MONTANA STATE UNIVERSITY

# Montana Biofilm S&T Meeting
# AGENDA: February 5-6, 2013

# ■ Center for Biofilm Engineering

02/04/2013

## Monday
## February 4

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

## Tuesday
## February 5

**7:30–8:00 a.m.**
**Registration and continental breakfast**
Hilton Garden Inn—Larkspur Foyer

**8:00–8:10**
**Introductory remarks**
Larkspur Ballroom
Paul Sturman, CBE Industrial Coordinator
Tony Rook, IA Chair, The Sherwin-Williams Company
Phil Stewart, CBE Director

### SESSION 1: Skin Biofilms

**8:10–8:15**
**Session introduction**
Garth James, CBE Medical Projects Manager; Associate Research Professor, Chemical & Biological Engineering, MSU

**8:15–8:45**
**Biofilm in comedonal and inflammatory *Acne vulgaris*: In vivo identification and characterization**
Manisha Patel, MD, Assistant Professor, Dermatology, School of Medicine, Johns Hopkins University

**8:45–9:15**
**Imaging biofilms in tissue**
Garth James

**9:15–9:45**
**Study of the human skin microbiome using metagenomic and genomic approaches**
Huiying Li, Assistant Professor, Molecular & Medical Pharmacology, University of California, Los Angeles

**9:45–10:15 Break**

### SESSION 2: Industrial Biofilms

**10:15–10:20**
**Session introduction**
Paul Sturman

**10:20–10:50**
**Manganese sulfide inclusions and pit initiation in carbon steel during microbially influenced corrosion: Pits initiate in the immediate surroundings of the inclusions**
Recep Avci, Director, Imaging & Chemical Analysis Laboratory (ICAL), Research Professor, Physics, MSU

**10:50–11:20**
**Characterization of *Desulfovibrio alaskansis* G20 physiology and biofilm metabolism on glass and steel surfaces**
Greg Krantz, PhD student, Microbiology, CBE

**11:20–11:45**
**Development and implementation of a new treatment for biofilm remediation in industrial systems**
Adrian Denvir, Manager, Water Treatment Science and Technology, NCH Corporation

**11:45–12:15**
**Systems-based analysis of industrially relevant microbes**
Ross Carlson, Associate Professor, Chemical & Biological Engineering, CBE
Abbie Richards, Assistant Professor, Chemical & Biological Engineering, CBE

**12:15–1:10**
**Catered lunch—Hilton Garden Inn**

**1:10–1:15**
**Presentation of student awards**
Nancy Characklis & Phil Stewart

### SESSION 3: Environmental / Mineral Biofilms

**1:15–1:25**
**Session introduction**
Brent Peyton, Professor, Chemical & Biological Engineering, CBE; Associate Director, Thermal Biology Institute, MSU

**1:25–1:50**
**Microbial ecology of mine waste environments**
Lisa Kirk, Research Scientist, CBE

**1:50–2:15**
**Why the mining industry needs microbiologists**
Chris Kennedy, Senior Consultant, SRK Consulting

**2:15–2:40**
**Planktonic and biofilm community dynamics in situ**
Kara De León, PhD student, Microbiology, CBE

### Special Presentations:

**2:40–3:05**
**2012 ASM Biofilms meeting digest**
Phil Stewart

**3:05–3:15**
**Update: Biofilm methods index**
Darla Goeres, Assistant Research Professor, Chemical & Biological Engineering, CBE

**Darla Goeres describes the Single Tube Method in this short video: http://youtu.be/37VDD3JiJiQ**

### Laboratory open house and poster session

**3:30–5:00**
CBE Laboratories, 3rd Floor EPS Building

# Wednesday February 6

**7:30–8:00 a.m.**
**Registration and continental breakfast**
Hilton Garden Inn—Larkspur Foyer

## SESSION 4: Pathogen Persistence in Biofilms

**8:00–8:25**
**Session introduction/overview: Pathogen persistence in biofilms**
Anne Camper, Associate Dean, College of Engineering, Professor, Civil Engineering, CBE

