

Center for Biofilm Engineering

07/02/09

Monday July 6

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

Tuesday July 7

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, Masco, TAC Chair
Phil Stewart, CBE Director

SESSION 1: Phenotypic Heterogeneity

8:15–8:20
Session introduction
Phil Stewart

8:20–9:00
Biofilms, genetic diversity, and
the insurance hypothesis
Pradeep Singh, Associate Professor,
Microbiology, University of
Washington

9:00–9:40
Distinct physiological cell-
subpopulations and antimicrobial
tolerance in biofilms
Sünje J. Pamp, Postdoctoral
Research Fellow, Microbiology &
Immunity, Stanford University
School of Medicine

9:40–10:15
Diverse phenotypes in biofilms:
Implications for antimicrobial
control
Phil Stewart

10:15–10:45 Break

SESSION 2: Environmental Biofilms

10:45–10:50
Session introduction
Al Cunningham, Professor, Civil
Engineering, CBE

10:50–11:15
Image and tracer analysis of
biofilm and mineral affected
porous media
Logan Schultz, MS Candidate,
Chemical and Biological
Engineering

11:15–11:35
Phase-field model of biofilm-flow
interaction
Tianyu Zhang, Assistant Professor,
Mathematics, MSU

11:35–12:00
Organisms responsible for
nitrification in drinking water
Gem Encarnacion, PhD Candidate,
Microbiology, CBE

12:00–1:10
Lunch catered at the Hilton
Garden Inn

SESSION 3: Dental Biofilms

1:10–1:15
Session introduction
Garth James, CBE Medical Biofilm
Laboratory Manager

1:15–2:00
Microbiology of oral biofilms -
present and future
Rob Palmer, Natl Inst Dental
Craniofacial Res – Natl Insts
Health Oral Infection and
Immunity Branch

2:00–2:30
Diffusion of macromolecules in
model oral biofilms
Phil Stewart

2:30–3:00
Environmental modulation of the
in vitro antimicrobial efficacy of
various oral care products on
dental plaque biofilms
Ositadinma Ona, Senior
Microbiologist, GSK Consumer
Healthcare R&D, and Raymond
Ignar, Development
Microbiologist, GSK

3:00–3:30 Break

3:30–4:00
Dental biofilm control
Harsh Trivedi, Senior Technical
Associate, Early Research Oral
Care, Colgate-Palmolive
Company, Piscataway, NJ

4:00–4:30
An in vitro model for the study of
bad breath
Alessandra Agostinho, Research
Scientist, CBE

4:30–5:00
Formation of communities within
oral biofilms
Rob Palmer

Wednesday July 8

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

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

SESSION 4: Biofilm Mechanics

8:00–8:30
Session introduction
Development of a microcantilever
method for measuring the
cohesive strength of biofilms
Ray Hozalski, Associate Professor,
Civil Engineering, University of
Minnesota

8:30–8:55

Measuring changes in biofilm mechanical properties due to chemical and enzymatic treatments

Eric Brindle, MS Student,
Mechanical and Industrial
Engineering

8:55–9:20

Modeling fluid structure interactions with application to biofilms

Jeff Heys, Assistant Professor,
Chemical and Biological
Engineering, MSU

9:20–9:45

Magnetic Resonance Microscopy study of biofilms: Diffusion, hydrodynamics, and porous media

Jennifer Hornemann, recent PhD
graduate, Chemical and
Biological Engineering

9:45–10:15 Break

SESSION 5:

Industrial Biofilms

10:15–10:25

Session introduction

Paul Sturman

10:25–11:00

Monitoring biofilms in industrial applications and processes

Michael Enzien, Sr. Research &
Development Specialist, Dow
Microbial Control

11:00–11:35

Fouling and cleaning science: Direct detection of biofilms and CIP-related problems in liquid process systems

Mark Fornalik, Director, Analytical
Chemistry & Biofouling Science
Ethox International STS Life
Sciences Division

Imaging industrial samples at the CBE: How do we do it?

Betsey Pitts, Research Scientist and
Microscope Facilities Manager

11:35–12:00

Comparing the disinfection of planktonic cells, biofilms, and detached biofilm particles

Sabrina Behnke, PhD Student,
Microbiology

12:00–1:15

Lunch catered at the Hilton
Garden Inn

Special Presentation

1:15–1:45

State of the CBE Address

Phil Stewart

1:45 – 3:00

**CBE Industrial Associates
Business Meeting**

**Poster Session
& Laboratory Open
House**

3:30–5:30

CBE Laboratories, 3rd Floor EPS
Building, MSU

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

**Thursday
July 9**

7:30–8:00 a.m.

**Registration and
continental breakfast**

Hilton Garden Inn reception area

SESSION 6:

**Molecular Methods in
Biofilm Ecology**

8:00–8:10

Session introduction

Matthew Fields, Assistant Professor,
Microbiology, CBE

8:10–8:40

**Detection of opportunistic
pathogens in drinking water and
biofilms in rural Montana**

Crystal Richards, PhD Candidate,
Microbiology

8:40–9:10

**Contaminated bulk soap
dispensers: comparison of two
methods of analysis**

Lindsey Lorenz, CBE Research
Assistant

9:10–9:35

**Statistical considerations in
molecular methods**

Al Parker, CBE Statistician

9:35–10:05

**Molecular methods for analyzing
microbial function in constructed
wetlands**

Jennifer Faulwetter, PhD Student,
Microbiology

10:05–10:35 Break

10:35–11:05

**Rapid taxonomic classification
and analysis of complex microbial
communities using a microarray**

Seth D'Imperio, Postdoctoral
Research Assistant, Chemical
and Biological Engineering

11:05–11:35

**Microbial community analysis of a
low-level waste site using the
PhyloChip, a novel microarray**

Erin Field, PhD Candidate,
Microbiology

11:35–12:00

**Elucidating possible relationships
within bacterial community
dynamics and abiotic
parameters**

Kara De Leon, PhD Candidate,
Microbiology

12:00

Meeting Wrap up

See you at the next

2010 MEETINGS

FEBRUARY 8-10, 2010

JULY 12-15, 2010
