



Duke Microbiome Center

June 2023 DMC Newsletter

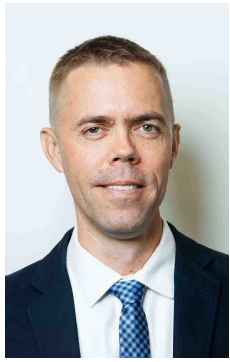
This quarterly newsletter is provided by the Duke Microbiome Center (DMC) to inform the Duke University community about activities, resources, news, funding and educational opportunities, and recent highlights in the microbiome sciences at Duke and beyond. To suggest items for this newsletter or to add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

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A Message from the Director



Dear DMC Community,

I hope your summer is off to a good start! In the quarterly DMC newsletter below, you'll find several news items and updates. I encourage you take a couple of minutes to browse the message below and I anticipate that you will find something of direct interest to you.

I am happy to announce the awardees of our 2023 DMC Development Grants. A Duke Microbiome Center Development Grant was awarded to Dr. Jatin Roper for his application entitled "*The role of TPL2 kinase in antimicrobial peptide production and function*", and a Duke Child Health Discovery Initiative – Duke Microbiome Center Joint Partnership Development Grant was awarded to Dr. Sweta Patel for her application entitled "*Characterizing the nasopharyngeal resistome of children living with HIV in Botswana*". It was a highly competitive pool of applications for these RFAs this year, and we're grateful to all who applied. We plan to issue a new RFA in early spring 2024 and encourage each of you to consider developing an application.

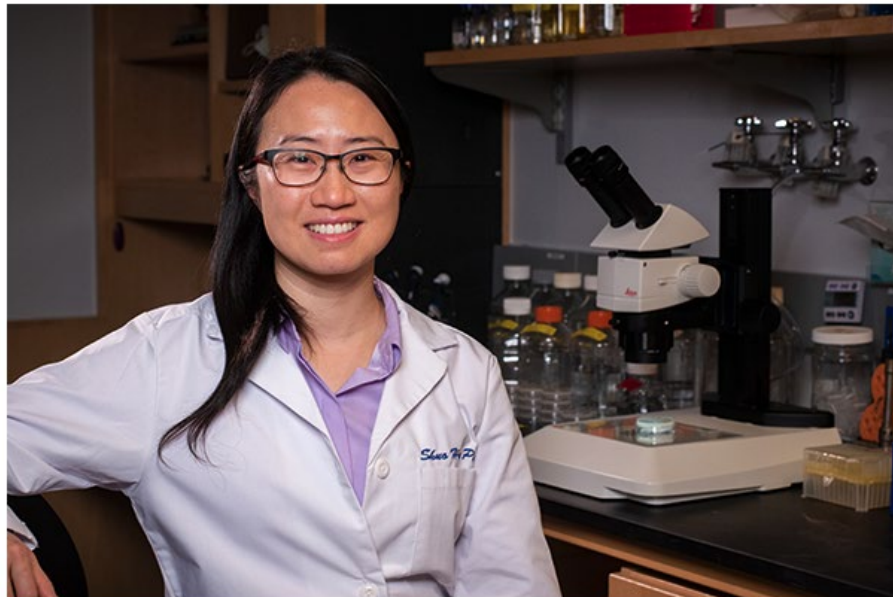
DMC grants support projects at their early stages to generate preliminary data needed to support larger grant applications. To that end, we congratulate 2018 DMC grantee Dr. Diego Bohorquez for a new NIH/NIDDK R01 grant, 2021 awardee Dr. Neil Surana for a new NIH/NIAID P01 grant with Drs. Sallie Permar (Cornell) and Kristina DeParis (UNC), and 2022 awardee Dr. Dan Reker for a new NIH/NIGMS R35 MIRA grant, all of which built upon their DMC-supported research.

In addition to these Center events, we also celebrate the important research and impactful discoveries ongoing in every lab within the DMC. The DMC exists to support you, so as always, please let us know how we can better support your work.

Sincerely,
John Rawls
Director, Duke Microbiome Center

Gut Microbiome May Hold the Key to Healthy Aging

Assistant Professor Shuo Han discusses her work focused on better understanding the metabolic role of the gut microbiota on aging. Read more [here!](#)



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Congratulations to recent graduate [Chin Yee Tan](#) for being awarded the 2023 AAI-Thermo Fisher Trainee Achievement Award, one of the highest awards given by the American Association of Immunology!

