# Montana Biofilm S&T Meeting

**AGENDA: February 8-9, 2011**

## Center for Biofilm Engineering

### Monday

**February 7**

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| 6:00–8:30 p.m. | Pre-registration and welcome reception  
Hilton Garden Inn, Bozeman                        |

### Tuesday

**February 8**

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| 7:30–8:00 a.m. | Registration and continental breakfast  
Hilton Garden Inn reception area                      |
| 8:00–8:10 | Introductory remarks  
Larkspur Ballroom  
Paul Sturman, CBE Industrial Coordinator  
Harsh Trivedi, TAC Chair, Colgate-Palmolive  
Phil Stewart, CBE Director                      |

### SESSION 1: Novel Antimicrobials

**8:10–8:15**

**Session introduction**  
Phil Stewart, CBE Director

**8:15–8:45**

Next-gen antimicrobial strategies enabled by synthetic biology  
Michael Koeris, President, Novophage Therapeutics, Inc.

**8:45–9:15**

Surface active systems afford insights for biofilm control agents  
Joe Sauer, Senior R&D Advisor, The Albemarle Corporation

**9:15–9:45**

Research and development of antimicrobial coatings using combinatorial/high-throughput methods  
Bret Chisholm, Senior Research Scientist, Center for Nanoscale Science and Engineering; Director, Combinatorial Materials Research Laboratory, NDSU

**10:15–10:45**

Antibacterial properties of cold electrically generated plasma and of plasma treated materials  
Gary Friedman, Professor, School of Biomedical Engineering, Drexel University

**10:45–11:10**

The surprising biological activity of volatile organic compounds from *Muscodor* spp.  
Gary Strobel, Professor Emeritus, Plant Sciences and Plant Pathology, MSU

### SESSION 2: Biofilm Methods

**11:10–11:35**

Chlorine and chlorine dioxide: Comparing the disinfection of detached biofilm particles  
Sabrina Behnke, PhD candidate, Microbiology, CBE

**11:35–12:00**

Update on the validation of a biofilm disinfectant efficacy test  
Darla Goeres, Assistant Research Professor, CBE

**12:00–1:00**

Lunch catered at the Hilton Garden Inn

### SESSION 3: Energy Related Biofilms

**1:00–1:10**

**Session introduction**  
Al Cunningham, Professor, Civil Engineering

**1:10–1:25**

MSU energy research  
Lee Spangler, Associate Professor, Chemistry & Biochemistry, MSU

**1:25–1:50**

Characterization of algal triacylglycerol accumulation for biodiesel production  
Brent Peyton, Professor, Chemical and Biological Engineering, CBE

**1:50–2:15**

*Ascocoryne sarcoides*: Exploration of potential fuel production  
Natasha Mallette, PhD candidate, Chemical & Biological Engineering, CBE

**2:15–2:40**

Utility of biofilms and biologically induced mineralization in geologic carbon sequestration  
Robin Gerlach, Associate Professor, Chemical & Biological Engineering, CBE

### Poster Session & Laboratory Open House

**3:20–5:20**

CBE Laboratories, 3rd Floor EPS Building, MSU

### Wednesday

**February 9**

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| 7:30–8:00 a.m. | Registration and continental breakfast  
Hilton Garden Inn reception area                      |

### SESSION 4: Biofilm Imaging/Microscopy

**8:00–8:25**

Optical microscopy of biofilms: The pursuit of more relevant imaging conditions  
Betsey Pitts, Research Associate and Microscope Facilities Manager
8:25–8:50
Nanoscale manipulation by immunoimmobilization of living bacteria
Recep Avci, Director of Imaging and Chemical Analysis Laboratory (ICAL) and Research Professor, Physics, MSU

8:50–9:20
In situ measurement of biofilm activity by FISH: Implications for the therapy of infective endocarditis
Judith Schmiedel, Institute for Microbiology and Hygiene, Charité University Hospital, Berlin

SESSION 5: Healthcare Related Biofilms

9:20–9:50
In vitro and in vivo testing of antimicrobial central venous catheters
Garth James, CBE Medical Biofilm Laboratory Manager

9:50–10:20 Break

10:20–10:50
Bacterial inter-species interactions in multi-species biofilm communities
Alex Rickard, Assistant Professor of Biological Sciences, University of Michigan

10:50–11:20
Urinary conditioning film components—a new target for preventing bacterial biofilm formation on urinary devices
Dirk Lange, The Stone Centre at Vancouver General Hospital, University of British Columbia, Vancouver, Canada

11:20–11:50
SaeR/S mediates pathogenesis in Staphylococcus aureus
Tyler Nygaard, Postdoctoral Researcher, Veterinary Molecular Biology, MSU

11:50–12:00
Meeting Wrap up