CANCER THERANOSTICS AND MOLECULAR IMAGING SYMPOSIUM

Thursday, Nov. 21
8 a.m. - 6:30 p.m.

Mitchell Building
Floor 3, Elevator J
Onstead Auditorium (S3.8012)
### CANCER THERANOSTICS AND MOLECULAR IMAGING SYMPOSIUM PROGRAM

<table>
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<td>8:00 - 8:10 a.m.</td>
<td>Opening Remarks&lt;br&gt;Robert Bresalier, M.D.&lt;br&gt;Professor, Gastroenterology, Hepatology &amp; Nutrition&lt;br&gt;The University of Texas MD Anderson Cancer Center&lt;br&gt;&lt;br&gt;Tatsuro Irimura, Ph.D.&lt;br&gt;Professor, Juntendo University School of Medicine, Division of Glycobiologics, Intractable Disease Research Center</td>
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<td>8:10 - 8:40 a.m.</td>
<td>Keynote Speaker&lt;br&gt;David Piwnica-Worms, M.D., Ph.D.&lt;br&gt;Professor and Chair, Cancer Systems Imaging&lt;br&gt;The University of Texas MD Anderson Cancer Center&lt;br&gt;Cancer Molecular Imaging and Theranostics</td>
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<td>8:40 - 9 a.m.</td>
<td>Session 1 - Nano in Diagnosis and Therapy: The Role of Molecular Imaging&lt;br&gt;Kazuhiko Ishihara, Ph.D.&lt;br&gt;Professor, Department of Materials Engineering, Graduate School of Engineering, The University of Tokyo&lt;br&gt;Bioinspired Polymers in Nanomedicine Science</td>
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<td>9 - 9:20 a.m.</td>
<td>Pratip K. Bhattacharya, Ph.D.&lt;br&gt;Associate Professor, Cancer Systems Imaging&lt;br&gt;The University of Texas MD Anderson Cancer Center&lt;br&gt;Hyperpolarized Si-29 Nanoparticle Theranostics</td>
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<td>9:20 - 9:40 a.m.</td>
<td>Konstantin V. Sokolov, Ph.D.&lt;br&gt;Professor, Imaging Physics-Research&lt;br&gt;The University of Texas MD Anderson Cancer Center&lt;br&gt;Nanoparticle Theranostics</td>
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<td>9:40 -10 a.m.</td>
<td>Chun Li, B.S., Ph.D.&lt;br&gt;Professor, Cancer Systems Imaging&lt;br&gt;The University of Texas MD Anderson Cancer Center&lt;br&gt;Nanoparticle Theranostics and Immunotherapy</td>
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<td>10-10:30 a.m.</td>
<td>Break</td>
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### Session 2 – New Technologies in Imaging of Cancer

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| 10:30 - 10:50 a.m. | **Richard R. Bouchard, Ph.D.**  
Associate Professor, Imaging Physics-research  
The University of Texas MD Anderson Cancer Center  
**U/S Photoacoustic Imaging** |                                                                    |                                                                                           |
| 10:50 - 11:10 a.m. | **Eugene J. Koay, M.D., Ph.D.**  
Associate Professor, Radiation Oncology  
The University of Texas MD Anderson Cancer Center  
**Using Radiogenomics and AI to Monitor Response** |                                                                    |                                                                                           |
| 11:10 - 11:30 a.m. | **Kei Takahashi, Ph.D.**  
Assistant Professor, Department of Molecular Pathology,  
The University of Tokyo School of Medicine  
**Application of Tissue-Clearing Technology in Cancer Research** |                                                                    |                                                                                           |
| 11:30 - 11:50 a.m. | **Atsuhiko Hikita, Ph.D.**  
Associate Professor, Department of Cartilage & Bone Regeneration, Graduate School of Medicine,  
The University of Tokyo  
**In Vitro Analysis of Bone Modeling and Remodeling Using Two-Photon Microscopy** |                                                                    |                                                                                           |
| 12:15 p.m.    | Lunch                                        |                                                                              |                                                                                           |

