

5th International Bio/Medical Interface Symposium 2024

IBMI 2024

March 9–10th, 2024
Taipei Medical University
Taipei, Taiwan R.O.C.

Hosted by

Taipei Medical University (TMU)

Cooperated by

Tokyo University of Science (TUS)

Taipei Medical University (TMU)

National Yang Ming Chiao Tung University (NYCU)

University of the Ryukyus (U. Ryukyus)

Organizing Chair: Kohei SOGA (TUS)

Organizing Co-Chairs:

Tsung-Rong KUO (TMU)

Bing-Shiang YANG (NYCU/ITRI)

Hidehiro KISHIMOTO (U. Ryukyus)

Symposium Web Site: <https://ksoga.com/ibmi>



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Prof. Jen-Chang YANG (TMU)

Prof. Tsung-Rong KUO (TMU)

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Tokyo University of Science (TUS)

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Prof. Hidehiro KISHIMOTO (Medicals)

National Chiao Tung University (NCTU/ITRI)

Prof. Bing-Shiang YANG (Device and Robotics)



SCHEDULE

Date | Mar 9th, 2024 (Sat.)

Venue | International Conference Hall, 16F, Comprehensive Medical Building (Rear Building)

| Time | Activity | | |
|-------------|----------------------|--|--|
| 09:00-09:20 | Registration | | |
| 09:20-09:30 | Opening Remarks | | |
| 09:30-11:30 | Session A: Materials | | |
| | A1 | Prof. Jen-Chang YANG (TMU) The biocompatibility and hemostatic efficacy of silk fibroin nanofibrils fabricated by shear-Induced phase separation process | Chairs: Prof. Akihiko KIKUCHI (TUS) Prof. Jen-Chang YANG (TMU) |
| | A2 | Prof. Yi-Ping CHEN (TMU) Mesoporous Silica Nanomedicine: Targeting Tumor Metastasis and Angiogenesis | |
| | A3 | Prof. Chih-Hsin LIN (TMU) A machine learning liver-on-a-chip system for safer drug formulation | |
| | A4 | Prof. Akihiko KIKUCHI (TUS) Thermo-sensitive particles as biomaterials | |
| | A5 | Prof. Shuuhei KOMATSU (TUS) Organic-inorganic capsules based on liquid-liquid phase separation for treatment of bone defects | |
| | A6 | Prof. Masao KAMIMURA (TUS) Stimuli-Responsive Polymer Nanomaterials Based Cell Manipulation | |

| Time | Activity | | |
|-------------|--------------------------------|--|--|
| 11:30-13:30 | Lunch Time | | |
| 13:30-15:30 | Session B: Device and Robotics | | |
| | B1 | Dr. Curtis KUAN (ITRI) The Development of Precision Medical Robot System | Chairs: Prof. Hiroshi TAKEMURA (TUS), Prof. Bing-Shiang YANG (NYCU/ITRI), Prof. Yu-Jui FAN (TMU) |
| | B2 | Prof. Bing-Shiang YANG (NYCU/ITRI) Development of Human-Robot Collaboration to Facilitate Care | |
| | B3 | Prof. Takuya HASHIMOTO (TUS) Musculoskeletal Model for Analysis of Swallowing Function | |
| | B4 | Prof. Takumi ASAKURA (TUS) Numerical simulation of vibroacoustic transmission characteristics via human middle ear | |
| | B5 | Prof. Yu-Jui FAN (TMU) Development of thrombosis-on-a-chip for drug testing | |
| | B6 | Prof. Tzu-En LIN (NYCU) Micro-Robotic Arm Integrated Electrode and Microchannel for Bacteria Sensing and on-Demand Drug Delivery | |

| Time | Activity | |
|-------------|---|---|
| 15:30-15:45 | Coffee Break | |
| 15:45-17:45 | Session C: Pharmaceuticals | |
| | C1 | Prof. Ching-Li TSENG (TMU) Nano-formulation Development for Ocular Disease Treatment |
| | C2 | Prof. Taiga TAKAHASHI (TUS) Multi-scale in vivo two-photon imaging in a mouse brain through a largescale cranial window utilizing fluoropolymer nanosheet and light-curable resin |
| | C3 | Prof. Chia-Wen WU (NHRI) Water-based Synthesis of Metal-Organic Frameworks for Biomedical Applications: Enzyme Immobilization, Dopamine Sensing, and Drug Delivery Systems |
| | C4 | Prof. David Jon LUNDY (TMU) Harnessing extracellular vesicles for cardiovascular therapy |
| | C5 | Prof. Masakazu UMEZAWA (TUS) Size fractionation method for extracellular vesicles and its application in biomedical research |
| | C6 | Prof. Er-Yuan CHUANG (TMU) Biomedical Applications of Platelet-Derived Therapeutics |
| 18:30-20:30 | Banquet (Shin Tung Nan Seafood Restaurant, Song Shan) | |

Chairs:
Prof. Masakazu UMEZAWA (TUS)
Prof. Er-Yuan CHUANG (TMU)

Date | Mar 10th, 2024 (Sun.)

Venue | International Conference Hall, 16F, Comprehensive Medical Building (Rear Building)

| Time | Activity | |
|-------------|---------------------|---|
| 09:20-09:30 | Registration | |
| 09:30-11:30 | Session D: Medicals | |
| | D1 | Prof. and Dr. Chen-Yuan CHIANG (TMU) Molecular diagnosis of tuberculosis |
| | D2 | Prof. Si-Han WU (TMU) Nano-Ninjas in Action: Mastering Size, Surface, and Stealth with Protein Coronas to Defeat Glioblastoma |
| | D3 | Prof. Tsung-Rong KUO (TMU) Copper Sulfide with Morphology-Dependent Photodynamic and Photothermal Antibacterial Activities |
| | D4 | Prof. Tetsu YAMASHIRO (U.Ryukus) The effect of Monascus Fermented Rice Extract on the pathogenicity of <i>Vibrio cholerae</i> |
| | D5 | Prof. Akio YAMASHITA (U.Ryukus) SMG1 and DNA-PK directly phosphorylate and stimulate NRF2 to inhibit ferroptosis |
| | D6 | Prof. Yukuto SATO (U.Ryukus) Host animal estimation of zoonotic pathogens using environmental DNA metabarcoding analysis |
| 11:30 | Closing Remarks | |

Chairs:
Prof. Hidehiro KISHIMOTO (U. Ryukus)
Prof. Jiunn-Horng KANG (TMU)