

11th Annual CBSD CoBRE Research Symposium

Monday, Aug. 15, 2022

7:45 – 8:30 a.m. *Private session at Finn in Double Tree over breakfast/coffee: Orientation meeting for External Advisory Committee (EAC), Bruce Bowler and Stephen Sprang*

8:30 – 9:00 a.m. Pick up your badge and get a cup of coffee (UC Meeting Room Foyer)

9:00 - 10:30 a.m. **OPEN SESSION (UC 330-331):**

The last 5 minutes of each talk is reserved for questions.

11th Annual CBSD Research Symposium - Welcome and Jr. Investigator Talks

<https://umontana.zoom.us/j/93898929785>

Meeting ID: 938 9892 9785

Passcode: 479214

9:00 – 9:30 a.m. CBSD Director Bruce Bowler “*Welcome and Overview of Phase III Year 1*”

Junior Investigator talks:

9:30 – 10:00 a.m. Beverly Piggott “*Na⁺/H⁺ exchangers regulate development of the neural stem cell – glial niche*”

10:00 – 10:30 a.m. Travis Hughes “*Improving the structural model of nuclear receptor activation*”

10:30 - 10:50 a.m. Session break for informal discussion (UC Meeting Room Foyer)

10:50 a.m - noon. **OPEN SESSION (UC 330-331): Short Investigator talks (demonstrating core usage)**

11th Annual CBSD Research Symposium - Short Investigator Talks and Elevator Talks

<https://umontana.zoom.us/j/91507233157>

Meeting ID: 915 0723 3157

Passcode: 129011

Investigator talks (last 5 minutes for questions):

10:50 – 11:10 a.m. Andrea Stierle “*Development of Fungal Artificial Chromosomes to Investigate the Biosynthesis of the Berkeleylactone Antibiotics in Extremophilic Fungi*”

11:10 – 11:30 a.m. Ekaterina Voronina “*The mysteries of C. elegans germline RNA helicases*”

11:30 a.m - noon. **OPEN SESSION (UC 330-331): Poster “Elevator” Talks**

Elevator Talks:	
11:30 – 11:35 a.m. Precious Nepomuceno	“ <i>The Effect Of Interdomain Interactions On The Structure And Stability Of The Eleventh Type 3 Domain From Human Fibronectin</i> ”
11:35 – 11:40 a.m. Camilla de Mattos	“ <i>Bacterial Threat Assessment of Bacteriophage Infection is Mediated by Intracellular Polyamine Accumulation and Gac/Rsm Signaling</i> ”
11:40 – 11:45 a.m. Andrew Voss	“ <i>Using the NMP422 scaffold to design a biased ligand for PPARγ</i> ”
11:45 – 11:50 a.m. Ariel Frederick	“ <i>Cardiolipin and its Effect on Nanodiscs as Model Membranes</i> ”
11:50 – 11:55 a.m. Bernice Lin	“ <i>Investigating the role of Na⁺/H⁺ exchangers (Nhe) in Drosophila brain development</i> ”
11:55 a.m – noon. Emily Gagliano	“ <i>When the Stomach is Calling but the Brain Won’t Pick Up: Octopamine Signaling May Have Inhibited the Message</i> ”

12:00 - 1:30 p.m. Lunch (Pick up lunch in UC Meeting room foyer; seating available in UC 332/333)

**** 12:00 - 1:30 p.m. PRIVATE LUNCH (UC Alumni Boardroom - UC 329)**

UM Vice President for Research & Creative Scholarship Scott Whittenburg

EAC: Elizabeth Goldsmith; Deborah Wuttke, David Case, Suzanne Scarlata

IAC: Kasper Hansen, Liz Putnam, Bruce Bowler, Ekaterina Voronina, Klara Briknarova and Stephen Sprang

1:30 - 2:30 p.m. OPEN SESSION (UC 330-331): Core Facility Presentations

Questions are reserved for the Q&A at the end of the second session.

11th Annual CBSD Research Symposium - Core Facilities Presentations

<https://umontana.zoom.us/j/99921225879>

Meeting ID: 999 2122 5879

Passcode: 971728

1:30 - 1:45 p.m. Steve Sprang, CBSD Associate Director, Core Financial Overview
"CoBRE Year 11 Financial Overview"

1:45 - 2:00 p.m. Levi McClelland, ISBC Manager
"ISBC Year 11"

2:00 - 2:15 p.m. Sandy Ross, BCRL Director (virtual) and
Matt Sydor, Interim Manager
"Updates with Time-resolved Fluorescence and Super-Resolution"

2:15 - 2:30 p.m. Dave Holley, MCCF Manager
"CoBRE Year 11 MCCF"

2:30 - 2:45 p.m. Session break for informal discussion (UC Meeting Room Foyer)

2:45 - 3:30 p.m. OPEN SESSION (UC 330-331): Core Facility Presentations cont.

