Sunday, September 9, 2018

2:00 PM		REGISTRATION BEGINS
SESSION I: Hierarchical Assembly of Biomaterials and Delivery systems **Discussion Leader: Buddy Ratner, University of Washington**		
4:00 PM		**Organizing Team** Welcome and Introductory Remarks
4:10 PM	1.	**KEYNOTE** **Sam Stupp**, Northwestern University Encoding Regenerative Bioactivity in Supramolecular Polymers
4:45 PM	2.	**Eric Appel**, Stanford University Supramolecular Biomaterials Enabling Innovations in Drug Formulation and Delivery
5:10 PM	3.	**ORGANIZER** **Theresa Reineke,** University of Minnesota Self Assembly of Amphiphilic Block Polymers Promote Encapsulation of CRISPR Cas9 Payloads and Intracellular Delivery
5:45 PM	4.	**KEYNOTE** **Tosh Chilkoti**, Duke University Hierarchical Self-Assembly of Genetically Encoded Biomaterials
6:20 PM		BREAK
6:30 PM		**ORGANIZER** **Buddy Ratner**, University of Washington Napa Wine Tutorial
7:00 PM		WELCOME RECEPTION

Monday, September 10, 2018

7:00 AM		CONTINENTAL BREAKFAST AT HOTEL
SESSION II: New Approaches to Biomaterials, Scaffolds, and Surfaces **Discussion Leader: Eric Appel, Standford University**		
8:00 AM	5.	**Melissa Grunlan,** Texas A&M University Self-Fitting Shape Memory Polymer Scaffolds to Treat Craniomaxillofacial (CMF) Bone Defects
8:25 AM	6.	**Allie Obermeyer**, Columbia University Engineering Protein Complex Coacervation for Cellular Compartmentalization
8:50 AM	7.	**Duncan Maitland**, Texas A & M University In Vivo Experience with Porous Biodegradable Polyurethane Vascular Occlusion Devices
9:15 AM	8.	**KEYNOTE** **Bob Ward**, ExThera Medical Corporation Clinical Testing of a Therapeutic Blood Filter that Removes Pathogens
9:50 AM		BREAK
SESSION III: New Polymers for therapeutics **Discussion Leader: Allie Obermeyer, Columbia University**		
10:10 AM	9.	**KEYNOTE** **Dan Anderson**, MIT Combinatorial Development of Biomaterials for Cellular Delivery
10:45 AM	10.	**Chris Alabi**, Cornell University Molecular Design and Activity of Sequence-Defined Macromolecules

11:10 AM	11.	**ORGANIZER** **Paul Burke**, Burke Bioadventures, LLC The Era of Polymer Therapeutics: A Venusian Dawn
11:45 AM	12.	**KEYNOTE** **Suzie Pun**, University of Washington Bioactive Polymers for Biomedical Applications
12:20 PM		LUNCH BREAK (ON YOUR OWN)
SESSION IV: Innovations in Devices, Biomaterials, and interfaces **Discussion Leader: Chris Alabi, Cornell University**		
4:00 PM	13.	**KEYNOTE** **Kristi Kiick**, University of Delaware Phase-Separated Microstructured Materials for Applications in Medicine
4:35 PM	14.	**Jadranka Travas-Sejdic**, University of Auckland, New Zealand Molecularly Engineered Conducting Polymers with Biomimetic Properties
5:00 PM		BREAK
5:20 PM	15.	**ORGANIZER** **Buddy Ratner**, University of Washington Update on Precision Porous Polymers for Healing and Regeneration
5:55 PM	16.	**Julio Palmaz**, Palmaz Winery and University of Texas Health Science Center San Antonio Stagnation in Medical Device Technology
6:20 PM		END DAILY SESSIONS
6:30 PM		POSTER SESSION AND RECEPTION
		DINNER ON YOUR OWN

Tuesday, September 11, 2018

7:00 AM		CONTINENTAL BREAKFAST AT HOTEL
SESSION V: Innovations in Bioimaging and Tissue regeneration **Discussion Leader: Heather Maynard, University of California, Los Angeles**		
8:00 AM	17.	**KEYNOTE** **Phil Messersmith**, University of California, Berkeley Shear-Thinning and Self-Assembling Polymer Prodrugs for Drug-Induced Tissue Regeneration
8:35 AM	18.	**Mark Grinstaff**, Boston University Polymers for Cartilage Tissue Supplementation and Lubrication
9:00 AM	19.	**Cassandra Fraser**, University of Virginia Luminescent Boron Biomaterials for Wound Oxygen Imaging
9:25 AM	20.	**Ellen Sletten**, University of California, Los Angeles Perfluorocarbon Nanoemulsion Theranostics Stabilized by Poly(oxazoline) Amphiphiles
9:50 AM		BREAK
SESSION VI: Polymers for Encapsulation, Stabilization, and Delivery **Discussion Leader: Theresa Reineke, University of Minnesota**		
10:10 AM	21.	**Heather Maynard**, University of California, Los Angeles Biometric Stabilizing Polymers for Protein Therapeutics
10:45 AM	22.	**Shaoyi Jiang**, University of Washington Anti-PEG Antibodies: Current Issues and Beyond PEGylation
11:10 AM	23.	**Steve Roffler**, Institute of Biomedical Sciences, Academia Sinica, Taiwan Anti-PEG Antibodies: Their Uses and Potential Clinical Impact

