



Montana Biofilm Science & Technology Meeting and Workshop



July 9-11, 2025



Hilton Garden Inn Bozeman
Draft AGENDA

5/9/2025 12:47 PM

Tuesday July 8

6:00–8:30 pm
Registration & Welcome Reception Larkspur Foyer

Wednesday July 9

7:00–8:00 am Coffee Talk with CBE Leadership *Optional*
An hour for members to chat with CBE leadership
Goldenrod Boardroom

7:30–8:00 am
Cont. breakfast Larkspur Foyer

8:00–3:10
Meeting Larkspur Ballroom

8:00–8:15
Opening Remarks
Matthew Fields, Director, CBE;
Professor, Microbiology &
Cell Biology, MSU
Darla Goeres, Industrial
Coordinator, CBE

8:15–8:45
Introductions

SESSION 1: The Rules of Biofilm Behavior

8:45–8:55
Session Introduction
Matthew Fields

Keynote Presentation

8:55–9:40
Molecular mechanisms driving biofilm formation in *Vibrio cholerae*

Fitnat Yildiz, Associated Dean of Research & Research Impact, PBCi Division, Distinguished Professor, Microbiology & Environmental Toxicology, Univ. of California, Santa Cruz

9:40–10:10 Networking Break

10:10–10:40
Grade school geometry and its contribution to an unavoidable rule of life
Ross Carlson, Professor, Chem. & Biological Eng., MSU, CBE

10:40–11:10
Title TBA
Roland Hatzenpichler, Associate Professor, Chemistry & Biochemistry, MSU, CBE

11:10–11:55
Panel:
Fitnat Yildiz
Roland Hatzenpichler
Ross Carlson
Moderator: Matthew Fields

11:55–1:25 Networking Lunch

SESSION 2: Interactions at the Interface

1:25–1:30
Session Introduction
Chris Jones, PI, Standardized Biofilm Methods Lab, CBE

1:30–1:50
Developing a standard operating procedure for biofilm growth in the Industrial Surfaces Biofilm Reactor and demonstration of use cases
Kylie Bodle, Postdoctoral Researcher, CBE

1:50–2:10
Investigating how environmental and genetic factors influence early surface attachment in the foodborne pathogen *Vibrio vulnificus*

Tiffany Williams, Senior Innovation Scientist–Microbiology, Diversy

2:10–2:30
Co-culture screening and surface-level analysis of multi-domain biofilms
Ghazal Vahidi, Postdoctoral Researcher, CBE

2:30–2:50
Testing the implications of micron-scale texture on microbial surface sensing and biofilm formation: An indwelling-device model

Shawna Pratt, Postdoctoral Researcher, Microbiology & Immunology, Geisel School of Medicine at Dartmouth College
*Young Investigator Awardee

2:50
Transport to CBE Labs

CBE Open House & Poster Session

3:30–5:30
3rd Floor Barnard Hall, MSU
Schedule available onsite

Thursday July 10

7:00–8:00 am Coffee Talk with CBE Leadership *Optional*
An hour for members to chat with CBE leadership
Goldenrod Boardroom

8:00–9:00 am
Cont. breakfast Larkspur Foyer

8:00–9:00 CBE Connect
An hour to connect with CBE researchers on projects. Optional for members and invited guests
Larkspur meeting area

9:00–4:00
Meeting Larkspur Ballroom

9:00–9:05
Opening remarks
Matthew Fields, Darla Goeres

SESSION 3: Multi-Species Pathology

(Continues on next page)

9:05-9:10

Session Introduction

Kelly Kirker, Assistant Research
Professor, Chemical &
Biological Eng., MSU, CBE

9:10-9:40

Title TBA

Pat Secor, Associate Professor,
Microbiology & Cell Biology,
MSU, CBE

9:40-10:10

**Biofilm microorganism growth
and community composition, and
urogenital infection association
in active-duty female soldiers
using 2nd and 3rd generation
Freshette® female urinary
diversion devices**

Elizabeth Kostas-Polsten, Assoc.
Professor & Deputy Director,
Nursing Science Program,
Uniformed Services University
of the Health Sciences

10:10-10:40

**Short-lived success:
Recolonization of Carbapenem-
resistant *Enterobacteriales* in
sink drains following repeated
disinfection with a peroxide-
peracetic acid-based foam**

Amy Mathers, Professor,
Medicine and Pathology,
University of Virginia Medical
School

10:40-11:10 Networking Break

11:10-11:40

**Cystic Fibrosis: A paradigm
biofilm infection in a new era**

Phil Stewart, Regents Professor,
Chemical & Biological Eng.,
MSU, CBE

11:40-12:05

CBE Awards & Milestones

12:05-1:20 Lunch

**SESSION 4: Rapid Trios—
The Matrix**

1:20-1:25

Session Introduction

Laura Jennings, Assistant
Professor, Microbiology & Cell
Biology, MSU, CBE

1:25-1:45

**Biofilm dispersal patterns
revealed using far-red
fluorogenic probes**

Andrew Bridges, Assistant
Professor, Biological Sciences,
Carnegie Mellon University
*Young Investigator Awardee

1:45-2:05

**Random acts of resistance:
Polysaccharide & epigenetic
heterogeneity in *P.
aeruginosa* biofilms**

Laura Jennings

2:05-2:25

**Lab biofilm models, the brain
ache of planning a breakup IRL**

Alan House, Senior Scientist,
Novonosis

2:25-2:55 Networking Break

**SESSION 5: Rapid Trios—
Engineered Systems**

2:55-3:00

Session Introduction

Chelsea Heveran, Assistant
Professor, Mechanical &
Industrial Eng., MSU, CBE

3:00-3:20

Title TBA

Michael Carter, Biomaterials
Research Scientist, Air Force
Research Laboratory

3:20-3:40

**mRNA PNA-FISH for high-
resolution gene expression and
the spatial ecology of *Legionella
pneumophila* biofilms**

Ana Barbosa, Visiting PhD
Student, Chemical & Biological
Eng., University of Porto

3:40-4:00

**Biofilms in pharmaceutical and
clinical water systems**

Mark Pasmore, Associate
Director, R&D, Vantive

4:00-4:10 Short Break

**Strategic Planning
Meeting for CBE
Members**

4:10-5:10

Hilton Garden Inn

BBQ Dinner

6:00-9:00 pm

Big Yellow Barn, Bozeman

**Friday
July 11**

8:00-8:30 am

Cont. breakfast Larkspur Foyer

8:30-11:50 am

Meeting Larkspur Ballroom

8:30-8:35

Opening Remarks

Matthew Fields, Darla Goeres

8:35-9:20

**Panel: From Graduation to
Industry: Why & How?**

Industrial Associates
Moderator: Chris Jones

**SESSION 6: Life in the
Extreme**

9:20-9:25

Session Introduction

Liz Sandvik, Research Engineer,
CBE

9:25-9:55

Title TBA

Madelyn Mettler, Postdoctoral
Researcher, CBE

9:55-10:25

Title TBA

Christine Foreman, Assoc. Dean,
Norm Asbjornson College of
Eng.; Professor, Chemical &
Biological Eng., MSU, CBE

10:25-10:55 Networking Break

Closing Keynote Presentation

10:55-11:40

**Polymicrobial biofilm growth and
control during spaceflight**

Bob McLean, Regents' Professor,
Biology, Texas State University

11:40-11:50

Closing Remarks

Matthew Fields, Darla Goeres

*Center for Biofilm Engineering
gratefully acknowledges the support
from these meeting sponsors:*

