



**Program for OIST mini symposium
“New Medical Imaging and Advanced Cancer Therapy (BNCT)
Instrumentation,” 14-16 May 2015**

Date: 14 – 16 May 2015

Location: OIST Seaside House

Day 1 (14 May 2015)

Session Chair: Prof. Hirotaka Sugawara (OIST)

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| 9:30-10:00 | Jonathan Dorfan, President, OIST
“Welcome Remarks” |
| 10:00-10:30 | Hirotaka Sugawara, Unit Head, OIST
“Advanced Medical Instrumentation Unit” |
| 10:30-12:00 | Akira Matsumura, Director, University of Tsukuba Hospital
“BNCT as a new generation charged particle therapy - From Reactor to Accelerator -”
Hiroaki Kumada, Associate Professor, University of Tsukuba
“Introduction of accelerator-based neutron source for BNCT”
Shin-ichi Kurokawa, Professor Emeritus, KEK
“Experiences of Ibaraki-BNCT accelerator commissioning”
Masakazu Yoshioka, Visiting Professor, OIST
“Unit Introduction: Baseline concept of OIST-BNCT accelerator design” |
| 12:00-13:00 | lunch
(group photo will be taken after lunch in front of SH entrance) |
| | Session Chair: Prof. Amy Shen (OIST) (tentative) |
| 13:00-14:00 | Hideyuki Saya, Professor, Keio University
“Therapeutic strategies targeting cancer stem cells” |
| 14:00-15:00 | Kazunori Kataoka, Professor, The University of Tokyo
“Smart Targeted Therapy by Self-Assembled Supramolecular Nanosystems” |



- 15:00-15:30 coffee break
- 15:30-17:00 **Tadayuki Takahashi and Yasuo Arai**
“Unit Introduction: Imaging Technology for the Advanced Cancer Therapy Project at OIST”
Tadayuki Takahashi, Professor, JAXA
“X-ray and Gamma-ray Telescopes used in Space and their Applications to Medical Imaging”
Yasuo Arai, Visiting Professor, OIST
“SOI Radiation Image Sensor for Medical Imaging and BNCT”
- 17:00-18:00 Parameter Board (closed session)
- 18:30-20:30 Symposium Dinner (closed for registered participants only)
- 21:00- Unit Meeting (closed session)

Day 2 (15 May 2015)

Session Chair: Prof. Shin-ichi Kurokawa (KEK)

- 9:30-12:00 **Akira Matsumura, Director, University of Tsukuba Hospital**
“Clinical study for malignant brain tumor with BNCT “
Teruhito Aihara, Associate Professor, University of Tsukuba
“Overview of the BNCT clinical studies for Head and Neck Cancer at the University of Tsukuba”
- 10:30-11:00 coffee break
- Nobuyoshi Fukumitsu, Associate Professor, University of Tsukuba**
“Boron Neutron Capture Therapy and Positron Emission Tomography”
Hiroaki Kumada, Associate Professor, University of Tsukuba
“Several irradiation methods and technologies applied in clinical study to enhance the therapeutic effect of BNCT”
- 12:00-13:00 lunch



Session Chair: Prof. Hiroaki Kumada (Univ of Tsukuba)

- 13:00-14:00 **Amy Shen, Professor, OIST**
“Microfluidic-assisted hydrogel particle synthesis for encapsulation, imaging, and drug delivery applications”
- 14:00-15:00 **Fuyuhiko Tamanoi, Professor, UCLA**
“Light and Magnetic Field Activated Release of Anticancer Drugs and Use of siRNA to Inhibit EMT Cancer Program”
- 15:00-15:30 coffee break/Discussion
- 15:30-17:45 OIST Campus Tour
- 18:00- Working Dinner (closed for registered participants only)
- 20:00- Unit Meeting (closed session)

Day 3 (16 May 2015)

Session Chair: Prof. Yasuo Arai (OIST)

- 9:30-10:30 **Shoji Kawahito, Professor, Shizuoka University**
“CMOS Image Sensors and Their Impacts on Medical Imaging”
- 10:30-11:30 **Gary Royle, University College London Hospital, U.K.**
“Imaging and treatment verification for advanced radiotherapy techniques”
- 11:30-12:00 **Takafumi Toita, Associate Professor, University of the Ryukyus**
“Roles and perspectives of photon beam radiotherapy (RT) in the next era of particle RT: the personal opinions of a radiation oncologist in Okinawa”
- 12:00-13:00 lunch

Session Chair: Prof. Masakazu Yoshioka (OIST)

- 13:00-14:00 **Minoru Suzuki, M.D., Professor, Kyoto University**
“BNCT for body trunk tumors”



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14:00-15:00

Rieko Ohki, Researcher, National Cancer Center

“PH domain-only protein PHLDA3 is a novel p53-regulated repressor of Akt and a novel tumor suppressor of neuroendocrine tumors -towards development of tailor-made therapies for neuroendocrine tumors-“

15:00-15:30

coffee break

15:30-16:00

Discussion

16:00-17:30

Hiroataka Sugawara, Distinguished Professor, OIST

“Closing Remarks: Failure of Japanese science and technology policy”

18:00-

Closing Dinner (closed for registered participants only)

20:00-

Unit Meeting (closed session)