

# Biofilm Science & Technology Meeting AGENDA: July 13–15, 2010

# Center for Biofilm Engineering

07/09/10

## Monday July 12

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

# Tuesday July 13

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

#### 8:00-8:15 Introductory remarks

Larkspur Ballroom
Paul Sturman, CBE Industrial
Coordinator
Bill Schwingel, TAC Chair,
Masco Corp.
Phil Stewart, CBE Director

## SESSION 1: Ophthalmologic Biofilms

8:15–8:45
Biofilms and ocular infections
Phil Stewart

#### 8:45-9:25 Microbial biofilms, contact lenses, and contact lens care products

Tim Morris, Senior Principal Scientist, Global Development R&D Microbiology, Bausch & Lomb, Rochester, NY

#### 9:25-10:05 Contact lens-associated biofilms: Model development and recent advances

Pranab Mukherjee, Assistant Professor, Center for Medical Mycology, Case Western Reserve University, Cleveland, OH

#### SESSION 2: Biofilm Fundamentals

10:45–11:15
Physiological roles of a
Shewanella oneidensis MR-1
PAS protein involved in oxygen
consumption, transfer to anoxia,
and biofilm formation

Anitha Sundararajan, PhD Candidate, Microbiology, CBE

11:15–11:45
Factors affecting biofilm formation by *Desulfovibrio vulgaris* Hildenborough

Andrew Sabalowsky, Postdoctoral Research Associate, CBE

11:45-12:45
Lunch catered at the Hilton
Garden Inn

### SESSION 3: Biofilms in the Built Environment

12:45–12:50
Session introduction
Darla Goeres, Assistant Research
Professor, CBE

12:50-1:20
The house as a system: How it impacts moisture in buildings

David Bell, Director of Building Science, Masco Contractor Services

1:20-1:50
Development of filamentous fungal biofilms

Julia Kerrigan, Assistant Professor, Mycology, Clemson University, Clemson, SC

#### 1:50-2:20

Fungal biofilms associated with commercial carpet tile: Aspects of preservation, sanitization and recycling contaminants

Daniel Price, Director, Microbiology, InterfaceFLOR R&D

2:20-2:50

Biofilms on exterior painted surfaces: What grows and why Gary Horacek, Director, Technical Microbiology Services, Troy Corp.

#### 2:50-3:20 Break

3:20-3:50
Microbial colonization of nonporous surfaces in a workplace and residential indoor environment

Jayne Morrow, Environmental Engineer, Biochemical Science Division, NIST

3:50-4:20 The lungs of our built environments: The hunt for biofilms and beyond

W. Curtis White, President, White IEQ Consultants, LLC

4:20–4:45
Biofilms in premise plumbing
Anne Camper, Professor, Civil

Engineering, CBE

4:45–5:10

Legionella and other microorganisms in biofilms from a hot water system

Barry Pyle, Research Professor, Microbiology, MSU

#### 10:05-10:45 Networking Break

# Wednesday July 14

7:30-8:00 a.m. Registration and continental breakfast

Hilton Garden Inn reception area

### SESSION 4: Biofilm Methods

8:00-8:05 Session introduction

Darla Goeres

8:05-8:35

Anti-fouling betaine modifications for medical devices and industrial application

Christopher Loose, Chief Technology Officer, Semprus Biosciences

8:35-9:05

Use of laser capture microdissection to characterize biofilm heterogeneity

Mike Franklin, Associate Professor, Microbiology, MSU

9:05-9:35

FISHing in biofilm: Advanced in situ molecular techniques and 3D image analysis

Kristen Brileya, PhD Candidate, Microbiology, CBE

9:35-10:05

Healthcare-related pathogen disinfection and survival in a four-species potable water biofilm

Margaret Williams, Research Microbiologist, Centers for Disease Control and Prevention

#### 10:05-10:35 Break

10:35-11:00

Biofilm efficacy test: Validation of the single tube protocol

Kelli Buckingham-Meyer, Research Assistant, CBE

11:00-11:30

Statistically assessing limits of detection and performance standards

Albert Parker, Biostatistician and Research Engineer, CBE

11:30-12:00

Development of a biofilm coupon holder and sampling test kit

Kevin Cook,

Assistant Professor, Mechanical and Industrial Engineering & CBE, MSU

12:00-1:00 Lunch catered at the Hilton Garden Inn

#### **Special Presentation**

1:00-1:30 State of the CBE Address Phil Stewart

1:30-2:30 CBE Business Meeting

# Poster Session & Laboratory Open House

3:00-5:00

CBE Laboratories, 3rd Floor EPS Building, MSU

6:00-9:00 Dinner, Catered at Rockin' TJ Ranch, Bozeman

# Thursday July 15

7:00-8:00 a.m. Biofilm Methods Advisory Committee Meeting

Darla Goeres and Paul Sturman

7:30-8:00 a.m. Continental breakfast

Hilton Garden Inn reception area

#### SESSION 5: Wound Biofilms

8:00-8:30

Recent advances in the characterization of human chronic wound biofilm

Anne Han, Wound Fellow, Department of Dermatology, Johns Hopkins Bayview Medical Center

8:30-9:00

Chronic wound healing in biofilmchallenged diabetic mice

Ge Alice Zhao, Senior Fellow, Divison of Dermatology, Department of Medicine, University of Washington

9:00-9:30

Defining the impact of microbes in chronic wounds: A biofilm reactor

Hamed Motlagh, MPH Candidate, West Virginia University 9:30-10:00 Wound biofilm research at the CBE

Garth James, Medical Projects Manager, CBE

10:00-10:30 Break

#### <u>SESSION 6:</u> Systems Analysis of Biofilms

10:30–11:00 Molecular level *in silico* analysis of mass and energy flows in microbial communities

Ross Carlson, Assistant Professor, Chemical and Biological Engineering, CBE

11:00-11:30

Characterization, classification, and analysis of undefined biofilm communities using molecular techniques

Brent Peyton, Professor, Chemical and Biological Engineering, CBE

11:30–12:00 Microbial community dynamics associated with different environments and processes

Matthew Fields, Assistant Professor, Microbiology, CBE

12:00-12:10 Meeting Wrap Up

See you at the 2011 MEETINGS:

FEBRUARY 8-9, 2011 JULY 12-14, 2011

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