

# Joint Meeting of the Missouri and Missouri Valley Branches of the American Society for Microbiology

**March 15-16, 2019**



UNO Biology

Creighton  
UNIVERSITY



## Hosted by the University of Nebraska, Omaha and Creighton University

The Missouri branch and the Missouri Valley branch of the American Society for Microbiology invite scientists and students to their annual meeting to be held jointly on the campus of the Kansas City Kansas Community College on March 15-16, 2019. The meeting will feature lectures by two ASM Distinguished Lecturers and several prominent local microbiology researchers and presentations by students from the region. The meeting is a great venue for undergraduate and graduate student researchers to gain experience presenting their research. Students can give a short oral or a poster presentation at this meeting and awards will be given to the top presenters in different categories. This meeting also is an excellent opportunity for microbiologists from Missouri, Nebraska, Kansas, and Oklahoma to become acquainted. We look forward to seeing you at the meeting, and we encourage students to submit abstracts of their research.

### Overview of Schedule (See [myasm.unl.edu/annual-meeting](http://myasm.unl.edu/annual-meeting) for more detailed information)

|                    |                   |  |
|--------------------|-------------------|--|
| Friday, March 15   | 5:00 PM – 9:00 PM | Invited speakers with dinner provided                          |
| Saturday, March 16 | 8:00 AM – 4:30 PM | Student presentations and invited speakers with lunch provided |

### Invited ASM Distinguished Speakers and their Topics

- Cheryl Nickerson, Arizona State University: Vaccines
- Aaron Best, Hope College: Course-based undergraduate research experience on bacteria in water

### Venue:

Friday night: UNO's Milo Bail Student Center, [6203 University Dr N, Omaha, NE 68132](http://6203%20University%20Dr%20N,%20Omaha,%20NE%2068132)

Saturday: Creighton University's Mike and Josie Harper Center, [602 N. 20th Street, Omaha, NE 68178](http://602%20N.%2020th%20Street,%20Omaha,%20NE%2068178).

Parking instructions will be posted on the web page ([myasm.unl.edu/annual-meeting](http://myasm.unl.edu/annual-meeting))

**Abstract Submission for Student Presentations:** Due by **February 22, 2019**. Abstracts should be sent to Travis Bourret [travisbourret@creighton.edu](mailto:travisbourret@creighton.edu). Formatting instructions are included in the brochure. Questions about abstracts and schedule: contact Travis Bourret at [travisbourret@creighton.edu](mailto:travisbourret@creighton.edu) or 402-280-3750.

### Registration Options: (Note you should register even if no payment is needed)

1. **Preferred:** Mail Registration form and check for any registration fees (made out to "Missouri Valley ASM") by March 8, 2018 to Donald Rowen using address on registration form.
2. **For Credit Card payment:** Payee should email registration form(s) to Donald Rowen ([drowen@unomaha.edu](mailto:drowen@unomaha.edu), 402-554-2143) by March 8. An email reply will contain a link that will allow payment via a credit card.
3. **At Meeting.** Pay by cash or a check made out to "Missouri Valley ASM". Late fee will be applied.

**Questions about Registration and payment:** Contact Donald Rowen at [drowen@unomaha.edu](mailto:drowen@unomaha.edu) or 402-554-2143/

**Housing Recommendation:** Posted on meeting web page ([myasm.unl.edu/annual-meeting](http://myasm.unl.edu/annual-meeting))

**Additional information:** Will be posted at [myasm.unl.edu/annual-meeting](http://myasm.unl.edu/annual-meeting).

**Registration Form for 2019 Meeting of the MO and MV Branches of ASM  
Hosted by University of Nebraska, Omaha and Creighton University  
March 15-16, 2019, Omaha, NE**

(A fillable pdf file is available at [mvasm.unl.edu/annual-meeting](http://mvasm.unl.edu/annual-meeting))

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Name (First) (MI) (Last) (Required) Title

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Institution/University/Company /Agency (Required) Department

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Street Address/P.O. Box (can be home address)

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City State Zip Code

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Day Phone E-mail Address (Required)

**Registration and Branch Membership (if paid by March 8, 2019)**

|                        |       |       |
|------------------------|-------|-------|
| Undergraduate Student: | Free  | _____ |
| Graduate Student       | \$ 5  | _____ |
| Professional:          | \$ 65 | _____ |

**Professional Branch Membership Discount (already paid branch membership fee)**

Note: An ASM branch membership is separate from national ASM membership

Subtract \$ 15 if you are already a member of the MB or MVB \_\_\_\_\_

**Late Fee for Onsite Registration (Bring form and check or cash to meeting)**

Graduate Student: Add \$5 \_\_\_\_\_

Professional: Add \$10 \_\_\_\_\_

**Total** \$ \_\_\_\_\_

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- 3. At Meeting.** Register at meeting and pay with cash or a check made out to “Missouri Valley ASM”. Late fees will be applied.

