

**Division of Oral Maxillofacial Surgery**  
**Department of Human Biology and Pathophysiology**

**Outline**

We educate the broad knowledge and basic skills for oral and maxillofacial surgery, mainly concerning the diagnostic procedure, treatment technique and the perioperative patient management. We also provide postgraduate courses of both basic and clinical research nature.

The Oral and Maxillofacial Surgery Clinic treat with removal of wisdom teeth and management of facial trauma, facial deformity, temporo-mandibular joint disease, oral mucosal disease, benign and malignant tumors and dental implants.

**Faculty members**

Professor;	Hiroki NAGAYASU, D.D.S., Ph.D.
Assistant professor/full-time lecture;	Yasuhito MINAMIDA, D.D.S., Ph.D. Fumiya HARADA, D.D.S., Ph.D.
Assistant professor/research associate;	Tomoya SASAKI, D.D.S., Ph.D. Yunosuke OKADA, D.D.S., Ph.D.
Clinical instructor;	Marie WAKABAYASHI, D.D.S.
Clinical assistant;	Ryo YANAGISAWA, D.D.S.
Post-graduate student;	Yoshiatsu TANAKA, D.D.S. Shinnosuke YAMASHITA, D.D.S.



Hiroki NAGAYASU



Yasuhito MINAMIDA



Fumiya HARADA



Tomoya SASAKI



Yunosuke OKADA



Marie WAKABAYASHI



Ryo YANAGISAWA

## Main research in progress

- 1) Development of Bone Regeneration Materials
- 2) Bone induction using bio-gradation and bio-absorption of functionally graded apatites
- 3) Enhancement of tumor progression by genomic instability
- 4) Inhibition of tumor cell invasion by modifying cell to cell contact
- 5) Dental implants and alveolar bone augmentation.

