012


F) Special lectures in academic meetings
1. Regulation of Gingival Epithelial Function for Prevention of Periodontal Disease; T. Fujita; The 28th annual meeting for academic science by Japanese association for dental science (Tokyo), January 2012

2. Periodontal initial treatment and Endodontic treatment -Periodontal regenerative therapy and Biological Endodontic treatment - : Hidemi Kurihara; Clinical conference for group of Hiroshima University Faculty of Dentistry, Department of Endodontics and Periodontology (Hiroshima), January 2012

3. Biological Endodontic treatment: Hidemi Kurihara; Dental clinical and scientific lecture for Sendai dental association(Sendai), January 2012

4. Relation to Diabetes mellitus of Periodontal disease; Hidemi Kurihara; Kissei Pharmaceutical Co., Ltd Meeting for Study of Diabetes mellitus and Periodontal disease(Hiroshima), February 2012

5. The study of the association with Osteoimmunology and Periodontitis in Boston.—The establishment of novel mouse periodontal disease model—: Mikihito Kajiya; 45th meeting of the Hiroshima University Dental Society (Hiroshima), June 2012

6. Recollection of Boston’s life.—Neutrophils respond to hypoxia through NADPH oxidase and...
PI3K/AKT/HIF-1α ~: T. NAGAHARA; 45th meeting of the Hiroshima University Dental Society (Hiroshima), June 2012

7. Regulation of Gingival Epithelial Function for Prevention of Periodontal Disease : T. FUJITA; Lunch & Learning, The 90th annual meeting of International Association for Dental Research (IGUACU FALLS, BRAZIL), June 2012

8. HIV infection and dentistry: Hideki Shiba; The 7th clinical meeting of the Japanese society of Periodontology (Matsue), July 2012

9. Development of Periodontal Regenerative therapy by BDNF: Hidemi Kurihara; The seminar for Okayama University Department of Pathophysiology- Periodontal Science (Okayama), July 2012

10. Change of dentistry demanded in cooperation between medical department and dental department: Hidemi Kurihara; Kyushu - Ochanomizu meeting workshop (Fukuoka), July 2012

11. Think about dentistry from the implant problem: Hidemi Kurihara; The seminar for Sasebo dental association(Sasebo), September 2012

12. celluar therapy/introduce stem cell application : Hidemi Kurihara; The 98th annual meeting of The American Academy of Periodontology (Los Angeles, USA), September 2012

13. Periodontal disease as Oral infection: Hidemi Kurihara; Hiroshima University Hospital Medical safety management staff workshop (Hiroshima), November 2012


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

1. Grants-in aid for scientific research : Kazuhisa Ouhara : #22792085

2. Grants-in aid for scientific research: Hidemi Kurihara: #23592923

3. Grants-in aid for scientific research: Noriyoshi Mizuno #23593061

4. Grants-in aid for scientific research: Hidemi Kurihara: #23659978

5. Grants-in aid for scientific research :Tomoyuki Iwata: #23792478

6. Grants-in aid for scientific research: Hidemi Kurihara: #24390467

7. Grants-in aid for scientific research: Hideki Shiba: #24593122

8. Grants-in aid for scientific research : Tsuyoshi Fujita: #24593123

9. Grants-in aid for scientific research: Hidemi Kurihara: #24659877

10. Grants-in aid for scientific research: Yasuko Kitamoto: #24792026

11. Grants-in aid for scientific research: Shinji Matsuda: #24792330

12. Grants-in aid for scientific research: Mikihito Kajiya:#24890142

14. Hiroshima University Grant for portent research: Takayoshi Nagahara;

(5) Award.

   Brain-derived neurotrophic factor induces migration of endothelial cells through a TrkB-ERK-integrin

2. 12th academic award of Japanese society of Periodontology (2012): Tuyoshi Fujita; Investigation of novel
   preventive method for periodontal disease by regulating gingival epithelial cell function.

Return to Contents
Department of Advanced Prosthodontics, 
Applied Life Sciences 
Department of Preventive and Restorative Dentistry  
(Implants and Prosthodontics)

(1) Staff and Students

Professor : Yasumasa Akagawa
Associate Professor : Kazuhiro Tsuga, Takayasu Kubo, Mineka Yoshikawa, Yasuhiro Abe, Kyou Hiasa
Assistant Professor : Katsunori Koretake, Kazuhiko Hayashi, Yasunari Miyamoto, Kana Harada
Resident : Maho Takeuchi, Ayumi Matsuura, Mariko Maruyama
Graduate Student : Hiroshi Oue, Yohei Okazaki, Hirokazu Tsuchioka, Kazuhisa Ookura, Maretaningtias Dwi Ariani, Shinsuke Okada, Shihoko Kajihara, Yusuke Makiura, Takahiro Mori, Chiaki Higa, Aya Hesaka, Kan Kato, Keisuke Yasuda
Administrative Staff : Rinko Kurumi

(2) Main Research Activities

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

(3) Research Achievements

A) Original Papers (including Case Reports)


B) Review

C) Publications

D) Other Publications


E) Presentation at Scientific Meeting

1: Development of composite of poly(P) and bFGF with interconnected porous calcium hydroxyapatite :


5: Increased C/I is not risk factor of implant failure under proper plaque control: Okada S, Koretake K, Miyamoto Y, Oue H and Akagawa Y: 40th Indian Prosthodontics Society Conference & 8th Biennial Meeting of Asian Academy of Prosthodontics (Chennai), 2012.


11: Advantageous effects of the multi-disciplinary dysphagia conference in the acute neurological ward:


17: Influence of formalin fixation on implant stability quotient and bone mechanical characteristics: Tsuga K, Yoshikawa M: The 22nd General Meeting of the Japanese Association for Dental Science (Osaka), 2012.


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

1: Ministry of Education, Culture, Sports, Science and Technology (MEXT) Grant-in Aid for challenging Exploratory Research: Akagawa Y: Molecular basis of association mechanism between Alzheimer's disease and tooth loss/occlusion. (Grant No. 236599D000). ¥1,000,000

2: MEXT Grant-in Aid for scientific Research (B): Akagawa Y: Development of functional intelligent implant complex using bio-processing. (Grant No. 243904350A). ¥2,600,000

3: MEXT Grant-in Aid for scientific Research (B): Kubo T: Invention of a newly artificial bone used by
molecular pharmacology processed with the NF-κB decoy. (Grant No. 23390443). ¥2,300,000

4: MEXT Grants-in-Aid for Scientific Research (C) : Tsuga K: Development of rader-chart for enhancing the anti-aging effect of prosthodontic treatments. (Grant No. 23592850). ¥900,000

5: MEXT Grants-in-Aid for Scientific Research (C) : Abe Y : Development of high-functioning nanobio-interface control method of apatite surface by ultraviolet (UV). (Grant No. 245929150A). ¥1,700,000

6: MEXT Grants-in-Aid for Scientific Research (C) : Hiasa K: Development of diagnosis system of dental implant immediate load indicated with bone strength. (Grant No. 23502887). ¥1,000,000

7: MEXT Grants-in-Aid for Scientific Research (C) : yoshikawa M: Assessment of the oral and pharyngeal functions for decision making of the ideal thickness of liquid. (Grant No. 23592849). ¥1,000,000

8: MEXT Grants-in-Aid for Young Scientists (B) : Hayashi K : Development of new bone augmentation using a bFGF/poly(P)/IP-CHA Complex. (Grant No. 247921430). ¥1,400,000

9: MEXT Grants-in-Aid for Young Scientists (B) : Morita K: Bone regeneration ability of inorganic hydroxyapatite adsorbed long chain polyphosphate. (Grant No. 23792228). ¥1,700,000

10: MEXT Grants-in-Aid for Young Scientists (Start-up) : Harada K: A study for the application of inorganic polyphosphate in peri-implantitis. (Grant No. 23890134). ¥1,200,000

11: MEXT Grants-in-Aid for Encouragement of Scientists : Maruyama M: Development of a new rehabilitation method for oral function using candy. (Grant No. 23932011). ¥600,000

(5) Academic Awards, etc.

