

BIOINTERFACE

SURFACES IN BIOMATERIALS FOUNDATION

2010

REGISTRATION

October 18-20, 2010 | Loews Atlanta Hotel | Atlanta, GA

The Surfaces in Biomaterials Foundation presents one of the best technical conferences in 2010! Join us for the BioInterface 2010 Symposium and Workshop in Atlanta, GA, October 18 - 20, 2010.

We are pleased to announce an exciting new format in 2010. The Surfaces in Biomaterials Foundation is co-hosting its 20th annual Workshop & Symposium with the Georgia Institute of Technology, Parker H. Petit Institute for Bioengineering and Bioscience. This year's Symposium will take place on Monday and Tuesday at the Loews Atlanta Hotel in Atlanta, GA. This year's Workshop will take place on Wednesday, on the Georgia Institute of Technology campus.

Conference highlights include two full days of technical sessions (October 18-19), a Student Poster competition starting Monday, and a lively Point-Counterpoint session on Tuesday, October 19. The prestigious Excellence in Surface Science Award will be presented during the Awards luncheon on Tuesday. The *New Frontiers in Biosurface Applications Workshop* will take place on the Georgia Institute of Technology campus on Wednesday, October 20.

The technical sessions on Monday and Tuesday comprise a host of diverse topics including: Biocompatibility, Prevention of Biofilm Infections, Advances in Surface Analysis and Surface Characterization, New Biomaterials and Applications, New Approaches to Combination Vascular Drug Delivery and Coming Ophthalmic Technologies and Implants. This year our workshop will take place on Monday and will feature a comprehensive ensemble of renowned academic speakers known for their respective contributions to Biosurface Applications.

Please plan to attend our 20th Anniversary event. You will be enriched by the science, the venue (the Midtown Atlanta area), and the unique blend of industry, academic, regulatory and clinical attendees. Our conference is purposely kept small (~150 registrants) to allow you to connect, share, learn, and visit by relaxed contact with the attendees.

For more information on BioInterface 2010, please contact Ashley Crunstedt at ashleyc@surfaces.org or call her directly at 651-203-7248. For updates, please visit our Website at www.surfaces.org.

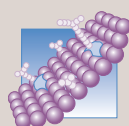


CONFERENCE HIGHLIGHTS:

- New Frontiers in Biosurface Applications
- Biocompatibility Podium and Poster Session
- Prevention of Biofilm Infections
- Advances in Surface Analysis and Surface Characterization
- New Biomaterials and Applications
- New Approaches to Combination Vascular Drug Delivery
- Ophthalmic Technologies and Implants
- Student Poster Session
- Student Town Hall Meeting
- Excellence in Surface Science Award

Foundation members and BioInterface attendees specialize in:

- Biodegradable Polymers
- Biofilms
- Hemocompatibility
- Nanotechnology
- Orthopaedics
- Surface Characterization
- Tissue Engineering
- Medical Devices



Surfaces in
Biomaterials
Foundation



**Georgia
Tech**



BIOINTERFACE 2010

Dear Fellow Surface Science Professionals,

You are invited to join me, your colleagues, industry leaders and invited distinguished scientists in beautiful Atlanta, Georgia, for The Surfaces in Biomaterials Foundation's 2010 BioInterface Symposium and Workshop. This annual event provides an intimate opportunity to meet and network with other professionals while discussing new developments in the biomaterials industry.

The Foundation's mission is to explore the creative solutions to technical challenges at the BioInterface by fostering education and multidisciplinary cooperation among industrial, academic, clinical, and regulatory communities.

This year's program consists of scientific sessions featuring well-known presenters and invited speakers discussing cutting edge technologies and recent scientific developments. In addition, this event includes the popular and the highly anticipated Point-Counterpoint debate session, Student Poster Competition, and Excellence in Surface Science Awardee address.

On behalf of the Foundation's members and Board of Directors, we hope you will join us at BioInterface 2010 for a valuable experience that will increase your scientific education, professional development, and further the research you are conducting.

