Day 1: December 9, 2021

8:55 Opening Remarks

9:00-10:00 Session I: Immunoregulation of Cancer
- David J. Mooney, PhD – Biomaterials-enabled chemo-immunotherapy (Professor of Bioengineering, Wyss Institute)
- Wayne Hancock, MBSS, PhD – Immune regulation of tumors, injury, and transplant rejection (Chief of Transplantation Immunology, Children’s Hospital of Philadelphia)
- Sara Meyer, PhD – Non-coding RNA regulation in leukemia (Assistant Professor of Cancer Biology and Medical Oncology, Thomas Jefferson Univ.)

10:20-10:40 Break

10:40-11:40 Session II: Cell Therapy
- Bruce Levine, PhD – Immune cell manufacturing (Professor of Cancer Gene Therapy, Univ. of Pennsylvania)
- Suzie Pun, PhD - Traceless aptamer-mediated isolation of CD8+ T cells for chimeric antigen receptor T-cell therapy (Professor of Bioengineering, Univ. of Washington)
- Minglin Ma, PhD - Biomaterials for islet encapsulation (Associate Professor of Biological Engineering, Cornell)

11:40-12:00 Panel Discussion

12:00-1:30 Lunch break

1:30-2:30 Session III: Nanomedicine for immune cell control I
- Vladimir Muzykantov, PhD - Erythrocyte-based delivery system for immunotherapy (Professor of Pharmacology, Univ. of Pennsylvania)
- Willem Mulder, PhD – Clinical translation of nanomaterial immunotherapeutics (Professor of Biomedical Engineering, Eindhoven University of Technology)
- Jamie Spangler, PhD – Engineering synthetic antibodies (Assistant Professor of Chemical and Biomolecular Engineering, Johns Hopkins)

2:30-2:50 Panel Discussion

2:50-3:10 Coffee Break

3:10-4:30 Session IV: Nanomedicine for immune cell control II
- Liangfang Zhang, PhD - Cellular Nanosponges Inhibit SARS-CoV-2 Infectivity (Professor of Nanoengineering, UCSD)
- Nichole Daringer, PhD – Synthetic engineering for immune therapy (Assistant Professor of Bioengineering, Rowan Univ.)
- Takashi Kei Kishimoto, PhD – Tolerogenic nanoparticles (CSO, Selecta Biosciences)
- Kandace Gollomp, MD – Synthetic antibodies for the treatment of sepsis (Attending Physician, Hematology, Children’s Hospital of Philadelphia)

4:30-4:50 Panel Discussion

5-7 Poster Session
Day 2: December 10, 2021

8:55 Opening Remarks

9:00-10:00 Session V: Infectious Diseases and Vaccines
- Gregg Duncan, PhD - Synthetic mucin biomaterials for the study and treatment of infectious disease (Assistant Professor of Bioengineering, Univ. of Maryland)
- Ebony Gary, PhD - DNA vaccines for Covid-19 (Wistar Institute)
- Annaleisa Anderson, PhD - Bench to bedside: A novel approach to generate a recombinant toxoid vaccine against Clostridium difficile (Chief Scientific Officer, Bacterial Vaccines, Pfizer Inc.)

10:20-10:40 Break

10:40-11:40 Session VI: Personalized medicine in immune engineering
- Brian Aguado, PhD – Engineering biomaterials to treat disease based on sex, age, and/or ancestry (Assistant Professor of Biomedical Engineering, UCSD)
- John Bethea, PhD – Sex differences in neuroimmune modulation of chronic pain (Professor of Biology, Drexel University)
- Peter Gaskill, PhD – Effects of drug use on HIV infection of macrophages (Assistant Professor of Pharmacology, Drexel University)

11:40-12:00 Panel Discussion

12:00-1:30 Lunch break

1:30-2:30 Session VII: Immune regulation of tissue repair
- De'Broski R. Herbert, PhD – Cellular context dictates response to helminth infection and injury (Associate Professor of Pathobiology, Univ. of Pennsylvania) (confirmed)
- Tatiana Segura, PhD - Biomaterials that modulate innate-adaptive immune crosstalk in wound healing (Professor of Biomedical Engineering, Duke) (confirmed)
- Hong Wang, MD, PhD – Immune regulation in cardiovascular injury and disease (Professor of Microbiology and Immunology, Temple School of Medicine) (confirmed)

2:30-2:50 Panel Discussion

2:50-3:10 Coffee Break

3:10-4:10 Session VIII: Engineering systems for fundamental understanding
- Daniel Hammer, PhD – Tools for understanding the migration of immune cells (Professor, Univ. of Pennsylvania)
- Rebecca Pompano, PhD – Ex vivo models to study lymph node function (Assistant Professor of Chemistry, University of Virginia)
- Ankur Singh, PhD – Organoids and on-chip models of immune organs (Associate Professor of Biomedical Engineering, Georgia Tech)

4:10-4:30 Panel Discussion

4:30-4:45 Concluding Remarks