

| Day 1 (Tuesday, Nov 27, 2012) | | | |
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| Time | Theme/Session | Speaker | Topic |
| 8:00 | Registration & Poster Setup | | |
| 8:45 | Welcome | Tony Dickherber | Meeting overview and program update |
| 9:00 | Novel Biosensors 1 | Session Chair | Steven Shen, M.D., Ph.D., Methodist Hospital Research Institute |
| 9:10 | | PARKER, LAURIE L. | Multiplex quantification of kinase activity in a breast cancer model system using surface-enhanced Raman spectroscopy (SERS) and peptide-functionalized nanoparticle (NP)-based biosensors |
| 9:30 | | BURKE, PETER J. | Nanoelectrode and Nanofluidic-Based Assay of Mitochondria Membrane Potential and Apoptosis |
| 9:50 | | WANG, SHAN X. | Multiplex Cancer Cell Purification with Magnetic Sifters |
| 10:10 | Break | | |
| 10:30 | Novel Biosensors 2 | Session Chair | Rebecca Richards-Kortum, Ph.D., Rice University |
| 10:40 | | SANTANGELO, PHILIP J. | Quantifying RNA-protein interactions in situ using modified-MTRIPs and proximity ligation |
| 11:00 | | DIEHL, MICHAEL RICHARD | Highly-Multiplexed, Spatially-Delineated Molecular Imaging in Cancer |
| 11:20 | | BEEBE, DAVID J. | An Integrated Platform for Quantifying Gene Expression in Co--Cultured Cells |
| 11:40 | | SHENDURE, JAY ASHOK | Rapid and sensitive multiplex sequencing of actionable cancer genes in clinical samples |
| 12:00 | Lunch (on your own) | | |
| 13:00 | Success Story: William Hahn, M.D., Ph.D. & David Hill, Ph.D., Dana-Farber Cancer Institute Collaboration vs. Commercialization to Disseminate your Technology; an IMAT success story | | |
| 14:00 | Poster Highlights Session (<= 8 minutes each) | RAO, JIANGHONG | Activatable BRET probes for MMP enzymatic activity detection |
| | | DORSEY, KATHLEEN | Methylation-based Dx assay for malignant melanoma |
| | | KOLOSSOV, VLADIMIR | FRET-based biosensors to monitor redox in cell cycle regulation |
| | | LAWRENCE, DAVID | Microfluidic sorting of blood cells for SPR and fluorescence analysis |
| | | BIEBERICH, CHARLES | Platform to identify low-toxicity kinase inhibitors |
| | | PARKER, LAURIE | Biosensor to monitor leukemia-related kinase activity in patient cells |
| | | WU, MINGMING | Probing chemoinvasion strategies using 3D microfluidic models |
| | | MESSMER, BRADLEY | Specific and reversible binding of DNA nanoparticles to cancer cells |
| | | PANT, DISHA | 2D-PCR for spatially mapping gene changes in tumor sections |
| | | CLAFFEY, KEVIN | Discovery platform for cancer antigens |
| | | MITRA, ROBI | Digital Analysis of Proteins through End Sequencing (DAPES) |
| | | WILLEY, JAMES | Internal standards for quantitative next-gen sequencing |
| | SZMACINSKI, HENRYK | Method for detection of secreted proteins in single cell assays | |
| 16:00 | Poster Session | | |
| 18:00 ... | Dinner on your own | | |

| Day 2 (Wednesday, Nov 28, 2012) | | | |
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| Time | Theme/Session | Speaker | Topic |
| 8:00 | Welcome | Tony Dickherber | Recap of Day 1 and Day 2 overview |
| 8:15 | Host Welcome: Mauro Ferrari, Ph.D., President and CEO of the Methodist Hospital Research Institute (and past IMAT awardee) | | |
| 8:45 | Keynote: Joshua LaBaer, M.D., Ph.D., Arizona State University Biodesign Institute, (and past IMAT awardee) | | |
| 9:30 | Cellular Pathway Tools | Session Chair | Claudio Aldaz, M.D., MD Anderson Cancer Center |
| 9:40 | | LI, DEYU | VEC ³ -Valve Enabled Cell Co-Culture Platforms for Cancer Biology Study |
| 10:00 | | JU, JINGFANG | Translational Control Analysis by Translationally Active RNA Capture/Microarray Analysis (TriP-Chip) |
| 10:20 | | MUDDIMAN, DAVID C. | Development and Application of Novel Glycan-Specific Reagents to Facilitate Early Detection of Epithelial Ovarian Cancer |
| 10:40 | Break | | |
| 11:00 | Biomarker Preservation and Discovery | Session Chair | Ignacio Wistuba, M.D., MD Anderson Cancer Center |
| 11:20 | | SHEN, LANLAN | Genome-Scale DNA methylation Profiling in Developing Colon and The impact of Diet |
| 11:30 | | HARISMENDY, OLIVIER | Detection of low prevalence mutations in solid tumors via Ultra Deep Targeted Sequencing |
| 11:50 | | LIOTTA, LANCE ALLEN | Tissue is alive: Preserving biomolecules and tissue morphology in clinical trial samples |
| 12:10 | | HAGEDORN, CURT H | Sentinel RNAs as a Measure of mRNA Integrity in Clinical Biospecimens |
| 12:30 | Lunch (on your own) | | |
| 13:30 | Genomic Pathway Tools | Session Chair | Steven Wong, M.D., The Methodist Hospital Research Institute |
| 13:40 | | ALEXANDRAKIS, GEORGIOS | Scanning Correlation Microscopy Methods for Quantifying DNA Repair Kinetics |
| 14:00 | | RIETHMAN, HAROLD C. | Targeted selection, sequencing, and analysis of human telomere and subtelomere DNA in cancer |
| 14:20 | | SHI, HUIDONG | Application of 454-Sequencing to Cancer Epigenomics |
| 14:40 | Break | | |
| 15:00 | Technologies to Aid Drug Screening & Delivery | Session Chair | Melissa Landis, Ph.D., The Methodist Hospital Research Institute |
| 15:10 | | KOPELMAN, RAOUL | Magnetorotation: A Rapid Assay for Single Cell Drug Sensitivity of Cancer Cells |
| 15:30 | | EVANS, CONOR LEE | Hyperspectral and Structural Microscopy Platform for Therapy of Resistant Cancer |
| 15:50 | | YAO, XUDONG | Ulthroughput Multiple Reaction Monitoring Mass Spectrometry for Large-Scale Cancer Biomarker Validation |
| 16:10 | | ACHARYA, BHARAT R | 384-well cell migration assay suitable for high throughput screening (HTS) of chemical libraries for cancer therapeutics |
| 16:30 | | KAY, BRIAN | Scaffolds for Delivering Deoxycytidine Kinase to HER2 Positive Cancer Cells |
| 16:50 | Meeting Close | Tony Dickherber | |