

07/21/2016

Monday July 18

6:00–8:30 pm

Registration & welcome reception
Larkspur Foyer, Hilton Garden Inn
Bozeman

Tuesday July 19

7:30–8:00 am

**Registration & continental
breakfast**
Larkspur Foyer, Hilton Garden Inn

8:00–8:10

Introductory remarks
Larkspur Ballroom
Paul Sturman, CBE Industrial
Coordinator
Matthew Fields, CBE Director
Chuck Pettigrew, Chair, CBE
Industrial Associates Program;
Principal Scientist, Procter &
Gamble, Mason, OH

SESSION 1: Fungal Biofilms

8:10–8:20

Session introduction
Paul Sturman

8:20–8:50

**A reproducible protocol for
growing relevant filamentous
fungal biofilms for industrial
consumer product applications**
Julia Kerrigan, Associate Professor,
Mycology, Clemson University,
Clemson, SC

8:50–9:20

**Relevance of fungal biofilms:
An industrial perspective**
Tony Rook, Senior Manager,
Microbiology Resource Center,
The Sherwin-Williams Company,
Cleveland, OH

9:20–9:50

**A review of lab protocols for
fungal biofilm studies and our
path forward**
Diane Walker, Research Engineer,
CBE

9:50–10:20 Networking Break

10:20–10:50

**Effect of selenite on the
morphology and respiratory
activity of *Phanerochaete
chrysosporium* biofilms**
Erika Espinosa-Ortiz, Postdoctoral
Research Associate, CBE

10:50–11:20

**Volatile organic compounds of a
filamentous fungal mat at varying
oxygen conditions**
Heidi Schoen, PhD candidate,
Chemical & Biological
Engineering, MSU, CBE

11:20–11:50

***Candida* and *Malassezia* yeasts in
biofilms**
Garth James, Assoc. Research
Professor, Chemical & Biological
Engineering, MSU; Manager,
Medical Biofilms Laboratory, CBE

12:00–1:00

Catered lunch, Hilton Garden Inn

SESSION 2: Industrial Biofilms

1:00–1:05

Session introduction
Paul Sturman

1:05–1:35

**Copper: An effective anti-
microbial?**
Colin Anderson, R&D Director,
American Chemet, E. Helena, MT

1:35–2:00

**Integrated molecular,
physiological, and in silico
characterization of two
extremophilic *Halomonas* isolates**
Ross Carlson, Professor, Chemical
& Biological Engineering, MSU,
CBE; and Chuck Pettigrew

2:00–2:25

**Acoustic pressure shock wave
technology successfully disrupts
medical and non-medical biofilms**
Iulian Cioanta, Vice President,
R&D, SANUWAVE Health, Inc.
Alpharetta, GA

CBE Open House: Lab demonstrations and poster session

2:45–4:45

3rd Floor EPS Building, MSU
Schedule available onsite

Wednesday July 20

7:30–8:00 am

**Registration & continental
breakfast**
Larkspur Foyer, Hilton Garden Inn

SESSION 3: Biofilm Methods

8:00–8:40

**Methods to assess biofilm
prevention on surface modified
urinary catheters**
Darla Goeres, Assoc. Research
Professor, Chemical & Biological
Engineering, MSU; Manager,
Standardized Biofilm Methods
Laboratory, CBE

8:40–9:10

**EPA Regulatory Update: Use of
the Single Tube Method to support
biofilm claims for antimicrobial
products**
Rebecca Pines, Biologist,
Microbiology Laboratory Branch,
Office of Pesticide Programs
(OPP), US EPA, Fort Meade, MD

9:10–9:40

**Using statistical confidence and
power to assess performance
standards for biofilm claims using
the Single Tube Method**
Al Parker, Assistant Research
Professor, Mathematical
Sciences, MSU; Bio-statistician,
CBE