11:35 AM	24.	**TBD**
12:00 PM		LUNCH BREAK ON YOUR OWN
SESSION VII: Advances in Drug Delivery – Polymers and Nanoparticles **Discussion Leader: Paul Burke, Burke Bioadventures, LLC**		
4:00 PM	25.	**KEYNOTE** **Bob Prud'homme**, Princeton University Nanomedicine: From High Tech to Global Health
4:35 PM	26.	**Peter Senter**, Seattle Genetics Potent Antibodies and Antibody-Drug Conjugates for Cancer Therapy
5:00 PM	27.	**Mark Dreibelbis**, The Dow Chemical Company Influence of Excipient Properties and Interactions on Solid Dispersions
5:25 PM		BREAK
5:45 PM	28.	**KEYNOTE** **Niren Murthy**, University of California, Berkeley *In vivo* Delivery of Cas9 Ribonucleoprotein and Donor DNA with Gold Nanoparticles
6:20 PM	29.	**Todd Emrick,** University of Massachusetts, Amherst Novel Polymer Zwitterions for Conjugation and Complexation of Therapeutics
6:45 PM	30.	**Marian Gindy**, Merck Polymer Based Drug Delivery Approaches to Improve Medication Adherence
7:10 PM		END DAILY SESSIONS
7:30 PM		WINE TASTING

Wednesday, September 12, 2018

7:00 AM		CONTINENTAL BREAKFAST AT HOTEL
SESSION VIII: New Synthesis and Assembly methods for Biomaterials **Discussion Leader: Al Nelson, University of Washington**		
8:00 AM	31.	**KEYNOTE** **Paula Hammond,** MIT Designer Polypeptides for the Electrostatic Assembly and Release of RNA Complex Systems
8:35 AM	32.	**Stefan Zauscher**, Duke University TdT Catalyzed Enzymatic Polymerization of ssDNA: A Novel Approach for Multifunctional DNA Materials
9:00 AM	33.	**Kenneth Shea**, University of California, Irvine Abiotic Synthetic Polymers: Functional Alternatives to Antibodies? Applications for Protein Stabilization, Inhibition of Signal Transduction and as Broad-Spectrum Antivenom
9:25 AM		BREAK
SESSION IX: 3D Printed Biomaterials and Applications in the Medical Industry **Discussion Leader: Ellen Sletten, Unviersity of California, Los Angeles**		
10:00 AM	34.	**Al Nelson**, University of Washington Synthetic Hydrogel Inks for Direct-Write 3D Printing
10:25 AM	35.	**Stephanie Willerth**, University of Victoria, Canada 3D Bioprinting Personalized Neural Tissue

10:50 AM	36.	**Steve Pollack**, Carbon 3D Reinventing Possibilities in Manufacturing of Medical Devices
11:15 AM		**Organizing Team** Concluding Remarks and Closing
11:30 AM		MEETING ENDS

1. **Orthogonal Supramolecular Polymers for Strong Surgical Adhesives**
   Diederik W. R. Balkenende, Phillip B. Messersmith

2. **Fatigue Life of Polymeric Prostetic Heart Valves**
   Eugenia Biral

3. **Effect of Pre-Existing Anti-PEG Antibodies on PEGylated Medicines**
   Bing-Mae Chen, Tien-Ching Chang, Even Chen, Tian-Lu Cheng, Daw-Yang Hwang, Steve R. Roffler

4. **Directing Brain Tissue Integration for Long-Term Electrophysiology with Conductive Microporous Hydrogel Electrodes**
   Lars Crawford

5. **Injectable Dynamic Covalent Hydrogels of Boronic Acid Polymers Cross-Linked by Bioactive Plant-Derived Polyphenols**
   Zhuojun Huang, **Peyman Delparastan**, Patrick Burch, Jing Cheng, Yi Cao, Phillip B. Messersmith

6. **Bioactive, Templated Inorganic-Organic Hydrogel Scaffolds for Bone Regeneration**
   Michael T. Frassica, Sarah K. Jones, Mariah S. Hahn, Melissa A. Grunlan

7. **Injectable Hydrogel for Improved Recovery Following Spinal Cord Injury**
   Daniel C. Lee

8. **PEO-Silane Amphiphiles and their Capacity to Resist Protein Adsorption and Thrombosis**
   Bryan Khai D. Ngo, Mikayla E. Barry, Kendrick K. Lim, Shane J. Staflien, Melissa A. Grunlan

9. **Polymers and Formulations for Advanced Nano Drug Delivery Systems**
   Gangadhar Panambur, Donghun Koo, Rajiv Kumar, Nicolynn Davis, Peng Gao

10. **Glomerular Disease Augments Kidney Accumulation of Synthetic Anionic Polymers**
    Alexander N. Prossnitz, Gary W. Liu, Diana G. Eng, Yilong Cheng, Jeffrey W. Pippin, Robert J. Lamm, Chayanon Ngambenjawong, Stuart J. Shankland, Suzie H. Pun

11. **Slow-Release Formulation of Cowpea Mosaic Virus for In Situ Vaccine Delivery to Treat Ovarian Cancer**
    Anna E. Czapar, **Brylee David B. Tiu**, Frank A. Veliz, Jonathan K. Pokorski, Nicole F. Steinmetz