

Division of Fixed Prosthodontics and Oral Implantology

Department of Oral Rehabilitation

Outline

Fixed Prosthodontics and Oral Implantology is at the forefront of developing materials for computerized fabrication of restorations. Our faculty have developed new concepts and techniques for analyzing the interaction between biomaterials and cells at the molecular and genetic levels. We have strategically positioned ourselves to create, analyze, and test novel implant materials for tissue replacement and prosthetic therapy. Integrated graduate programs are available for qualified students to combine their clinical specialty certificate programs with tissue engineering and biomaterials research.

Faculty members

Professor; Morio Ochi, D.D.S., Ph.D.

Professor (concurrent post); Takeo Maida, D.D.S., Ph.D.

Associate professor; Yukito Hirose, D.D.S., Ph.D.

Assistant professor/full-time lecturer; Yasuhiro Nakanishi, D.D.S., Ph.D.

Assistant professor/research associate (concurrent post); Yoshiteru Kannari, D.D.S., Ph.D.

Assistant professor/research associate; Kazuyo Nakanishi, D.D.S., Ph.D.

Assistant professor/research associate; Kanetaka Yamaguchi, D.D.S., Ph.D.

Clinical instructor; Tetsuro Yamada, D.D.S.

Clinical instructor; Susumu Mikami, D.D.S.

Postgraduate students

Masahiro Yamanaka, D.D.S.



Masahiro YAMANAKA

Main research in progress

- 1) Bone repair by using Electromagnetic field, Low-intensity pulsed ultrasound and Noninvasive capacitively coupled electric fields
- 2) Surface modification of implant materials
- 3) Bone-inducing factor delivery for Tissue Engineering
- 4) Application of glass fiber reinforced polymer materials and ceramic materials for dental restoration
- 5) Development of antimicrobial dental cements
- 6) The influence of the implant positioning and superstructure design on stress distribution around the implant using three-dimensional finite element analysis
- 7) Association between job-related stress and dental status for middle-aged worker

Current publications

- Effect of low intensity pulsed ultrasound stimulation on sinus augmentation in rabbits, Takebe H., Nakanishi Y., Hirose Y., Ochi M., Clin Oral Implants Res 2014; 25, 735 -741.