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- 8:55 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

8:55- 9:00 a.m.  Introduction  Gaulton Auditorium
Jake Brenner, MD, PhD, Assistant Professor & Attending Physician, Departments of Medicine and Pharmacology, University of Pennsylvania

9:00- 9:05a.m.  Special Address  Gaulton Auditorium
Drew Weissman, MD, PhD, Roberts Family Professor in Vaccine Research, Perelman School of Medicine, 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**  
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*

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*

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

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**Session V**  
**Keynote Lecture**  
Gaulton Auditorium

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