



Duke Microbiome Center

June 2026 DMC Newsletter

This quarterly newsletter is provided by the Duke Microbiome Center (DMC) to inform the Duke University community about activities, resources, news, funding and educational opportunities, and recent highlights in the microbiome sciences at Duke and beyond. To suggest items for this newsletter or to add someone to our newsletter listserv, please email [Cindy Wicker](#). For further information on the DMC, please visit the DMC [website](#).

A Message from the Director



To the DMC community,

At the end of June, I will step down as Director of the Duke Microbiome Center as Professor Julia Oh assumes this role. After serving as Director since 2014, I find myself reflecting with gratitude on what we have built together and with great optimism about what lies ahead.

Over the past 12 years, the DMC has grown from a community of approximately 20 labs to more than 70 labs spanning 18 different departments across Duke's schools of Medicine, Nursing, Engineering, Environment, and Arts & Sciences. To support that growth, we expanded the Center's portfolio of research resources, educational programs, and community-building activities, creating new opportunities for collaboration and discovery.

Yet when I look back on these years, the accomplishments that stand out most are not programs or numbers. They are your accomplishments. It has been a privilege to watch your ideas become impactful projects, manuscripts become publications, and proposals become funded grants. Most rewarding of all

has been seeing students, postdoctoral fellows, and junior faculty develop into the next generation of leaders in microbiome science. Sharing in those successes has been the greatest privilege of serving as Director.

As one generation of leadership transitions to the next, I am delighted that the Center will be led by Professor Julia Oh. Julia brings exceptional scientific vision, deep experience in interdisciplinary microbiome research, and a strong commitment to community building and innovation. Over the past six months, we have worked closely together to prepare for this transition, and I am confident that she will begin this new chapter with momentum and fresh ideas.

I hope you will join me in supporting Julia as she leads the DMC forward. The Center's greatest strength has always been its people, and those strengths have never been greater than they are today. I am excited to see where the next chapter takes us and look forward to remaining an enthusiastic member of the DMC community.

Thank you for your partnership, your friendship, and your many contributions to the Center over the years.

Sincerely,
John Rawls
Director, Duke Microbiome Center



Dear DMC community,

I'm very honored for this opportunity to take the reins from Dr. Rawls! His long leadership has been truly exemplary and I pledge to strive to build on this remarkable community that he's brought together. In coming months, my goal is to listen and learn, to better understand how the DMC can continue to serve and strengthen the Duke community. Please join me in thanking Dr. Rawls, and here's to the DMC!

Sincerely,

Julia

News & Awards

New Leadership in the Duke Microbiome Center!

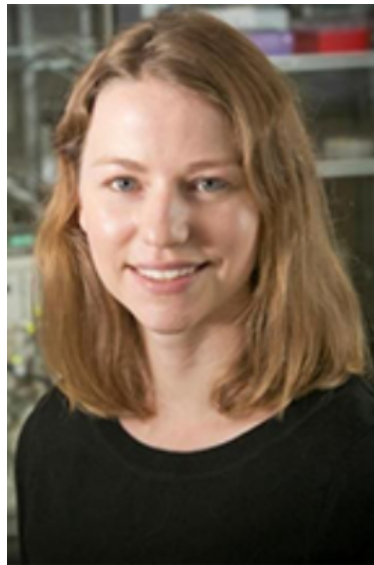
Beginning July 1, 2026, Julia Oh, PhD, will assume the role of director of the Duke Microbiome Center!

We are all deeply grateful for John Rawls' exceptional leadership over the past 10+ years, and look forward to the bright future of the DMC!

More details can be found here in the [Duke School of Medicine press release](#)!



Two DMC faculty members have been awarded distinguished professorships by Duke University



Pelham Wilder Distinguished Professor of Chemistry

[Emily Derbyshire, PhD](#), is Eads Family Professor and Professor of Chemistry with appointments in molecular genetics and microbiology and in cell biology. She is also an associate of the Duke Initiative for Science and Society. A fellow of the American Association for the Advancement of Science, her interdisciplinary collaborative research program integrates chemical biology, molecular biology, and biochemistry to globally interrogate parasite biology. She studies the chemical biology of the liver stage of malaria, and she has been recognized for the development of new therapeutics to address a major global health challenge.



