



**1st Day October 14 Room 2**

**9 : 00~10 : 00 Instructional lecture 1 Moderator K. Shimizu**

- 1-2-EL1 Ferritin can be transferred from macrophages to NG2 cells *in vivo* and can induce new oligodendrocyte formation in the adult spinal cord  
 .....*D.M. McTigue, et al.*, Dept. of Neuroscience, Ohio State Univ., Columbus, OH, USA...S1025

**10 : 10~12 : 00 Panel discussion 1  
 Update on translational basic research-2: Spinal cord Moderators H. Baba, T. Taguchi**

- 1-2-P1-1 Regenerative medicine for spinal cord injury using stem cell transplantation  
 .....*M. Nakamura, et al.*, Dept. of Orthop. Surg., Keio Univ...S1026
- 1-2-P1-2 Therapeutic effects of granulocyte colony-stimulating factor (G-CSF) for spinal cord injury  
 .....*M. Koda, et al.*, Dept. of Orthop. Surg., Chiba Aoba Municipal Hosp...S1026
- 1-2-P1-3 Original approach for spinal cord regeneration mediated by vascular niche  
 .....*N. Kamei, et al.*, Dept. of Orthop. Surg.,  
 Graduate School of Biomedical Sciences, Hiroshima Univ...S1027
- 1-2-P1-4 Oligodendrocyte progenitor cells as a therapeutic target in spinal cord injury  
 .....*T. Ogata, et al.*, National Rehabilitation Center...S1027
- 1-2-P1-5 Endoplasmic reticulum stress response in the apoptosis after the spinal cord injury  
 .....*M. Watanabe, et al.*, Dept. of Orthop. Surg., Tokai Univ...S1028

**12 : 35~13 : 35 Luncheon seminar 1 Moderator C. Hamanishi**

- 1-2-LS1 New concept for backache: Biopsychosocial pain syndrome  
 .....*S. Kikuchi*, Fukushima Medical Univ...S1029

**13 : 50~15 : 20 Panel discussion 2  
 Update on translational basic research-1-1: Articular cartilage, bone and intervertebral disc  
 (before announcement of human stem cell guideline) Moderator M. Ochi**

- 1-2-P2-1 Bone and cartilage repair with bone marrow mesenchymal cell transplantation  
 .....*S. Wakitani, et al.*, Dept. of Orthop. Surg., Osaka City Univ.  
 Graduate School of Medicine...S1030
- 1-2-P2-2 Second generation autologous chondrocyte implantation for cartilage regeneration  
 .....*N. Adachi, et al.*, Dept. of Orthop. Surg.,  
 Graduate School of Biomedical Sciences, Hiroshima Univ...S1030
- 1-2-P2-3 Development of cartilage regeneration therapy with synovial mesenchymal stem cells  
 .....*I. Sekiya, et al.*, Cartilage Regeneration, Tokyo Medical and Dental Univ...S1031
- 1-2-P2-4 Novel bone tissue engineering technology based on our clinical cases  
 .....*H. Ohgushi, et al.*, National Institute of Advanced Industrial  
 Science and Technology (AIST)...S1031

**15 : 30~16 : 40 Panel discussion 3  
 Update on translational basic research-1-2: Articular cartilage, bone and intervertebral disc  
 (after announcement of human stem cell guideline) Moderator J. Toguchida**

- 1-2-P3-1 Cell transplantation therapy for intervertebral disc regeneration: Progress in clinical trial and basic research.....*D. Sakai, et al.*, Dept. of Orthop. Surg., Tokai Univ...S1032
- 1-2-P3-2 Repair of bone defect using cultured bone grafts derived from mesenchymal stem cells for bone tumors and tumor-like lesions.  
 .....*Y. Yoshimura, et al.*, Dept. of Orthop. Surg., Shinshu Univ...S1032

- 1-2-P3-3 Clinical trial for osteonecrosis using autologous mesenchymal stem cells  
 .....*T. Aoyama, et al.*, Dept. of Orthop. and Musculoskeletal Surg.,  
 Graduate School of Medicine, Kyoto Univ.···S1033

**1st Day October 14 Room 3**

**9 : 00~10 : 00 Free papers 1 Osteoclast • osteoblast Moderator S. Ichimura**

- 1-3-1 IRAK4-p38 signal is a therapeutic target for implant failure  
 .....*H. Miyamoto, et al.*, Dept. of Orthop. Surg., Keio Univ.···S1034
- 1-3-2 The transcriptional repressors Blimp1-Bcl6 axis regulates osteoclastogenesis and bone homeostasis  
 .....*T. Miyamoto, et al.*, Dept. of Orthop. Surg., Keio Univ.···S1034
- 1-3-3 Association of G2 arrest in bone marrow cells and reduced bone formation in alcohol-induced osteopenia in aldehyde dehydrogenase 2-disrupted mice  
 .....*Y. Shimizu, et al.*, Dept. of Orthop. Surg., Univ. of Occupational and Environmental Health···S1035
- 1-3-4 Synergistic effect of VIP on TNF-alpha-induced IL-6 synthesis in osteoblasts  
 .....*K. Kato, et al.*, Dept. of Orthop. Surg., Nagoya City Univ.,  
 Graduate School of Medical Sciences···S1035
- 1-3-5 Involvement of Rho-kinase in TGF-beta-stimulated heat shock protein 27 induction in osteoblasts  
 .....*C. Minamitani, et al.*, Dept. of Orthop. Surg., Nagoya City Univ.,  
 Graduate School of Medical Sciences···S1036
- 1-3-6 Rho-kinase limits FGF-2-stimulated VEGF release in osteoblasts  
 .....*H. Natsume, et al.*, Dept. of Orthop. Surg., Nagoya City Univ.,  
 Graduate School of Medical Sciences···S1036