**8:25–8:55**
**Root associated biofilms: Physical gradients and nutrient cycling**
Chris Allen, PhD student, Civil Engineering, CBE

**8:55–9:25**
**Pathogen-biofilm-root interactions for common constructed wetland plants**
Rachel VanKempen-Fryling, PhD student, Microbiology, CBE

**9:25–9:55 Break**

## SESSION 5: Next Generation Biomaterials

**9:55–10:05**
**Session introduction**
Phil Stewart

**10:05–10:35**
**A porous biomaterial approach to biofilm infection control**
Andrew Marshall, Director & Chief Technology Officer, Healionics

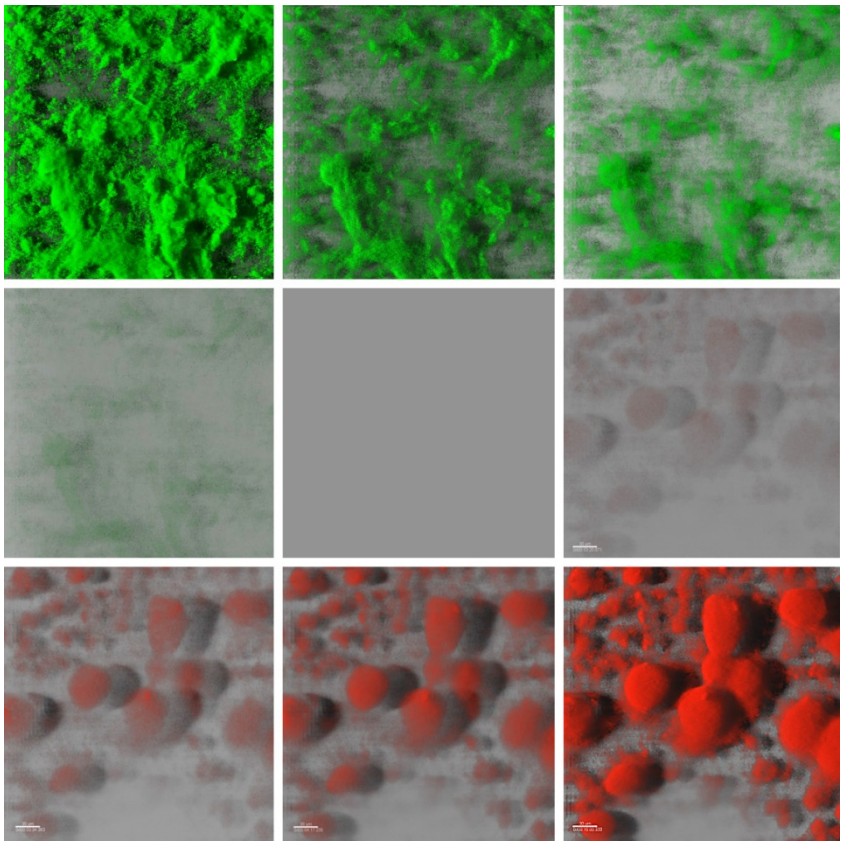
**10:35–11:05**
**Bioinspired slippery surfaces with robust and persistent anti-biofouling performance**
Ben Hatton, Assistant Professor, Materials Science & Engineering, University of Toronto

**11:05–11:35**
**In vivo analysis of a novel antimicrobial coating to prevent biofilm implant-related infection**
Dustin Williams, Postdoctoral Fellow, Department of Orthopaedics, University of Utah

**11:35–12:05**
**Inhibiting bacterial biofilm formation on stainless steel 316L using self-assembled monolayers**
Kristen Kruszewski, Research Chemist, PPG Industries

**12:05–12:15**
**Meeting Wrap-up**

See you at the
***NEXT MEETING:***
***July 16–18, 2013***



Time lapse screenshots obtained from the CBE's newly developed Treatment Flow Cell, designed to image antibacterial treatments on live biofilms. Imaging by B Pitts & L Lorenz.