

PROGRAMME

Tuesday Dec 9, 2008 Oral Presentations

| Time | Index | Title of presentation | Speaker |
|-------------------------------------------|-------|------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|
| | | Welcome address Opening Remarks | GPBE GSC Takami Yamaguchi, Tohoku University |
| 8:30 - 8:45 | | | |
| 8:45 -9:30 | S1-KN | Keynote- The Development of Confocal Microscopy | Colin Sheppard, NUS |
| 9:30-10:30 | S1-O1 | Reproduction of Pulse Waveform Measurement using One-dimensional Mathematical Model for Validation of Pulse Diagnosis | Tsutomu Nakanishi, Tohoku University |
| | S1-O2 | Measurement of Friction Characteristics of Neutrophils on MPC Polymer with the Inclined Centrifuge Microscope | Takashi Umimoto, Tohoku University |
| | S1-O3 | Plasmon Resonance: Contrast enhancement Mechanism for Optical Coherence Tomography | Kalpesh Mehta, NUS |
| 10:30-11:00 Tea break/ Poster viewing | | | |
| 11:00-11:20 | S2-I | Invited- Fully Implantable Retinal Prosthesis with 3-Dimensionally Stacked LSI | Tetsu Tanaka, Tohoku University |
| 11:20-12:20 | S2-O1 | 3D-Soluble Environments in a Microfluidic Channel based Cell-Culture for Drug Testing | Zhang Chi, IBN, A*STAR |
| | S2-O2 | Anisotropic Hybrid Blood Vessel Model using Poly (Vinyl Alcohol) Hydro Gel and Mesh Material | Lei Liu, Tohoku University |
| | S2-O3 | Back and Forth Sample Contact Strategy via Magnetic Planar Peristaltic Pump (MP3) for Enhanced DNA Extraction | Chaitanya Kantak , NUS |
| 12:20-13:20 Lunch break/Poster viewing | | | |
| 13:20-14:05 | S3-KN | Keynote- Bionic Design of Tube Formation in the Integrated Cellular Structure | Kazuo Tanishita, Keio University |
| 14:05-14:30 | S3-I | Invited- Functional Systems Biology and Engineering: a process-centered approach to the solutions for liver diseases | Henry Yu, NUS |
| 14:30-15:30 | S3-O1 | Development of Newly Designed Bioassay System towards Single Cell Analysis | Kiichiroh Mori, Tohoku University |
| | S3-O2 | Development of Poly (Vinyl Alcohol) Gel with in vivo Acoustic Properties | Osamu Yamashita, Tohoku University |
| 15:30-16:00 Tea break/ Poster viewing | | | |
| 16:00-16:45 | S4-KN | Keynote- Computational Biomechanical Studies on Arterial Diseases at the Micro and Macro Levels | Takami Yamaguchi, Tohoku University |
| 16:45-17:45 | S4-O1 | Formulation of Linearized Error Dynamics Equation of Measurement-Integrated Simulation | Kentaro Imagawa, Tohoku University |
| | S4-O2 | Effect of Vertical Distribution of Shear Stress Generated by Flow or Centrifugal Force on Orientation of Cultured Endothelial Cell | Manabu Saito, Tohoku University |
| | S4-O3 | Solute Concentration Gradients in a Hydrogel-assisted Gradient Generator | Cherng-wen Tan, NUS |

19:00 onwards Reception at Singapore flyers for all presenters, judges, keynote speakers, invited speakers, and organizers hosted by GCOE NanoBME program (Transport from NUS will be arranged)