**10 : 10~11 : 10 Free papers 2 Repair and regeneration of bone-BMP, etc. Moderator S. Soen**

- 1-3-7 Synergistic effect of BMP combined with dexamethasone on bone formation  
 .....*M. Yuasa, et al.*, Dept. of Orthop. Surg., Tokyo Medical and Dental Univ.···S1037
- 1-3-8 Reconstruction of massive bone defects using rhBMP-coated bone allograft  
 .....*H. Yasuda, et al.*, Dept. of Orthop. Surg., Osaka City Univ.···S1037
- 1-3-9 Effects of alendronate on bone formation induced by recombinant human bone morphogenetic protein-2  
 .....*S. Kitasato, et al.* Dept. of Orthop. Surg., The Jikei Univ. School of Medicine···S1038
- 1-3-10 Serum levels of VEGF, FGF-2, BMP-2 and osteocalcin in shed blood in total hip arthroplasty  
 .....*T. Yoshida, et al.*, Dept. of Orthop. Surg.,  
 Graduate School of Biomedical Sciences, Hiroshima Univ.···S1038
- 1-3-11 The effect of a gelatin beta-tricalcium phosphate sponge incorporating platelet-rich plasma on bone union: An examination using posterolateral lumbar spinal fusion model in rat  
 .....*S. Okamoto, et al.*, Dept. of Orthop., Graduate School of Medical Science,  
 Kyoto Prefectural Univ. of Medicine···S1039
- 1-3-12 Isolation of autologous platelet-rich plasma and analysis of the release of platelet-associated growth factors from preoperative autologous blood donation  
 .....*T. Nakamura, et al.*, Dept. of Musculoskeletal Surg., Mie Univ.  
 Graduate School of Medicine···S1039

**11 : 20~12 : 10 Free papers 3 Repair and regeneration of bone-cell, etc. Moderator H. Ohgushi**

- 1-3-13 Bone reconstruction using heat-treated bone with bone marrow derived stromal cells in a dog model  
 .....*H. Koyanagi, et al.*, Dept. of Orthop. Surg., Tokyo Medical and Dental Univ.···S1040

- 1-3-14 Self-reproducing potential of skeletal muscle-derived multipotent stem cell under mouse tibia fracture model: Six months of follow-up  
 .....*Y. Uchiyama, et al.*, Dept. of Orthop. Surg., Tokai Univ...S1040
- 1-3-15 The bone regeneration using bone marrow derived mesenchymal stem cell with platelet rich plasma in femoral segmental defect of rats  
 .....*J. Yamakawa, et al.*, Dept. of Orthop. Surg., Yamagata Univ...S1041
- 1-3-16 Shed blood-derived cells from total hip arthroplasty have osteoinductive potential  
 .....*T. Yoshida, et al.*, Dept. of Orthop. Surg.,  
 Graduate School of Biomedical Sciences, Hiroshima Univ...S1041
- 1-3-17 Pericellular oxygen concentration in osteoblast culture  
 .....*H. Oze, et al.*, Dept. of Orthop. Surg., Osaka Univ. Graduate School of Medicine...S1042

<b>12 : 35~13 : 35</b>	<b>Luncheon seminar 2</b>	<b>Moderator K. Satomi</b>
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- 1-3-LS2-1 Epidemiology and biostatistics in clinical research  
 .....*Y. Nishiwaki*, Dept. of Preventive Medicine & Public Health, Keio Univ...S1043
- 1-3-LS2-2 Pathomechanisms of intervertebral disc degeneration  
 .....*K. Chiba*, Dept. of Orthop. Surg., Keio Univ...S1043

<b>13 : 50~15 : 00</b>	<b>Free papers 4 Spinal cord injury: Transplantation therapy</b>	<b>Moderator M. Nakamura</b>
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- 1-3-18 Isolation and wide genome analysis of engrafted neural stem precursor cells in injured cord  
 .....*H. Kumamaru, et al.*, Dept. of Research Superstar Program Stem Cell Unit...S1044
- 1-3-19 Transplantation of human iPS cell-derived neurospheres for the treatment of spinal cord injury in NOD-scid mice  
 .....*S. Nori, et al.*, Dept. of Orthop. Surg., Keio Univ...S1044
- 1-3-20 Significance of remyelination in the functional recovery after NSPC transplantation for SCI  
 .....*A. Yasuda, et al.*, Dept. of Orthop. Surg., Keio Univ...S1045
- 1-3-21 Transplantation of activated macrophage for chronic spinal cord injury  
 .....*M. Koda, et al.* Dept. of Orthop. Surg., Chiba Aoba Municipal Hosp...S1045
- 1-3-22 Magnetic targeting of human CD133 positive cells in spinal cord injury  
 .....*Y. Fujioka, et al.*, Dept. of Orthop. Surg.,  
 Graduate School of Biomedical Sciences, Hiroshima Univ...S1046
- 1-3-23 Regenerative therapy with transplant-derived neurons for spinal cord injury  
 .....*M. Abematsu, et al.*, Dept. of Orthop. Surg.,  
 Graduate School of Medical and Dental Sciences, Kagoshima Univ...S1046
- 1-3-24 The treatment effects of bone-marrow stromal cells for spinal cord injury  
 .....*H. Nakajima, et al.*, Dept. of Orthop. Surg.,  
 Graduate School of Medical and Dental Sciences, Kagoshima Univ...S1047

