



and Therapeutics

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Engineering

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"Nanomedicine and the Immune System"

8:30- 8:35a.m.	Welcome Andrew Tsourkas, PhD, CT ³ N Co-Director, Chemical and Nanoparticle Synthesis Core, Professor of Bioengineering and Radiology, School of Engineering and Applied Science, University of Pennsylvania
8:35- 8:45a.m.	Introduction Garret FitzGerald, MD, FRS, Professor of Medicine and Pharmacology, McNeil Professor in Translational Medicine and Therapeutics, Director, Institute for Translational Medicine & Therapeutics, Perelman School of Medicine, University of Pennsylvania
Session I	<u>Keynote Lecture</u> Session Chair: Dennis E. Discher, PhD, Robert D. Bent chaired Professor, Director of NCI Phys Sci Oncology Ctr @ Penn, Biophys Eng'g Labs: Mol.Cell Biophys & NanoBio-Polymers, University of Pennsylvania
8:45- 9:35 a.m.	<i>New Strategies for Harnessing the Immune System to Treat Cancers</i> Philip S. Low, PhD, Presidential Scholar for Purdue Institute for Drug Discovery Ralph C. Corley Distinguished Professor of Chemistry Purdue University
Session II	Session Chair: David Cormode, DPhil, Associate Professor, Radiology Department, Perelman School of Medicine, University of Pennsylvania
9:35- 10:10 a.m.	Engineering the Bio/Nano Interface for Enhanced Nano-Immunotherapy Evan A. Scott, PhD, Kay Davis Professor of Biomedical Engineering & Microbiology immunology, Department of Biomedical Engineering, Department of Microbiology- Immunology, Interdisciplinary Biological Sciences, Chemistry of Life Processes Institute, Simpson Querrey Institute, International Institute of Nanotechnology, Institute for Global Health, Robert H. Lurie Comprehensive Cancer Center, Northwestern University

10:10- 10:45 a.m.	<i>Biomaterials-Aided Combination Immunotherapy</i> Natalie Artzi, PhD, Assistant Professor of Medicine, Brigham and Women's Hospital, Harvard University; Principal Research Scientist, Massachusetts Institute of Technology
10:45 - 11:00 a.m.	Break
Session III	Session Chair: Jake Brenner, MD, PhD, Assistant Professor & Attending Physician Depts of Medicine and Pharmacology, University of Pennsylvania
11:00- 11:35 a.m.	<i>Immunotherapeutic Drug Delivery to Lymph Nodes Augments Cancer Immunotherapy</i> Susan Thomas, PhD, Associate Professor, George W. Woodruff School of Mechanical Engineering, Associate Director, Integrated Cancer Research Center, Georgia Institute of Technology
11:35- 12:10 p.m.	Engineering Strategies to Modulate the Gut Microbiome and Immune System James Moon, PhD, John Gideon Searle Professor, Department of Pharmaceutical Sciences, Department of Biomedical Engineering, University of Michigan
12:10- 1:10 p.m.	Lunch Break
Session IV	<u>UPENN Keynote Lecture</u> Session Chair: Michael J. Mitchell, PhD, Skirkanich Assistant Professor of Innovation, Department of Bioengineering, School of Engineering and Applied Science, University of Pennsylvania
1:10- 2:00 p.m.	"Nucleoside-Modified mRNA-LNP Targeted Therapies" Drew Weissman, MD, PhD, Roberts Family Professor in Vaccine Research, Perelman School of Medicine, University of Pennsylvania
Session V	Session Chair: E. John Wherry, PhD, Richard and Barbara Schiffrin President's Distinguished Professor Chair, Department of Systems Pharmacology and Translational Therapeutics Director, Institute for Immunology, University of Pennsylvania
2:00- 2:35 p.m.	The Use of Targeted mRNA-Lipid Nanoparticles in the Context of Acute Inflammatory Conditions Hamideh Parhiz, PhD, Research Assistant Professor of Medicine, Infectious Disease Division, Perelman School of Medicine, University of Pennsylvania
2:35- 3:10 p.m.	Harnessing The Neonatal Fc Receptor to Enhance Pharmacokinetics of Biotherapeutics Patrick Glassman, PhD, Research Associate, Department of Systems Pharmacology and Translational Therapeutics, Perelman School of Medicine, University of Pennsylvania
3:10- 3:25 p.m.	Break
<u>Session VI</u>	<u>Keynote Lecture</u> Session Chair: Hans Huber, PhD, Adjunct Professor of Systems Pharmacology and Translational Therapeutics, Associate Director, CT ³ N, Perelman School of Medicine, University of Pennsylvania

3:25- 4:15 p.m. **Exploiting Tumor Lymphangiogenesis for Cancer Immunotherapy Melody A. Swartz, PhD,** William B. Ogden Professor of Molecular Engineering, Pritzker School of Molecular Engineering and Ben May Department for Cancer Research, Vice Dean for Faculty Affairs, University of Chicago

4:15-4:25p.m. Closing Remarks

Vladimir Muzykantov, PhD, Founding Co-Director of the PSOM/SEAS Center for Targeted Therapeutics and Translational Nanomedicine (CT³N), Professor of Systems Pharmacology and Translational Therapeutics, Professor of Medicine, University of Pennsylvania