Sincerely,
Lawrence Salvati
President, Surfaces in Biomaterials Foundation



2010 PROGRAM COMMITTEE

Gene Boland
University of Louisville
gene.boland@louisville.edu

Barbara Boyan
Georgia Institute of
Technology, Institute of
Bioengineering and Bioscience
barbara.boyan@bme.gatech.edu

**Kristen O'Halloran
Cardinal**
Cal Poly-San Luis Obispo
kohallor@calpoly.edu

Vicky Carr-Brendel
Boston Scientific
carrbrev@bsci.com

Joe Chinn
J Chinn LLC
jchinn@q.com

Ashley Crunstedt
Surfaces in Biomaterials
Foundation Staff
ashleyc@surfaces.org

Aylvin Dias
DSM Biomedical
Aylvin.Dias@dsm.com

Andrés Garcia
Georgia Institute of
Technology, Institute of
Bioengineering and Bioscience
andres.garcia@me.gatech.edu

Rob Kellar
Development Engineering
Sciences
rkellar@des-company.com

William Lee
AST Products
wlee@astp.com

Peter Maziarz
Bausch and Lomb
Peter.Maziarz@bausch.com

Peg Palmer
SurfaceSolutions Labs
SurfaceLab@aol.com

Ted Parker
Cordis Corporation
tparker1@its.jnj.com

Jeff Ross
Surmodics, Inc.
jross@surmodics.com

Shrirang Ranade
Cordis Corporation
SRanade1@its.jnj.com

Newton Samuel
CIBA VISION Corp.
newton.samuel@cibavision.com

Carl Turnquist
Genzyme
Carl.Turnquist@genzyme.com

Dehua Yang
Ebacto
dyang@ebatco.com

Zhengrong Zhou
St. Jude Medical
ZZhou@sjm.com

NOTE: Exhibits will be available to participants throughout the symposium. Posters will be on display during the technical sessions (Monday and Tuesday).

WORKSHOPS/SESSIONS

Monday, October 18

Loews Atlanta Hotel

7:00–8:25 **Registration and Breakfast**

7:20–8:20 **General Poster Session and Student Poster Judging**
Co-chairs: Carl Turnquist, Kristen Cardinal
Judges: Gene Boland, Carl Turnquist, Rob Kellar

8:20–8:25 **President's Welcome**

8:25–10:00 **Session 1: Biocompatibility (Podium and Poster Session)**
Co-chairs: William Lee, Jeff Ross

8:25–8:45 **Invited Speaker: David Grainger, University of Utah**
"Biomaterials Approaches to Device-Centered Infection"

8:45–9:30 **Podium Session 1**
This will be a brief session of 5-minute introductions by poster presenters about the topic of their posters. Once the presenters finish, you will be given a chance to discuss the presenters' topics with them at their respective posters.

Poster Participants:

Roy Biran, W.L. Gore & Associates, Inc. Medical Products Division
"Analysis of Proteins Associated with the Carmeda Bioactive Surface (CBAS®) After Acute Blood Contact"

John L. Fisher, W.L. Gore & Associates, Inc. Medical Products Division
"Reduced Protein Deposition: A Mechanism for In Vivo Persistence of Heparin Bioactivity on CBAS-ePTFE Vascular Grafts"

Rahul Bhola, Department of Metallurgical and Materials Engineering Colorado School of Mines
"Modification of Surface Oxides on the Newer β Titanium Alloys by Calcium and Phosphorous to Enhance Bone Cell Adhesion for Implant Applications"

Steven J. Potts, Flagship Biosciences, Flagstaff, AZ
"Validation of Automated Vascularization Analysis at the Tissue-Material Interface"

Smit Pandya, Florida International University
"A Comparative Assessment of Corrosion Resistance and Biocompatibility of Ti-Ta Alloys for Orthopedic Implants"

Mark E. Smith, American Preclinical Services, LLC
"Methods for Evaluating the Effect of Drug-Eluting Balloons and Other Intravascular Solid Formulation Delivery Systems on Distal Bed Perfusion"

9:30–10:00 **Poster Session 1**

10:00–10:30 **Exhibitor Break**

10:30–12:00 **Session 2: Prevention of Biofilm Infections**
Chair: Aylvin Dias

10:30–11:00 **Invited Speaker: David Grainger, University of Utah**
"Protein Sorting on to Patterned Surfaces"

11:00–11:20 **Jens Thies, DSM Biomedical**
"DSM Non-Biofouling Coatings: A Stealth Approach to the Fighting Biofilms"

11:20–11:40 **Robert Ward, DSM PTG, Part of DSM Biomedical**
"Biomaterials In a New Role: Treatment and Prevention of Infectious Disease"

11:40–12:00 **Claire Kavanagh, Martin Murphy, Aziz Tnibar, Jonathan Thompson**
"In Vivo Antibiotic Release Profile from an Antibiotic-Coated Orthopaedic Implant"

12:00–12:50 **Student Town Hall Meeting and Attendee Luncheon**
Co-chairs: Vicky Carr-Brendel, Rob Kellar