**Mailing address**

Donald Rowen  
Biology, 114 AH  
6001 Dodge St  
Omaha, NE 68182

**Questions about Registration**

Donald Rowen  
[drowen@unomaha.edu](mailto:drowen@unomaha.edu)  
402-554-2143

## Instructions for Abstract Submission (Due by February 22, 2019)

All students in the region doing microbiology related research are invited to submit abstracts for a 12-15 minute oral presentation or a poster presentation. To be eligible to present, one must be a Missouri or Missouri Valley ASM Branch member. One can become a branch member by registering for the meeting. Please remember that this is a regional meeting and does not prevent one from presenting your work at the national level.

**Guidelines.** Abstracts must be 200 words or less. Type the title first using title casing and a **bold** font. Capitalize the first letter of each word except prepositions, articles, and names of species. *Italicize* the Latin binomial names of organisms. List all authors with an asterisk following the name of the person delivering the presentation. If the presenter is a student, please indicate the level (doctoral, master's, undergraduate, or high school) parenthetically between the name and asterisk so that students may be placed in the appropriate competition areas. For each author, list institutional affiliations and short addresses (city and state only). Indicate the preferred category after the abstract text. Submitted abstracts will not be edited in any way, so please adhere to these guidelines and check carefully for grammatical errors. If you have any limitations on when you can present, please include that information with your submitted abstract.

### Categories and Tentative time for presentation

- I. General Microbiology Graduate Student Oral Presentation (Sat AM and/or PM)
- II. Environmental Microbiology Graduate Student Oral Presentation (Sat AM and/or PM)
- III. Medical Microbiology/Immunology Graduate Student Oral Presentation (Sat AM and/or PM)
- IV. Undergraduate or High School Oral Presentation (Saturday AM and/or PM)
- V. Graduate Student Poster presentation (Saturday AM)
- VI. Undergraduate or High School Poster Presentation (Saturday AM)

### Example

**Relationship Between Extracellular Polysaccharide Expression and Propensity to Form Biofilms in Clinical Isolates of *Burkholderia multivorans*.** Sallie A. Ruskoski (Masters)\*, Gerwald A. Köhler, and Franklin R. Champlin. Oklahoma State University Center for Health Sciences, Tulsa, Oklahoma.

*Burkholderia multivorans* is a gram-negative bacillus that causes opportunistic pulmonary infections in patients having underlying disease. It is hypothesized that the ability to adhere to host tissues is affected by bacterial cell surface properties and most strains are known to elaborate extracellular polysaccharide capsules comprised of disparate biopolymers. The purpose of the present study was to better characterize the cell surface physiology of a type reference strain and seven clinical isolates which represent virulence and colonial phenotypic variants. Microscopic observation, standard macrobroth dilution susceptibility, cell surface hydrophobicity, and biofilm formation analyses were employed to assess pertinent aspects of outer cell surface physiology among strains. The cell surface of the mucoid phenotype was found to be a function of extracellular polysaccharide expression and appeared to facilitate initiation of biofilm production, while being inversely related to cell surface hydrophobic properties. However, the outer cell envelopes of all strains were uniformly permeable to hydrophobic antimicrobial agents as suggested by their uniform minimal inhibitory concentrations. These data support the hypothesis that while extracellular polysaccharide production may affect the ability of *B. multivorans* to bind to host cells, it does not influence the accessibility of the outer cell surface to nonpolar antimicrobial agents.

**Category: III Medical Microbiology/Immunology Graduate Student Oral presentation**

The abstract must be submitted via email by **February 22, 2019** to Travis Bourret [travisbourret@creighton.edu](mailto:travisbourret@creighton.edu) using the formatting instructions listed above. Questions: contact Travis Bourret at [travisbourret@creighton.edu](mailto:travisbourret@creighton.edu) or 402-280-3750.