1: Poster Presentation Award on International Seminar of the 2nd Joint scientific Meeting in Dentistry : Maretaningtias AD

2: Poster Award on 4th Hiroshima Conference on Education Science in Dentistry : Maretaningtias AD

(6) Patents

Return to Contents
Department of Advanced Prosthodontics, Applied Life Sciences
Department of Preventive and Restorative Dentistry
(Prosthetic Dentistry)

(1) Staff and Students

Professor : Yasumasa Akagawa
Associate Professor : Shinsuke Sadamori, Hitoshi Abeura
Assistant Professor : Koh-ichi Kuremoto, Kazuya Doi, Kouji Morita
Administrative staff : Michiko Miyagawa

Resident : Kazuko Kagawa, Wataru Mizumachi, Kouichi Kamada, Hiroki Tsuka,
           Masahiro Tsuboi, Tomoharu Hori
Graduate Student : Tomohisa Okura, Keisuke Nogami, Kazuko Kagawa (Since April)
Research Student : Toru Akutsu
Clinical Trainee : Isao Fujihara

(2) Main Research Activities

1: The study of relationship between oral habits and psychosomatic stress responses measured by salivary
   chromogranin A.
2: The antimicrobial efficacy of chlorine dioxide element to add to dental material.
3: Exploration of amelogenic stem/progenitor cells for tissue-engineered tooth.
4: The roles of FGFR2b signaling in the regenerative capacity of tooth and bone.
5: Study of occlusal-supporting ability of individual maxillary and mandibular teeth
6: Relation between prosthetic treatment and general condition in elderly with dementia.
7: Psychiatric disorders in dental practice.
8: Establishment of bone regeneration by using interconnected porous hydroxyapatite and
   biopolymeric material

(3) Research Achievements

A) Original Papers (including Case Reports)

2: A Survey of new program in dental clinical training at Hiroshima university hospital : Nishi H.,


B) Review

C) Publications


D) Other Publications

E) Presentation at Scientific Meeting


11 : Development of implant/interconnected porous calcium hydroxyapatite complex : Doi K., Oue H., Morita K., Kajihara S., Kubo T., Akagawa Y.: 90th International Association for Dental Research (Foz do Iguazu, Brazil), 2012.


13 : Development of composite of poly(P) and bFGF with interconnected porous calcium hydroxyapatite : Morita K., Doi K., Kubo T., Kajihara S., Takeshita R., Quan Y., Ping G., Akagawa, Y.: 2012 Sino-Japan Dental Conference (Chengdu, China), 2012.


F) Special lectures in academic meetings

1 : High technology modern medicine: Hybrid resin crown restoration made by dental CAD/CAM system in Hiroshima university hospital.: Abekura H : Annual Scientific Meeting of Japan Prosthodontic Society Chugoku and Shikoku Branch(Hiroshima), 2012.9.2

(4) Status of Receiving Grants-in Aid for Scientific Research, etc.
1 : Grant-in-Aid for Scientific Research (C) : Sadamori S, The relation between breathing and denture wearing and not wearing during sleep. (No. 23592848). 3,380 thousand yen.
2 : Grant-in-Aid for Scientific Research (C) : Abekura H, Participation of lifestyle in relationship between oral habits and psychological stress. (No.22592152). 1,040 thousand yen.
3 : Grant-in-Aid for Scientific Research (C) : Kuremoto K, Acquisition of amelogenic stem/progenitor cells for tissue-engineered tooth. (No.23592875). 1,100 thousand yen.
4 : Grant-in-Aid for Scientific Research (C) : Doi K, Bio-active effect of inorganic polyphosphate for bone quality improvement. (No.24592918). 1,170 thousand yen.
5 : Grant-in-Aid for Scientific Research (C) : Mizumachi W, Development of occlusal support ability system in residual teeth based on clinical data processing. (No.23592847). 1,430 thousand yen.
6 : Grant-in-Aid for Young Scientists (B) : Morita K : Bio-active effect of inorganic polyphosphate for bone quality. (No.23792228). 2,210 thousand yen.
7 : Grant-in-Aid for Young Scientists (B) : Kamada K, Creation of magnetic separation high self-bone differentiation cell content artificial bone. (No. 24792088). 1,200 thousand yen.
8 : Grant-in-Aid for Young Scientists (B) : Hiroki Tsuka : Development of the high durability tissue conditioner which has the self-cleansing action suitable for home dentistry medical examination. (No. 24792087). 2,100 thousand yen.

(5) Academic Awards, etc.

(6) Patents
Department of Orthodontics and Craniofacial Development for Dentistry, Applied Life Sciences
Department of Oral Health and Development (Orthodontics)

(1) Staffs and students

Professor : Kazuo Tanne
Associate Professor : Toshitsugu Kawata
Lecturer : Hiroshi Ueda, Kotaro Tanimoto,
Assistant Professor : Masato Kaku, Tadashi Fujita, Junji Ohtani, Masahide Motokawa, Myongsun Koh, Yuki Tanne
Intern : Ryo Kunimatsu, Hiroko Sunagawa, Naoto Hirose, Atsushi Horihata, Motoko Yoshioka, Hidetaka Hayashi, Yayoi Matsuda, Tomomi Mitsuyoshi,
Graduate Student : Syunichi Kojima, Keisuke Sumi, Noriko Tsubamoto, Akiko Terao, Yuki Yoshimi, Emi Ishikawa, Kyoko Murasaki, Yuji Tsuka, Su Shao Ching, Hiromi Sumi, Kaori Takahashi, Tetsuya Awada, Nanae Oki, Hanaka Shikata, Eri Fujii, Fang Zhao, Yuki Okamoto, Tahsin Raquib Abonti, Kazuko Irome, Hirotaka Sugino, Tomomi Date, Yu Matsumura
Research Student : Shoutoku Kojima
Professor (part-time) : Kazuhiro Ueki, Toshitsugu Kojima, Hiroharu Tsuka, Hiroshi Hanaoka,
Registered Intern : Kuniaki Tanaka, Kazunori Itatani, Hiroko Kamada, Youhei Suekawa, Ryoko Yamamoto, Natsumi Tsuka, Satoru Ohkuma, Kouji Takahashi, Yasunori Iwabuchi, Genki Watanabe, Goshi Ito, Noritsugu Ozaki, Aki Kawazoe, Hiroyuki Koseki, Tomoko Sasamoto, Masahiko Michida,
Dental Hygienist : Yano Kanako

(2) Main academic activity

1: Viscoelastic property of temporomandibular joint disks.
2: Effects of growth factors on the proliferation and differentiation of condylar cartilage and the disk cells.
3: Biomechanical investigation of TMJ loading and assessment of lubricating function.
4: Mechanisms of pain transmission during experimental tooth movement and clarification of pain control.
5: Changes in stomatognathic functions from orthodontic surgery.
6: Association between nasal respiratory disturbances and craniofacial morphology and masticatory and respiratory functions.
7: Influences of mechanical stimuli on the proliferation and differentiation of chondrocytes.
8: Clarification of PDL regeneration mechanism.
9: Metabolism of hyaluronan in TMJ synovial fluid.
10: Influences of food consistency on neuropathological changes in the cerebral cortex.
11: Regeneration of bone and cartilage with mesenchymal stem cells.
12: Control mechanism of bone growth and development with sex hormone.
13: Long term cryopreservation of various tissues and cells
14: Development of biomineralization therapy for damaged tooth enamel using enamel matrix proteins
15: Utility of amelogenin peptides for bone regeneration

(3) Research achievement

A) Original article


7. Construction of orthodontic setup models on a computer: Kihara T., Tanimoto K., Michida M., Yoshimi Y.,


20. P2X(7) receptor in the trigeminal sensory nuclear complex contributes to tacticle allodynia/hyperalgesia


B) General remarks

C) Books

D) Other publications

E) Presentation at Scientific Meeting


32. Evaluation of the course work education employing Cognitive Behavior Therapy at Hiroshima University, Graduate School of Biomedical Sciences.: Shirakura M., Oka H., Kamiya T., Suehiro F., Shirasuna K., Sugai M., Kogayashi M.: The 44th Dental meeting of Hiroshima University(Hiroshima), 2012.


Annual Meeting of the Japanese Orthodontic Society (Morioka), 2012


59. Long-term cryopreservation of rat MSCs by use of a programmed freezer with magnetic field: Kojima

60. Effects of FKO on enlargement of pharyngeal airway: Matsumura Y., Horihata A., Koh M., Ueda H., Tanne K.: The 51th Hiroshima Prefecture Dental Association • The 96th Hiroshima University Dental Society (Hiroshima), 2012.


F) Academic society symposium and special lecture


9. Kawata T.: The research which gives a student and a researcher a dream is tissue engineering with indispensable cooperation with the fundamental research and clinical medicine - I would like to consider both the futures of the "oral medicine" about tissue engineering by a tooth bank and you, Fukuoka Dental College: The 8th Fukuoka Dental College Symposium (Fukuoka), 2012.

10. Kawata T.: The cell banking system for the tissue engineering in a pre-symptomatic patient -Propose from realizable tooth reproduction to medical treatment-: The 19th Japan Mibyou System Association
(Kanazawa), 2012.


12. Ueda H.: -An approach of treatment for obstructive sleep apnea patients in Hiroshima University Hospital-: The 56th joint meeting of Chugoku & Shikoku regions for occupational health (Hiroshima), 2012.