12:50–1:30 **Surfaces in Biomaterials Foundation Business Meeting**

Tuesday, October 19

Loews Atlanta Hotel

7:30–8:00 Registration and Breakfast

8:00–9:30 Session 4: New Biomaterials (Podium and Poster Session)

Co-Chairs: Zhengrong Zhou, Gene Boland

8:00–8:30 Invited Speaker: Chih-Chang Chu, Rebecca Q. Morgan '60 Professor of Fiber Science

“New Synthetic Biodegradable Pseudo-Protein Biomaterials, their Performance and Applications”

8:30–8:45 E. P. Goldberg, University of Florida, Biomaterials Center, Department of Materials Science & Engineering

“Phospholipid Surface Modification of Microporous Biopolymer-Microglial Cell Implants for Spinal Cord/CNS Repair”

8:45–9:30 Podium Session 4

This will be a brief session of 5-minute introductions by poster presenters about the topic of their posters. Once the presenters finish, you will be given a chance to discuss the presenters' topics with them at their respective posters.

Maryna Ornatska, Department of Chemistry and Biomolecular Science, Clarkson University

“Cerium Oxide Paper Sensors for Hydrogen Peroxide and Glucose Detection”

Jie Wen, Innovative Surface Technologies, Inc.
“Novel Photoreactive Primer for Silicone Surfaces”

Rao S. Bezwada, Bezwada Biomedical, LLC
“Monomers and Absorbable Polymers for Biomedical Applications”

Tahmina Naqvi, Innovative Surface Technologies, Inc.

“Smart Thermo-responsive Cell Culture Surfaces”

Robert Kellar, Protein Genomics, Flagstaff, AZ

“Recombinant Human Tropoelastin as a Novel Biomaterial”

1:30–3:00 Session 3: Advances in Surface Analysis and Surface Characterization

Co-chairs: Dehua Yang, Peter Maziarz

1:30–2:00 Invited Speaker: Conrado Aparicio, PhD, University of Minnesota

“Contact Angles at the Macro- and Micro-Level for Assessing Wettability and Surface Free Energy of Dental Biomaterials”

2:00–3:00 Puneet Gill, Florida International University

“The Effect of Surface Treatment and Manufacturing Techniques on Ti-Ta Alloy”

C. W. Extrand, Entegris Inc.

“The Distortion of Spherical Sessile Drops”

John A. Notte IV, Carl Zeiss SMT, Inc.

“Helium Ion Microscopy”

3:00–3:30 Exhibitor Break

3:30–4:30 Applied Technology Workshops

Chair: Peg Palmer

ATW Presenters (two parallel 30-min. presentations):

3:30–4:00

PVA Tepla

“Plasma Surface Modification for Lifescience Applications: A Technology Review”

3:30–4:00

BASF

“Silver-Based Antimicrobial Technology for Plastic Devices”

4:00–4:30

Anasys

“Transition Temperature Microscopy: Nanoscale Thermal Analysis Technique”

4:00–4:30

SJTRI

“Biochemical Markers in Pre-Clinical Studies”

4:30–5:30 20th Anniversary Reception

5:30–6:30 Keynote Lecture

Keynote Speaker: Cy Wilcox, Vice President Science & Technology at Medtronic Vascular