<b>15 : 10~16 : 20</b>	<b>Free papers 5 Spinal cord injury: Pathology</b>	<b>Moderator Y. Matsuyama</b>
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- 1-3-25 Analytical investigation for each inflammatory component using cell sorter after spinal cord injury  
 .....*S. Okada, et al.*, Dept. of Orthop. Surg.,  
 Graduate School of Medical Sciences, Kyushu Univ...S1048
- 1-3-26 The role of infiltrating neutrophils in coagulation cascade after spinal cord injury  
 .....*H. Saiwai, et al.*, Dept. of Research SSP Stem Cell Unit,  
 Graduate School of Medical Sciences, Kyushu Univ...S1048
- 1-3-27 FTY720, a sphingosine 1-phosphate receptor agonist, improves functional outcomes after spinal cord injury  
 .....*Y. Norimatsu, et al.*, Dept. of Orthop., Jichi Medical Univ...S1049

- 1-3-28 Expression of microRNA-223 following spinal cord injury in mice  
 .....*B. Izumi, et al.*, Dept. of Orthop. Surg.,  
 Graduate School of Biomedical Sciences, Hiroshima Univ.··S1049
- 1-3-29 The role of myeloperoxidase in spinal cord injury·····*K. Kubota, et al.*, Dept. of Orthop. Surg.,  
 Graduate School of Medical Sciences, Kyushu Univ.··S1050
- 1-3-30 The role of high mobility group box-1 (HMGB-1) in spinal cord injury  
 .....*H. Nakajima, et al.*, Dept. of Orthop. and Rehabilitation Medicine, The Univ. of Fukui··S1050
- 1-3-31 Temporal changes in myelin map of graded spinal cord injury in Primates  
 .....*T. Konomi, et al.*, Dept. of Orthop. Surg., Keio Univ.··S1051

**16 : 30~17 : 10 Free papers 6 Chronic compression to spinal cord/Others**  
**Moderator M. Yamazaki**

- 1-3-32 Neuroprotective therapy using granulocyte-colony stimulating factor for five patients with rapidly aggravating compression myelopathy  
 .....*T. Sakuma, et al.*, Dept. of Orthop. Surg., Graduate School of Medicine, Chiba Univ.··S1052
- 1-3-33 The effect of prolyl hydroxylases (PHD) inhibitor for chronic compression of the spinal cord in rats······*K. Suyama, et al.*, Dept. of Orthop. Surg., Tokai Univ.··S1052
- 1-3-34 The roles of macrophage in the chronic compressed spinal cord model (*twy/twy*)  
 .....*T. Hirai, et al.*, Dept. of Orthop. and Rehabilitation Medicine, The Univ. of Fukui··S1053
- 1-3-35 Bone marrow stromal cells stimulate neurite outgrowth in cultured spinal cord cells  
 .....*K. Uchida, et al.*, Dept. of Orthop. and Rehabilitation Medicine, The Univ. of Fukui··S1053

**1st Day October 14 Room 4**

**9 : 00~10 : 00 Free papers 7 Cartilage culture and metabolism-1 Moderator H. Kawaguchi**

- 1-4-1 A transcription factor p63 extensively controls endochondral ossification through distinct functions of the isoforms······*Y. Taniguchi, et al.*, Orthop. Surg.,  
 Graduate School of Medicine, The Univ. of Tokyo··S1054
- 1-4-2 Sox9, scleraxis, and E47 cooperatively regulate chondrogenesis  
 .....*T. Furumatsu, et al.*, Science of Functional Recovery and Reconstruction,  
 Okayama Univ. Graduate School of Medicine··S1054
- 1-4-3 Knockdown of Sox9 inhibits BMP4 expression in C310T1/2  
 .....*K. Koshi, et al.*, Dept. of Orthop. Surg., Tohoku Univ. Graduate School of Medicine··S1055
- 1-4-4 C/EBP beta and Runx2 transactivate MMP13 synergistically and control skeletal growth and osteoarthritis progression  
 .....*M. Hirata, et al.*, Orthop. Surg., Graduate School of Medicine, The Univ. of Tokyo··S1055
- 1-4-5 Molecular basis for Gadd45 beta activation of C/EBP beta in terminally differentiating chondrocytes······*K. Tsuchimochi, et al.*, Dept. of Orthop. Surg.,  
 Graduate School of Medical and Dental Sciences, Kagoshima Univ.··S1056
- 1-4-6 Analyses of autophagy in chondrocytes of the mouse epiphyseal growth plate  
 .....*Y. Oniki, et al.*, Orthop. and Neuro-Musculoskeletal Surg.,  
 Faculty of Medical and Pharmaceutical Sciences, Kumamoto Univ.··S1056

**10 : 10~11 : 10 Free papers 8 Cartilage culture and metabolism-2 Moderator S. Yoshiya**

- 1-4-7 Overexpression of SIRT1 inhibits osteoarthritic gene expression changes induced by interleukin-1B in human chondrocytes  
 .....*H. Sasaki, et al.*, Dept. of Orthop. Surg., Kobe Univ. Graduate School of Medicine··S1057

- 1-4-8 Morphological differences during *in vitro* chondrogenesis of bone marrow-, synovium-MSCs, and chondrocytes.....*I. Sekiya, et al.*, Section of Cartilage Regeneration, Graduate School, Tokyo Medical and Dental Univ...S1057
- 1-4-9 Differential effect of steroid on cartilage degeneration among species .....*Y. Sawaji, et al.*, Dept. of Orthop. Surg., Tokyo Medical Univ...S1058
- 1-4-10 The role of ADAMTS-4/5 from synovial tissue on the degradation of aggrecan in human osteoarthritis.....*T. Kosaka, et al.*, Dept. of Orthop. Surg., Tokyo Medical Univ...S1058
- 1-4-11 Analysis of humoral factors in layered chondrocyte sheets .....*G. Ebihara, et al.*, Dept. of Orthop. Surg., Tokai Univ...S1059
- 1-4-12 Over sulfated chondroitin sulfate E promotes chondrogenic differentiation of ATDC5 cells .....*D. Kawamura, et al.*, Dept. of Orthop. Surg., Hokkaido Univ., Graduate School of Medicine...S1059

