



Montana Biofilm Science & Technology Virtual Meeting

CENTER FOR
BIOFILM ENGINEERING
30th
ANNIVERSARY
1990 - 2020

July 14-16, 2020



Draft AGENDA

7/27/2020 3:11 PM

****All times are Mountain Daylight Time (MDT)**

Tuesday July 14

9:15–9:25

Opening Remarks

Matthew Fields, CBE Director,
Professor, Microbiology &
Immunology, MSU
Paul Sturman, CBE Industrial
Coordinator

SESSION 1: Biofilm Dynamics

9:25–9:30

Session Introduction

Matthew Fields

9:30–10:00

Regulatory mechanisms and effectors leading to biofilm dispersion

Karin Sauer, Chair, Dept. of
Biological Sciences;
Co-Director, Binghamton
Biofilm Research Center,
Binghamton University

10:00–10:30

Identifying causative relationships and active populations in polymicrobial communities

Matthew Fields

10:30–11:00

What we know and don't know about viruses in biofilms

Elinor Pulcini, Assistant
Research Professor, Chemical
& Biological Engineering,
MSU, CBE

11:00–11:30 Break

SESSION 2: CBE Paths Forward

11:30–12:00

State of the CBE

Matthew Fields

12:00–12:30

Pathways to Innovation: Growing a Regulatory Science Program at the CBE

Darla Goeres, Research
Professor of Regulatory
Science, MSU; PI
Standardized Biofilm Methods
Laboratory, CBE

12:30–1:00 Discussion

Wednesday July 15

9:15–9:25

Opening Remarks

Matthew Fields
Paul Sturman

SESSION 3: Biofilm Methods

9:25–9:30

Session Introduction

Darla Goeres

9:30–10:00

Development of a biofilm model using in vitro colonized tissue models

Samantha Westgate, CEO,
Perfectus Biomed

10:00–10:30

Biofilm sensing: An engineering overview

Stephan Warnat, Assistant
Professor, Mechanical &
Industrial Eng., MSU, CBE

10:30–11:00

Experimental designs to quantify early aggregation and colonization of biofilms with statistical confidence from confocal images

Brian Pettygrove, PhD
Candidate, Microbiology &
Immunology, MSU, CBE
Al Parker, Biostatistician, CBE;
Assoc. Research Professor,
Mathematical Sciences, MSU

11:00–11:30 Break

SESSION 4: Field Studies

11:30–11:35

Session Introduction

Paul Sturman

11:35–12:05

Multi-domain biofilm growing systems and their potential application

Erika Espinosa-Ortiz, Asst.
Research Professor, Chemical
& Biological Eng., MSU, CBE

12:05–12:35

Microbially induced calcium carbonate precipitation (MICP): Bio-cement's journey from the laboratory to the field

Catherine Kirkland, Assistant
Professor, Civil Engineering,
MSU, CBE
Adie Phillips, Assoc. Professor,
Civil Engineering, MSU, CBE

12:35–1:05

Large-scale water and facility decontamination testing capabilities

Steve Reese, Research
Engineer, Idaho National
Laboratory

1:05–1:30 Discussion

Thursday

July 16

9:15–9:25

Opening Remarks

Matthew Fields
Paul Sturman

SESSION 5: Biofilms and Antimicrobials

9:25–9:30

Session Introduction

Phil Stewart, Regents Professor,
Chemical & Biological
Engineering, MSU, CBE

9:30–10:00

Continued metabolism of bacteria in antimicrobial-treated biofilms

Phil Stewart

10:00–10:30

The *Pseudomonas aeruginosa* biofilm matrix and antimicrobial tolerance

Matt Parsek, Professor, Microbiology,
University of Washington

10:30–11:00

The immediate and urgent need for products with broad antimicrobial activity and how to get there

Alicia Tetlak, Director, Biological Sciences,
Next Science

11:00–11:30 Break

11:30–12:00

Evaluation of ND-7901 (HT-01): A fast acting bactericidal antibacterial agent with broad activity

Garrett Moraski, Research Scientist,
Chemistry & Biochemistry, MSU

12:00–12:30

A highly effective, broad spectrum disinfectant for use against pathogenic organisms and biofilms in food safety applications

Mark Tucker, Chief Scientific Officer
Decon7 Systems

12:30–12:50

Influence of material type and coating on biofilm accumulation by an ISS isolate

Madelyn Mettler, Research Assistant,
Chemical & Bio. Eng., MSU, CBE

12:50–1:10

Simulated microgravity experimentation and molecular mechanism behind biofilm formation in ISS isolates

Ceth Parker, Postdoctoral Researcher
NASA Jet Propulsion Laboratory