# Division of Periodontology and Endodontology
# Department of Oral Rehabilitation

**Outline**

Major subjects we are responsible for in the undergraduate and postgraduate education are Periodontology and Endodontology. Our staffs treat patients suffering mostly from periodontal diseases, pulp diseases and periapical lesions, especially patients with severe periodontitis to whom multidisciplinary approach including periodontal, endodontic, orthodontic, and prosthodontic treatments is required. Our division has been performing basic as well as clinical research on the topics listed below.

A series of seminars and case presentations take place at a weekly basis so that the residents in the division can obtain fundamental as well as up-dated knowledge and skills for treating patients with advanced periodontitis. Our division is certified as the training institution for the JSP Board Certified Periodontist/JSP Certified Periodontist, both certified by the Japanese Society of Periodontology (JSP) and can issue credits for those who attend the seminars and presentations. Three- or five-years training in a certified institution with the corresponding credits are mandatory followed by the written examination and evaluation of documentation of a treated patient for JSP certified periodontist and documentations and a case presentation of the treated cases for the JSP Board certified periodontist.

**Faculty members**

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| Professor; | Yasushi FURUICHI, D.D.S., Ph.D. |
| | Toshiyuki NAGASAWA, D.D.S., Ph.D. (concurrent position) |
| Assistant Professor/Lecturer; | Mari MORI, D.D.S., Ph.D. (concurrent position) |
| | Satsuki KATO, D.D.S., Ph.D. |
| Associate Professor; | Takashi KADO, D.D.S., Ph.D. (concurrent position) |
| Assistant Professor/Research Associate; | Shintaro SHIMIZU, D.D.S., Ph.D. |
| | Kousei MATSUMOTO, D.D.S., Ph.D. |
| | Kanako SHITOMI, D.D.S., Ph.D. |
| Clinical Instructor | Syunsuke YANASE, D.D.S., Ph.D. |
| | Shiika NAKAGAWA, D.D.S |


Y. Furuichi


T. Nagasawa


M. Mori


S. Kato


T. Kado


S. Shimizu


K. Matsumoto


K. Shitomi


S.Yanase


S. Nakagawa

Postgraduate Students;
Sarita GIRI, D.D.S.
Yoshiki FUJIMOTO, D.D.S.
Hiroshi NAKAGAWA, D.D.S.
Yukichi OKADA, D.D.S.
Kazuma EBATA, D.D.S.
Nodoka SUGIYAMA, D.D.S.

**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**


* 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. doi: 10.1111/iej.13414.

* 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. doi: 10.4012/dmj.2019-358.

* Figuero E, Han YH, Furuichi Y. Periodontal diseases and adverse pregnancy outcomes: Mechanisms. Periodontol 2000. 2020 Jun;83(1):175-188. doi: 10.1111/prd.12295.

* 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. doi: 10.1002/jbm.b.34377.

* 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.

* 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