**11 : 20~12 : 20 Free papers 9 Cartilage repair and regeneration-1 Moderator Y. Matsusue**

- 1-4-13 Treatment of partial growth arrest using an *in vitro* generated scaffold-free tissue engineered construct (TEC) derived from synovial mesenchymal stem cells .....*K. Yoshida, et al.*, Dept. of Orthop. Surg., Graduate School of Medicine, Osaka Univ...S1060
- 1-4-14 Cartilage regeneration using mixed cellular transplants of synovium derived cells and chondrocytes.....*J. Lee, et al.*, Dept. of Orthop. Surg., Tokai Univ...S1060
- 1-4-15 Intraarticular administration of BMP-7 suppresses inflammatory arthritis and maintains cartilage matrix.....*T. Takahashi, et al.*, Section of Orthop. Surg., Graduate School, Tokyo Medical and Dental Univ...S1061
- 1-4-16 Do PAMPS and PDMAAm gels have the same ability that induces spontaneous articular cartilage regeneration as PAMPS/PDMAAm double-network gel has? .....*M. Ogawa, et al.*, Dept. of Orthop. Surg., Nara Medical Univ...S1061
- 1-4-17 Osteochondral repair using a functionally graded hydroxiapatite .....*Y. Kasahara, et al.*, Dept. of Orthop. Surg., Hokkaido Univ., Graduate School of Medicine...S1062
- 1-4-18 Repair of articular cartilage with administration of the Bevacizumab .....*T. Nagai, et al.*, Dept. of Orthop. Surg., Tokai Univ...S1062

**13 : 50~14 : 50 Free papers 10 Imaging-1 Moderator H. Miura**

- 1-4-19 Evaluation of T1rho mapping for cartilage degeneration .....*J. Hirose, et al.*, Dept. of Orthop. and Neuro-Musculoskeletal Surg., Faculty of Medical and Pharmaceutical Sciences, Kumamoto Univ...S1063
- 1-4-20 *In vivo* evaluation of T1rho mapping and T2 mapping for extracellular matrix of cartilage .....*H. Nishioka, et al.*, Dept. of Orthop. and Neuro-Musculoskeletal Surg., Faculty of Medical and Pharmaceutical Sciences, Kumamoto Univ...S1063
- 1-4-21 Loading and knee-alignment have significant influence on cartilage T2 .....*T. Shiomi, et al.*, Dept. of Orthop. Surg., Graduate School of Medicine, Osaka Univ...S1064
- 1-4-22 Three-dimensional diatribution of cartilage T2 mapping *in vivo* .....*T. Shiomi, et al.*, Dept. of Orthop. Surg., Graduate School of Medicine, Osaka Univ...S1064
- 1-4-23 The evaluation of translation in the dysplastic hips using dynamic 3D-MRI .....*K. Akiyama, et al.*, Dept. of Orthop. Biomaterial Science, Graduated School of Medicine, Osaka Univ...S1065
- 1-4-24 The cerebral activation in chronic low back pain patients: A functional MRI study .....*Y. Kobayashi, et al.*, Dept. of Orthop. Surg., Fukushima Medical Univ...S1065

**15 : 00~16 : 00 Free papers 11 Imaging-2 Moderator T. Shimamura**

- 1-4-25 Metabolic neuro-imaging of the spinal cord with FDG PET-CT in normal cases .....*T. Seki, et al.*, Dept. of Orthop. Surg., St. Hill Hosp...S1066

- 1-4-26 The relationships between <sup>18</sup>F-DG-PET findings and the progress of the joint destruction in patients with RA.....*Y. Yonemoto, et al.*, Dept. of Orthop. Surg., Graduate School of Medicine, Gunma Univ...S1066
- 1-4-27 Anatomical analysis of brachial plexus using diffusion-weighted MR neurography .....*Y. Eguchi, et al.*, Dept. of Orthop. Surg., Graduate School of Medicine, Chiba Univ...S1067
- 1-4-28 Evaluation of the cervical radiculopathy and brachial plexus injuries using diffusion-weighted MR neurography .....*Y. Eguchi, et al.*, Dept. of Orthop. Surg., Graduate School of Medicine, Chiba Univ...S1067
- 1-4-29 The correlation between the apparent diffusion coefficient and cellularity .....*K. Oka, et al.*, Orthop. and Neuro-Musculoskeletal Surg., Faculty of Medical and Pharmaceutical Sciences, Kumamoto Univ...S1068
- 1-4-30 The efficacy of computed tomography after L5 radiculography on far-out syndrome .....*Y. Abe, et al.*, Dept. of Orthop. Surg., Sapporo Medical Univ...S1068

<b>16 : 10~17 : 10</b>	<b>Free papers 12 Computer analysis</b>	<b>Moderator E. Chousa</b>
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- 1-4-31 Development of new matching method in navigation system for total hip arthroplasty: The second report.....*M. Ikebuchi, et al.*, Dept. of Orthop. Surg., Osaka City Univ. Graduate School of Medicine...S1069
- 1-4-32 Finite element studies for the osteotomy of the hip joint .....*H. Ike, et al.*, Dept. of Orthop. Surg., Yokohama City Univ...S1069
- 1-4-33 Mechanics of new mobile PS type total knee arthroplasty .....*Y. Sato, et al.*, Dept. of Orthop. Surg., Kyorin Univ...S1070
- 1-4-34 Evaluation of stress distribution pattern about elbow joint of baseball player using CT osteoabsorptiometry.....*D. Momma, et al.*, Dept. of Orthop. Surg., Hokkaido Univ...S1070
- 1-4-35 Changes in length of the collateral ligament and the accessory collateral ligament during flexion of the metacarpophalangeal joint of the hand .....*T. Kataoka, et al.*, Dept. of Orthop. Surg., Graduate School of Medicine, Osaka Univ...S1071
- 1-4-36 Spinal cord compression mechanism of Brown-Séquard syndrome utilizing finite element analysis.....*N. Nishida, et al.*, Dept. of Orthop. Surg., Yamaguchi Univ. Graduate School of Medicine...S1071