### Session 3 - Tumor Microenvironment and Therapy

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| 1:20 - 1:40 p.m. | **Horacio Cabral, Ph.D.**  
Associate Professor, Department of Bioengineering,  
Graduate School of Engineering, The University Tokyo  
**Engineering the Tumor Microenvironment toward Enhanced Drug Delivery** |                                                                    |                                                                                           |
| 1:40 - 2 p.m.  | **Seth T. Gammon, Ph.D.**  
Assistant Professor, Cancer Systems Imaging  
The University of Texas MD Anderson Cancer Center  
**PET Imaging of Innate Immune Response** |                                                                    |                                                                                           |
| 2-2:20 p.m.   | **Mark D. Pagel, Ph.D.**  
Professor, Cancer Systems Imaging  
The University of Texas MD Anderson Cancer Center  
**CEST MR / acido CEST** |                                                                    |                                                                                           |
| 2:20-2:40 p.m. | **Tatsuro Irimura, Ph.D.**  
Professor, Juntendo University School of Medicine,  
Division of Glycobiologics, Intractable Disease Research Center  
**Glycosylation as a Target of Drug Development** |                                                                    |                                                                                           |

### Session 4 – Image-Guided Therapy and Theranostics: Towards the Clinic

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| 2:40-3 p.m. | **Cheenu S. Kappadath, Ph.D.**  
Associate Professor, Imaging Physics  
The University of Texas MD Anderson Cancer Center  
**Imaging-guided radionuclide therapy dosimetry** |                                                                    |                                                                                           |
| 3-3:20 p.m. | Break                                        |                                                                              |                                                                                           |
| 3:20-3:40 p.m. | **Beth Chasen, M.D.**  
Associate Professor, Nuclear Medicine  
The University of Texas MD Anderson Cancer Center  
**Clinical Nuclear Medicine Perspective: Theranostics** |                                                                    |                                                                                           |
| 3:40-4 p.m.  | **James Welsh, M.D.**  
Associate Professor, Radiation Oncology  
The University of Texas MD Anderson Cancer Center  
**Immuo-Radiation Therapy and Imaging** |                                                                    |                                                                                           |
| 4-4:20 p.m.  | **John D. Hazel, B.S., M.S., Ph.D.**  
Professor and Chair, Imaging Physics  
The University of Texas MD Anderson Cancer Center  
**Image-Guided Therapy** |                                                                    |                                                                                           |
| 4:20-4:40 p.m. | **Yasuteru Urano, Ph.D.**  
Professor, Laboratory of Chemistry and Biology,  
Graduate School of Pharmaceutical Sciences,  
The University of Tokyo  
**Intraoperative Rapid Imaging of Tiny Tumors with Novel Fluorogenic Probes for Exopeptidases** |                                                                    |                                                                                           |
| 4:40-5 p.m.  | **Rony Avritscher, M.D.**  
Associate Professor, Interventional Radiology  
The University of Texas MD Anderson Cancer Center  
**HCC Ablation and Immunotherapy** |                                                                    |                                                                                           |
| 5-5:20 p.m.  | **Manoop Bhutani, M.D.**  
Professor, Gastroenterology, Hepatology & Nutrition  
The University of Texas MD Anderson Cancer Center  
**The use of endoscopic ultrasound for diagnosis and treatment of GI malignancies** |                                                                    |                                                                                           |
| 5:20-5:30 p.m. | Concluding Remarks                           |                                                                              |                                                                                           |
| 5:30-6:30 p.m. | Poster Session with Refreshments             |                                                                              |                                                                                           |
CANCER THERANOSTICS AND MOLECULAR IMAGING

Theranostics is a new field of medicine which combines specific targeted therapy based on specific targeted diagnostic tests. With a key focus on patient-centered care, theranostics provides a transition from conventional medicine to a contemporary personalized and precision medical approach. One theranostic paradigm involves using nanoscience to unite diagnostic and therapeutic applications to form a single agent, allowing for diagnosis, drug delivery and treatment response monitoring. Other developments in molecular diagnostic tests and targeted therapeutics in an interdependent and collaborative manner, particularly focusing on individualizing treatment by targeting therapy to an individual’s specific disease subtype and genetic profile, enable optimization of drug efficacy and safety, an assist in streamlining the drug development process.

JOINT SPONSORSHIP & SUPPORT

Departments of Gastroenterology, Hepatology and Nutrition
Department of Cancer Systems Imaging
Department of Imaging Physics
The University of Tokyo

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