Chin Yee Tan, a recently graduated MGM Student who trained in the lab of [Neil Surana, MD, PhD](#), was recently selected to receive the [2023 AAI-Thermo Fisher Trainee Achievement Award](#), which is one of the highest awards given by the American Association of Immunologists each year to 6 trainees (students or postdocs).

Chin Yee is currently in Singapore finishing medical school.



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The Breakfast Club

Starting this fall 2023, we are pleased to announce a new community forum for informal scientific discussion and cross-departmental networking. This forum, called "The Breakfast Club", will provide free breakfast and coffee catered by [NOSH](#), and space for community activities in the OBGE Lounge area in MSRB3 every Wednesday morning from 8:00-9:30AM. This event will be sponsored by the [Duke Microbiome Center](#), [Duke Center for Host-Microbial Interactions](#), [Department of Molecular Genetics and Microbiology](#), and [Department of Immunology](#). We anticipate this weekly forum will launch at the end of August, with a formal announcement coming around the beginning of August. Stay tuned

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News & Awards

- [Lodge, Rawls, Sullivan, Gromeier and Miao Awarded Distinguished Professorships](#)
- [Matsunami Research Featured in Quanta Magazine](#)
- [Ko, Gusa Recognized with Faculty Awards](#)
- [Blasi, Han, Saunders Receive School of Medicine Awards](#)
- [Gusa Named CIFAR Azrieli Global Scholar](#)

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Updated Membership Criteria for New DMC Faculty

The DMC has historically required faculty candidates requesting to join DMC to give a brief presentation during a DMC quarterly faculty meeting, seminar series, or other DMC forum.

Due to increased demand for new memberships, and limited opportunities for presentations throughout the year, we have adjusted the membership pipeline for new investigators.

Instead of being required to present at a faculty meeting, faculty candidates may now submit a brief pre-recorded video presentation, which will be shared with the microbiome research community and evaluated by DMC leadership. We feel that including this digital component in membership will help to expand new investigator visibility within the DMC, and will provide more opportunities for faculty within DMC to identify potential collaborators.

As we begin putting this new procedure into action, we would like existing DMC investigators to consider producing short video presentations (10-15 minutes) highlighting their own research interests and goals, which can also be made available to the whole microbiome research community at Duke!

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DMC launches new Bioinformatics and Biostatistics Working Group


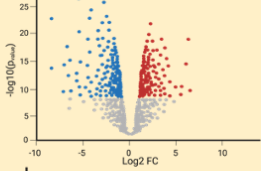
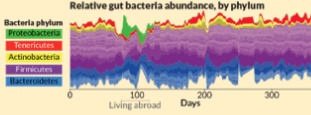
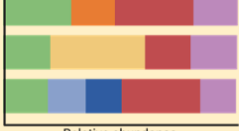
After identifying a major unmet need for bioinformatics and biostatistics support within the microbiome research community, we have decided to develop a microbiome-focused [working group for bioinformatics and biostatistics](#).

This group will utilize expertise from within the Duke Microbiome Center to build and expand a community focused on solving complex bioinformatics/biostatistics problems within the microbiome space.


We aim to utilize both in-person and digital components to help not only lay the framework for development of collaborative networks, but also to build a forum for problem solving discussions that can be used by future investigators to reduce the need for redundant troubleshooting.

The inaugural meeting for this group is currently in the planning phases, so if you would like to join, please contact jason.arnold@duke.edu or pixu.shi@duke.edu. There are no restrictions on skill level or expertise to join. The more active members we have, the better we can tailor this group to fit the needs of the research community!

**Duke Microbiome Center
Bioinformatics Working Group**

Mission: Improve accessibility and quality of bioinformatics/biostatistics resources to microbiome researchers.



Provide real-time bioinformatics/biostats support
 Collaborative community building
 Protocol development discussion
 Grant and manuscript writing support

Open to faculty, staff, and trainees
 Monthly meetings – journal club, case study discussion

Contact: jason.arnold@duke.edu
 pixu.shi@duke.edu

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Recap of DMC Faculty Retreat

The weather was perfect for for the inaugural DMC Faculty Retreat in beautiful Beaufort NC on May 4-5!

A total of 17 DMC faculty from across 10 Duke departments converged at the Duke Marine Labs for this 2-day event. On Thursday early afternoon, attendees were given a tour of the Duke Marine Labs research facilities, and some of the other highlights of the island prior to beginning the academic agenda for the retreat.