<b>1st Day October 14 Room 5</b>
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<b>9 : 00~9 : 50</b>	<b>Free papers 13 Neuropathic pain</b>	<b>Moderator T. Yamashita</b>
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- 1-5-1 Effect of anti-NGF receptor (p75 neurotrophin receptor) for behavior and activation of spinal microglia in the rat sciatic nerve injury pain model .....*M. Izumi, et al.*, Dept. of Orthop. Surg., Graduate School of Medicine, Chiba Univ...S1072
- 1-5-2 Differences between TNF-alpha receptors type 1 and type 2 in the modulation of spinal glial cell activation and mechanical allodynia in a rat sciatic nerve injury model .....*T. Ishikawa, et al.*, Dept. of Orthop. Surg., Graduate School of Medicine, Chiba Univ...S1072
- 1-5-3 The effect of gene transfection with the precursor of endogeneous endorphin in a rat neuropathic pain model.....*T. Ishikawa, et al.*, Dept. of Orthop. Surg., Graduate School of Medicine, Chiba Univ...S1073
- 1-5-4 *In vivo* imaging of neuropathic pain using novel transgenic mouse: First report .....*O. Tsuji, et al.*, Dept. of Orthop. Surg., Keio Univ...S1073
- 1-5-5 Mechanism of pain relief using radiofrequency treatment .....*N. Ochiai, et al.*, Dept. of Orthop. Surg., Graduate School of Medicine, Chiba Univ...S1074



**1st Day October 14 Room 6**

**9 : 00~10 : 00 Free papers 16 Biomaterials: Affinity Moderator M. Neo**

- 1-6-1 Biomaterial development of intervertebral disc: Application of glycotecchnology  
 .....*K. Akeda, et al.*, Dept. of Musculoskeletal Surg., Mie Univ. Graduate School of Medicine...S1085
- 1-6-2 Development of hip joint prostheses using carbon fiber reinforced PEEK  
 .....*I. Nakahara, et al.*, Dept. of Orthop. Surg., Graduate School of Medicine, Osaka Univ...S1085
- 1-6-3 A new technology for grafting biocompatible phospholipid polymer on the surface of Co-Cr-Mo alloy  
 .....*M. Kyomoto, et al.*, School of Medicine, The Univ. of Tokyo...S1086
- 1-6-4 Osteoblast adhesion on carbon nanotube-ceramics composite material  
 .....*N. Ogihara, et al.*, Dept. of Orthop. Surg., Shinshu Univ...S1086
- 1-6-5 *In vivo* osteoconductivity of thermal sprayed silver-containing hydroxyapatite coating by the tibial rat model  
 .....*Y. Yonekura, et al.*, Dept. of Orthop. Surg., Saga Univ...S1087
- 1-6-6 Bioactive titanium: Effect of mixed acid and heat treatment  
 .....*T. Kawai, et al.*, Dept. of Orthop. and Musculoskeletal Surg., Graduate School of Medicine, Kyoto Univ...S1087

**10 : 10~11 : 00 Free papers 17 Biomaterials: Surface fabrication Moderator K. Marumo**

- 1-6-7 Next generation type antibacterial HA coating (3rd Report): Basic study for antibacterial property of Ag-HA coating  
 .....*I. Noda, et al.*, Research Dept., Japan Medical Materials Corporation...S1088
- 1-6-8 Evaluation of influence for cells by Ag ions released from Ag-HA coating  
 .....*Y. Ando, et al.*, Research Dept., Japan Medical Materials Corporation...S1088
- 1-6-9 The antibacterial efficacy of photocatalytic titanium dioxide thin film to prevent external fixator pin tract infection: *In vivo* study  
 .....*T. Asahara, et al.*, Dept. of Orthop. Surg., Graduate School of Medicine, Nagasaki Univ...S1089
- 1-6-10 The biocompatibility of the low Young's modulus and high performance new Ti-Nb-Sn alloy  
 .....*K. Miura, et al.*, Dept. of Orthop. Surg., Tohoku Univ. Graduate School of Medicine...S1089
- 1-6-11 Effect of stem surface design on initial mechanical stability  
 .....*I. Nakahara, et al.*, Dept. of Orthop. Surg., Graduate School of Medicine, Osaka Univ...S1090

**11 : 20~12 : 20 Free papers 18 Biomechanics Moderator O. Shirado**

- 1-6-12 Biomechanical significance of the unilateral pedicle screw fixation in the posterior lumbar reconstruction surgery  
 .....*Y. Kanamori, et al.*, Dept. of Orthop. Surg., Teikyo Univ. Mizonokuchi Hosp...S1091
- 1-6-13 Influence of the axis of rotation in functional spinal unit due to spinal instrumentation  
 .....*T. Sakakibara*, Dept. of Spinal Surg. and Medical Engineering, Mie Univ...S1091
- 1-6-14 The stabilizing effect of the distal interosseous membrane on the distal radioulnar joint in ulnar shortening procedure: A biomechanical study  
 .....*S. Arimitsu*, Mayo Clinic Orthop. Biomechanics Laboratory...S1092
- 1-6-15 Mechanical analysis of the knee joint using combination of point cluster technique and finite element method  
 .....*Y. Kiriyama*, Dept. of Clinical Biomechanics, Keio Univ...S1092
- 1-6-16 Biomechanical analysis of newly developed Grasping Pin for proximal femoral fracture  
 .....*Y. Kaji, et al.*, Dept. of Orthop. Surg., Showa Univ...S1093
- 1-6-17 Analysis of trunk muscle activity during active pelvic tilting  
 .....*K. Kaneoka*, Faculty of Sports Sciences, Waseda Univ...S1093