	Brent C. Bell, Isoflux Biomed "Sputtered Porous Columnar Coatings for Non-Polymeric Drug Delivery"		Khoren Sahagian, Anasys Instruments Inc. "Biomaterials Characterization Using Nanoscale Thermal and IR Spectroscopy"
9:30–10:00	Poster Session 4		Junwei Li, Biocoat, Inc. "Pinch Testing of Hydrophilic Lubricous Coatings"
10:00–10:30	Exhibitor Break		
10:30–12:00	Session 5: New Approaches to Combination Vascular Drug Delivery Co-Chairs: Ted Parker, Shirang Ranade Session Sponsor: Cordis	3:00–4:00	Break: Shuttles to Marcus Nanotechnology Building, Georgia Tech campus
10:30–11:00	Invited Speaker: Dr. Elazer Edelman, MIT "How Should One Consider Existing and Emerging Technologies in Cardiovascular Drug Delivery?"	Marcus Nanotechnology Building 4:00–5:00	Point-Counterpoint Session: "Be it resolved that the concept of an inert, biocompatible biomaterial is folly. All biomaterials elicit a host response."
11:00–11:20	Dr. Ronald Sahatjian, President, Medi-Solve Coatings LLC "Balloon Based Drug-Eluting Systems 'The Comeback Kid'"		Moderator: David Williams, University of Liverpool
11:20–11:40	Dr. Dinesh Patwardhan, Food & Drug Administration "Drug Microstructure to Drug Release"		Pro: Barbara Boyan, GTEC Con: Monty Reichert, Duke
11:40–12:00	Ashley Kelly, Abbott Vascular "Effects of Processing and Environmental Conditions on the Mechanical Properties of a Bioresorbable Vascular Scaffold (BVS)"	5:00–6:00	Networking Reception
12:00–1:30	Awards Sessions and Lunch <u>Student Poster Winner Announced</u> Excellence in Surface Science Award: Professor David F. Williams "Biocompatibility Then and Now: What Have We Learned in 20 Years and Where Do We Go from Here?"		<i>Wednesday, October 20</i> Marcus Nanotechnology Building 7:00–3:30
1:30–3:00	Session 6: Ophthalmic Technologies and Implants Chair: Newton Samuel		BioInterface & Petit Institute for Bioengineering and Bioscience (IBB) Workshop: New Frontiers in Biosurface Applications Co-chairs: Barbara Boyan, Andrés Garcia, Peter Maziarz
1:30–2:00	Invited Speaker: Rob Scott, CIBA Vision "Past, Present and Future of Contact Lens Research and Materials Development"	7:00–8:00	Pre-Registration and Continental Breakfast
2:00–3:00	Yongxing Qiu, CIBA Vision Corporation "Wettable Silicone Hydrogel Contact Lenses"	8:00–8:15	Welcome and Introduction
		8:15–9:00	Workshop Speaker 1: Julia Babensee, Georgia Tech, Biomedical Engineering Topic: Biomaterial/Glycan Cell Interactions
		9:00–9:45	Workshop Speaker 2: Valeria Milam, Georgia Tech, Materials Science Topic: Employing Double-Stranded Probes on Colloidal Particles for Nucleic Acid Detection
		9:45–10:15	Break

Thursday, October 21

Marcus Nanotechnology Building

**Parker H. Petit Institute for Bioengineering and Bioscience
Industrial Partners Program**

Georgia Tech's Petit Institute for Bioengineering and Bioscience (IBB) invites you to explore its Industrial Partners Program by extending your stay in Atlanta and attending the Industrial Partners Symposium on Thursday, October 21. As an invited guest there is no charge to attend the event where you can meet faculty and students and learn more about IBB's interdisciplinary approach to research in areas including Regenerative Medicine, Biomaterials, Imaging, Pharmaceutical Development, Drug Delivery and more. The full-day program will allow you to learn not only about the latest research advances but also ways that your company can benefit from the resources available through IBB and Georgia Tech. We welcome you to learn what the Industrial Partners Program can do for your company.

Robert E. Guldberg, Ph.D.

Director, Parker H. Petit Institute for Bioengineering & Bioscience

Robert M. Nerem, Ph.D.

Director, Georgia Tech/Emory Center for Regenerative Medicine

Mark R. Prausnitz, Ph.D.

Director, Center for Drug Design, Development & Delivery

To learn more about the Industrial Partners Program and the annual Symposium, please visit www.industry.gatech.edu or contact Katharine Montgomery, Manager for Industrial Relations, katharine.montgomery@ibb.gatech.edu, 404-385-2105.

- 10:15–11:00 **Workshop Speaker 3: Andrew Lyon, Georgia Tech, Chemistry & Biochemistry**
Topic: Dynamic, Self-Healing, and Nanostructured Hydrogel Coatings
- 11:00–11:45 **Workshop Speaker 4: Ken Sandhage, Georgia Tech, Materials Science**
Topic: Shape-Preserving, Chemical Tailoring of Nanostructured Assemblies
- 11:45–12:45 **Lunch & Nanotechnology Research Center Tours**
- 12:45–1:30 **Workshop Speaker 5: David Grainger, University of Utah, College of Pharmacy**
Topic: New Approaches to Analyze DNA and Proteins Immobilized at Surfaces
- 1:30–2:15 **Workshop Speaker 6: James Bryers, University of Washington, Bioengineering**
Topic: Biofilm Infections and Biomaterials
- 2:15–3:00 **Panel Discussion**
Topic: Converting Academic Insight into Industrial Application
- 3:00–4:30 **IBB Industrial Partners Program Welcome Reception**
- 6:30 **IBB Industrial Partners Program Welcome Dinner**
Guest Speaker: Dr. Gail Cassell, Vice President, Scientific Affairs and Distinguished Lilly Research Scholar for Infectious Diseases Eli Lilly and Company

HOTEL INFORMATION



Loews Atlanta Hotel
1065 Peachtree Street
Atlanta, Georgia 30309
LoewsHotels.com/Atlanta

Conference attendees can receive the special reduced room rate of \$159 per night. Reservations are to be made by the individual online or through the Loews' reservation department at: (404) 745-5000. Make sure to ask for the Surfaces in Biomaterials Foundation rate in order to receive the special group rate. Reserve your room by September 17, 2010 to receive the group rate. The room block for The Surfaces in Biomaterials Foundation is available for guests to book reservations online using the Group Code: SIBO17.

