

Division of Anatomy

Department of Oral Growth and Development

Outline

For the appropriate mastication and intake of food, not only the tooth itself, periodontal tissue, such as cementum, periodontal ligament, alveolar bone and gum, should be healthy. In the Division of Anatomy, we are concerned to elucidate the process of development and regeneration of periodontal tissue, using the morphological approach such as fine structural examination and immunohistochemistry with a light and an electron microscope. Our ongoing research is shown below.

Faculty members

Professor; Kazuharu IRIE, D.D.S., Ph.D.

Assistant professor; Toru SHIBUI D.D.S., Ph.D.

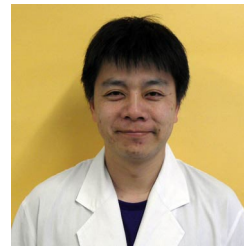
Assistant professor; Masami TAKAHASHI D.D.S., Ph.D.



Kazuharu IRIE



Toru SHIBUI



Masami TAKAHASHI

Postgraduate students

Main research in progress

Hard tissue biology and periodontal tissue regeneration including

- 1) The role of osteocyte in bone remodeling
- 2) The role of non-collagenous proteins in dentin and bone mineralization
- 3) Regeneration of periodontal tissue during dental implant and dental transplant

Current publications

- * Shibui T, (Takahashi M, Irie K) et al. Effect of the enamel protein on the periodontium regeneration around the hydroxyapatite granule which implanted in the extraction socket. *Dent J Health Sci Univ Hokkaido* 40(1):29-36, 2021 (in Japanese)
- * Takebe H, (Irie K) et al. Localization of Bmi1 in osteoblast-lineage cells during endochondral ossification. *Anat Rec* 305(5):1112-1118, 2021 DOI org/10.1002/ar.24693
- * Takahashi M, (Shibui T) et al. Control of Survival by Hypoxia-Inducing Factors through Glucose Transporters, Monocarboxylate Transporters and Autophagy in Chondrocytes of Developing Mouse Tibias. *Dent J Health Sci Univ Hokkaido* 39(2):7-16, 2020
- * Shibui T, (Irie K) et al. Architecture of connective tissue regenerated by enamel matrix derivative around hydroxyapatite implanted into tooth extraction sockets in the rat maxilla. *Anat Sci Int*, 95:334-341, 2020 DOI: 10.1007/s12565-020-00526-2
- * Takebe H, (Irie K) et al. Sonic hedgehog regulates bone fracture healing. *Int.J.Mol.Sci*, 21(2);677, 2020 DOI: 10.3390/ijms21020677