Minnie Geller Distinguished Professor for Research in Genetics

David M. Tobin, PhD, is a professor of molecular genetics and microbiology who also has appointments in cell biology and integrative immunobiology. His research focuses on understanding the interplay between mycobacteria and their hosts, using model organism genetics, human genetics, pharmacology, and high-resolution microscopy. By identifying key pathways utilized by the infecting bacteria and the host innate immune system, he seeks to discover new therapeutic targets and interventions to combat tuberculosis. His work integrates zebrafish genetics with mechanistic studies of mycobacterial pathogens, advancing fundamental understanding of host-pathogen interactions relevant to human diseases including tuberculosis and leprosy.

North Carolina Microbiome Consortium Meeting



Thank you to Neil Surana and Jason Arnold for chairing the 2026 NC Microbiome Consortium meeting, on May 4th, 2026 at the North Carolina Biotechnology Center.

This was a successful meeting incorporating robust discussions of methodological advances, ecological and systems biology approaches, and translational impacts of microbiome research across the state of North Carolina.

Congratulations to all of this year's awardees, including Elizabeth Hughes from Raphael Valdivia's lab, who was recognized for the best trainee flash talk of the meeting.

The 2027 event will co-chaired by [Nathan Crook](#) and [Kasie Raymann](#) from NCSU - If you are interested in being involved in organization of next year's event, feel free to reach out to either Nathan or Kasie.

Highlighted Grant Awardees



Diego V. Bohorquez
A gut sense for dietary lysine.
Sponsor: NIH R01DK143462.



Jeseth Delgado Vela
Phage Anti-Biofouling Coatings (PhAB-Co) for marine applications
Sponsor: Office of Naval Research



Noelle Younge

Mechanisms of microbial regulation of postnatal growth and lipid metabolism.

Sponsor: NIH R01DK142979

Additional Grant Awards [here](#).

Resource Showcase

DMC Red Team Review

We invite you to take advantage of DMC Red Team Review service for faculty members of the DMC. Our goal is to provide a formal service for giving conceptual feedback (that is, not proofreading) to help hone your latest grant applications to NIH, NSF, etc. For additional information visit the [DMC Webpage](#).

In the spirit of balancing turnaround time (1-2 weeks) with feasibility, we suggest that you contact us with a projected submission date early in your grant timeline (a month recommended). Suggested reviewers (we will aim for 2 reviewers per grant) are also requested.

Submissions are through [Google Forms](#).

Please contact Julia.Oh@duke.edu and cc Cynthia.Wicker@duke.edu with questions.

"Devil's Advocate" Pilot



Devil's Advocate is Duke's new AI-powered grant review assistant - developed to identify compliance risks, citation errors, and aimed at strengthening proposal narratives prior to submission.

This tool is currently in beta testing.

For more information or to test it out yourself, [click here!](#)

DMC Office Hours Continue

Open to anyone within the DMC community – at any background level.

This recurring event is designed to provide real-time assistance with any aspect of ongoing or upcoming microbiome research projects.

Topic experts in bioinformatics, biostatistics, microbiology, and general microbiome-science will be in attendance each week, so feel free to bring any questions/problems that you have.

Event Location: MSRB3 Conference Room 4122

Event Time: First and Third Friday of each month - 1:30pm – 2:30pm

Scheduling changes will go out to the Microbiome Center email list, and will be posted on the [DMC Website](#) and in the [Bioinformatics/Biostatistics working group](#).

For more info, or any questions regarding office hours, please contact jason.arnold@duke.edu.

Duke Compute Cluster Resource Update

We have recently been working through some challenges with the DMC's research partition on the Duke Compute Cluster - but seem to have the majority of the issues resolved!

If you have a group on the DCC, you should have access to the "dmcshared" partition to run jobs at a higher priority level.

[More info here](#)

If you are having problems connecting, or believe access is not functioning correctly (or if you are planning on setting up a new group in the DCC, please contact jason.arnold@duke.edu for assistance getting connected!

New NMDC - ASM Microbiome Certificate



The National Microbiome Data Collaborative (nmcdc) has partnered with American Society for Microbiology (ASM) to offer a Microbiome Science Certificate Program.

