

Periodontology

1. Staffs and Students (April, 2010)

Professor	Yuichi IZUMI	
Associate Professor	Hisashi WATANABE	
Lecturer	Shigeru ODA,	Satsuki HAGIWARA
Research Associate	Makoto UMEDA, Akira AOKI, Yasuo TAKEUCHI	Shinichi ARAKAWA, Hiroaki KOBAYASHI,
GCOE AI Supper Students	Amodini G RAJAKARUNA, Akiko HIMENO, Hiromi NANBARA, Yuka TSUMANUMA, Mayumi OGITA	Takafumi SUZUKI, Bharti PARIKSHA, Azusa YAMADA, Chui CHANTHOEUN,
Graduate Students	Aslam AL MEHDI, Chie KOBAYASHI, Tatsuro KOYANAGI, Sae HAYAKUMO, Masanori SAWABE, Kaori FUJIWARA, Yasuo ITO, Ye CHANGCHANG, Yuichi IKEDA, Yoko SHIMIZU, Norihiko ASHIGAKI, Akiko TSUNO, Supreda SUPHANANTACHAT	Norio AOYAMA, Chihiro HARUTA, Yoichi TANIGUCHI, Marika TAKAHASHI, Naho KOBAYASHI, Tomoya HANATANI, Kenichiro EJIRI, Asuka YOSHIDA, Yasuyuki KIMURA, Akiko ENDO, Noriko MARUYAMA, Takahiko SHIBA,

Hospital Staff: 6, Research Student: 22, Registered dentist: 28

2. Purpose of Education

Periodontology is a branch of dental science which deals with supporting structures of teeth, diseases and conditions affect them. Main objectives of periodontology in the graduate course is to provide students basic knowledge of etiology of periodontal diseases, its treatment modality and prognosis, and also to study advanced regenerative therapy.

3. Research Subjects

- 1) Periodontopathic bacteria and their pathogenicity
- 2) Inflammatory and immunological factors in periodontal disease
- 3) Analyses of growth factors and bio materials in periodontal regeneration
- 4) Clinical applications of laser in periodontics
- 5) Influence of periodontal disease on general health

4. Clinical Services

Periodontal clinic provides diagnosis, treatment and prevention of periodontal disease. Periodontal surgery and regenerative therapy are also performed in the clinic.

5. Publications

Original Article

1. Aleksic V, Aoki A, Iwasaki K, Takasaki AA, Wang C-Y, Abiko Y, Ishikawa I, Izumi Y. Low-level Er:YAG laser irradiation enhances osteoblast proliferation through activation of MAPK/ERK. *Lasers Med Sci* 25(4):559-569, 2010.
2. Fujimura M, Calenic B, Yaegaki K, Murata T, Ii H, Imai T, Sato T, Izumi Y. Oral malodorous compound activates mitochondrial pathway inducing apoptosis in human gingival fibroblasts. *Clin Oral Invest* 14:367-373, 2010.
3. Katagiri S, Nitta H, Nagasawa T, Izumi Y, Kanazawa M, Matsuo A, Chiba H, Miyazaki S, Miyauchi T, Nakamura N, Kanamura N, Ando Y, Hanada N, Inoue S. High prevalence of periodontitis in non-elderly obese Japanese adults.

Obesity Res Clin Pract 4:e301-e306, 2010.

4. Koyanagi T, Sakamoto M, Takeuchi Y, Ohkuma M, Izumi Y. Analysis of microbiota associated with peri-implantitis using 16S rRNA gene clone library. *J Oral Microbiol* 2:51-54, 2010.
5. Onishi H, Arakawa S, Nakajima T, Izumi Y. Levels of specific immunoglobulin G to the forsythia detaching factor of *Tannerella forsythia* in gingival crevicular fluid are related to the periodontal status. *J Periodont Res* 45:672-680, 2010.

Review Article

1. Aleksic V, Aoki A, Iwasaki K, Takasaki AA, Wang CY, Abiko Y, Ishikawa I, Izumi Y. Low-level Er:YAG laser irradiation enhances osteoblast proliferation through activation of MAPK/ERK. *J Laser Dent* 18(2):57-58, 2010.
2. Iimura T, Himeno A, Nakane A, Yamaguchi A. Hox genes, a molecular constraint for the development and evolution of the vertebrate body plan. *J Oral Biosci* 52(2):155-163, 2010.
3. Nagasawa T, Noda M, Katagri S, Takahashi Y, Takaichi M, Wara-Aswapati N, Kobayashi H, Ohara S, Kawaguchi Y, Tagami T, Furuichi Y, Izumi Y. Relationship between periodontitis and diabetes —Importance of a clinical study to prove the vicious cycle. *Internal Med* 49(10):881-885, 2010.

Book

1. Ishikawa I, Aoki A, Takasaki AA. Lasers in periodontics. In: Consulelo VM, Claudia C (Eds), Lasers in dentistry. Edizioni Martina, Bologna, Italy, 2010, 163-176.