(4) Scientific research grant -in-aid

1. Grant-in-aid for Clinical Research in Hiroshima University: Tanne K.: 500,000yen

2. Grant-in-aid for Scientific Research (B): Tanne K.: Effectiveness of improvement of lubrication and condylar cartilage regeneration in temporomandibular joints with osteoarthritis. No. 23390474. 4,500,000 yen


4. Grant-in-aid for Scientific Research (C): Tanimoto K.: Optimization of bone regeneration by transplantation of mesenchymal stem cells and application to the closure of jaw cleft. No. 23593029. 1,700,000 yen

5. Grant-in-aid for Scientific Research (C): Fujita T.: Mechanism of the condylar regeneration with orthopedic force.: No. 23593030. 1,300,000yen.


14. Grant-in-Aid for Scientific Research: Hayashi H.: Condylar regeneration leading to craniofacial growth by the use of orthopedic force: No.24890141. 1,100,000yen

15. Ryokufukai Research Award for Young Scientists: Fujii E.: Orthodontic tooth movement on ovariectomized rats induced experimental periodontitis: 500,000yen.


(5) Commendation

1. Tanne Y.: Expression and activity of Runx2 mediated by hyaluronan during chondrocyte differentiation: Incentive award for Alumni Association of Hiroshima University Faculty of Dentistry.


3. Matsuda Y.: Clinical survey of the association between root resorption incident to orthodontic treatment and host factors.: The 15th Japanese Orthodontic Society: Academic incentive award


6. Fujita T.: Important role of articular disk in mandibular growth: The 25th Annual Meeting of the


(6) Patent
Department of Oral and Maxillofacial Radiology, Applied Life Sciences
Department of Oral and Maxillofacial Surgery and Oral Medicine (Oral and Maxillofacial Radiology)

(1) Staff and Students

Professor : Keiji Tanimoto
Associate Professor : Minoru Fujita
Associate Professor/Lecturer : Yoshikazu Suei, Takashi Nakamoto
Assistant Professor : Toshikazu Nagasaki, Masahiko Ohtsuka, Masahiko Sawajiri, Masaru Konishi
Graduate Student : Masaru Konishi, Yukimi Yasuhara, Mitsuko Shimizu, Kiyohito Ota, Md Mahmud Uz Zaman, Satsuki Minamitani, Atia Hossain, Kimio Okada, Preeyaporn Srimawong, Keiji Harada

(2) Main Research Activities

1: Radiographic study to screen osteoporosis using panoramic radiographs of the jaw
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: Study on improvement of radiotherapy for oral cancers

(3) Research Achievements

A) Original Papers


D) Other Publications


E) Presentation at Scientific Meeting

8: Fundamental studies of cooked rice including contrast media: Konishi M, Nagasaki T, Yasuhara Y, Tanimoto K: 17th & 18th annual meeting of the Japanese Society of Dysphagia Rehabilitation, Sapporo, 2012.8.31-9.1
(4) Status of Receiving Grants-in Aid for Scientific Research, etc.

1: Grant-in-aid for scientific research from the Japan Society for the Promotion of Science: Sawajiri M. : Radioprotective assay on bone metabolism with Japanese Medaka (*Oryzias latipes*). ( no. 23592765) ¥1,100,000

2: Research Grant (Mikasa Shoji Co., Ltd): Sawajiri M. : The effect of electrolysed water on radioactive extraction from internal exposure animal. ( no. 7109) ¥4,950,000

3: Grant-in-aid for scientific research from the Japan Society for the Promotion of Science: Sawajiri M. : Research and development of the dental material having a functional antibacterial action. ( no. 24592917): ¥1,900,000
Department of Dental Science for Health Promotion, Integrated Health Sciences
Department of Preventive and Restorative Dentistry (Operative and Conservative Dentistry)

(1) Staff and Students

Professor : Fusanori Nishimura
Associate Professor :
Associate Professor : Masashi Fujii
Assistant Professor : Makoto Arakawa, Shigeki Suzuki, Naoyo Motoyama, Akiko Yamashita, Misaki Iwashita
Resident : Hideo Nakarai, Shintara Nagayasu, Sakiko Fujii
Graduate Student : Takanori Shinjo, Seiji Kobuke, Sano (Ganse) Tomomi, Atsushi Hashikata, Hiroaki Hoshino

(2) Main Research Activities

1: Studies on host factors associated with caries susceptibility
2: Studies on relationship between dental disease and systemic diseases
3: Studies on association between nutrients and dental diseases
4: Development of new laboratory tests for diagnosis of dental diseases
5: Development of new preventive therapies for dental diseases based on new laboratory tests
6: Development of biocompatible materials and their clinical application
7: Pathology of discolored teeth and development of new therapy
8: Development of new host-noninvasive therapies using lasers
9: Biological regeneration of dentin/pulp complex

(3) Research Achievements

A) Original Papers (including Case Reports)


2: Angiotensin receptor 1 blocker valsartan normalizes gene expression profiles of 3T3-L1 adipocytes altered by co-culture with LPS-treated RAW264.7 macrophages: Sonoko Kumamoto, Akifumi


B) Review


C) Publications

3: Lessons Learned from Mouse Models of DSPP, DSP, and DPP: Shigeki Suzuki and Ashok Kulkarni: Bentham Science Publishers., 221-230 (10), 2012

D) Other Publications


E) 学会発表

3: Establishment and effect of the serum free culture method in human dental pulp cells: Fujii S., Oda R.,


14: The comprehensive analysis of miRNA involved in metabolic syndrome such as insulin resistance induced local chronic inflammation: Akiko Yamashita, Shigeki Suzuki, Yoshimitu Abiko, Fusanori Nishimura: the 55th Annual Meeting of the Japan Diabetes Society (Yokohama), May 17-19, 2012

(4) Status of Receiving Grants-in Aid for Scientific Research, etc.
1: Grant-in-Aid for Scientific Research(C): Arakawa M., The analysis of congenital gingival enlargement complicated with hypertrichosis. No. 23593059  ¥ 780,000
2: Grant-in-Aid for Scientific Research: Mineoka A., Development of photosensitizer with urea-Establishment of periodontal treatment combined with Er:YAG laser. No. 24792329. ¥ 1,100,000
3: Grant-in-Aid for Scientific Research(C) :Nagayasu S. Detailed clarification of the molecule machine beginning of cardiovascular event controlling effect by EC and examination of action in living body.. No.2489014300  ¥ 2,660,000
4: Grants-in-Aid for Scientific Research: Iwashita M, Elucidation of amelioration mechanisms of metabolic endotoxemia-induced insulin resistance by valsartan. No. 24792328. ¥ 1,800,000
5: Grant-in-Aid for Scientific Research: Suzuki S., The establishment of ameloblast cell line from adult stem cells and of the method of tooth germ regeneration. No. 23792176. ¥ 700,000
6: Grant-in-Aid for Scientific Research: Challenging Exploratory Research :Nishimura F, Global analysis of molecules the expression is fluctuated in pulp cell cultured with macrophage. No. 23659889. ¥ 1,560,000
7: Grant-in-Aid for Scientific Research (B)(general): Nishimura F, Collaborative Basic Research on Periodontal Medicine and Geriatric medicine. No. 80208222. ¥ 2,990,000
8: Grant-in-Aid for Scientific Research (C)(general): Fujii M, Development of non-serum culture medium for selective proliferation of pulp stem cell. 21592422, ¥1,300,000
9: Grants-in-Aid for Scientific Research: Yamashita A., Basic study aimed at the control of insulin resistance induced periodontal inflammation that target miRNA. No. 24792331. ¥ 2,860,000

(5) Academic Awards, etc.

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

(1) Staff and Students

Professor: Katsuyuki Kozai.
Associate Professor: Chieko Mitsuhata
Research Associate: Yasutaka Kaibara, Goh Yoshimura (~March), Meiko Tachikake
: Ryoko Hirata (substitute teacher, January, 2012 ~ March, 2013)
: Aya Tsuboi, Yukari Ohara (April~)
Physician: Mihaya Ariki (~September), Ryoko Hirata (~January)
Satoko Otani (~March), Nami Miyake, Masafumi Kitamoto
Graduate Student: Yukari Ohara (~March), Hu Yiqun (~September), Yukiko Konishi
: Ayumi Shimada, Aomin, Yuko Iwamoto, Noriko Goto
: Nobuyuki Tatsukawa, Kaoru Sakurai (April~)
Visiting Research Scholar: Hu Yiqun (October~)
Research Student: Akira Yamane
Clinical Trainee: Fumiko Hayashi, Mihaya Ariki (October~), Mie Hirakawa

(2) Main Research Activities

1: Bacteriological research in dental caries in children
2: Molecular biological research of mutans streptococci
3: Research in oral environment and dental diseases in abused children
4: Clinical research in oral care in children suffered from systematic diseases
5: Evaluation of psychological stress in dental treatment in children using chromogranin A
6: Evaluation of dentitional development and 3-D analysis of diagnosis
7: Bacteriological research in periodontal diseases in children
8: Seeking for anti-cariogenic substances extracted from natural sources

(3) Research Achievements
A) Original Papers (including Case Reports)


B) Review


C) Publications


D) Other Publications


E) Presentation at Scientific Meeting


15: An investigation on tendency for first-visit patients at the department of Pediatric Dentistry Hiroshima University Hospital — Regional treatment cooperation with case reports—: Mitsuhata C., Ohara Y.,


F) Special lectures in academic meetings


2: The Lecture organized by Mihara Nursery League: Relationship between infant development of oral function and eating habits: Kozai K.: Mihara shi Fukushi Kaikan (Mihara), 2012.