This program consists of 12 modules designed as a self-paced learning program to provide training and resources required to thrive in a microbiome research workforce.



Certificate program was built with a focus on undergraduate students but is available to any career stage.

Materials are publicly available here without certificate enrollment: <https://zenodo.org/records/18176387>

Citation: Kelliher, J., Prime, K. J., Rodriguez, F., Johnson, L., Roux, S., Miller, S., & Elie-Fadrosh, E. (2026, January 1). NMDC Microbiome Science Certificate Program Materials. Zenodo. <https://doi.org/10.5281/zenodo.18176387>

Upcoming Events

DMC happy hour celebrating John Rawls

It is our pleasure to invite you to a special event honoring Dr. John Rawls as he concludes his service as Director of the Duke Microbiome Center on June 30, 2026, following more than 12 years of dedicated leadership.

Please join us in celebrating Dr. Rawls and the exceptional contributions, growth, and accomplishments of the DMC under his leadership on **June 29, 2026, from 3:00–5:00 PM** in **MSRB1 Room 001/atrium** with light refreshments.

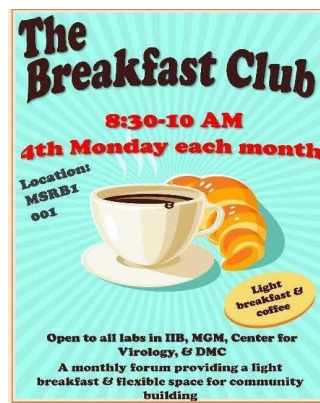
Upcoming DMC Meetings

The next **DMC Quarterly Faculty Meeting** will be Monday, August 24, 2026 at 1:00 PM in-person in 4122 MSRB3 with a [Zoom](#) option.

Please mark your calendars.

The Breakfast Club will resume August 24 ,2026

We are excited to continue the “[The Breakfast Club](#)” starting back August 24, 2026 through the remainder of 2027 - a monthly community building forum every 4th Monday morning of the month with light breakfast and coffee.



WHO: This forum is jointly sponsored by the Department of Integrative Immunobiology (IIB), Department of Molecular Genetics and Microbiology (MGM), Center for Virology and Duke Microbiome Center (DMC). Students, postdocs, staff, and faculty in any laboratory affiliated with DMC, Center for Virology, MGM, or IIB are invited.

WHEN: Every 4th Monday morning of the month from 8:30-10:00AM (March 23rd, April 27th, May 26th and June 22nd)

WHERE: MSRB1 room 001 Atrium

WHAT: Free coffee and light breakfast (while supplies last) in a flexible and informal space for community building.

WHY: We seek to build community across IIB, MGM, Center for Virology, and DMC. In addition to informal conversation, attendees are invited to use The Breakfast Club to hold any kind of small group activity (e.g., small group meetings, journal clubs, office hours, practice chalk talks).

DMC Research-in-Progress Series 2026-2027

The DMC Research-in-Progress Series will be taking a break for June and July, but will return in August.

This series has always focused heavily on ongoing research, and novel innovation within the microbiome research space - we look forward to continuing throughout 2026-2027.

This is a forum not only to provide opportunities for investigators to present their research, but also to gain the feedback and insights from other microbiome scientists from across the DMC!

Next Event:

August 26, 2026

Elizabeth Howell, M.D. - *"Impact of Estrogen on the Genitourinary Microbiome and Metabolome"*

Sign up here on the [google sheet](#) for your spot.

12:00pm and 1:00pm in MSRB3 – Room 1125. Pizza will be served

[Zoom link](#) is available here for those who cannot attend in person.