**12 : 35~13 : 35      Luncheon seminar 4      Moderator    H. Shindo**

- 1-6-LS4    Osteoarthritis of the knee from a point of view of biotribology  
 .....*H. Miura*, Dept. of Bone and Joint Surg., Ehime Univ. Graduate School of Medicine...S1094

**13 : 50~14 : 50      Free papers 19    Motion analysis-1      Moderator    Y. Shibata**

- 1-6-18    Three-dimensional scapular kinematics with midshaft clavicular nonunion  
 .....*N. Matsumura*, Dept. of Orthop. Surg., Saiseikai Utsunomiya Hosp...S1095
- 1-6-19    Squatting after total hip arthroplasty.....*J. Koyanagi*, Dept. of Orthop. Biomaterial Science,  
 Osaka Univ. Graduate School of Medicine...S1095
- 1-6-20    *In vivo* three-dimensional kinematics of the iliosacral joint  
 .....*Y. Nagamoto, et al.*, Dept. of Orthop. Surg., Graduate School of Medicine, Osaka Univ...S1096
- 1-6-21    *In vivo* functional length change of the ulnar collateral ligament of the elbow  
 .....*J. Miyake, et al.*, Dept. of Orthop. Surg., Graduate School of Medicine, Osaka Univ...S1096
- 1-6-22    Postoperative change in the mobility of polyethelen insert in a mobile-bearing total knee arthroplasty.....*A. Tanaka, et al.*, Dept. of Orthop. and Neuro-Musculoskeletal Surg.,  
 Faculty of Medical and Pharmaceutical Sciences, Kumamoto Univ...S1097
- 1-6-23    Knee kinematics and kinetics at the axial plane after ACL reconstruction during a high-demand activity: Single bundle vs. anatomical double bundle  
 .....*G. Misonoo, et al.*, Dept. of Orthop. Surg.,  
 Graduate School of Comprehensive Human Sciences, Univ. of Tsukuba...S1097

**15 : 00~15 : 40      Free papers 20    Genetic analysis      Moderator    Y. Kawaguchi**

- 1-6-24    Functional analysis of over-expressed GOLPH3 in osteosarcoma and soft tissue sarcoma  
 .....*O. Kunigou, et al.*, Dept. of Orthop. Surg.,  
 Graduate School of Medical and Dental Sciences, Kagoshima Univ...S1098
- 1-6-25    Potential role of p38 MAPK in bone metabolism and nerve regeneration  
 .....*N. Kato, et al.*, Dept. of Orthop. Surg., Saitama Medical Center, Saitama Medical Univ...S1098
- 1-6-26    Isolation of novel genes regulating osteogenic and chondrogenic disease using exchangeable  
 .....*S. Kurogi, et al.*, Div. of Orthop. Surg., Univ. of Miyazaki...S1099
- 1-6-27    A genome-wide association study of lumbar disc herniation  
 .....*T. Karasugi, et al.*, Dept. of Orthop. and Neuro-Musculoskeletal Surg.,  
 Faculty of Medical and Pharmaceutical Sciences, Kumamoto Univ...S1099

**16 : 10~17 : 00      Free papers 21    Motion analysis-2      Moderator    Y. Shimada**

- 1-6-28    Detection of the swing-phase in hemiplegic drop foot gait using 3-axes accelerometers and gyrosensor....*T. Tomite, et al.*, Dept. of Orthop. Surg., Akita Univ. Graduate School of Medicine...S1100
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- 1-6-30    Assessment of myofascial low back pain in rats using the catwalk gait analysis system  
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- 1-6-31    A change of the physical deflection at walk with the aging  
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**9 : 00~10 : 00 Instructional lecture 5 Moderator E. Itoi**

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**10 : 20~11 : 20 Instructional lecture 6 Moderator S. Komiya**

1-7-EL6 Regenerative medicine for musculoskeletal system using magnetic field  
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**12 : 35~13 : 35 Luncheon seminar 5 Moderator K. Takagishi**

