

Division of Periodontology and Endodontology Department of Oral Rehabilitation

Outline

The main educational courses of this department are Periodontology and Endodontics in the School of Dentistry and Graduate School of Dentistry. Members of the department are mainly responsible for the treatment of periodontal disease, pulp disease, and apical periodontitis based on a comprehensive treatment plan from diagnosis of etiology to surgery, prosthodontics, and orthodontics. Related basic and clinical research is also conducted as listed in the "main research in progress" section.

In addition to the outpatient training, the department holds weekly meetings for paper abstracts and case presentations as an opportunity to acquire the latest knowledge and treatment methods. In addition, this division is a training facility for the certification system of the Japanese Society of Periodontology (periodontist/specialist: a certification system conducted by the Japanese Society of Periodontology under the approval of the Ministry of Health, Labor and Welfare), and participation in abstract reading sessions and case review meetings is accepted as credit for this system. After a minimum of three years of training and the acquisition of the prescribed credits, certified periodontists must pass a written examination and case material review, while specialist periodontists must pass a case material review and oral examination.

Faculty members

Professor

Toshiyuki NAGASAWA, D.D.S., Ph.D.

Associate Professor

Takashi KADO, D.D.S., Ph.D. (concurrent position)

Assistant Professor/full-time lecturer

Satsuki KATO, D.D.S., Ph.D.

Mari MORI, D.D.S., Ph.D. (concurrent position)

Assistant Professor/research associate

Shintaro SHIMIZU, D.D.S., Ph.D

Kohei SATO, D.D.S., Ph.D

Nodoka SUGIYAMA, D.D.S., Ph.D

Clinical instructor

Yukichi OKADA, D.D.S., Ph.D

Yoshiki FUJIMOTO, D.D.S., Ph.D

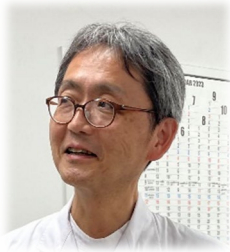
Sho HIROSE, D.D.S.

Graduate student

Norihiro NAKAMOTO, D.D.S.

Professor

Yasushi FURUICHI, D.D.S., Ph.D. (concurrent position)



T. Nagasawa



S. Kato



S. Shimizu



K. Sato



N. Sugiyama



Y. Okada



Y. Fujimoto



S. Hirose



N. Nakamoto



T. Kado



M. Mori

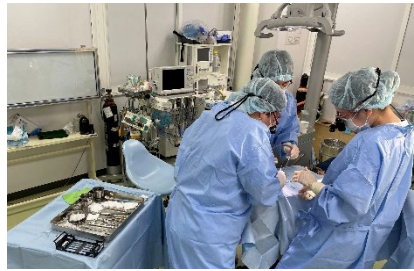


Y. Furuichi

Activities



Education (with pig jaws)



Clinic (Periodontal surgeries)



Research & Clinical discussion

Main research in progress

- 1) Association between periodontal disease/treatment and systemic health.
- 2) Periodontal regeneration using growth factors and somatic stem cells.
- 3) Application of surface modification technology to enhance the functions of dental materials and devices.
- 4) Development of mouth rinses/dentifrices containing plant extracts.
- 5) Roles of various microorganisms in the pathogenesis of periodontal disease.
- 6) Roles of genetics and aging in the pathogenesis of periodontal disease.
- 7) Development of materials enhancing the efficacy of endodontic treatments.
- 8) Pathogenesis and treatments of the Peri-implant diseases.

Current publications

1. Sugiyama N, Uehara O, Kawano Y, Paudel D, Morikawa T, Nakamoto N, Kato S, Takayama T, Nagasawa T, Miura H, Abiko Y, Furuichi Y. Ingenuity pathway analysis of gingival epithelial cells stimulated with estradiol and progesterone. *J Oral Biosci*, doi:10.1016/j.job.2023.11.002. Epub 2023 Nov 8.
2. Giri S, Uehara O, Takada A, Paudel D, Morikawa T, Arakawa T, Nagasawa T, Abiko Y, Furuichi Y. The effect of *Porphyromonas gingivalis* on the gut microbiome of mice in relation to aging. *J Periodontal Res*. 2022. 57(6):1256-1266.
3. Divaris K, Haworth S, Shaffer JR, Anttonen V, Beck JD, Furuichi Y, et al. Phenotype Harmonization in the GLIDE2 Oral Health Genomics Consortium. *J Dent Res*. 2022. 57(6):1256-1266.
4. Kato S, Nagasawa T, Uehara O, Shimizu S, Sugiyama N, Hasegawa-Nakamura K, Noguchi K, Hatae M, Kakinoki H, & Furuichi Y. Increase in *Bifidobacterium* is a characteristic of the difference in the salivary microbiota of pregnant and non-pregnant women. *BMC Oral Health* 2022, 22(1):260.
5. Sugiyama N, Uehara O, Morikawa T, Paudel D, Ebata E, Hiraki D, Harada F, Yoshida K, Kato S, Nagasawa T, Miura H, Abiko Y, Furuichi Y. Gut flora alterations due to lipopolysaccharide derived from *Porphyromonas gingivalis*. *Odontology* 2022. 110(4):673-681
6. Urangoo S, Kado T, Nezu T, Nagano-Takebe F, Endo K, Furuichi Y. Surface analysis of titanium disks with strontium coating. *Dent Mater J*. 2022, 41(2): 273-278.
7. Giri S, Takada A, Paudel D, Yoshida K, Furukawa M, Kuramitsu K, Matsushita K, Abiko Y, Furuichi Y. An *in vitro* senescence model of gingival epithelial cell induced by hydrogen peroxide treatment. *Odontology* 2021, 110(1):44-53
8. Xiong, B, Shirai K, Matsumoto K, Abiko Y, Furuichi Y. The potential of a surface pre-reacted glass root canal dressing for treating apical periodontitis in rats. *Int Endod J* 2021 Feb;54(2):255-267.
9. Ichioka Y, Kado T, Aita H, Nezu T, Furuichi Y, Endo K. In vitro evaluation of NaOCl-mediated functionalization of biologically aged titanium surfaces. *Dent Mater J*. 2021 Jan 31;40(1):74-83.
10. Figuero E, Han YH, Furuichi Y. Periodontal diseases and adverse pregnancy outcomes: Mechanisms. *Periodontol* 2000. 2020 Jun;83(1):175-188.
11. Ichioka Y, Kado T, Mashima I, Nakazawa F, Endo K, Furuichi Y. Effects of chemical treatment as an adjunctive of air-abrasive debridement on restoring the surface chemical properties and cytocompatibility of experimentally contaminated titanium surfaces. *J Biomed Mater Res B Appl Biomater*. 2020 Jan;108(1):183-191.
12. Shungin D, et al. Genome-wide analysis of dental caries and periodontitis combining clinical and self-reported data. *Nat Commun*. 2019 Jun 24;10(1):2773. doi: 10.1038/s41467-019-10630-1.
13. Kado T, Aita H, Ichioka Y, Endo K, Furuichi Y. Chemical modification of pure titanium surfaces to enhance the cytocompatibility and differentiation of human mesenchymal stem cells. *Dent Mater J*. 2019 Dec 1;38(6):1026-1035. doi: 10.4012/dmj.2018-257