4: The 2nd Annual Meeting of Japan Association of Dental Traumatology Western Japan Branch.: Treatment for oral trauma: Kozai K.: General Lifelong Learning Center (Kitakyusyu), 2012.


7: The 59th Annual Meeting of the Japanese Society of Child Health: Symposium: Take care our teeth, eyes, and ears from dating childhood~ for our happy old age Why should we brush our teeth? ~Teeth are my life treasure~: Kozai K.: Okayarma Convention Center (Okayama), 2012.

8: The Lecture meeting Hiroshima lifelong learning program: Keys to good teeth and mouth from the infant period: Kozai K.: Hiraiwa Community Center (Higashihiroshima), 2012.


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

2: Grant-in-Aid for Scientific Research (B): Kozai K., Effects of plaque-eco system on gene of cariogenic bacteria. (No. 2239039), 2011 direct expenses: ¥3,800,000, indirect expenses: ¥1,140,000, 2012: direct expenses: ¥3,600,000, indirect expenses: ¥1,080,000.


4: Grant-in-Aid for Scientific Research (C): Mitsuhata C., Effects of endocrine disorders on developing dopaminergic system in Brain (No.19592354), 2011 direct expenses: ¥1,700,000, indirect expenses: ¥510,000, 2012: direct expenses: ¥1,200,000, indirect expenses: ¥360,000.

5: Grant-in-Aid for Scientific Research (B): Kadomoto N., Development of oral care program using dental drug delivery system for patients who underwent hematopoietic stem cell transplantation (No.21792073), 2011 direct expenses: ¥1,400,000, indirect expenses: ¥420,000.

6: Grant-in-Aid for Scientific Research (B): Tachikake M., Elucidation of the mechanism of the inhibition of the differentiation of osteoblasts by LPS from A.a. (No. 21792074), 2011 direct expenses: ¥1,000,000, indirect expenses: ¥300,000.

7: Grant-in-Aid for Scientific Research (B): Tsuboi A., Development of the new valuation basis of mouth complications and oral care program, who underwent medical treatment of childhood cancer. (No. 247922870004), 2012 direct expenses: ¥1,100,000, indirect expenses: ¥300,000.


9: Ryoku Fuu Kai Research Grant for young investigators: 2012,Ao M., ¥500,000.

10: Hiroshima University Supporting Committee Grant for students: 2012: Ao M., ¥200,000.

(5) Academic Awards, etc.


(6) Patents


Return to Contents
Department of Dental Anesthesiology, Integrated Health Sciences
Department of Oral & Maxillofacial Surgery and Oral Medicine (Dental Anesthesiology)

(1) Staff and Students

Professor: Irifune Masahiro, D.D.S., Ph.D.
Resident: Miyahara Takeshi, D.D.S., Oue Kana, 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 antianxiety effects of sedative drugs
5: Study on effects of nitrous oxide on cardiovascular system
6: Study on chronic pain
7: Study on efficacy of chest compressions in cardiopulmonary resuscitation
8: Acute medicine for emergency during dental treatments

(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

1: Minimum knowledge requirements concerning vital sign in dental clinic: Irifune M: The vital sign seminar of Japanese Dental Society of Anesthesiology and Hiroshima Prefecture Dental Association in 2012 (Hiroshima), 2012.


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

1: Grant-in-Aid No. 23592992 for Scientific Research (C) from the Ministry of Education, Culture, Sports, Science, and Technology of Japan (Continued): Irifune M: Elucidation of the role of pain and motor neurons of the spinal cord in antinociception, muscle relaxation, and immobility as general anesthetic components. ¥800,000.

2: Grant-in-Aid No. 23792348 for Young Scientists (B) from the Ministry of Education, Culture, Sports, Science, and Technology of Japan (Continued): Doi M: To diagnose lingual pain by imaging: by use of brain functional imaging. ¥600,000.


(5) Academic Awards, etc.

1: Shimizu Yoshitaka: Excellent Poster Presentation: Change of CPR guideline affects to chest compression


(6) Patents
Department of International Collaboration Development for Dentistry, Integrated Health Sciences

(1) Staffs and Students

Professor: Takashi Takata (Chair of ICDD Committee)
Associate Professor: Udijanto Tedjosasonko (Specially appointed; -September)
Ketut Suardita (Specially appointed; October-)
Assistant Professor: Hiroko Oka (Specially appointed)

(2) Main Research Activities

1: Development and evaluation of dental education program cooperated with Asian countries
2: Development and evaluation of Japanese-English dual linguistic education system
3: Study on international exchange program
4: Study on contribution to international community through dentistry
5: Research on the specific mechanisms of destruction in periodontal tissue

(3) Research Achievements

A) Original Papers (including Case Reports)


B) Review

C) Publications

D) Other Publications
E) Presentation at Scientific Meeting

1: Innovation of educational program for undergraduate dental students at Hiroshima University: Hiroko Oka, Yuichi Mine, Udijanto Tedjosasongko, Takashi Uchida, Kazuo Tanne, Hidemi Kurihara, Takashi Takata: 15th Ottawa Conference (Kuala Lumpur, Malaysia), 2012.

2: BioDental education at Faculty of Dentistry Hiroshima University, Japan-To produce new generation: Yuichi Mine, Takashi Uchida, Fusanori Nishimura, Hiroki Nikawa, Katsuhiko Kozaï, Takashi Kanematsu, Takashi Takata: 15th Ottawa Conference (Kuala Lumpur, Malaysia), 2012.


4: Comparison and synchronization of the dental education system between Airlangga University and Hiroshima University for the International Dental Course Program in Hiroshima University: Udijanto Tedjosasongko, Hiroko Oka, Takashi Uchida, Takashi Takata: The 45th Congress of The Hiroshima University Dental Society (Hiroshima), 2012.

5: Assessment on a pilot collaborating seminar between dental clinical training course and undergraduate international exchange programs at Hiroshima University: Hiroko Oka, Udijanto Tedjosasongko, Tetsuji Ogawa, Takashi Takata: The 45th Congress of the Hiroshima University Dental Society (Hiroshima), 2012.

6: Evaluation of the course work education employing Cognitive Behavior Therapy at Hiroshima University, Graduate School of Biomedical Sciences: Maya Shirakura, Hiroko Oka, Takashi Kamiya, Fumio Suehiro, Kanemitsu Shirasuna, Motoyuki Sugai, Masao Kobayashi: The 45th Congress of The Hiroshima University Dental Society (Hiroshima), 2012.


8: Assessment on a pilot collaborating seminar between dental clinical training course and undergraduate international exchange programs: Hiroko Oka, Udijanto Tedjosasongko, Tetsuji Ogawa, Takashi Takata: The 31st Annual Academic Meeting of Japanese Dental Education Association (Okayama), 2012.


F) Special lectures in academic meetings and extension lectures

1: Go through International : Udijanto Tedjosasonko, Hiroko Oka : 2012 Hiroshima University Open Lecture for High School-Students : Hiroshima University School of Dentistry (Hiroshima), 2012

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

1: Grant-in-Aid for Young Scientists (B) : Hiroko Oka : Mechanism of hard tissue destruction controlled by F-spondin via LDL receptor family. (No. 23792103). ¥1,000,000.

2: Hiroshima University Educational research 2012 C: Miyuki Goto, Hiroko Oka, Shinichi Amano, Udijanto Tedjosasonko, Takashi Takata : Development of New Oral Health Program for Elementary School Students which Collaborates to International Communications -Through the Exchange Program with International Dental Course Students-. (No. 13) ¥212,625.

(5) Academic Awards, etc.

1: Hiroko Oka : Incentive Award for the Presentation at international Academic Meetings, Japanese Dental Education Association

(6) Patents

(7) Others

A) The number of the foreign students for the international exchange program

1: The international short exchange program 2012 January: 19 students (Taipei Medical University, 4th-year, Taiwan) : 5 days, 2012.

2: Short Stay Program (JASSO) : 3 students ( 2 students; University of Washington, United States: 1 students; University of British Columbia, Canada) : 7 days, 2012.

3: The international short exchange program 2012 August: 20 students (Taipei Medical University, 4th-year, Taiwan) : 5 days, 2012.