PROGRAMME

Tuesday Dec 9, 2008 Poster Presentations

| Time | Index | Title of Poster | Presenter |
|--------------|-------|------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|
| 8:45 - 17:00 | P1 | Anatomical Networks in the Human Brain Revealed by Regional Gray Matter Volume with Japanese Brain MRI Database | Kai Wu, Tohoku University |
| | P2 | CT Liver Tumor Segmentation | Li Bingnan, NUS |
| | P3 | Super-resolution along extended depth of focus with binary-phase filters | Liu Linbo, NUS |
| | P4 | Cortical Hemispheric Surface Template Generation Using Multi-Manifold Diffeomorphic Metric Mapping | Zhong Jidan, NUS |
| | P5 | Silica-coated Fluorescent Nano-particles by Sentinel Lymph Node Biopsy and Mapping Diagnostic | Liman Cong, Tohoku University |
| | P6 | The study of interaction of hypericin and its pharmaceutical preparation by fluorescence techniques | Liu Jun, NUS |
| | P7 | Numerical Simulation of Inspiratory and Expiratory Pulmonary Airflow using a Subject-specific Model | Takahito Miki, Tohoku University |
| | P8 | The Electrospinning of Poly (ϵ -caprolactone)/Collagen (PCL/Col) Fibers For Improved Cellular Infiltration | Andrew K. Ekaputra, NUS |
| | P9 | PHBV Microspheres as Tissue Engineering Scaffold for Neurons | Chen Wenhui, NUS |
| | P10 | The Evaluation of Hydrogels for Cartilage Repair | Ho Saey Tuan, NUS |
| | P11 | Osteoblastic behaviour on nano-HA coated electrospun PLGA and PLGA/Col nanofibers | Michelle Ngiam, NUS |
| | P12 | Hepatocyte Regeneration as a Therapy for Liver Fibrosis | Narmada B. C., NUS |
| | P13 | Collagen-based Fibers for Stem Cell Encapsulation | Yow Soh Zeom, NUS |
| | P14 | A Novel Hemodynamic Index for the Initiation of Cerebral Aneurysms: Focusing on Temporal Variation of Spatial Wall Shear Stress Gradient | Yuji Shimogonya, Tohoku University |
| | P15 | Vertical Electrical Stimulation to C2C12 Myotubes | Takeshi Ishibashi, Tohoku University |
| | P16 | Behavior of a Red Blood Cell in a Simple Shear Flow Simulated by a Boundary Element Method | Toshihiro Omori, Tohoku University |
| | P17 | Development of Si Neural Probe with Microfluidic Channel Fabricated by Using Wafer Direct Bonding Technique | Soichiro Kanno, Tohoku University |
| | P18 | Transglutaminase as a Biological Tissue Adhesive | Tan Bing-Shi Ariel, NUS |

PROGRAMME

| Wednesday Dec 10, 2008 Oral Presentations | | | |
|-------------------------------------------|-------|------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------|
| Time | Index | Title of presentation | Speaker |
| 8:30 - 8:45 | | Opening announcements | Organizers |
| 8:45 -9:30 | S5-KN | Keynote- Growth Factor Signaling in Vertebrate Developmental | Mike Jones, IMB |
| 9:30-10:30 | S5-O1 | New Strategy for Rescue of Pendrin Mutants Causing Pendred Syndrome | Shuhei Okuyama, Tohoku University |
| | S5-O2 | Macromolecular Crowding enhances Microenvironment For the Adipogenesis Of Mesenchymal Stem Cells | Felicia Celeste Loe, NUS |
| | S5-O3 | Development of an in vitro hepatotoxicity testing platform | Abhishek Ananthanarayanan, NUS |
| 10:30-11:00 | | Tea break/ Poster viewing | |
| 11:00-11:20 | S6-I | Invited- Beyond Transcription: Translational Control in Embryonic Stem Cells | Prabha Sampath, IMB |
| 11:20-12:20 | S6-O1 | Docetaxel loaded PLA-TPGS/ F68 blend nanoparticles for controlled release & overcoming drug resistance | Deepak Choudhury, NUS |
| | S6-O2 | Cellulosic Scaffold for 3D Hepatocyte Culture | Bramasta Nugraha, NUS |
| | S6-O3 | Layer-by-layer (Lbl) technology for the sustained drug release applications | Shareef M. Ismail, NUS |
| 12:20-13:20 | | Lunch break/Poster viewing | |
| 13:20-14:05 | S7-KN | Keynote- Revitalization of Japan's Medical Equipment Industry | Minoru Sakairi, Hitachi Ltd. |
| 14:05-14:30 | S7-I | Invited- Fluid Shear Stress Suppresses Transendothelial Migration of Leukocytes in Coculture Model | Naoya Sakamoto, Tohoku University |
| 14:30-15:30 | S7-O1 | Cochlear nucleus Stimulation by means of the Multi-channel Surface Microelectrodes | Kiyoshi Oda, Tohoku University |
| | S7-O2 | Fabrication of Multichannel Neural Microelectrodes with Microfluidic Channels Based on Wafer Bonding Technology | Risato Kobayashi, Tohoku University |
| 15:30-16:00 | | Tea break/ Poster viewing | |
| 16:00-16:45 | S8-KN | Keynote- Shift-variant optics for 3D imaging | George Barbastathis, MIT |
| 16:45-17:25 | S8-O1 | Quantitative imaging with differential interference contrast (DIC) microscope: role of coherence of illumination | Shalin Mehta, NUS |
| | S8-O2 | Application of Random Rough Nonspherical Particles Mode in Light Scattering in Biological Cell | Si Ke, NUS |
| 17:30-18:00 | | Prize distribution | Takami Yamaguchi, Tohoku University/ Michael Raghunath, NUS |
| | | Valedictory | Yuji Shimogonya, Tohoku University / Michael Raghunath, NUS |

