



Polymers in Medicine and Biology: 2007
June 17-20, 2007
Sonoma Valley, California

PROGRAM

SUNDAY, JUNE 17TH

2:30 PM REGISTRATION BEGINS

MODERATORS: TO BE ANNOUNCED

4:00 PM **Michael Sefton**

University of Toronto, Canada

New, New Biomaterials

4:45 PM **Rigoberto Advincula**

University of Houston

Nanostuctured Bio-resistant and Bio-specific Surfaces by Electrochemical Grafting of PEG-Dendron Precursors

5:15 PM **Karen Burg**, K. Naser, C. Parzel, and C. C. Yang

Clemson University

Polymer Design for Tissue Test Systems

5:45 PM *BIOMATERIALS, MEDICAL DEVICES AND DIAGNOSTICS* - RECEPTION HOSTED BY THE
POLYMER TECHNOLOGY GROUP, INC.

7:00 PM DINNER ON YOUR OWN

MONDAY, JUNE 18TH

7:30 AM CONTINENTAL BREAKFAST

MORNING SESSION I - POLYMERS FOR VASCULAR REGENERATION AND HEALING

MODERATORS: JEFF LINHARDT, BAUSCH AND LOMB, ROCHESTER, NY

8:15 AM **Kathryn Uhrich**

Rutgers University, and Polymerix Corp.

Welcome and Introductory Remarks

8:30 AM **John Rabolt,**

Chair, University of Delaware

Structure/Processing/Property Relationships in Electrospun Polymer Nanofibers with Engineered Properties for Vascular Regeneration

9:00 AM **Joyce Wong**, Brett C Isenberg, Corin Williams, and Edward Lee

Boston University

Building Structure into Small Diameter Blood Vessels



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MONDAY, JUNE 18TH, CONT'D

- 9:30 AM **James Bryers**, Tyler Swanger, Thelma Valdes, Kathryn Uhrich and Kristy Katzenmeyer
University of Washington
Emerging Biomaterials Strategies to Promote Healing and Prevent Infection
- 10:00 AM **Annelise Barron**, Nicolynn Davis, Sheng Ding, Russell Haynes, and Phillip B. Messersmith
Northwestern University
Enzymatically Crosslinked Protein Polymer Hydrogels for Tissue Engineering and In-situ MRI
- 10:30 AM BREAK

MORNING SESSION II - POLYMERS IN DRUG DELIVERY AND THERAPEUTICS

MODERATORS: SUE MECHAM, POLYMER SOLUTIONS, INC., BLACKSBURG, VA

- 10:45 AM **Alexander Kabanov**
University of Nebraska
Polymer Nanomaterials for Drug Delivery
- 11:15 AM **Suzie Pun**, J.M. Bergen, I. K. Park, J. M. Saul, K. Wang, and C. P. Ng
University of Washington
Controlled Trafficking of Synthetic Gene Delivery Systems
- 11:45 AM **David Putnam**, Sharon Wong, Anne Doody, and Peter Zavanah
Cornell University
Design and Synthesis of Functional Biomaterials: From Nucleic Acid Delivery to Bioadhesives
- 12:15 PM LUNCH ON YOUR OWN

AFTERNOON – POLYMERS WITH DESIGNED SURFACES

MODERATOR: DAVID GALE, ABBOTT VASCULAR DEVICES, MOUNTAIN VIEW, CA

- 3:30 PM **Buddy Ratner**, Shrojal Desai, Scott Curtin, Felix Simonovsky, and Wei He
University of Washington
Two Novel Biodegradable Polymers for Tissue Engineering
- 4:00 PM **Robert Ward (CEO)**, Keith McCrea, Yuan Tian, James Parakka, and Shangr Wang
The Polymer Technology Group
Modification of Biomedical Polymer Surfaces by Self-Assembling Monolayer End Groups (SAME™)



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MONDAY, JUNE 18TH, CONT'D

4:30 PM **Gabriel Lopez**
University of New Mexico
Model Stimuli-Responsive Polymer Surfaces

EVENING

MODERATOR: TO BE ANNOUNCED

5:30 PM Reception Speaker, **Vince Bryan**
inventor of Polymeric Cervical Disc Replacements and Winemaker, Cave B Estate Winery
Polymeric Cervical Disc Replacements