4: Short Stay Program (JASSO) : 6 students (3 students; Airlangga University, Indonesia: 3 students; University of Medicine and Pharmacy at HoChiMinh City, Vietnam) 6 months, 2012.

5: Short Stay Program (JASSO) : 12 students ( 2 students; Airlangga University, Indonesia: 2 students; Chulalongkorn University, Thailand: 2 students, Khon Kaen University, Thailand: 2 students; University of Medicine and Pharmacy at HoChiMinh City, Vietnam: 2 students; University of Health
Science, Cambodia) : 10 days, 2012.

6 : International Dental Course 2013: 3 students (Airlangga University, Indonesia; University of Medicine and Pharmacy at HoChiMinh City, Vietnam; University of Health Science, Cambodia), 2012.

7 : International Dental Course 2012: 3 students (Airlangga University, Indonesia; University of Medicine and Pharmacy at HoChiMinh City, Vietnam; University of Health Science, Cambodia), 2012.

B) Homepage of International Program

1 : http://icdd.hiroshima-u.ac.jp/

C) Conclusion of Memorandum of Agreement of International Exchange Programs (Support)

1 : Faculty of Odonto-Stomatology, University of Health Science, Cambodia

D) Conclusion of Memorandum of Agreement of International Exchange Programs (Support)

1 : Airlangga University, Indonesia

E) Supporting the International Research Exchange Program

1 : Preparing the documents for sending the research equipment grant from Hiroshima University Faculty of Dentistry to Airlangga University Faculty of Dentistry

Return to Contents
Department of Public Oral Health, Integrated Health Sciences

(1) Staffs and Students

Professor : Masaru Sugiyama
Associate Professor : Maki Nosou, Atsushi Shimazu (Department)
Assistant Professor : Akemi Naitou
Graduate Student : Rumi Nishimura

(2) Main Research Activities

1 : Study on oral care
2 : Study on the relationship between oral sensitivity and oral functions in elders
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)


B) Review

C) Publications


D) Other Publications

E) Presentation at Scientific Meeting


F) Contribution to Community

1: Nishimura R: Assessment of oral function at special nursing home.(2012)

2: Nishimura R: The services to improve oral function are provided in Hatsukaichi city.(2012)

3: Nishimura R: The services to improve oral function are provided in Saka town.(2012)

4: Nishimura R: The oral care of persons requiring nursing care at Hiroshima University Hospital.(2012)

5: Nishimura R: Refresher course for dental hygienists (Step up course) “Study Abroad programs at UCLA”, Hiroshima, 2012.7.12.

6: Nishimura R: Teaching nurses proper oral hygiene techniques to maintain healthy teeth and gums at Kusatsu Hospital, Hiroshima, 2012.7.19.

7: Shimazu A: Dental Support Activity in Cambodia (Cambodia), 2012.

8: Shimazu A: Oral health activity in Junior High School Students in Hiroshima (Hiroshima), 2012.

9: Shimazu A: Dental Examination for Acidity and Alkalinity (Hiroshima), 2012.

10: Shimazu A: Dental Examination for Infants (Higashi-Hiroshima), 2012.

11: Sugiyama M: Refresher course for dental hygienists (Step up course), Hiroshima, 2012.11.22.

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

1: Grants-in-Aid for Scientific Research (Scientific Research (C)): Sugiyama M: Optimization of the bone regeneration method in transplantation of mesenchymal stem cells and its application for closure of alveolar cleft. (No. 23593029). ¥200,000.

(5) Academic Awards, etc.

(6) Patents

Return to Contents
Department of Maxillofacial Functional Development, Integrated Health Sciences

(1) Staff and Students

Professor: AMANO Hideaki
Lecturer: HARA Kumiko
Assistant Professor: TSURUDA Keiko
Graduate Student: IWAMOTO Akiko, FUKADA Eri, TETSUMORI Kotomi, SATO Manami

(2) Specialized Fields

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 activation of the function of salivary glands
4: Study on the methods for Oral health care
5: Study on the education program for Oral health
6: Study on the development of oral function
7: Study on education program for graduate dental hygienists
8: Study on the Mechanism of Aggregatibacter actinomycetemcomitans-CDT complex formation and secretion

(3) Achievements

2: The Directionality of the Education for Oral Care - Based on an analysis of the workshop for Practice Oral Care - : Ayako Sakoda, Ryouichi Yasui, Kumiko Hara : Oral Care Mate No.6, 8-12, 2012.6.30.

B) Reviews
C) Books
D) Other Publications

E) Presentations

1: Effects of automutanolysin (Aml) on Streptococcus mutans infection in rats. :Yiqun Hu1, Yuko Iwamoto1, Shizuo Kayama1, Fuminori Kato1, Hitoshi Komatsuza, Keiko Tsuruda1, Katsuyuki Kozai, Motoyuki Sugai1: The 85th annual meeting of Japanese Society for Bacteriology (Nagasaki)2012.3.27.

2: An Assessment of the three-dimensional growth changes of the oral morphology with plaster models of the infants. – Based on the Observation records of the Lower Jaws of the infants up to 1 year 6 months -:Satoko Iwamae, Miyoko Kuwahara, Chie Kanbe, Yasutaka Kahiha, Asami Katayama, Hiroki Nikawa, Hideaki Amano, Katsuyuki Kozai : 50th Annual Meeting of Japanese Society of Pediatric Dentistry (Tokyo), 2012.5.13


7: The interaction between the green tea polyphenol (+)-epigallocatechin gallate and the salivary proteins : Masaru Ohara, Kumiko Hara, Rumi Nishimura, Masaru Sugiyama, Hideaki Amano : The 60th Chyu-shikoku annual meeting of the Japanese Stomatological Society(Hiroshima) 2012.10.06

8: A Study of the relationship between the age- related changes of sensory thresholds in the oro-facial region and the feeding disorder, dysphagia and denture wearer. : Rumi Nishimura, Kaoru Ymashita, Kumiko Hara, Hideaki Amano, Masaru Sugiyama : The 60th Chyu-shikoku annual meeting of the Japanese Stomatological Society(Hiroshima) 2012.10.06

9: A Study of the diagnostic method of suckling and swallowing functions from measurement of internal
pressure of oral cavity : Eri Fukada, Masaru Sugiyama, Hideaki Amano : The 60th Chyu-shikoku annual meeting of the Japanese Stomatological Society(Hiroshima) 2012.10.06

10 : Some vision-aided methods fitted with the specific characteristics of each disabled child in the dental treatments : Kaoru Sakurai, Yasutaka Kaitara, Nami Miyake, Mihaya Ariki, Ryouko Hirata, Masasi Kitamoto, Hideaki Amano, Katsuyuki Kozai : 31th Chyu-Shikoku Annual Meeting of Japanese Society of Pediatric Dentistry (Takamatsu)2012.11.4


F) Lectures

1 : Hara K. : Let’s try to do the training for improvement of oral function in your clinic : Recurrent Workshop for dental hygienists (Hiroshima), 2012.2.23

G) Social Contributions

1 : Program for kids from elementary schools, Dental Kids, “Let’s Be a Dentist!”: Hiroshima University Faculty of Dentistry, 2012.
2 : Program for high school students, Dental Kids: Hiroshima University Faculty of Dentistry, 2012.
3 : Cooperate to the assessment of the Program for improvement of oral function in the ambulatory care facility “Kosei-En”, 2012.

(4) Grant-in-Aid for Scientific Research

1 : 2012th grant-in-aid for scientific research : AMANO H.: A Study of Intraoral pressure Change for the Clinical Diagnosis System of Ability to Swallow. (No. 24593093)
2 : 2012th grant-in-aid for scientific research : Tsuruda K. : Development of the method of preventing infection under control of the mucosal genes. (No.22592333)

(5) Awards

(6) Patents
Department of Oral Health Management, Integrated Health Sciences

(1) Staffs
Professor: Toshinobu TAKEMOTO
Assistant professor: Atsue MATSUMOTO
Research associate: Yoshie NIITANI
Graduate student: Hinako TSUZUKI, Takaum OCHIAI (From April)
Graduation thesis student: Kaori OZEKI, Haruno HAMASUNA, Miho TOYOTA, Yui KOTAKE, Saki OGURA, Chisato OHSHITA, Miho KUME, Kotoko HIROSE, Midori KOHMURA, Akiko OHARA, Manami TATSUMOTO, Yukiko YAMANOH, Kiyomi HARAJIRI, Shoko KATA YAMA

(2) Research Fields
1: Dental hygienists education
2: Research about dental hygienists occupation
3: Career formation of students
4: 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

A) Original Articles


C) Books


E) Presentations at Scientific Meeting


5: [Survey about the factors which determines the one’s easiness for communication][ja]: Ogura S., Ogawa T., Takimoto T.: The 14th Annual Meeting of Chugoku-Shikoku Chapter of Communication Association of Japan (CAJ) • The 6th Seminar of Medical Communication Education and Research (Hiroshima), 2011.

