

COINS Seminar #17

“Color of Disease: Biomedical Spectroscopy” Research Scientist, Jeon Woong Kang

Laser Biomedical Research Center,
George. R. Harrison Spectroscopy Laboratory,
MIT, 77 Massachusetts Avenue, Cambridge MA 02139 USA

Date: Wednesday, May 25, 2016

Time: 4:00pm – 5:00am (Open at 3:30pm)

Venue: 4F Rm#4101, Innovation Center of NanoMedicine (iCONM)

Capacity: 40 people

Research Mixer: 5:00pm-6:00pm (Fee: JPY500)

Registration: By E-mail to <jimukyoku-coins@kawasaki-net.ne.jp>
including your “name” and “Affiliation” and “Please send
Division” and “Attendance of Research Mixer” and “E-Mail”

— Abstract —

Since its establishment at 1985, MIT Laser Biomedical Research Center (MIT LBRC) has been solving biological and medical problems using optics and spectroscopy techniques. Based on intrinsic biological signals, spectroscopic tissue diagnosis has been successfully applied to various cancers as well as atherosclerosis. Further, drug response and nano-materials interactions are monitored in the cellular scale.

This talk will introduce three research topics of the center.

1. Spectroscopic tissue diagnosis: Fast and reliable intraoperative tissue diagnosis is a critical component of successful cancer surgery in a variety of organ systems. Yet there continues to exist a significant clinical need for rapid and reliable intraoperative margin assessment of excised surgical specimens. We have developed a spectroscopic tissue scanner for intraoperative cancer margin assessment.
2. Non-invasive blood glucose monitoring: With only increasing diabetic population, it is important to develop non-invasive glucose monitoring device. We have developed a transcutaneous blood glucose monitoring device and performed multiple human volunteer studies.
3. Cell-nano interactions: Recently, nano-materials are widely used for targeting disease or delivering drugs. However, the fundamental cellular uptake mechanism was not fully understood due to the lack of proper tools. We have developed a custom-built Raman microscope to investigate this process.

How to translate laboratory techniques to the medical field will be also discussed.



**Organizer: Center of Innovation (COI Program) by JST,
Center of Open Innovation Network for Smart Health (COINS), Kazunori KATAOKA, Research Leader,
Kawasaki Institute of Industrial Promotion, Innovation Center of NanoMedicine (iCONM)**

For more information:

Please email to “COINS Research Support Office” <jimukyoku-coins@kawasaki-net.ne.jp>

Web: <http://coins.kawasaki-net.ne.jp/>

<Venue access>

Name: Innovation Center of Nanomedicine (iCONM)

Address: 3-25-14, Tonomachi, Kawasaki-ku, Kawasaki 210-0821, JAPAN

Access by train:

Keikyu-Kawasaki Sta. to Kojima-Shinden Sta. by Keikyu-Daishi Line (ride time about 10 minutes) and Walk about 15 minutes to iCONM (See below access map)

Access by bus

“Bus stop on East Terminal at JR Kawasaki Sta.”

- 1) No. 20 bus stop (KAWASAKI TSURUMI RINKO BUS Co.,LTD)
川 (kawa) 02 line; Tonomachi terminal, to “Tonomachi” bus stop (ride time about 30 minutes), walk about 3 minutes to iCONM from the bus stop
- 2) No. 20 bus stop (KAWASAKI TSURUMI RINKO BUS Co.,LTD)
川 (kawa) 02 line; Ukishima-Bashi terminal, to “King Sky Front Irigchi” (ride time about 20 minutes), walk about 5 minutes to iCONM from the bus stop
- 3) No. 16 bus stop (KAWASAKI TSURUMI RINKO BUS Co.,LTD)
川 (kawa) 03 line; Ukishima-bus terminal, to “King Sky Front Irigchi” (ride time about 30 minutes), walk about 5 minutes to iCONM from the bus stop

Access Map