Make reservations!

About the hotel:

Centrally located in midtown Atlanta, there are plenty of nearby attractions to keep you busy:

- Piedmont Park
- Atlanta Botanical Gardens
- World of Coca-Cola
- Georgia Aquarium
- Centennial Olympic Park
- Zoo Atlanta
- Six Flags over Georgia
- Stone Mountain Park
- Fernbank Museum of Natural History
- The King Center
- Jimmy Carter Presidential Library
- Atlanta History Center
- Atlanta Cyclorama/Civil War Museum
- High Museum of Art
- Museum of Design Atlanta
- And many more!

2010 SUPPORTING MEMBERS

Abbott Vascular
American Preclinical Services
AST Products, Inc.
Bausch & Lomb
BD Pharmaceutical Systems
BioCoat, Inc.
Boston Scientific
Boston Scientific – Maple Grove
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DSM Biomedical
Evans Analytical Group
Genzyme Corporation
Lifecore Biomedical
Medtronic
Physical Electronics
St. Joseph's Translational Research
Surface Solutions Laboratories, Inc.
SurModics, Inc.
W.L. Gore & Associates

2010 ACADEMIC MEMBERS

Georgia Institute of Technology
Medical Device Evaluation Center
MNESAC/BIO – University of Washington
Syracuse University, Biomaterials Institute
University of Louisville, Cardiovascular
Innovation Institute
University of Minnesota

BIOINTERFACE 2010

Cost

Full Conference – Oct. 18, 19 & 20 (Includes workshop and 2-day symposium, all luncheons, breaks, an evening reception and the Point-Counterpoint session)

Member Combined	<input type="checkbox"/> \$850
Non-Member Combined	<input type="checkbox"/> \$950
Students ¹	<input type="checkbox"/> \$350

Workshop Only – Oct. 20 (Includes the entire workshop, lunch and breaks)

Member	<input type="checkbox"/> \$350
Non-Member	<input type="checkbox"/> \$450
Students ¹	<input type="checkbox"/> \$200

Symposium Only – Oct. 18 & 19 (Includes the 2-day symposium, luncheons, breaks, an evening reception and the Point-Counterpoint session)

Member	<input type="checkbox"/> \$550
Non-Member	<input type="checkbox"/> \$650
Students ¹	<input type="checkbox"/> \$200

¹Students who submit a Technical Poster are given free registration to the Conference (Technical Symposium only; not the Workshop)

☐ Check box for more information on the IBB Industrial Partners Program Wednesday dinner and Thursday program.

Membership – Join now and save on your Symposium registration. Visit www.surfaces.org for complete member benefit information.

Corporate Annual Membership Rates (includes one full conference registration & one exhibit option) ☐ \$2,500

Smaller Corporations (fewer than 50 employees) (includes one full conference registration & one exhibit option) ☐ \$2,000

Academic Membership (one discounted full conference registration at half the member price and one free exhibit option) ☐ \$625

Individual Membership (entitles registration at Member rates) ☐ \$50

TOTAL \$ _____

Name _____

Affiliation _____

Department _____

Address _____

City _____ State _____ Zip _____

E-mail _____

Phone _____ Fax _____

ADA/Special Requests _____

Payment (Payment must accompany registration form to be processed)

☐ Check (made payable to Surfaces in Biomaterials Foundation) ☐ MasterCard ☐ VISA ☐ American Express

Name (as it appears on card) _____ Cardholder Phone _____

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Send to: Surfaces in Biomaterials Foundation
1000 Westgate Drive, Suite 252
St. Paul, MN 55114
Phone: 651-290-6267
Fax: 651-290-2266
www.surfaces.org

Cancellation Policy: With written cancellation notice, received by Oct. 4, 2010 you will receive a full refund, less a \$50 administrative charge. Cancellations after Oct. 4, 2010 are non-refundable. Notices of cancellation must be faxed to the Surfaces in Biomaterials office at 651-290-2266. No-shows will not receive refunds.

(For office use only)

initials	fin.
date	
CK/CC	
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