11th Annual CBSD Research Symposium - Core Facilities Presentations

<https://umontana.zoom.us/j/99921225879>

Meeting ID: 999 2122 5879

Passcode: 971728

2:45 - 3:00 p.m. Dan Decato/Orion Berryman, SMXDC
"CoBRE SMXDC Year 11"

3:00 - 3:15 p.m. Eric Schultz, MSCF Manager
"Mass Spectrometry Core Facility"

3:15 - 3:30 p.m. Core Q&A

3:30 - 4:00 p.m. Poster Session Participant set up if didn't occur earlier and break time.

3:30 p.m. - 4:00 p.m. PRIVATE SESSION Core Facility Directors and Managers with EAC

- MSCF Deborah Wuttke
- ISBC Betsy Goldsmith
- MCCF David Case
- BCRL Suzanne Scarlata (virtual)

4:00 - 6:00 p.m. OPEN SESSION: Poster Session & Refreshments (UC 332-333)

Poster presenters	Titles
Jasper Aquiono & Annie Buchholz	"Methoxyamino- and 2-Aminopyridyl Functionalized Scaffold as a Tool for Systematic Investigation of β -Glucan Binding and Dectin-1 Activation"
Hannah Christman	"Investigating the role of SERCA in Brain Tumor Growth"
Camilla de Mattos	"Bacterial Threat Assessment of Bacteriophage Infection is Mediated by Intracellular Polyamine Accumulation and Gac/Rsm Signaling"
Daniel Decato	"Exploring Small Crystals in Big Sky Country—Microcrystal Electron Diffraction"
Emily Gagliano, Ashley Bielawski, & Evan MacArthur-Waltz	"When the Stomach is Calling but the Brain Won't Pick Up: Octopamine Signaling May Have Inhibited the Message"
Ariel Frederick	"Cardiolipin and its Effect on Nanodiscs as Model Membranes"
Bernice Lin	"Investigating the role of Na ⁺ /H ⁺ exchangers (Nhe) in <i>Drosophila</i> brain development"
Michelle Nemetchek	"A structural mechanism for biased agonism in a nuclear receptor"
Precious Nepomuceno	"The Effect Of Interdomain Interactions On The Structure And Stability Of The Eleventh Type 3 Domain From Human Fibronectin"
Mariah Rayl	"PPAR γ agonists induce different transcriptomic signatures"
Caleb Schwartzkopf	"The filamentous bacteriophage protein PfsE modulates <i>Pseudomonas aeruginosa</i> PQS signaling"
Andrew Voss	"Using the NMP422 scaffold to design a biased ligand for PPAR γ "

6:30 – 9:00 p.m. Dinner at Ten Spoon Vineyard catered by Silk Road

Tuesday, Aug. 16, 2022

7:45 - 8:45 a.m. EAC Breakfast meetings with Junior Investigators at Finn in the Doubletree
Beverly Piggott with Suzanne Scarlata and Deborah Wuttke
Travis Hughes with David Case and Betsy Goldsmith

8:45 Return with EAC to UM campus

9:10 - 10:30 a.m. OPEN SESSION Pilot Project Leader talks (UC 330 – 331)

The last 5 minutes of each talk is reserved for questions.

11th Annual CBSD Research Symposium - Pilot Project Presentations & Closing Plenary
Presentation
<https://umontana.zoom.us/j/95196500763>
Meeting ID: 951 9650 0763
Passcode: 784644

9:10 – 9:30 a.m. Brent Ryckman, "*Crystal structure of human cytomegalovirus UL98 alkaline nuclease: part of a 2-component recombinase*"

9:30 – 9:50 a.m. Kendall Ryter, "*Saccharide-Modified Dendrimers and Nanoparticles as Vaccine Adjuvants*"

9:50 – 10:10 a.m. Laura Jennings, "*Sugar-coated, multidrug-resistant bacteria as a source of new antimicrobial targets*"

10:10 – 10:30 a.m. Eric Schultz, "*Combining Scanning Mutagenesis and Molecular Dynamics to Investigate the Mechanism of HCMV gB Activation by gH/gL*"

10:30 – 10:45 a.m. break (UC Meeting Room Foyer)

10:45 – 11:30 OPEN SESSION Closing Plenary

Jeff Good, Director, UM Genomics Core, *Genomic diversity of SARS-CoV-2 through space and time*

11:30 a.m. - 12:30 p.m. PRIVATE SESSION Working Lunch for EAC and CBSD directors (UC Alumni Boardroom - UC 329)

EAC meet with CBSD Director, Associate Director and Director of Strategic Financial Planning to discuss their evaluation of progress, annual report and recommendations

