Wednesday, December 5, 2018
Perelman School of Medicine, University of Pennsylvania
Biomedical Research Building, Gaulton Auditorium and Lobby
421 Curie Boulevard, Philadelphia, PA 19104

Wednesday December 5, 2018

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

8:45- 9:00 a.m.  
Welcome & Introduction  
Gaulton Auditorium

Andrew Tsourkas, PhD, CT3N Co-Director, Co-Director, Chemical and Nanoparticle Synthesis Core, Professor of Bioengineering and Radiology, School of Engineering and Applied Science, University of Pennsylvania

Session I:  

Keynote Lecture  
Session Chair: Andrew Tsourkas, PhD

9:00- 9:50 a.m.  
Rational Vaccinology: In Pursuit of the Perfect Vaccine  
Chad Mirkin, PhD, George B. Rathmann Professor of Chemistry and Director, International Institute for Nanotechnology, Northwestern University

Session II:  

Immune Response Engineering and Therapy  
Session Chair: Theresa M. Busch, PhD, CT3N Advisory Board Member, Research Professor of Radiation Oncology, Perelman School of Medicine, University of Pennsylvania

9:50- 10:20 a.m.  
Engineering Nanotechnology for Immuno-Oncology: Harnessing Innate Immunity to Enhance Cancer Immunotherapy  
John T. Wilson, PhD, Assistant Professor of Chemical and Biomolecular Engineering, Vanderbilt University
10:20-10:50 a.m.  
**Dual-Function Oligonucleotides for Immunotherapy of “Cold” Prostate Cancers**

Marcin Kortylewski, PhD, Associate Professor of Immuno-Oncology, City of Hope

10:50-11:05 a.m.  
**Coffee Break**

Gaulton Lobby

**Session III**

**Tissue Targeting and Engineering**

*Session Chair: Hans E. Huber, PhD, Associate Director of CT²N, Adjunct Associate Professor of Pharmacology, Perelman School of Medicine, University of Pennsylvania*

11:05-11:35 a.m.  
**Oligonucleotide Therapeutics: Now on Target**

Arthur A. Levin, PhD, Executive Vice President of Research and Development, Avidity Biosciences

11:35-12:05 p.m.  
**There’s Plenty of Room in the Belly: Efficient Cell Targeting in Visceral Tissues**

Andrew M. Smith, PhD, Associate Professor of Bioengineering and Associate Head of Undergraduate Programs, University of Illinois at Urbana-Champaign

12:05-12:35 p.m.  
**Non-Genetic Engineering of Cell-Cell Interactions with Protein Nanorings**

Carston R. Wagner, PhD, Professor and Endowed Chair in Medicinal Chemistry, University of Minnesota

12:35-1:50 p.m.  
**Lunch, Poster Viewing, and Networking**

Gaulton Lobby

**Session IV**

**Drug Delivery Vehicles and Devices**

*Session Chair: Michael Chorny, PhD, Associate Director of CT²N, Research Associate Professor of Pediatrics, Children’s Hospital of Philadelphia*

1:50-2:20 p.m.  
**Long-Acting Implants: Design for Durable Drug Delivery**

Seth Forster, MS, Associate Principal Scientist, Merck Research Laboratories

2:20-2:50 p.m.  
**Design and Development Synthetic High Density Lipoprotein Nanomedicines**

Anna Schwendeman, PhD, Assistant Professor of Pharmaceutical Sciences, Biointerfaces Institute, College of Pharmacy, University of Michigan
2:50- 3:20 p.m.  
*Using Blood-Brain Barrier Characteristics to Target the CNS: An Emphasis on Exosomes*

**William A. Banks, MD, FACE**, Professor, Division of Gerontology and Geriatric Medicine, Department of Internal Medicine, University of Washington and Associate Chief of Staff, Research and Development, Puget Sound VA

3:20- 3:35 p.m.  
**Coffee Break**

Gaulton Lobby

3:35- 4:05 p.m.  
*Utilizing miRNA-enriched MSC Exosomes for Cardiac Regeneration: An Activity-Composition Analysis*

**Juliane Nguyen, Pharm D, PhD**, Assistant Professor, Department of Pharmaceutical Sciences, School of Pharmacy, University at Buffalo

**Session V**

**Keynote Lecture**

*Session Chair: Vladimir Muzykantov, MD, PhD, Co-Director, CT^3N, Professor of Pharmacology and Medicine, Vice-Chair of Faculty Development, Department of Pharmacology, Perelman School of Medicine, University of Pennsylvania*

4:05- 4:55 p.m.  
*Developing T-Cell Therapy for the Masses*

**Matthias Stephan, MD, PhD**, Associate Member, Program in Immunology, Clinical Research Division, Fred Hutchinson Cancer Research Center

4:55- 5:00 p.m.  
**Closing Remarks**

**Vladimir Muzykantov, MD, PhD**

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

Gaulton Lobby