1-7-LS5 Medical treatment for chronic pain in locomotorium  
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1-8-S3-2 Fracture treatment using bone lengthening  
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1-8-S3-3 Bone regeneration with peripheral blood cell and tricalciumphosphate  
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1-8-S3-4 Transplantation of circulating CD34<sup>+</sup> cells for bone healing  
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1-Pb-2 Injectable bone to the implanted ceramics  
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- 1-Pi-9 Synthetic siRNA targeting the breakpoint of EWS/Fli-1 inhibits growth of Ewing sarcoma xenografts in a mouse model.....I. Takigami, et al., Dept. of Orthop. Surg., Graduate School of Medicine, Gifu Univ...S1176
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 .....T. Ariizumi, et al., Div. of Orthop. Surg., Niigata Univ. Graduate School of Medical and Dental Sciences...S1179
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- 1-Pj-5 Over-expression of Notch4 in rhabdomyosarcoma and functional analysis of Notch downstream target.....*H. Nagao, et al.*, Dept. of Orthop. Surg., Graduate School of Medical and Dental Sciences, Kagoshima Univ.··S1181
- 1-Pj-6 EWS-CHOP type1 fusion protein suppresses the osteopontin gene expression .....*K. Suzuki, et al.*, Dept. of Orthop. Surg., Toyama Univ.··S1181
- 1-Pj-7 Histological change of macrophage and macrophage migration inhibitory factor after irradiation with high intensity focused ultrasound .....*S. Chida, et al.*, Dept. of Orthop. Surg., Akita Univ. Graduate School of Medicine··S1182
- 1-Pj-8 The effect of bevacizumab (Avastin) in combination with doxorubicin on tumor growth of malignant fibrous histiocytoma in the animal model .....*Y. Okada, et al.*, Dept. of Orthop. Surg., Kobe Univ. Graduate School of Medicine··S1182
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- 1-Pk-1 Expression of SIRT1 and inhibitory effect of SIRT1 suppression in musculoskeletal malignancies.....*T. Kawamoto, et al.*, Dept. of Orthop. Surg., Kobe Univ. Graduate School of Medicine··S1184
- 1-Pk-2 Role of protein kinase D1 in musculoskeletal tumors .....*Y. Onishi, et al.*, Dept. of Orthop. Surg., Kobe Univ. Graduate School of Medicine··S1184
- 1-Pk-3 Antitumor effects of the third generation bisphosphonate containing hydroxyapatite against osteosarcoma and soft tissue sarcoma cell lines.....*K. Koto, et al.*, Dept. of Orthop., Graduate School of Medical Science, Kyoto Prefectural Univ. of Medicine··S1185
- 1-Pk-4 Effect of pretreatment on the intratumoral distribution of viral vectors in tumor spheroids .....*S. Nagano, et al.*, Dept. of Orthop. Surg., Graduate School of Medical and Dental Sciences, Kagoshima Univ.··S1185
- 1-Pk-5 Roles of a new binding partner of autocrine motility factor in metastasis .....*T. Yanagawa, et al.*, Dept. of Orthop. Surg., Graduate School of Medicine, Gunma Univ.··S1186
- 1-Pk-6 A3 isoform of V-ATPase is critical to bone and lung metastases .....*T. Nishisho, et al.*, Dept. of Orthop., The Univ. of Tokushima Graduate School··S1186
- 1-Pk-7 Orthotopic transplantation with LM8 increased lung metastases .....*H. Wakabayashi, et al.*, Dept. of Musculoskeletal Surg., Mie Univ. Graduate School of Medicine··S1187
- 1-Pk-8 Suppression of hyaluronan synthesis in breast cancer cells demonstrates anti-tumor effects both *in vitro* and *in vivo* model of bone metastasis .....*H. Urakawa, et al.*, Dept. of Orthop. Surg., Nagoya Univ.··S1187
- 1-Pk-9 Mechanism for inhibition of bone metastasis by thrombin inhibitor artgatroban .....*K. Asanuma, et al.*, Dept. of Musculoskeletal Surg., Mie Univ. Graduate School of Medicine··S1188
- 1-Pk-10 Anti-tumor necrosis factor alpha suppresses the bone metastasis in breast cancer cell line .....*T. Hamaguchi, et al.*, Dept. of Musculoskeletal Surg., Mie Univ. Graduate School of Medicine··S1188

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- 1-Pl-1 Regeneration of bone-tendon junction using cylindrical titanium web consisting of the titanium fine fiber.....*T. Ohmori, et al.*, Dept. of Orthop. Surg., The Jikei Univ. School of Medicine··S1189

- 1-P1-2 Establishment of cell alignment in collagen-gels with and without application of cyclic stretching.....*Y. Sasazaki, et al.*, Dept. of Orthop. Surg., Murayama Medical Center...S1189
- 1-P1-3 Four looped suture technique: A new 8-strand suture technique for flexor tendon lacerations .....*H. Okubo, et al.*, Dept. of Orthop. Surg., Univ. of the Ryukyus...S1190
- 1-P1-4 Effect of platelet-rich plasma on tendon repair: *In vivo* study .....*D. Sato, et al.*, Dept. of Orthop. Surg., Yamagata Univ...S1190
- 1-P1-5 Vascularity of the supraspinatus tendon after arthroscopic repair using contrast-enhanced ultrasound.....*T. Funakoshi, et al.*, Dept. of Orthop. Surg., Hokkaido Univ., Graduate School of Medicine...S1191
- 1-P1-6 Position of the elbow and forearm and varus stress of the elbow induces mechanical stress of the tendinous origin the common wrist and finger extensor tendons .....*Y. Tanaka, et al.*, Dept. of Orthop. Surg., Japan Self Defense Force, Sapporo General Hosp...S1191
- 1-P1-7 Amyloid deposition in the rotator cuff tear .....*K. Kikukawa, et al.*, Orthop. and Neuro-Musculoskeletal Surg., Faculty of Medical and Pharmaceutical Sciences, Kumamoto Univ...S1192
- 1-P1-8 An experimental model to prevent a tendon rupture after flexor tendon repair .....*J. Ikeda, et al.*, Dept. of Orthop. Surg., Showa Univ...S1192
- 1-P1-9 Chondrogenic differentiation potential of human rotator cuff derived cells .....*I. Nagura, et al.*, Dept. of Orthop. Surg., Kobe Univ. Graduate School of Medicine...S1193
- 1-P1-10 Intervertebral range of motion in continuous type of ossified posterior longitudinal ligament .....*T. Fujimori, et al.*, Dept. of Orthop. Surg., Graduate School of Medicine, Osaka Univ...S1193