6: [Research about the factors which determines the easiness of communication][ja]: Ogura S., Ogawa T., Takimoto T.: The 15th Annual Meeting of Chugoku-Shikoku Chapter of Communication Association of Japan (CAJ) • The 7th Seminar of Medical Communication Education and Research (Hiroshima), 2012.

7: [Research about getting one’s “consent”][ja]: Ohara S., Ogawa T., Takimoto T.: The 15th Annual
Meeting of Chugoku-Shikoku Chapter of Communication Association of Japan (CAJ) • The 7th Seminar of Medical Communication Education and Research (Hiroshima), 2012.

Presentation of Graduation Thesis 2012 (Hiroshima), 2012.

1. [The relation between oral uncomfortable feeling and stress factors.] [ja]: Ozeki K.
2. [Survey about factors affecting the progress in the technique of glass ionomer cement preparation of dental hygienist students.] [ja]: Ohshita C.
3. [Research about the factors which determines the easiness of communication –A questionnaire paper survey to 3rd and 4th grade dental hygienists students and dental hygienists in university hospitals.] [ja]: Ogure S.
4. [The relation between the infection control and “Organizational Climate Scale” of private dental clinic and department of dentistry in general hospitals.] [ja]: Hamasuna Y.
5. [The present situation of dental implant and the role of dental hygienists.] [ja]: Kotake Y.
6. [The consciousness of private dental clinics about protection against disasters and its regional difference.] [ja]: Kume M.
7. [The consciousness of Oral Health Science students about tobacco smoking and smoking prohibition.] [ja]: Toyoda M.

F ) Lectures

1 : [The image of dental hygienist students to each other –The result of cross-sectional survey to the students-] [ja]: Takemoto T., Nakamori T.: Annual meeting of Hiroshima Association of Dental Hygienist Education (Hiroshima), 2012.
2 : [Lecture about mouth, group instruction of tooth] [ja]: Matsumoto A.: Child-care course of a community program of the nursery school, Danbara Mimyo Nursery School (Hiroshima) : 2012.
3 : [Lecture about mouth, group instruction of tooth] [ja]: Matsumoto A.: Child-care course of a community program of the nursery school, Mimyo Nursery School (Hiroshima) : 2012.
4 : [Oral care for pregnant woman and new born infant] [ja]: Matsumoto A.: School for pregnant women in Gynecology department of Hiroshima University Hospital (Hiroshima) , 2012.
5 : [Outpatient Preventive Care Project for Specified elderly person at Hatsukaichi city] [ja]: Matsumoto A.: Held at Tsuda, Miyazono, Ajina-dai, Ohno, Asahara,(Hiroshima), 2012.
6 : [Dental Hygiene 2] [ja]: Niitani Y.: JADHE program I for teachers in dental hygienists schools (Aichi) 2012.

G ) Social Contributions
1: Program for kids from elementary schools, Dental Kids, “Let’s Be a Dentist!”: Hiroshima University Faculty of Dentistry, 2012.
2: Renewal seminar for teacher’s license: Takemoto T, Hiroshima University (Hiroshima), 2012.
3: Member of Dental Hygienists' National Examination Committee: Matsumoto A., Niitani Y.: Foundation of Promoting Dental Care and Training, 2012.
4: Secretary of the regional association of Kinki, Chugoku and Shikoku area for Japanese Society for Dental Health: Matsumoto A, 2012.
8: Member of dental working group in committee of National University Hospital infection control association: Niitani Y., Training seminar at Chugoku-Shikoku Block in 2011(Okayama), 2012

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

1: Grant-in-Aid for Scientific Research (C): Takemoto T.: The analysis of factors indicating the quit of dental hygienist and settling a plan for the prevention. (No.23593090). ¥650,000

（5）Academic Awards

1: Matsumoto A.: The 7th Sunstar award for scientific article (Encouragement award) of the Japanese society of dental health Prize winning article:
Department of Anatomy and Functional Restorations, Integrated Health Sciences

(1) Staff and Students

Professor : Takahiro Satoda
Associate Professor : Saiji Shimoe
Graduate Students : Shougo Iwaguro, Yuji Chiba, Syouji Matsushita, Hiroki Nishida, Kanako Touma

(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)


B) Review

C) Publications
D) Other Publications

E) Presentation at Scientific Meeting


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

1: Grant-in-Aid for Scientific Research(C): Shimoe S: Development of tooth-friendly zirconia crown restorations optimized polymer composite resins for the clinical application. (No.24592916). ¥1,600,000

(5) Academic Awards, etc.

(6) Patents
Department of Medical System and Biomaterial Engineering, Integrated Health Sciences

(1) Staff and Students

Professor : Takeshi Murayama
Associate Professor : Mitsuhiro Tamamoto
Graduate Student : Keita Yauchi, Tsuyoshi Hidaka, Shinya Chiba, Kouki Ishizu,
                  Yuta Takumi, Kousei Ohno, Harumi Kaneishi
Graduation Research Students : Asumi Nagata, Mayumi Nakanodo, Megumi Nishikawa,
                               Noriko Fujimoto, Yuko Fuchimoto, Haruka Houchi, Shuich Masu,
                               Kouki Higashi, Mayu Asamura, Ryouma Tsuruta, Yumika Teranishi,
                               Emi Hyougo

(2) Main Research Activities

1: Application of CAD/CAM and rapid prototyping to dentistry
2: Concurrent engineering in dentistry
3: 3d-modeling and computer simulation in dentistry
4: Development and clinical application of maxillofacial prosthetic apparatus for treatment and protection
5: Study on esthetic dentistry
6: Study on dental education
7: Analysis of dental techniques using a motion-capture system
8: Simulation-based analysis of work processes in dental technology
9: Study on sports dentistry (mouthguard)
10: Study on musical dentistry (music splint)

(3) Research Achievements

A) Original Papers (including Case Reports)

2: Construction of orthodontic setup models on a computer: Kihara T, Tanimoto K, Michida M,


B) Review

C) Publications


D) Other Publications


E) Presentation at Scientific Meeting


3: Research on prostheses for animals: Nagata A, Murayama T, Tamamoto M: 34th Meeting of the Nippon Academy of Dental Technology (Okayama), 2012.


5: A study on objective and schematic assessment of practice by dental technicians -Assessment of students one year before graduated in 2-, 3- and 4-year dental technicians schools-: Ozaki J, Suese K, Tamamoto M, Sugita J, Ichikawa M, Koizumi J: 34th Meeting of the Nippon Academy of Dental Technology (Okayama), 2012.


7: Health monitoring system using wearable sensors involved in dentures: Murayama T, Houchi H, Eguchi


11: Scheduling to meet due date with capacity adjustment –An efficient search method using the mixture of GA and priority rule:-: Yoda M, Eguchi T, Murayama T: the 55th Japan Joint Automatic Control Conference(Kyoto), 1C207, pp.182-186, 2012.

F)Special Lectures in Academic Meetings

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

1: Grants-in-Aid for Scientific Research (Challenging Exploratory Research): Murayama T (Representative), Health monitoring system using wearable sensors involved in dentures. No. 23650352.600, 000yen

2: JST A-STEP(Adaptive and Seamless Technology Transfer Program through Target-driven R&D) FS-stage: Murayama T(Cooperation), Development of high-precision pressing system for dental titanium mesh and band. No.AS232Z02507F. 400, 000yen

(5) Academic Awards, etc.