PROGRAMME

Wednesday Dec 10, 2008 Poster Presentations

| Time | Index | Posters | Presenter |
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| 8:45 - 17:00 | P19 | Mutation-induced Enhancement of the Activity of Prestin, the Motor Protein in the Inner Ear | Shun Kumano, Tohoku University |
| | P20 | Study of Retinal Prosthesis with Three-Dimensionally Stacked LSI | Keigo Sato, Tohoku University |
| | P21 | Material Evaluation of the Flexible Cable and Stimulus Electrodes for Retinal Prosthesis System | Yoshiyuki Kaiho, Tohoku University |
| | P22 | Study of Electromagnetic Inductor for Power Delivery to Three-Dimensional Retinal Prosthesis System | WooCheol Jeong, Tohoku University |
| | P23 | The Scar-in-a-Jar: Studying Antifibrotic Lead Compounds from the Epigenetic to the Extracellular Level in a Single Well | Clarice Chen, NUS |
| | P24 | Molecular Insight of Lactate Metabolism in CHO Cell Culture | Lim U-Ming, NUS |
| | P25 | Dual Oscillator Mechanism in the Circadian Clock System | Mark Chong, NUS |
| | P26 | The Effect of Macromolecular Crowding on the Distribution & Mobility of Cell Membrane Receptors | Rafi Rashid, NUS |
| | P27 | A Bacteriorhodopsin/ATP Synthase Liposome System for Light-Driven ATP Production | Tan Wee Jin, NUS |
| | P28 | Maintenance of Hepatocyte Polarity in Synthetic Sandwich Culture | Xia Lei, NUS |
| | P29 | Porous Polymer Films for Bead-based Microarray Application | Cheng Jinting, NUS |
| | P30 | Rapid Induction of Differentiation-like Morphology in Neural Stem Cells | Viknesh K. Kutty, NUS |
| | P31 | In Vitro Viscoelastic Test Apparatus for Cytoskeletal Bundles | Tsubasa Matsui, Tohoku University |
| | P32 | Morphological Changes in Vascular Endothelial Cells Induced by Tension Transmitted through Intercellular Junctions | Yosuke Ueki, Tohoku University |
| | P33 | Fabrication of hemispherical structures with double exposure photolithography | Lim Chee Tiong, NUS |
| P34 | Magnetically guided distribution of non-viral gene transfer vectors in the central nervous system | Yang Jingye, NUS | |
| P35 | A Novel Biomimetic Approach to Nanostructured Biomaterials and Their Applications in Cellular and Tissue Engineering | Yu Haidong, NUS | |