9:40–10:10 Networking Break

10:10–10:40

**Quantifying biofilm development
and structure with image analysis
and high resolution 3D imaging**
Curtis Larimer, Postdoctoral
Fellow, Pacific Northwest
National Laboratory,
Richland, WA

10:40–11:10

Osmotic pressure-induced rupturing of gastrointestinal organoids

Jim Wilking, Assistant Professor,
Chemical & Biological
Engineering, MSU, CBE

11:10–11:40

**Montana Nanotechnology Facility:
A powerful resource for biofilm
science and engineering**

David Dickensheets, Professor,
Electrical & Computer
Engineering; Director, Montana
Nanotechnology Facility (MONT),
MSU

11:40–12:00

State of the CBE

Matthew Fields

12:00–12:15

Presentation of CBE awards

Matthew Fields

12:15–1:15

Catered lunch, Hilton Garden Inn

SESSION 4:

Multi-Species Biofilms

1:15–1:20

Session introduction

Anne Camper, Regents Professor,
Civil Engineering, Associate
Dean, College of Engineering,
MSU, CBE

1:20–1:50

**The ecology of nitrification in
water systems: A consortium of
organisms and metabolisms**

Anne Camper

1:50–2:20

**Forced cooperation leads to
improved productivity in a
multispecies biofilm**

Laura Camilleri, PhD student,
Microbiology & Immunology,
MSU, CBE

2:20–2:50

**Biofilms enhance survival in
extreme environments**

Heidi Smith, Postdoctoral
Researcher, CBE

2:50–3:20

**Effects of chlorhexidine
treatments on single and mixed
species biofilms of *Streptococcus
mutans* and *Lactobacillus
acidophilus* as well as *S. mutans*
and *Actinomyces naeslundii***

Rosa Oliveira, Postdoctoral Res.,
Araraquara School of Dentistry,
UNESP–Univ. Estadual Paulista,
Araraquara, São Paulo, Brazil

3:20–3:30 Break

3:30–5:00

Business Meeting

Hilton Garden Inn

6:00

Dinner/Banquet

Rockin' TJ Ranch, Bozeman

Thursday

July 21

7:30–8:00 am

**Registration & continental
breakfast**

Larkspur Foyer, Hilton Garden Inn

SESSION 5:

Wound Biofilms

8:00–8:05

Session Introduction

Garth James

8:05–8:40

**Biofilm-related oxygen
consumption in wounds**

Garth James

8:40–9:10

**Chronic wounds in diabetic
patients: Biochemical association
between skin microbiome and
metabolic landscape**

Mary Cloud Ammons, Assistant
Research Professor, Chemistry &
Biochemistry, MSU

9:10–9:40

**Predictive multiscale modeling of
microbial biofilm consortia**

Ross Carlson

9:40–10:10

**Bacterial fitness determinants in
chronic wound infections:
Correlation with *in vitro* biofilm
fitness**

Sarah Morgan, Sr. Postdoctoral
Fellow, Microbiology,
University of Washington,
Seattle, WA

10:10–10:40 Networking Break

SESSION 6:

Device-Related Biofilms

10:40–10:45

Session Introduction

Garth James

10:45–11:15

**Understanding *E. coli* biofilms
on urinary catheters: Are there
CAUTI-specific characteristics?**

Maria Hadjifrangiskou, Assistant
Professor, Pathology,
Microbiology, & Immunology,
School of Medicine, Vanderbilt
University, Nashville, TN

11:15–11:45

**Strategies to treat intracellular
and biofilm forming**

***Staphylococcus aureus* in
orthopedic infections**

Devendra Dusane, Postdoctoral
Researcher, Microbial Infection &
Immunity, The Ohio State
University, Columbus, OH

11:45–12:15

**Preclinical wound biofilm models:
Establishment, consequences, and
topical antimicrobial effects**

Eric Roche, R&D Manager, Smith
& Nephew, Fort Worth, TX

12:15–12:25

Meeting Wrap-up