(6) Patents

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Department of Oral Biology & Engineering, Integrated Health Sciences

(1) Staff and Students

Professor : Hiroki Nikawa
Lecturer : Hisako Sasahara, Tsuyoshi Taji
Assistant Professor : Kazuko Kawahara
Assistant Professor : Yuichi Mine, Kaori Taguchi (H24.10+)
(Special Appointment)
Administrative Staff : Miki Onji (-H24.8), Haduki Yamaguchi (H24.9-)
Education and Research Support Staff : Kaori Taguchi
Graduate Student : Takuya Kihara, Yuichi Mine, Sumiyo Mimura, Yukihiro Takayama,
Sachie Hogaki, Minako Okamura, Yuko Katabuchi, Minako Shinkawa,
Tomoya Tamura, Minako Hiramatsu, Rie Fukuda, Eri Morooka, Yu Yamaguchi,
Kaori Yushita, Asami Katayama, Megumi Kurose, Yu Tomiyama,
Natsumi Yamamoto,
Undergraduate Student : Mikiko Kurose, Mari Sakata, Ayumi Sato, Kentaro Takagi, Xiaoxu Zhang,
Kento Nakashima, Yosuke Hikichi, Mayumi Fukuda, Shizuka Horibe,
Ayaka Ando, Chika Umemoto, Masahiro Okuni, Chiaki Okada,
Miku Kuimoto, Eri Tanaka, Tetsuo Hatanaka, Yumi Hamamoto,
Megumi Hirooka, Ryutaro Fujimura, Ai Manabe, Satoshi Miyauchi

(2) Main Research Activities

1 : Mechanisms on allergy caused by dental materials
2 : Study on candidal biofilms and denture plaque
3 : Study on dental caries and probiotics
4 : Design for cationic antimicrobial peptides
5 : Study on large-scale proliferation of the mesenchymal stem cells using antimicrobial peptides
6 : Study on mechanisms of the alveolar bone resorption and on bone - resorption inhibitors
7 : Study on dental implant materials

(3) Research Achievements
A) Original Papers (including Case Reports)


B) Review

C) Publications

D) Other Publications

E) Presentation at Scientific Meeting


2: BioDental education at Faculty of Dentistry Hiroshima University, Japan —To produce new generation of leaders in dentistry— : Mine Y, Uchida T, Nishimura F, Nikawa H, Kozai K, Kanematsu T, Takata T : 15th Ottawa Conferences Malaysia H24.3.9-13


5: Verifying the accuracy of a dental fiberscope navigation system : Ikawa T, Yamazaki Y, Yamamoto T, Kihara T, Shigeta Y, Momoi Y, Hosoya N, Ogawa T : 90th General Session & Exhibition of the International Association for Dental Research H24.6.20-23

(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, Yuichi Mine (Co-investigators) : Research Project Number: 24390434

2: Grants-in-Aid for Scientific Research (Scientific Research (C)) : Tsuyoshi Taji (Head), Hiroki Nikawa (Co-investigators) : Research Project Number: 23592851

3: Grants-in-Aid for Scientific Research (Scientific Research (C)) : Kazuko Kawahara (Head), Hiroki Nikawa (Co-investigators) : Research Project Number: 22592334

4: Grants-in-Aid for Scientific Research (Scientific Research (B)) : Yuichi Mine (Co-investigators) : Research Project Number: 24390437

(5) Academic Awards, etc.

1: Sumiyo Mimura : The 2012 World Congress on In Vitro Biology Wilton R. Earle Award, SIVB Student Travel Award 2012.6

(6) Patents

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Central Research Laboratory

(1) Staff and Students

Director: Fusanori Nishimura (~3, 31), Kouichi Kato (4, 1~) (by-work)
Assistant Professor: Ikue Hayashi

(2) Main Research Activities

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

(3) Research Achievements

A) Original Papers (including Case Reports)


B) Review

C) Publications

D) Other Publications

E) Presentation at Scientific Meeting

1: The role in Staphylococcus aureus skin-infection, a novel cell wall protein Skip: Hisatsune J., Murakami


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

1: Research project, Grant-in-Aid for Scientific Research (C): Hayashi I: Mechanism of automutanolysin (Aml) for the specific selectivity toward cariogenetic bacteria:(No. 23592702), ¥1,430,000

(5) Academic Awards, etc.

(6) Patents

Return to Contents
Department of Advanced General Dentistry, General Dentistry

(1) Staff and Students

Professor: Tetsuji Ogawa
Lecturer: Yoshihara Tanaka, Masaru Ohara, Hiromi Nishi
Graduate Student: Taiji Obayashi, Kayo Kajitani, Yukiko Nagatani

(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

(3) Research Achievements

A) Original Papers (including Case Reports)


B) Review


C) Publications

D) Other Publications


E) Presentation at Scientific Meeting

Meeting of Japanese Dental Education Association, Okayama, 2012.


F) Implementation of Seminars / Workshops

1. Workshop for postgraduate trainees 2012 (Hiroshima)
3. “Seminar on Oral Care” to the workers at Hiroshima University Hospital ①lecture ②practice, Hiroshima, 2012.

G) Lecturer・Symposiast

1. Education and evaluation of clinical capability: a lecturer Tetsuji Ogawa : The FD seminar of Kagoshima University Faculty of Dentistry held in Kagoshima, 2012.
2. Relation of professionalism and outcome-Based education: a lecturer Tetsuji Ogawa : The FD seminar of Hokkaido University Faculty of Dentistry held in Sapporo, 2012.
3. Recommendation of the bidirectional lesson which utilized e-Learnig (WebCT): a symposiast: Tetsuji Ogawa; Educational information promotion forum.-e-learning support in a university, turn to tomorrow's education held in Higashihiroshima, 2012.
5. SP simulation from the position in dental education: a symposiast: The 15th anniversary symposium of a registration simulated patient in Kyushu University, held in Fukuoka, 2012.
6. Active learning and PBL-tutorial education: a lecturer Tetsuji Ogawa : The FD seminar in Kyushu University Faculty of Dentistry Science, held in Fukuoka, 2012.
7. Simulated patient in dental education -What is it?: a lecturer Tetsuji Ogawa : The simulated patient skill-up seminar in Okayama University, held in Okayama, 2012.

H) Attending of Lectures, Seminars, and Workshops


4. The 2nd EBM workshop : Attendant: Taiji Obayashi, Faculty of Medicine, Kyushu University. (Fukuoka), 2012.


I) Implementation of OSCE, CSA

1. 2nd Advanced OSCE for Postgraduate Trainees 2011-2012

2. 1st Advanced OSCE for Postgraduate Trainees 2012-2013

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

1. Grant-in-Aid Scientific Research, Scientific Research (C). Tanaka Y.: Fundamental studies on the analysis of the medical interview conversation first visit dentistry : Program No. 24500257. 1,430,000yen

2. Grant-in-Aid Scientific Research, Young Scientists (B). Nishi H.: Analysis of Toll-like receptor in oral mucosal disease . Program No. 23792346. 1,170,000yen

3. Grant-in-Aid Scientific Research, Scientific Research (C). Ogawa T.: The theory and measurement
methodology of politeness phenomena in the medical interview. Program No. 23520509. 300,000yen (co-researcher)

(5) Academic Awards, etc.

(6) Patents
Department of Oral Health and Development, Preventive Dentistry

(1) Staff and Postgraduate students

Assistant Professor: Makoto Kawamura

(2) Research fields

(3) Publication

A) Original Papers (including Case Reports)

B) Reviews

C) Books/Book Chapters

D) Proceedings/Others

E) Presentations

(4) Grants-in-aid

(5) Awards

(6) Patents

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Department of Oral Health and Development
(Special Care Dentistry)

(1) Staffs and Students

Professor : Mitsugi Okada (※) Head of Dentistry
Assistant Professor : Yuki Oda
Resident : Masaki Hayashiuchi, Yasue Otsuka, Yoko Fujino
Research Student : Koichiro Matsumoto (〜Sep)
Graduate Student : Koichiro Matsumoto (Oct〜)
Clinical Trainee : Megumi Iwamoto, Masaki Yasusaka, Fumiko Hayashi

(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

(3) Research Achievements

A) Original Papers (including Case Reports)


B) Review
C) Publications

D) Other Publications

E) Presentation at Scientific Meeting


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

(5) Academic Awards, etc.

(6) Patents

Return to Contents
Central Clinical Sections, Special Dental Clinic Section

(1) Staff and Students

Chief Professor   : Keiji 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)

B) Review

C) Publications

D) Other Publications

E) Presentation at Scientific Meeting

2: Characteristic of Viscosity Change in Commercial Thickening : Yukimi Y : 8th annual meeting of Hiroshima Speech-Language Hearing Therapists Association, 2012.3.18
4: Fundamental studies of cooked rice including contrast media: Konishi M, Nagasaki T, Yasuhara Y, Tanimoto K: 17th & 18th annual meeting of the Japanese Society of Dysphagia
(4) Status of Receiving Grants-in Aid for Scientific Research, etc.

1: Urakami Foundation (public utility foundation) academic research grant for 2012: Yukimi Yasuhara: ¥900,000

(5) Academic Awards, etc.

(6) Patents
Central Clinical Sections, Center of Oral Clinical Examination

(1) Staffs and Students

Director: Hidemi Kurihara
Associate Professor: Ikuko Ogawa (Clinic)
Lecturer: Masae Kitagawa (Clinic)
Research Associate: Tomoaki Shintani
Technician: Keiko Banno
Intern: Shunryo Yanagisawa

(2) Main Research Activities

1: Clinical study on endodontal-periodontal therapy.
2: Clinicopathological study on head and neck lesions.
3: Developmental study of treatment to dysgeusia.
4: Study on test and treatment in metal allergy and dry mouth.
5: Molecular pathological study on proliferation and development of oral squamous cell carcinoma.
6: Study on molecular target therapy to oral cancer targeted with VEGFR and EGFR.
7: Study on function of cementoblast specific genes in human cementoblast.

(3) Research Achievements

A) Original Papers (including Case Reports)

PLos ONE, 7(8), e44488, 2012.


