



Montana Biofilm Science & Technology Meeting and Workshop



July 9-11, 2025



Hilton Garden Inn Bozeman
Draft AGENDA

5/16/2025 4:45 PM

Tuesday July 8

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

Wednesday July 9

7:00–8:00 am Coffee Talk
Optional discussion hour for members & 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, PBSci 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, Diversify

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
Depart for CBE Labs (on own)

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
Optional discussion hour for members & CBE leadership
Goldenrod Boardroom

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

8:00–9:00 CBE Connect
Optional networking hour to connect with CBE researchers. Open to members and invited attendees
Larkspur meeting area

9:00–4:00
Meeting Larkspur Ballroom

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

(Continues on next page)

SESSION 3: Multi-Species Pathology

9:05-9:10

Session Introduction

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

9:10-9:40

The role of physical forces in shaping polymicrobial communities

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, Novonesis

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 Networking Break

10:25-10:55

Title TBA

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

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

CBE gratefully acknowledges the support from these meeting sponsors:

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