

ORTHOPAEDIC SURGERY

Principal Investigator

Professor Masashi YAMAZAKI M.D., Ph.D.

URL <http://tsukuba-seikei.jp>



Other Faculty Members:

Professor:

Shumpei MIYAKAWA M.D., Ph.D.

Yasushi HADA M.D., Ph.D.

Yasumasa NISHIURA M.D., Ph.D.

Associate Professor:

Hajime Mishima M.D., Ph. D.

Masao KODA M.D., Ph.D.

Takeshi OGAWA M.D., Ph.D.

Takeo MANMOTO M.D., Ph.D.

Tomokazu YOSHIOKA M.D., Ph.D.

Hisashi SUGAYA M.D., Ph.D.

Assistant Professor:

Akihiro KANAMORI M.D., Ph.D.

Hiroshi KAMADA M.D., Ph.D.

Daisuke NOZAWA M.D., Ph.D.

Tetsuya ABE M.D., Ph.D.

Tomofumi NISHINO M.D., Ph.D.

Yuki HARA M.D., Ph.D.

Toru FUNAYAMA M.D., Ph.D.

Yoshiko NAKAJIMA M.D., Ph.D.

Masaki TATSUMURA M.D., Ph.D.

Hiroshi WADA M.D., Ph.D.

Yuta TSUKAGOSHI M.D., Ph.D.

Yohei TOMARU M.D.

Norihito ARAI M.D.

Shigeki KUBOTA Ph.D.

Clinical assistant professor:

Hiroshi NOGUCHI M.D., Ph.D.

Shinzo ONISHI M.D., Ph.D.

Yukiyo SHIMIZU M.D., Ph.D.

Yukei MATSUMOTO M.D.

Yohei YANAGISAWA M.D., Ph.D.

Kousei MIURA M.D., Ph.D.

Katsuya NAGASHIMA M.D.

Hideki KADONE Ph.D.

Major Scientific Interests of the Group

1. Regenerative medicine and neuroprotective treatment for spinal cord injury.
Basic research and clinical trials for spinal cord injury (cell therapy and drug therapy)

2. Rehabilitation therapy using robotic devices (robot suit Hybrid Assistive Limb (HAL) [®]) for spinal cord lesions, various kinds of spinal disorder, joint diseases and peripheral nerve palsies. Clinical trials and basic research including myoelectric and motion analysis
3. Development of new diagnostic imaging
Dynamic digital tomosynthesis, Diffusion tensor imaging MRI, functional MRI
4. Development of new medical biomaterials in orthopaedic surgery
Basic and clinical research of unidirectional porous β -tricalcium phosphate
Basic and clinical research for combination device (biological and biomaterial): Fibroblast growth factor-2-apatite composite layer coating on screws and external fixation pins
5. Regenerative medicine for bone, cartilage and ligaments of joints
Basic and clinical research of autologous concentrated bone marrow grafting for osteonecrosis and nonunion and intra-articular platelet-rich plasma (PRP) injections for the treatment of osteoarthritis of the knee
6. Research for the elongation of the peripheral nerve
7. Novel treatments in sports medicine
Extra-corporeal shock wave for enthesopathies, platelet rich plasma for tendon/ligament repair