B) Review


C) Publications


D) Other Publications

E) Presentation at Scientific Meeting


3: Diagnosis and examination of Sjogren Syndrome -Confirmed Diagnosis by suitable examination and risk assessment of oral disease-: Kitagawa M., Yanagisawa S., Ando T., Shintani T., Ogawa I., Kurihara H.: The 45th Meeting of Hiroshima University Dental Society (Hiroshima), 2012.


(Yokohama), 2012.

21: A case of ectomesenchymal chondromyxoid tumor -Difference from myoepithelial carcinoma-:
Ogawa I., Tsunematsu T., Ando T., Obayashi M., Yamazaki S., Takata T.: The 57th Annual Meeting of

22: Tumor of maxillary sinus (Dedifferentiated adenoid cystic carcinoma): Tsunematsu T., Ando T.,
Obayashi M., Ogawa I., Suei Y., Takata T.: The 107th Slide Conference of the Japanese Society of
Pathology (Tokushima), 2012.

23: Tumor of the buccal mucosa (Clear cell carcinoma, NOS): Furusho H., Ogawa I., Sakaida N., Nakano
R., Takata T.: The 108th Academic Meeting of Chugoku-Shikoku Branch of the Japanese Society of
Pathology (Kurashiki), 2012.

24: Lesion of mandible (Thickened dental follicle): Ogawa I., Obayashi M., Fujita Y., Fujihara M., Takata
T.: The 58th Meeting of Hiroshima Pathological Conference (Hiroshima), 2012.

25: Pigmented lesion of palate (Intramucosal melanocytic nevus): Obayashi M., Fujita Y., Fujihara M.,
Ogawa I., Takata T.: The 23rd Annual Meeting of the Japanese Society of Oral Pathology (Tokyo),
2012.

F) Special lectures in academic meetings

1: Pathological diagnosis of salivary gland lesions and neoplasms: Ogawa I., Takata T.: The 3rd Meeting
of Kochi Conference of Diagnostic Pathology (Kochi), 2012.

2: Companion meeting 6 [Pathology of salivary gland tumors - controversial points and recent topics],
The diagnostic problems of malignant counterpart of pleomorphic adenoma: Ogawa I., Takata T.: The
101st Annual Meeting of the Japanese Society of Pathology (Tokyo), 2012.

3: Workshop [Pathobiology of bisphosphonate-related osteonecrosis of the jaw]. Pathological
characteristics of jaw bone of the patient treated with intravenous bisphosphonates. A case
presentation: Ogawa I., Miyauchi M., Takata T.: The 23rd Annual Meeting of the Japanese Society of
Oral Pathology (Tokyo), 2012.

(4) Status of Receiving Grants-in Aid for Scientific Research, etc.
(5) Academic Awards, etc.
(6) Patents
Central Clinical Sections, Dental Technicians Section

(1) Staff and Students

Director of Dental Technicians Section : Hiroki Nikawa (Prof.)
Chief Dental Technician : Hirotaka Okura
Supervisor Dental Technician : Masanobu Yamamoto, Eisaku Habu, Yoshihiro Otani, Meiji Yamamoto, Ryoji Kato
Dental Technician : Syougo Iwaguro

(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

(3) Research Achievements

A) Original Papers (including Case Reports)

B) Review

C) Publications


D) Other Publications

E) Presentation at Scientific Meeting

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

(5) Academic Awards, etc.

(6) Patents

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Central Clinical Sections
(Dental Hygiene Section)

(1) Staff and Students

Director of Dental Hygiene Section : Hidemi Kurihara
Chief Dental Hygienist : Hiroko Tamura(Till March), Miyuki Nakaoka(From April)
Supervisor Dental Hygienists : Kayo Kajitani(From April)
Dental Hygienists : Yoriko Iwasaki, Miho Yoneda(Till February), Kanako Matsui, Megumi Takamoto, Tomoko Tokikazu, Kana Dainobu, Naomi Hara(Till August), Miho Okada, Ayumi Kouchi, Itsuka Kouno(Till June), Atsuko Wakita, Chieko Kawai, Yukiko Nagatani, Yumi Irie, Yurie Nakano, Maiko Kawagoe, Kanako Yano(From April), Mayuko Oshita(From April), Ayano Tomoike(From July), Ayumi Yamaguchi(From October)
Dental Assistants : Yuri Ota, Yuka Tamamoto, Hisako Ozaki, Mayumi Yatabe

(2) Main Research Activities

1 : A study about the dentistry health guidance that dental hygienist performs.
2 : A study about improvement of local dentistry health.

(3) Research Achievements

A) Original Papers (including Case Reports)

B) Review

C) Publications
D) Other Publications

E) Presentation at Scientific Meeting


4: The treatment of chronic periodontitis and SPT Case report: Good oral condition has been maintained for 4 years and half by SPT: Kouchi A, Mizuno T, Nakaoka M, Kurihara H: The Japanese society of periodontology (Shimane), 2012.7.8

5: Short-term improvement of inflamed periodontal tissue and occlusal force in a patient with severe chronic periodontitis: A case report: Matsui K, Uchida Y, Fujita T, Nakaoka M, Kurihara H: Japan society of Periodontology The 7th Clinical training meeting (Chugoku area) (Shimane), 2012.7.8

6: Successful management of generalized aggressive periodontitis patient by initial preparation: a case report: Nagatani Y, Mizuno T, Nakaoka M, Kurihara H: Japan society of Periodontology The 7th Clinical training meeting (Chugoku area) (Shimane), 2012.7.8

7: What kind of effect does the deep reflection of the dental trainee bring about?: Obayashi T, Kajitani K, Nagatani Y, Nishi H, Taguti N, Ogawa T: The 44th annual meeting of the Japan society for medical education (Yokohama), 2012.7.27-28


12: A two-year longitudinal study of dental caries incidence associated with *Streptococcus mutans* and *Streptococcus sobrinus* in patients with mental retardation: Oda Y, Hayashiuchi M, Otsuka Y, Fujino Y,
F) Special lectures in academic meetings

(4) Status of Receiving Grants-in Aid for Scientific Research, etc.
1. Scientific research funds subsidy (encouragement study) : Miho Okada. The effect of the cognitive-behavioral therapy on dental phobia patient ~Evaluation using the brain function image~. No24932002.600,000yen
2. Scientific research funds subsidy (encouragement study): Miyuki Nakaoka, Study on evaluation of dental stress reduction of children with developmental disability. encouragement study. No24932006. 300,000yen

(5) Academic Awards, etc.

(6) Patent

(7) Special Lecture
1. Knowledge and techniques of oral care : Kayo Kajitani: 5th Technical Committee on Respiratory Care Hiroshima

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Dental Clinic

(1) Staff and Students

Director: Takamune Hino
Research Associate: 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)


B) Review

C) Publications

D) Other Publications

E) Presentation at Scientific Meeting

1. Examination of experimental bacteria biofilm formation in a tube of dental unit waterline. Y. Niitani, K. Ouhara, T. Hino, H. Shiba, H. Kurihara.; 45th meeting of Hiroshima University Faculty of Dentistry (Hiroshima) June 2012
2. Prevalence of drug-resistant nosocomial microorganisms in oral cavity after oral cancer therapy


F) Seminar, Workshop, etc.

1. Infection control on the Dental Clinic of Hiroshima University: Takamune Hino; The 3rd meeting of Higashihiroshima dental association lecture (Higashihiroshima), February 2012

2. Discussion of bacteriological and immunological studies for origin, progress or extension of periodontal disease: Takamune Hino; The meeting of the clinical study society (Hiroshima), February 2012

1. Recurrent seminar: Important ecosystem of oral flora. Masaru Ohara: 2012/10/11 (Thu) 19:30-21:00 in Hiroshima


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

1. Grants-in aid for scientific research: Takamune Hino: #21390557

(5) Academic Awards, etc.

(6) Patents

1. JP 4857438 B2 2012.1.18

2. JP 5007439 B2 2012.8.22
**Dental Medical Information Section**

(1) Staff and Students

Director : Kazuo Tanne (Co.)
Professor : Hideaki Amano (Co.)
Assistant Professor : Kyou Hiasa (Co.), Masahiko Ohtsuka (Co.), Takeshi Tanaka
Technician : Tokue Yanagida (Co.)

(2) Main Research Activities

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

(3) Research Achievements

A) Original Papers (including Case Reports)


B) Review

C) Publications
D) Other Publications

E) Presentation at Scientific Meeting

1: The Present Situation of Managing a Hospital Information System in Japan and the Credibility of its Patient Data: H TSUKUMA, M IKEUCHI, T TANAKA and K ISHIKAWA: The Liaison Conference of Information Management Departments in University Hospitals 2012” (Matsuyama), 2012.

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

(5) Academic Awards, etc.

(6) Patents

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