Wednesday December 5, 2018

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

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

**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 Wilson, PhD*, Assistant Professor of Chemical and Biomolecular Engineering and Biomedical 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**

**Session III**

**Tissue Targeting and Engineering**

*Session Chair: Hans E. Huber, PhD, Associate Director of CT3N, 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**

**Session IV**

**Drug Delivery Vehicles and Devices**

*Session Chair: Michael Chorny, PhD, Associate Director of CT3N, 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, West Point, PA

2:20- 2:50 p.m.  
**Synthetic High Density Lipoprotein Nanomedicine and Drug Delivery Carrier**  
Anna Schwendeman, PhD, Assistant Professor of Pharmaceutical Sciences, 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: Vladmir Muzykantov, MD, PhD, Co-Director, CT³N, 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.  
**In Situ Re-Programming of T Cells - The Power of Cell Therapy with the Convenience of a Drug**  
Matthias Stephan, MD, PhD, Associate Professor, Department of Medicine, Division of Oncology, University of Washington School of Medicine and Associate Member, 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