Upcoming Conferences

The Marine Biological Laboratory - Molecular and Cell Biology of Symbiosis summer course

Woods Hole, Massachusetts, United States | Jul 17, 2026–Aug 15, 2026

International Symposium on Microbial Ecology - ISME20

Auckland, New Zealand | August 16–21, 2026

North Carolina ASM Annual Meeting - NC-ASM2026

Charlotte, North Carolina, United States | October 10, 2026

Abstract Deadline: TBA

Microbiome

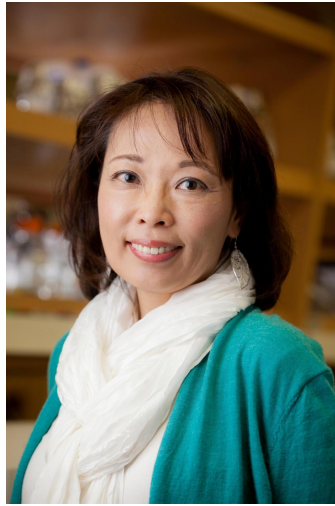
Cold Spring Harbor, New York, United States | October 27 - 31, 2026

Abstract Deadline: August 7, 2026

World Conference on Marine Biodiversity

Bruges, Belgium | November 17–20, 2026

New Member Spotlights!



Mari L. Shinohara

Professor of Integrative Immunobiology

In my lab, we use mouse models for infectious and autoimmune diseases to understand the cellular and molecular mechanisms of; pathogen recognition by PRRs in macrophages and DCs, initiation of inflammatory responses in the innate immune system, and the impact of innate immune inflammation on the development and regulation of T cell-mediated adaptive immune responses.

Please join us in welcoming Mari Shinohara to the Duke Microbiome Center community, and check out some of the exciting research her [lab](#) is working on!

Highlighted Publications

Spatial proximity dictates bacterial competition and expansion in microbial communities.

Emrah Simsek, César A. Villalobos, Kinshuk Sahu, Zhengqing Zhou, Nan Luo, Dongheon Lee, Helena R. Ma, Deverick J. Anderson and Charlotte T. Lee, **Lingchong You**

Nat. Commun. DOI: <https://doi.org/10.1038/s41467-025-65892-9>

A bacterial nutrition strategy for plant disease control.

Shanzhi Wang, Lisong Zhu, Meng Tian, Wenyi Wu, Xu Hu, Xuan Li, Jiyang Wang, Ying Zhu, Jiaqing Xu, Baohui Mou, Jiyum Yang, Fuhao Cui, Dayong Li, Jie Cheng, Zhilong Liu, Ming-An Wang, Linlu Qi, Weiwei Jin, Zhaou-Qing Luo, Pei Zhou, Yong-Hwan Lee, Brian Staskawicz, **Sheng-Yang He** and Wenxian Sun

Science DOI: <https://doi.org/10.1126/science.ady8325>

Validation of a modified Landry-Hassett dilution technique to quantify the growth and mortality rates of subpopulations of planktonic microbes.

Junyao Gu, Kay Foley, Laura Huber, **Dana Hunt** and **Zackary Johnson**

Front. Mar. Sci. DOI: <https://doi.org/10.3389/fmars.2025.1687609>

Charting the future of wastewater-based epidemiology for vector-borne diseases: opportunities, challenges, and climate-driven needs.

Tahmina Ahmed, Alessandro Zulli, Farah Ishtiaq, Judith Chui Ching Wong, Juliana Calabria de Araujo, Katrin G. Kuhn, Alexandria B.I Boehm, Rolf U. Halden, Kyle Bibby and **Jeseth Delgado Vela**

Environ. Sci.: Water Res. Technol. DOI: <https://doi.org/10.1039/d5ew00799b>

Profiling Biological Effects of Microbiome Metabolites via Machine Learning.

Hong A. Chung, Zachary Fralish, Tiffany Tu and **Daniel Reker**

iScience DOI: <https://doi.org/10.1016/j.isci.2026.115282>

Additional DMC Publications [here](#).

Highlighted Funding Opportunities

- North Carolina Biotechnology Center Flash Grant

Deadline: July 15, 2026 at noon.

[More details here](#)

- Tick-Borne Disease Research Program -- Idea Development Award

Deadline October 22, 2026

[More details here](#)

- NOIP: Clinical Research Network on Antimicrobial Resistance Award

Deadline: September 29, 2026

[More details here](#)

- Enhancing Mechanistic Research on Precision Probiotic Therapies (R61/R33 Clinical Trial Optional)

Deadline: October 1, 2026

[More details here](#)

Additional Microbiome Funding Opportunities [here](#).

Job Listings

Make sure to review [DMC's website](#) for any open and current positions



Duke Microbiome Center



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