Wednesday, December 6, 2023
Perelman School of Medicine, University of Pennsylvania
Biomedical Research Building, Gaulton Auditorium and Lobby
421 Curie Boulevard, Philadelphia, PA 19104

“Entering the Nobel Era of Nanomedicine”

8:15-8:45 a.m.  Registration and Breakfast  Gaulton Lobby

8:45-9:00 a.m.  Welcome  Gaulton Auditorium
Andrew Tsourkas, PhD, Co-Director, CT3N and Chemical and Nanoparticle Synthesis Core; Professor of Bioengineering, School of Engineering and Applied Science, University of Pennsylvania

9:00-9:05 a.m.  Introduction  Gaulton Auditorium
Jake Brenner, MD, PhD, Assistant Professor & Attending Physician, Departments of Medicine and Pharmacology, University of Pennsylvania

Session I  Keynote Lecture
Session Chair: Hamideh Parhiz, PharmD, PhD, Research Assistant Professor of Medicine, Department of Medicine, University of Pennsylvania

9:05-9:55 a.m.  Lipid Nanoparticles for mRNA Delivery to the Pancreas  Gaulton Auditorium
Kathryn Whitehead, PhD, Professor, Departments of Chemical and Biomedical Engineering, Carnegie Mellon University

Session II  A Breath of Fresh Nano-Air: Inhaled Delivery
Session Chair: Jake Brenner, MD, PhD, Assistant Professor & Attending Physician, Departments of Medicine and Pharmacology, University of Pennsylvania

9:55-10:30 a.m.  Designing Inhalable Nanoparticles to Direct Innate Immune Cell Responses in the Lung  Gaulton Auditorium
Catherine Fromen, PhD, Associate Professor, Chemical and Biomolecular Engineering, University of Delaware
10:30-11:05 a.m.  *Dual Functions of NanoSTING@Mn to Enhance Protective Immunity Against Heterosubtypic Influenza Viruses in Aging Mice*
Mei X. Wu, MD, PhD, The Wellman Center for Photomedicine, Dermatology Department, Massachusetts General Hospital, and Harvard Medical School

11:05-11:25 a.m.  Coffee Break  
Gaulton Lobby

**Session III**  
**Delivery on Our Minds: CNS Delivery**  
Session Chair: *Patrick Glassman, PhD, Assistant Professor, School of Pharmacy, Temple University*  
Gaulton Auditorium

11:25-12:00 p.m.  *Hypotonic Gelling Solutions for Extended Topical Ocular Drug Delivery*
Laura M. Ensign-Hodges, PhD, Marcella E. Woll Professor of Ophthalmology, Vice Chair for Research, Wilmer Eye Institute, Professor of Chemical and Biomolecular, Engineering, Biomedical Engineering, Pharmacology and Molecular Sciences, Infectious Diseases, Gynecology & Obstetrics, and Oncology, Johns Hopkins Medicine

12:00-12:35 p.m.  *Targeted Nanomedicine for Stroke*
Oscar Marcos Contreras, PhD, Assistant Professor, Department of Systems Pharmacology and Translational Therapeutics, Department of Neurology, University of Pennsylvania

12:35-1:55 p.m.  Lunch Break  
Gaulton Lobby

**Session IV**  
**A Rich Plate of Carriers: Lipid Nanocarriers’ Continued Ascension**  
Session Chair: *Kara L. Spiller, PhD, Professor, School of Biomedical Engineering, Science, and Health Systems, Drexel University*  
Gaulton Auditorium

1:55-2:30 p.m.  *The Evolution of Liposomes and Lipid Nanoparticles as Drug Carriers - Six Decades On*
Francis C. Szoka Jr., PhD, Emeritus Professor of Bioengineering, Therapeutic Sciences and Pharmaceutical Chemistry University of California, San Francisco

2:30-3:05 p.m.  *Lipid Nanoparticles Enabled mRNA Therapeutics*
Yizhou Dong, PhD, Professor, Icahn Genomics Institute, Precision Immunology Institute, Department of Oncological Sciences, Tisch Cancer Institute, Friedman Brain Institute, Icahn School of Medicine at Mount Sinai

3:05-3:40 p.m.  *That’s Funny*
Tom Anchordoquy, PhD, Professor, Skaggs School of Pharmacy and Pharmaceutical Sciences, University of Colorado Anschutz Medical Campus

3:40-4:00 p.m.  Coffee Break  
Gaulton Lobby
**Session V**  
**Keynote Lecture**

*Session Chair: Dennis Discher, PhD, Robert D. Bent Professor, Department of Bioengineering, School of Engineering and Applied Science, University of Pennsylvania*

4:00- 4:50 p.m.  
*Rational Design of Lipid Nanoparticles for Enabling Gene Therapies*  
**Pieter Cullis, PhD**, Professor, Department of Biochemistry and Molecular Biology, University of British Columbia

4:50- 5:00 p.m.  
**Closing Remarks**  
**E. John Wherry, PhD**, Chair, Department of Systems Pharmacology & Translational Therapeutics, Richard and Barbara Schiffrin President’s Distinguished Professor, Director, Institute for Immunology, Co-Program Leader, Immunobiology Program, Abramson Cancer Center, Co-Director, Parker Institute for Cancer Immunotherapy, University of Pennsylvania

**Jake Brenner, MD, PhD**, Assistant Professor & Attending Physician, Departments of Medicine and Pharmacology, University of Pennsylvania

5:00- 6:00 p.m.  
**Reception**  
Gaulton Lobby