## Current publications (2020-2023)

- Morikawa T, Uehara O, Paudel D, Yoshida K, **Harada F**, Hiraki D, Sato J, Matsuoka H, Kuramitsu Y, Michikawa M, Abiko Y. Systemic Administration of Lipopolysaccharide from *Porphyromonas gingivalis* Decreases Neprilysin Expression in the Mouse Hippocampus. *In Vivo*. 2023 Jan-Feb;37(1):163-172. doi: 10.21873/invivo.13065. PMID: 36593043; PMCID: PMC9843806.
- 森川 哲郎, 中本 規裕, 杉山 のどか, 平木 大地, **原田 文也**, 植原 治, 古市 保志, 安彦 善裕. NAFLD モデルマウスの口腔内および腸内細菌叢に対するホップの影響. 北海道医療大学歯学雑誌 = The Dental Journal of Health Sciences University of Hokkaido 2022;41:1-12.
- Aya Onishi, Koki Yoshida, Tetsuro Morikawa, Durga Paudel, Shuhei Takahashi, Ariuntsetseg Khurelchuluun, Dedy Ariwansa, **Fumiya Harada**, Osamu Uehara, Yoshihito Kurashige, Yoshihiro Abiko. Induction of Periodontal Ligament-like Cells by Coculture of Dental Pulp Cells, Dedifferentiated Cells Generated from Epithelial Cell Rests of Malassez, and Umbilical Vein Endothelial Cells. *Journal of Endodontics*, Volume 48, Issue 11, Pages 1387-1394, 2022. ISSN 0099-2399.
- Sugiyama, N., Uehara, O., Morikawa, T. Paudel, D., Ebata, K., Hiraki, D., **Harada, F.**, Yoshida, K., Kato, S., Nagasawa, T., Miura, H., Abiko, Y., Furuichi, Y. *et al.* Gut flora alterations due to lipopolysaccharide derived from *Porphyromonas gingivalis*. *Odontology* (2022).
- Uehara O, Abiko Y, Nagasawa T, Morikawa T, Hiraki D, **Harada F**, Kawano Y, Toraya S, Matsuoka H, Paudel D, Shimizu S, Yoshida K, Asaka M, Furuichi Y, Miura H. Alterations in the oral microbiome of individuals with a healthy oral environment following COVID-19 vaccination. *BMC Oral Health*. 2022 Mar 3;22(1):50. doi: 10.1186/s12903-022-02093-6. PMID: 35241064; PMCID: PMC8892109.
- **Harada F**, Abiko Y, Khurelchuluun A, Yoshida K, Takeda S, Nakayama E, Shimo T, **Nagayasu H**. Intraosseous clear cell mucoepidermoid carcinoma in the maxilla: A case report and review of literature. *Clin Case Rep*. 2021 Jul 23;9(7):e04447. doi: 10.1002/ccr3.4447. PMID: 34322244; PMCID: PMC8299266.
- Kuhara, Keisuke & Kitagawa, Takao & Baron, Byron & Tokuda, Kazuhiro & Sakamoto, Kazuhiko & Nagano, Hiroaki & Nakamura, Kazuyuki & Kobayashi, Masanobu & **Nagayasu, Hiroki** & Kuramitsu, Yasuhiro. Proteomic Analysis of Hepatocellular Carcinoma Tissues With Encapsulation Shows Up-regulation of Leucine Aminopeptidase 3 and Phosphoenolpyruvate Carboxykinase 2. *Cancer genomics & proteomics*. 18 (2021). 307-316. 10.21873/cgp.20261.
- Elsayed N, Shimo T, **Harada F**, Hiraki D, Tashiro M, Nakayama E, Abiko Y, **Nagayasu H**. A challenging diagnosis of a mucocele in the maxillary gingiva: Case report and literature review. *Int J Surg Case Rep*. 2021 Jul;84:106030. doi: 10.1016/j.ijscr.2021.106030. Epub 2021 May 26. PMID: 34167072; PMCID: PMC8239459.
- Yoshida K, Uehara O, Kurashige Y, Paudel D, Onishi A, Neopane P, Hiraki D, Morikawa T, **Harada F**, Takai R, Sato J, Saitoh M, Abiko Y. Direct reprogramming of epithelial cell rests of malassez into mesenchymal-like cells by epigenetic agents. *Sci Rep*. 2021 Jan 20;11(1):1852. doi: 10.1038/s41598-020-79426-4. PMID: 33473142; PMCID: PMC7817677.
- Elsayed N, Shimo T, **Harada F**, Takeda S, Hiraki D, Abiko Y, Nakayama E, **Nagayasu H**. Masticatory muscle tendon-aponeurosis hyperplasia diagnosed as temporomandibular joint disorder: A case report and review of literature. *Int J Surg Case Rep*. 2021 Jan;78:120-125. doi: 10.1016/j.ijscr.2020.11.150. Epub 2020 Dec 2. PMID: 33340978; PMCID: PMC7750134.
- Hiraki D, Uehara O, Kuramitsu Y, Morikawa T, **Harada F**, Yoshida K, Akino K, Chiba I, Asaka M, Abiko Y. *P. gingivalis* Lipopolysaccharide Stimulates the Upregulated Expression of the Pancreatic Cancer-Related Genes Regenerating Islet-Derived 3 A/G in Mouse Pancreas. *Int J Mol Sci*. 2020 Oct 5;21(19):7351. doi: 10.3390/ijms21197351. PMID: 33027970; PMCID: PMC7583020.
- Yutaka Kawano, Jun-ichi Yoshida, Masahiro Asaka, **Fumiya Harada**, Takeo Maida, Tomofumi Kawakami, Yuichiro Eguchi. Retrospective investigation of cases with hepatitis virus infection and liver injury in dental oral surgery. *Kanzo* 2020; 61: 527—530. Online ISSN: 1881-3593 . DOI: <https://doi.org/10.2957/kanzo.61.527>.
- 小池 一, 椎葉 正, 鎌田 孝, 中原 寛, 磯村 恵, 濱田 傑, 日野 聡, 山森 郁, 大林 由, 日比 英, 黒川 亮, 平石 幸, 大橋 伸, 松尾 浩, 野口 忠, 山本 俊, 山縣 憲, 飯久保 正, **南田 康**, 住友 伸, 大森 実, 藤澤 健, 三條 祐, 橋本 憲, 篠原 光, 富永和, 畠山 大, 丹沢 秀, 栗田 浩, 藤田 茂. 総合病院入院患者の歯科口腔保健に関する全国調査—口腔内の現状と口腔機能管理に関する意識調査—. *日本口腔科学会雑誌*, 69: 179-189, 2020. DOI: <https://doi.org/10.11277/stomatology.69.179>. ISSN: 2185-0461.
- Uehara O, Hiraki D, Kuramitsu Y, Matsuoka H, Takai R, Fujita M, **Harada F**, Paudel D, Takahashi S, Yoshida K, Muthumala M, **Nagayasu H**, Chiba I, Abiko Y. Alteration of oral flora in betel quid chewers in Sri Lanka. *J Microbiol Immunol Infect*, 2020 Jun 27;S1684-1182(20)30150-X. DOI: 10.1016/j.jmii.2020.06.009. ISSN/eISSN: 1684-1182/1995-9133.
- Islam, S., Uehara, O., Matsuoka, H., Kuramitsu, Y., Adhikari, B.R., Hiraki, D., Toraya, S., Jayawardena, A., Saito, I., Muthumala, M., **Nagayasu, H.**, Abiko, Y., Chiba, I. DNA hypermethylation of sirtuin 1 (SIRT1) caused by betel quid chewing - A possible predictive biomarker for malignant transformation. *Clinical Epigenetics*. 12 (1), 2020. DOI: 10.1186/s13148-019-0806-y.
- Toraya S, Uehara O, Hiraki D, **Harada F**, Neopane P, Morikawa T, Takai R, Yoshida K, Matsuoka H, Kitaichi N, Chiba I, Abiko Y. Curcumin inhibits the expression of proinflammatory mediators and MMP-9 in gingival epithelial cells stimulated for a prolonged period with lipopolysaccharides derived from *Porphyromonas gingivalis*. *Odontology*. 2020 Jan;108(1):16-24. doi: 10.1007/s10266-019-00432-8. Epub 2019 May 13. PMID: 31087163.
- Karnoon Shamsoun, **Fumiya Harada**, Shintaro Yodogawa, Shigehiro Takeda, Saki Fujii, Yoshihiro Abiko, Eiji Nakayama, Takashi Saito, **Hiroki Nagayasu**, Tsuyoshi Shimo. Asymptomatic submandibular giant calculus left for 24 years: A case report. *Surg Rehabil*, Volume 4: 2-4 (2020). DOI: 10.15761/SRJ.1000163
- Tsuyoshi Shimo, **Fumiya Harada**, Kazuhiro Miyamoto, Tatsuji Odachi, Masahiro Ishikawa, Karnoon Shamsoun, Takashi Saito, Tomofumi Kawakami, Yoshihiro Abiko, Eiji Nakayama and **Hiroki Nagayasu**. Tooth extraction in a patient with juvenile osteoporosis and cardiovascular disease. *Surg Rehabil*. Volume 4: 1-3, 2020. DOI:10.15761/SRJ.1000162.