The academic program was a great success, sparking discussions between investigators and identifying numerous potential opportunities for collaborative research, acquisition of funding, and expanding visibility and impact of the DMC locally and nationally. Attendees commented that having representatives from so many diverse research backgrounds provided insights that otherwise may never have been identified. Each faculty member left the event with expressed commitments to follow up on high-priority collaborative contacts. Thanks to all who attended!



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DMC to host the next NC ASM Meeting

The [North Carolina Branch of the American Society for Microbiology \(NC-ASM\)](#) has selected DMC Assistant Director Dr. Jason W. Arnold as their president for the 2023-2024 term.

As a result, the Annual NC-ASM Research Conference will be taking place at Duke University this fall! Event is scheduled for Saturday, November 4th at the Trent Semans Center for Health Education.

The Duke Microbiome Center will be heavily involved in event planning and hosting, providing a microbiome-focused talk session in addition to the general microbiology talks.

Additional information will be sent to DMC and departmental email lists and will be posted on [DMC](#) and [NC-ASM](#) websites. Please stay tuned and plan on attending!

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New plans for DMC compute resources

Microbiome research frequently generates large data sets that require massive computational resources to process and analyze. This has been identified as an unmet need within the Duke Microbiome Center's research community and we are taking action to increase the computational resources available to DMC members.

The Duke Microbiome Center is working to develop a partnership with the Duke Center for Human Systems Immunology (CHSI) to bring improved priority access to Duke

Compute Cluster (DCC) CPU and GPU nodes, and to form an integrated "Duke Microbiome Center Group" within the DCC, allowing higher priority access to resources within that group than is available to the general public on campus.

This group will also benefit the owners of computational resources within the DMC, as they will also be offered higher priority access to resources within this DCC Group, allowing for the potential for higher speeds and better allocation for certain computational tasks.

Additional information about this initiative will be sent via email in upcoming weeks, as details between DMC and CHSI are finalized.

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Funding Opportunities through the DMC

[DMC Rolling Voucher Program:](#)

Duke University has established shared resources that avail diverse technologies to Duke investigators that can be used to advance microbiome science. To facilitate Duke Microbiome Center investigators' access to these shared resources, particularly for microbiome projects that are not yet externally funded, we are pleased to announce the Duke Microbiome Center Rolling Voucher Program. This rolling voucher program offers vouchers in amounts ranging up to \$10,000. Each DMC faculty member cannot receive more than \$10,000 of funds through this mechanism within any two year period. These vouchers are redeemable at any of the [Duke University School of Medicine's many core facilities](#), and applicants are required to contact the directors of these shared resources to develop project budgets. Learn more [here](#).

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Upcoming Conferences and Workshops

For a full list of upcoming microbiome conferences, click [here](#). See also the two NC Microbiome Consortium events listed above.

The [SymbNET PhD Summer School on Host-Microbe Symbioses](#), hosted by the Instituto Gulbenkian de Ciência in Portugal. This is a two week, lecture-based course for students interested in host-microbe symbioses. This course is scheduled for **3-16 July 2023**. Registration will open in January/February 2023, with a deadline anticipated by the end of March. More information and a website will be available soon (the old 2022 website is available [here](#), but has not yet been updated for 2023).

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Upcoming DMC Meetings

[DMC Seminar Series](#): We are currently in the process of reorganizing DMC Seminars to better accommodate the schedules of DMC members. No seminars are scheduled at this time.

DMC Faculty Meetings: The next Faculty meeting will be Monday, August 28, 2023. All faculty meetings are quarterly (every 3 months) on 4th Mondays, at 1:00 PM in-person in 4122 MSRB3 with a Zoom option.

Please mark your calendars!

