

KIST-Tohoku Joint Symposium on Nanobiomedical Engineering

14th International Symposium of Tohoku University Global COE Programme
Global Nano-Biomedical Engineering Education and Research Network Centre

30-31 August, 2010
Korea Institute of Science and Technology (KIST)

Programme

Monday 30th Aug 2010		
Time	Agenda	Speaker
9:00-9:30	Registration & Welcome Tea/Breakfast	
9:30-9:45	Opening Remarks	Dr. Myung Soo Kim <i>Vice-president of KIST</i> Prof. Takami Yamaguchi <i>Leader of Tohoku University Global COE Programme</i>
Session 1. Chairman: Dr. Ick Chan Kwon (<i>KIST</i>)		
9:45-10:25	<u>Plenary Lecture 1</u> Extraction of Classification Features from Images of Angular Light Scattered from Bacterial Colonies Using a 632nm Laser	J. Paul Robinson <i>Purdue University</i>
10:25-10:50	Metabolic Bioassay Using Gel Sheet-Based Skeletal Muscle Cell Culture System	Matsuhiko Nishizawa <i>Tohoku University</i>
10:50-11:05	Tea Break	
11:05-11:30	Detection of Small Number of Cells Using Non-invasive <i>In Vivo</i> Imaging.	Jae-Beom Kim <i>Caliper Life Sciences</i>
11:30-11:55	Sophisticated Regulation of Satellite Cells in Skeletal Muscle Repair	Ryoichi Nagatomi <i>Tohoku University</i>
11:55-13:45	Lunch (lunch box) / Poster Session	
Session 2. Chairman: Dr. Naoya Sakamoto (<i>Tohoku University</i>)		
13:45-14:25	<u>Plenary Lecture 2</u> A Numerical Study on Migration of Malaria Infected Red Blood Cells	Yohsuke Imai <i>Tohoku University</i>
14:25-14:50	Design of a Low-Noise Amplifier for Nerve Cuff Electrode Recording	Jun-Uk Chu <i>KIST</i>
14:50-15:15	Electrically-Evoked Potential Evaluation of In-vivo Experiments with Implanted Retinal Prosthesis Chip	Tetsu Tanaka <i>Tohoku University</i>
15:15-15:30	Tea Break	
Session 3. Chairman: Dr. Kuiwon Choi (<i>KIST</i>)		
15:30-16:10	<u>Plenary Lecture 3</u> A Novel Way to Expand the Dynamic Range of Genetically-Encoded FRET-Based Indicators	Takeharu Nagai <i>Hokkaido University</i>
16:10-16:35	Dab1 Binds to Fe65 and Diminishes the Effect of Fe65 or LRP1 on APP Processing	Hyesung Jeon <i>KIST</i>
16:35-17:00	Restoration of Haptic Sensation for Upper Extremity Amputees Using a Miniature Haptic Device	Keehoon Kim <i>KIST</i>
17:15	Transfer to Dinner Place	
18:00-21:00	Dinner	

Tuesday 31st Aug 2010

Time	Agenda	Speaker
9:00-9:30	Registration & Welcome Tea/Breakfast	
Session 4. Chairman: Dr. Shin'ichiro Kanoh (<i>Tohoku Institute of Technology</i>)		
9:30-10:10	<u>Plenary Lecture 4</u> Bionics Emerges As A New Rehabilitation Technology for the Next Generation	Jun-Kyo Francis Suh <i>KIST</i>
10:10-10:35	Molecular Imaging Project at Tohoku University	Kazuhiko Yanai <i>Tohoku University</i>
10:35-10:50	Tea Break	
Session 5. Chairman: Dr. Jun-Kyo Francis Suh (<i>KIST</i>)		
10:50-11:30	<u>Plenary Lecture 5</u> Spatial Gradient of Shear Stress Induces Phosphorylation of Cell-Cell Adhesion Proteins in Endothelial Cells	Naoya Sakamoto <i>Tohoku University</i>
11:30-11:55	Tumor-homing Glycol Chitosan Nanoparticle for <i>In Vivo</i> Cancer Imaging	Kwangmeyung Kim <i>KIST</i>
11:55-12:20	Suspension Biomechanics of Swimming Micro-organisms	Takuji Ishikawa <i>Tohoku University</i>
12:20-13:20	Lunch (2nd floor restaurant)	
Session 6. Chairman: Prof. Tetsu Tanaka (<i>Tohoku University</i>)		
13:20-14:00	<u>Plenary Lecture 6</u> Neurofeedback Training for Brain-Computer Interface Based on Moror Imagery	Shin'ichiro Kanoh <i>Tohoku Institute of Technology</i>
14:00-14:25	Development of Si Neural Probe with Optical Waveguide for Precise Light Stimulation of Neuron	Risato Kobayashi <i>Tohoku University</i>
14:25-14:50	Optical Neural Probe for DBS (Deep Brain Stimulation)	Jinseok Kim <i>KIST</i>
14:50-15:00	Wrap Up	Prof. Takami Yamaguchi <i>Tohoku University</i> Dr. Ick Chan Kwon <i>KIST</i>
15:00-16:30	KIST Video Watching & Lab. Tour	
16:30	Transfer to Hotel	