<b>17 : 30~18 : 25</b>	<b>Poster Cartilage-1</b>	<b>Moderator T. Aoyama</b>
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- 1-Pm-1 Implantation of salmon-derived crosslinked atelocollagen sponge into an osteochondral defect enhances spontaneous cartilage regeneration *in vivo* .....*Y. Kawaguchi, et al.*, Dept. of Sports Medicine & Joint Reconstruction Surg., Hokkaido Univ...S1194
- 1-Pm-2 Localization of VEGF at the early stage of cartilage repair using bioabsorbable synthetic polymer scaffold.....*R. Sakata, et al.*, Dept. of Orthop. Surg., Kobe Univ. Graduate School of Medicine...S1194
- 1-Pm-3 Cartilage defect repair by BMP-7 in combination with interconnected-porous calcium hydroxyapatite ceramics: Rabbit knee full-thickness cartilage defect model .....*K. Sugiyasu, et al.*, Dept. of Orthop. Surg., Graduate School of Medicine, Osaka Univ...S1195
- 1-Pm-4 Repair of articular cartilage defects by synthetic polypeptide .....*T. Kobayashi, et al.*, Dept. of Orthop. Surg., Graduate School of Medicine, Chiba Univ...S1195
- 1-Pm-5 Cartilage repair using fibroin based cell-delivery system .....*E. Hirakata, et al.*, Dept. of Medical Engineering, Kyoto Univ...S1196
- 1-Pm-6 Intra-articular injection of bone marrow stromal cell and hyaluronic acid in a spontaneous model of osteoarthritis .....*M. Sato, et al.*, Dept. of Orthop. and Rehabilitation Medicine, The Univ. of Fukui...S1196
- 1-Pm-7 Verification of prostaglandin E2 receptor selective agonist in osteoarthritis like rabbit model .....*H. Mitsui, et al.*, Dept. of Tissue Regeneration Institute for Frontier Medical Sciences, Kyoto Univ...S1197
- 1-Pm-8 Meniscal repair using fibroblast growth factor 2 and biodegradable gelatin hydrogel: An experimental study in rabbits.....*A. Narita, et al.*, Dept. of Orthop. Surg., Yamagata Univ...S1197
- 1-Pm-9 Expression of chondromodulin-I in human meniscus .....*Y. Yokoyama, et al.*, Science of Functional Recovery and Reconstruction, Okayama Univ. Graduate School...S1198

**18 : 25~19 : 00    Poster    Osteoarthritis-2    Moderator    Y. Suda**

- 1-Pm-10    The development of the simple navigation system using custom jig for resurfacing total hip arthroplasty.....*T. Yoshida, et al.,* Dept. of Orthop. Surg., Osaka City Univ. Graduate School of Medicine...S1199
- 1-Pm-11    Magnetic resonance image analysis using semi-automated software for quantification of knee articular cartilage: The ROAD study  
.....*H. Oka, et al.,* 22nd Century Medical and Research Center, Graduate School of Medicine, The Univ. of Tokyo...S1199
- 1-Pm-12    Patellar morphology affects the contact pressure of patellofemoral joint in total knee arthroplasty without patellar resurfacing.....*A. Takahashi, et al.,* Dept. of Orthop. Surg., Tohoku Univ. Graduate School of Medicine...S1200
- 1-Pm-13    Lower limb alignment and elongation of affected leg after total hip arthroplasty  
.....*H. Fujimaki, et al.,* Dept. of Orthop. Surg., Yokohama City Univ....S1200
- 1-Pm-14    Prevalence rate of metabolic syndrome among knee osteoarthritis patients  
.....*R. Inoue, et al.,* Dept. of Orthop. Surg., Hirosaki Univ. Graduate School of Medicine...S1201

**2nd Day    October 15    Room 1**

**8 : 50~10 : 40    Panel discussion 4  
Basic research for pharmacological therapy of neurogenic pain    Moderators    S. Konno, T. Ushida**

- 2-1-P4-1    Plastic changes of nociceptive transmission in the spinal cord and neuropathic pain  
.....*T. Nakatsuka,* Pain Research Center, Kansai Univ. of Health Sciences...S1202
- 2-1-P4-2    Mechanism of chronic radicular pain  
.....*T. Yamashita, et al.,* Dept. of Orthop. Surg., Sapporo Medical Univ....S1202
- 2-1-P4-3    Potential agents for pain-related behavior after application of nucleus pulposus  
.....*M. Sekiguchi, et al.,* Dept. of Orthop. Surg., Fukushima Medical Univ....S1203
- 2-1-P4-4    Proopiomelanocortin gene, precursor of endogenous endorphin, suppresses adjuvant induced /neuropathic pain in rats  
.....*M. Yamashita, et al.,* Dept. of Orthop. Surg., Social Insurance Funabashi Central Hosp....S1203
- 2-1-P4-5    Spinal microglial cells: A new target for developing pain-killers?  
.....*M. Tsuda, et al.,* Dept. Mol. Syst. Pharmacol., Grad. Sch. Pharm. Sci., Kyushu Univ....S1204

**10 : 50~11 : 50    Invited lecture 3    Moderator    K. Nakamura**

- 2-1-IL3    The role of cytokines in the degenerative spine: Current concepts and future perspectives  
.....*B. Rydevik,* Dept. of Orthop., Univ. of Gothenburg, Sahlgrenska Univ. Hosp., Gothenburg, Sweden...S1205

**13 : 35~14 : 35    Special lecture    Moderator    J. Mochida**

- 2-1-SL    Tasks for the Japanese society and demanded leadership.....*K. Kitashiro,* IBM Japan, Ltd./ KEIZAI DOYUKAI (Japan Association of Corporate Executives)...S1206

**14 : 45~16 : 15    Symposium 5  
Efficient planning suggestions for musculoskeletal basic research from government, industry and academic stand point    Moderators    A. Minami, K. Shinomiya**

- 2-1-S5-1    The insight to basic research in the musculoskeletal system from a view of academic position  
.....*N. Ishiguro,* Dept. of Orthop. Surg., Nagoya Univ....S1207