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Highlighted Microbiome Funding Opportunities

- **The Duke Aging Center and the Duke/UNC ADRC request applications for Microbes in Alzheimer's Disease Pilot Awards.** The purpose of these \$85,000 pilot awards is to stimulate and support collaborative, innovative research on the potential role of microbes or pathogens in the development of Alzheimer's disease (AD). Principal investigators must be faculty at Duke University to be eligible for funding consideration. Please view the [complete RFA on this website](#).
 - Timeline:LOI due 7/10/23
 - Invitations to apply issued by 7/28/23
 - Full applications due 9/28/23
 - Funding decisions will be announced by 12/4/23, with funding available 1/8/24
- **Notice of Intent to Publish an FOA for Human Virome Project: Developing novel and innovative tools to interrogate and annotate the human virome (U01 CTNA) (NOT-RM-23-014)** Office of Strategic Coordination
- **Notice of Intent to Publish an FOA for the NIH Common Fund Human Virome Program: Characterization of functional interactions between viruses and human and microbial hosts (U01 CTNA) (NOT-RM-23-015)** Office of Strategic Coordination
- **Notice of Intent to Publish an FOA for the NIH Common Fund Human Virome Program: Consortium Organization and Data Collaboration Center for the Human Virome Project (U24 CTNA) (NOT-RM-23-016)** Office of Strategic Coordination
- **Notice of Intent to Publish an FOA for the NIH Common Fund Human Virome Program: Characterize the Human Virome in Longitudinal, Diverse Cohorts Across the Lifespan (U54 CTNA) (NOT-RM-23-017)** Office of Strategic Coordination
- **Duke University Microbes in Alzheimer's Disease Pilot Awards** (see [here](#)) Deadline: July 10, 2023
- **Crohns & Colitis Foundation of America Research Awards** (see [here](#)) Deadline: November 1, 2023

See more microbiome funding opportunities [here](#)

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Highlights Recent DMC Publications

Names of MGM authors are bolded.

Daniel Rittschof "*Biofouling and Antifouling: Interactions between Microbes and Larvae of Invertebrates*" (<https://scholars.duke.edu/publication/1571673>)

Neeraj K Surana "*Ruminococcus gnavus and Limosilactobacillus reuteri Regulate Reg3γ Expression through Multiple Pathways*" (<https://scholars.duke.edu/publication/1569528>)

Noelle Elizabeth Younge "*The gestational membrane microbiome in the presence or absence of intraamniotic infection*" (<https://scholars.duke.edu/publication/1562508>)

Amy K. Schmid "*The Hypersaline Archaeal Histones HpyA and HstA Are DNA Binding Proteins That Defy Categorization According to Commonly Used Functional Criteria*" (<https://scholars.duke.edu/publication/1565372>)

Jason W. Arnold "*Giardia* hinders growth by disrupting nutrient metabolism independent of inflammatory enteropathy" (<https://scholars.duke.edu/publication/1578773>)

See additional DMC publications [here](#).

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Jobs Listing

[Duke Microbiome Center Job Board](#) is Live!

If you have open positions in your labs, please feel free to send those postings to jason.arnold@duke.edu to have them listed on the DMC website!

Jobs within Duke Microbiome Center:

[Research Technician – Ecological and Environmental Toxicology – Duke University](#)

[Associate in Research/Lab Technician – Microbial Genomics](#)

[Postdoctoral Fellow – Development and analysis of genomic surveys of human diet](#)

[Postdoctoral Fellow – Genomic surveys of diet and wastewater](#)

[Bioinformatician – Generate, analyze, and visualize genomic food intake data](#)

[Lab Research Analyst – Host–Microbiome–Immune Interactions](#)

[Research Technician – Host–Microbiome–Immune Interactions](#)

[Postdoctoral Associate – Host–Microbiome–Immune Interactions](#)

[Research Technician – Duke Microbiome Core](#)

External Academic Positions:

[Postdoctoral Fellowship – Microbiology/Immunology – University of South Carolina, Charleston](#)

[Research Technician – Virginia State University](#)

[Associate Researcher – Marine Biotechnology – Sultan Qaboos University](#)

[Postdoctoral Fellowship – Biostatistics/Bioinformatics – NYU School of Medicine](#)

[Junior Tenure-Track Faculty – Center for Microbiome Research – UMass Chan Medical School](#)

[Computational Biologist/Bioinformaticist – Biostatistics and Computational Biology Branch – NIH](#)

[Remote Staff – Computational Metagenomics – University of Alabama \(Payami Lab\)](#)

[Postdoctoral Fellowship – Comparative Genomics/Microbial Ecology – University of Hawaii](#)

[Postdoctoral Fellowship – Microbiota-Host and Microbiota-Diet Interactions – NCSU](#)

[Postdoctoral Fellow – Quantitative Evolutionary Microbiology – Rutgers](#)

[Professor and CIHR Canada Research Chair – Microbiota-Host Interactions – Université du Québec à Montréal](#)

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