Posters
Monday 30th Aug 2010, 11:55-13:45

No.	Poster Title	Presenter
1	The Incorporation of GALA Peptide into a Protein Cage for an Acid-inducible Molecular Switch	Seung-Hye Choi <i>KIST</i>
2	Protein Cages Provide a Platform of Cell-Permeable and Biocompatible Imaging Probe in Living Cells	Seung-Hye Choi <i>KIST</i>
3	<i>In vivo</i> Real-time Tracking of Polymeric Micelles for DDS Visualization	Yohei Hamanaka <i>Tohoku University</i>
4	Electrical Stimulation of Subthalamic Nucleus in Brain Slice Using Multielectrode Arrays	Jung Heo <i>KIST</i>
5	Non-invasive Imaging of Gene Silencing Efficacy by siRNA Delivery System	Myung Sook Huh <i>KIST</i>
6	Conjugated Polymer/Photochromic Dye Intergrated Binary Nanoparticles: Stable and Reversible Fluorescence Photoswitching for Bioimaging	Keunsoo Jeong <i>KIST</i>
7	Transcutaneous Wireless Power Transmission Efficiency of FPCB-Based CMC Structure	S.H. Joung <i>KIST</i>
8	The Development of Optogenetic Neuronal Stem Cell from Dental Stem Cells	Sung-Min Jun <i>KIST</i>
9	Elimination of Commensal Bacteria Delays the Recovery of Skeletal Muscle Damage	Tomiaki T. Kawaoka <i>Tohoku University</i>
10	A Polyethylene Glycol-based Drug Delivery Capsule Device for Neuroprotection from Retinal Diseases	Takeaki Kawashima <i>Tohoku University</i>
11	Simultaneous Tumor Diagnosis and Photodynamic Therapy <i>via</i> Tumoral pH-responsive Polymeric Micelles	Heebeom Koo <i>KIST</i>
12	A Study of Multi-functional Si Neural Probe for Implantable Intelligent Si Neural Probe System	Sanghoon Lee <i>Tohoku University</i>
13	Squaraine-Doped Functional Nanoprobes: Lipophilically Protected Near-Infrared Fluorescence for Cellular Imaging	Yong-Deok Lee <i>KIST</i>
14	Dye-Condensed Polymeric Hybrids: Chromophoric Self-Assembly Toward Fluorescent Nanoparticles for Bioimaging	Chang-Keun Lim <i>KIST</i>
15	Effects of Rosette Formation and Cytoadhesion on Hemodynamics in Malaria Infection	Keita Nakaaki <i>Tohoku University</i>
16	Fluorescence and CT Imaging of Tumor-Bearing Mice with Novel Silica-Coated Nano-Particles	Tomohiko Nakagawa <i>Tohoku University</i>
17	Histamine Receptor H3 Regulates Insulin Secretion in Mouse Pancreatic β -cell Line MIN6 Cells	Tadahiko Nakamura <i>Tohoku University</i>
18	In Situ Monitoring System for PLGA Microspheres' Drug Delivery	Kaori Sasaki <i>Tohoku University</i>
19	Separation of Cancer Cells from Blood by Using a Micro Fluidic Device	Tatsuya Tanaka <i>Tohoku University</i>
20	Shape Design of Suitable Self-expanding Stents Based on Mechanical Properties	Daisuke Yoshino <i>Tohoku University</i>
21	Circuit Design Optimization of Retinal Prosthesis Chip to Achieve Adequate Light Sensitivity for ADLs	Yoshiho Yukita <i>Tohoku University</i>