## PROGRAM

## Saturday, October 15, 2011 (Officer's Club)

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8:00-8:50 AM Registration/Poster Mounting

8:50-9:00 AM Introductory Remarks Thomas Parks Vice President for Research, University of Utah, USA

**Chris Ireland** Dean, College of Pharmacy, University of Utah, USA

<u>Session I</u>: Advanced Nanomaterials Co-Chairs: Hamid Ghandehari Pharmaceutics & Bioengineering, Utah Center for Nanomedicine, University of Utah, USA

Marc Schneider Helmholtz Institute for Pharmaceutical Research Saarland, Saarland University, Germany

9:00-9:40 AM <u>Plenary Lecture</u> Nanoengineered Multifunctional Particles: Recent advances and Challenges for Nanomedicine **Frank Caruso** Department of Chemical & Biomolecular Engineering, University of Melbourne, Australia

9:40-10:10AM Engineering Nanostructured Interfaces for Enhanced Epithelial Binding and Permeability Tejal Desai Department of Physiology, University of California, USA

**10:10-10:20AM** Coffee Break/Poster Viewing

<u>Session II</u>: Theranostics Co-Chairs: Andrew MacKay Department of Pharmacology and Pharmaceutical Sciences, University of Southern California, USA **Dennis Parker** Department of Radiology Research, University of Utah, USA

10:20-10:50 AMImage Guided Drug DeliveryKatherine FerraraBiomedical Engineering, University of California, Davis, USA

10:50-11:20AMRole of Nanomedicine in TheranosticsIck Chan KwonBiomedical Science Center, Korea Institute of Science and Technology, Korea

11:20- 11:50 AMAdvancements in Nanomedicine Extend the Horizons of Diagnosis and TherapyGregory LanzaCardiovascular Division, Washington University, USA

10:50 AM-12:20 PMMolecular Imaging and NanomedicineShawn ChenNational Institute of Biomedical Imaging and Bioengineering (NIBIB)National Institute of Health, USA

12:20 - 1:00 PM Lunch Box/Poster Viewing

<u>Session III</u>: Theranostics Co-Chairs: **Tatiana Bronich** College of Pharmacy, University of Nebraska Medical Center, USA

**David Grainger** Department of Pharmaceutics and Pharmaceutical Chemistry, University of Utah, USA

**1:00-1:30 PM** Image-Guided Polymeric Nanomedicines for Tumor-Targeted Combination Therapies **Twan Lammers** Department of Pharmaceutics, Utrecht University, The Netherlands

1:30-2:00 PM The Application of Nanomedicine to the Detection and Treatment of Cardiovascular Disease Jason McCarthy Center for Molecular Imaging Research and The Center for Systems Biology Harvard Medical School, USA **2:00-2:30 PM** Advances in Development of Theranostics for Epithelial Cancers **Subhra Mohapatra** Department of Molecular Medicine, University of South Florida, USA

2:30-2:40 PM Coffee Break/Poster Viewing

Session IV: Drug Delivery Co-Chairs: Mohamed El-Sayed Department of Biomedical Engineering, University of Michigan, USA

Leonard Pease Department of Chemical Engineering, University of Utah, USA

**2:40-3:10 PM** Delivery of Lysosomal Enzyme Replacement Therapies by Targeted Nanocarriers **Sylvia Muro** Department of Bioengineering, University of Maryland, USA

**3:10-3:40 PM** 3-in-1 Polymeric Micelle Nanocontainer for Poorly Water-Soluble Drugs **Glen Kwon** School of Pharmacy, University of Wisconsin-Madison, USA

3:40-4:10 PM
Polymer Conjugates as Single Agents or in Combination Therapy: Versatile Nanomedicines for Tissue Repair and Cancer Therapy
Maria Vicent
Polymer Therapeutics Lab, Prince Felipe Research Centre, Spain

**4:10-4:20 PM** Coffee Break/Poster Viewing

<u>Session V</u>: Drug Delivery Co-Chairs: Natalya Rapoport Department of Bioengineering, University of Utah, USA

Arash Hatefi Department of Pharmaceutics, Rutgers, The State University of New Jersey, USA

**4:20-4:50 PM** Novel Design Concepts for Nucleic Acid Nanocarriers **You Han Bae**  Department of Pharmaceutical Chemistry, University of Utah, USA

**4:50-5:20 PM** Safe and Stable Peptide Nanomedicines Prepared using Phospholipid Micelles **Hayat Onyuksel** Department of Biopharmaceutical Sciences, University of Illinois at Chicago, USA

5:20-5:50 PMTyrosine-Derived Nanoparticles for the Topical Treatment of PsoriasisBozena MichniakDepartment of Pharmaceutics, Rutgers, The State University of New Jersey, USA

5:50 -6:50 PM Refreshments/Poster Viewing

**7:00 PM** Banquet Officers Club, 150 S Fort Douglas Blvd

Sunday, October 16, 2011 (Officer's Club)

Session VI: Translational Nanomedicine Co-Chairs: Alexander Kabanov College of Pharmacy, University of Nebraska Medical Center, USA

Paul Shami Department of Hematology, University of Utah, USA

9:00-9:40 AM <u>Plenary Lecture</u> Clinical Significance of Iron Oxide Nanoparticles and the Blood Brain Barrier Edward Neuwelt Blood-Brain Barrier and Neuro-Oncology Program, Oregon Health & Science University, USA

**9:40-10:10 AM** Development of Highly Active Lipid-Based Nanotherapeutics **Daryl Drummond** Merrimack Pharmaceuticals, USA

**10:10-10:20 AM** Coffee Break/Poster Viewing

**10:20-10:50 AM** Nanoparticle Drug Delivery Systems which Employ the Vitamin B12 Uptake Mechanisms

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**David Nowotnik** Access Pharmaceuticals, Inc., USA

10:50-11:20 AM
Using Ultrasound and Microbubbles to Temporarily Disrupt the Blood-Brain Barrier for Targeted Drug Delivery
Nathan McDannold
Brigham and Women's Hospital, Harvard Catalyst, USA

11:20-12:00 PM Lunch Box/Poster Viewing

Session VII: Drug Delivery Co-Chairs: Ilya Zharov Department of Chemistry, University of Utah, USA

## **Darin Furgeson**

Department of Pharmaceutical Chemistry, University of Utah, USA

12:00-12:30 PM

Porous Silica Nanomaterials for Efficient Drug Delivery and Improving Cytotoxicity of Anticancer Drugs **Tewodros Asefa** Department of Chemistry & Chemical Biology, Rutgers University, USA

## 12:30-1:00 PM

Multivalent Trisnitrilotriacetic Acids in Nanomedicine: Structure Optimization, In Vitro Applications, and In Vivo Challenges **Zhaohua Huang** Merimack Pharmaceuticals, USA

**1:00-1:30PM** Student Award Winning Poster Presentations Three presentations @ 10 min each starting with 3<sup>rd</sup>, 2<sup>nd</sup> and finishing with 1<sup>st</sup>

Co-Chairs: Margit Janat Amsbury Department of Medicine, University of Utah, USA

Tamara Minko

Department of Pharmaceutics, Rutgers, The State University of New Jersey, USA

1:30-1:45 PM

Closing Remarks: Tamara Minko, Alexander Kabanov