6:00 PM POSTER SESSION AND RECEPTION

7:00 PM DINNER ON YOUR OWN

TUESDAY, JUNE 19TH

7:30 AM CONTINENTAL BREAKFAST

MORNING SESSION I - POLYMER NANOCONSTRUCTS FOR MEDICAL USES

MODERATORS: JEFF HRKACH, MOMENTA PHARMACEUTICALS, CAMBRIDGE, MA

8:30 AM **Judy Riffle**, Richey Davis, and Alan Esker
Virginia Tech
Actuation of Magnetic Nanoparticles in Biological Media

9:00 AM **Robert Prud'homme**
Princeton University
Drug Delivery and Imaging Using Nanoparticles Produced by Block-copolymer Directed Flash NanoPrecipitation

9:30 AM **Joe DeSimone**
University of North Carolina
Adapting Lithographic Processes to Fabricate Organic, Highly Functional Targeted Carriers for Use in Nanomedicine

10:00 AM **Tim Deming**, Eric P. Holowka, Victor Z. Sun, and Daniel T. Kamei
UCLA
Polypeptide Vesicles for Drug Delivery



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TUESDAY, JUNE 19TH, CONT'D

10:30 AM BREAK

MORNING SESSION II - POLYMER IN DRUG DELIVERY AND THERAPEUTICS

MODERATOR: KEITH MCCRAE, THE POLYMER TECHNOLOGY GROUP, BERKELEY, CA

- 10:45 AM **Kazunori Kataoka**
The University of Tokyo
Smart Supra-Macromolecular Assemblies as Nanocarriers for Gene and Drug Delivery
- 11:15 AM **Justin Hanes**
Johns Hopkins University
Pulmonary Nanotherapeutics
- 11:45 AM **Tanya Bronich**
University of Nebraska Medical Center
Crosslinked Polymer Micelles for Cancer Therapeutics
- 12:15 AM LUNCH ON YOUR OWN

AFTERNOON – NEW MATERIALS AND POLYMER INTERACTIONS WITH BIOLOGICAL STRUCTURES

MODERATOR: TO BE ANNOUNCED

- 3:00 PM **Becky Bergman**
Medtronics, Inc.
Perspectives from the Medical Device Industry
- 3:30 PM **Jay Kunzler** and Jeff Linhardt
Bausch and Lomb
Recent Advances in the Design of Polymers for Ophthalmic Applications
- 4:00 PM **Mark Grinstaff**
Boston University
Biodendrimers for Ocular Wound Repair
- 4:30 PM **Kathryn Uhrich**
Rutgers University
Functionalized Amphiphilic Macromolecules for Targeted Cellular Interactions



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EVENING

MODERATOR: TO BE ANNOUNCED

5:30 PM Reception speaker, **Julio Palmaz**
inventor of the vascular stent and winemaker, Palmaz Vineyards
Stents and Cabernets

6:00 PM RECEPTION

7:00 PM DINNER ON YOUR OWN

WEDNESDAY, JUNE 20TH

7:30 AM CONTINENTAL BREAKFAST

MORNING - POLYMERS AND TISSUE ENGINEERING

MODERATORS: SHRI RENADE,

8:30 AM **Ken Wynne**
Virginia Commonwealth University
Contact Biocidal Surface Modifiers: Polyurethanes Containing 2,2-Substituted-1,3-Propylene Oxide Soft Blocks with Alkylammonium Side Chains

9:00 AM **Joe Kennedy**
University of Akron
Novel Membranes for Biology and Medicine

9:30AM **Kam Leong**
Duke University
Response of Stem Cells to Nanostructures

10:00 AM **Theresa Reineke**, Y. Liu, S. Srinivasachari, K. Fichter, and R. Lucas
University of Cincinnati
PGAAs: Versatile Glycopolymers for DNA and Imaging Agent Delivery

10:30 AM **Urs Hafeli** and Katayoun Saatchi
University of British Columbia Canada
Synthesis of Biodegradable Metal-Specific Ligand Polymers



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- 11:00 AM **W.-M. Kulicke**, S. Scholtz, T. Liebert, and Th. Heinze
University of Hamburg, Hamburg, Germany and Friedrich-Schiller-Universitat
Kompetenzentrum Polysaccharidforschung, Germany
*Synthesis of Regioselectively Synthesized 2-O-acetyl Starches for Clinical and in
Particular Parenteral Application*
- 11:30 AM JUDY RIFFLE, CONCLUDING REMARKS
- 11:45 AM MEETING ENDS – LUNCH ON YOUR OWN