

Montana Biofilm S&T Meeting FINAL AGENDA: July 17–19, 2012 Center for Biofilm Engineering

07/18/2012

Monday July 16

6:00–8:30 p.m. Pre-registration & welcome reception

Larkspur Foyer, Hilton Garden Inn, Bozeman

Tuesday July 17

7:30–8:00 a.m. Registration & continental breakfast Larkspur Foyer, Hilton Garden Inn

8:00-8:10

Introductory remarks Larkspur Ballroom Paul Sturman, CBE Industrial Coordinator Harsh Trivedi, IA Chair, Colgate-Palmolive Phil Stewart, CBE Director

SESSION 1: Anti-Biofilm Coatings

8:10-8:40

Vascular access product with non-leaching betaine modification reduces microbial attachment Roger Smith, Head of Microbiology,

Semprus BioSciences

8:40–9:10 Linking antimicrobial peptides to

implant surfaces Dirk Lange, Assistant Professor,

Urologic Sciences, University of British Columbia

9:10–9:40 Evaluation of antimicrobial PICC catheters using an ovine model

Elinor Pulcini, CBE Medical Research Manager, Assistant Research Professor, Chemical & Biological Engineering, MSU

9:40-10:10 Break

10:10-10:40 N-halamine biocidal copolymers for coatings and latex paints Idris Cerkez, Postdoctoral Researcher, Auburn University

<u>SESSION 2:</u> Industrial Biofilms

10:40–11:10 Online biofilm monitoring in industrial systems Paul Sturman

11:10–11:40 From corrosion to pathogenesis: The role of bacterial nanowires in diverse microbial biofilms

Yuri Gorby, Associate Professor, Marine Environmental Biology, University of Southern California

11:40–12:10 Applications of molecular ecology for industrial purposes

Chiachi Hwang, Industrial Research Scientist, CBE

12:10-1:10

Catered lunch, Hilton Garden Inn

<u>CBE Open House: Lab</u> <u>demonstrations and</u> <u>poster session</u> 2:00–5:00

CBE Laboratories, 3rd Floor EPS Building, MSU Detailed schedule provided at registration

Wednesday July 18

7:30–8:00 a.m. Registration & continental breakfast Larkspur Foyer, Hilton Garden Inn

<u>SESSION 3:</u> Wound Biofilms

University

8:00–8:40 Wound biofilms: Clinical insights attained from animal models Robert Galiano, Assistant Professor, Plastic Surgery, Feinberg School of Medicine, Northwestern

8:40-9:20

Interbacterial communication in chronic wounds

Alex Rickard, Assistant Professor, Biological Sciences, University of Michigan

9:20-10:00

Molecular diagnostics and personalized medicine in wound care: Assessment of outcomes

Randy Wolcott, MD, Medical Director, Southwest Regional Wound Clinic

10:00-10:30 Break

10:30–11:10 Antimicrobials vs. polymicrobial biofilms: In vitro studies using wound-colonizing bacteria

Garth James, CBE Medical Projects Manager, Associate Research Professor, Chemical & Biological Engineering, MSU

11:10-11:40

Interfering with quorum sensing: Exploring the potential of combination therapy to treat chronically infected wounds

Gilles Brackman, Postdoctoral Researcher, Laboratory of Pharmaceutical Microbiology, University of Ghent, Belgium

11:40-12:00

State of the CBE address Phil Stewart

12:00-12:10

CBE Award Presentations: Outstanding Researcher Student Citizen Phil Stewart

12:10–1:10 Catered lunch, Hilton Garden Inn

SESSION 4:

Energy & Environmental Biofilms

1:10–1:35 Overview of CBE energy and environmental biofilm research Al Cunningham, Professor, Civil Engineering, CBE

1:35-2:00 Well leakage mitigation using biomineralization

Robin Gerlach, Associate Professor, Chemical & Biological Engineering, CBE

2:00-2:25

Imaging, microanalysis, and modeling of the microbially induced CaCO₃ precipitation process

> James Connolly, PhD Student, Environmental Engineering, CBE

2:25-2:50

In situ and laboratory enriched microbial community composition and function associated with coal bed methane from Powder River Basin coals

Elliott Barnhart, PhD Student, Microbiology, CBE

2:50 - 3:15

Potential role of carbon fixation pathways during bio-oil accumulation in Phaeodactylum tricornutum

Jake Valenzuela, PhD Student, Chemistry & Biochemistry, CBE

3:15-3:30 Break

3:30-4:30 **CBE Industrial Associates Business Meeting**

6:00-9:00 Banguet Rockin TJ Ranch, Bozeman

Thursday July 19

7:30-8:00 a.m. **Registration & continental** breakfast Larkspur Foyer, Hilton Garden Inn

SESSION 5: **Biofilm Methods**

8:00-8:30 In vitro studies of Legionella pneumophila grown as mono- and multi-species biofilms Danielle Orr, Undergraduate Student, Microbiology, CBE

8:30-9:00 A new flow cell for time-lapse confocal microscopy Betsey Pitts, Senior Research

Associate, Microscope Facilities Manager, CBE

9:00-9:30 Correlation of the single tube method and the treatment flow cell: Log reductions and confocal microscopy Kelli Buckingham-Meyer, Research Assistant, CBE

9:30-10:00 Break

SESSION 6: **Biofilm Control**

10:00-10:30

Antimicrobials vs. biofilms: A review Phil Stewart

10:30-11:15

Ignorance, bliss, and antibiotic tolerance of nutrient-limited bacteria Pradeep Singh, Associate Professor,

Microbiology, University of Washington

11:15-11:45

- Microbial Defense Systems: Advanced biofilm eradication technology
 - Chris Samuel, Vice President, Sales and Marketing, Microbial Defense Systems

11:45-12:00 Meeting Wrap-up

> 2013 Meeting Date: February 5-6, 2013