



Duke Microbiome Center

Winter 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](#). For further information on the DMC, please visit the DMC [website](#).

In this newsletter:

- [A Message from the Director](#)
- [Dr. Jason Arnold announced as new DMC Assistant Director](#)
- [NCDRC 2023 Gut Microbiomes & Diabetes Mini-Symposium](#)
- [Duke Microbiome Center's Lawrence David Awarded Science Diversity Leadership Grant](#)
- [Save-the-date for upcoming NC Microbiome Consortium Events](#)
- [Funding Opportunities through the DMC](#)
- [Upcoming Conferences and Workshops](#)
- [Upcoming DMC Meetings](#)
- [News](#)
- [Highlighted Microbiome Funding Opportunities](#)
- [Highlighted Recent DMC Publications](#)
- [Jobs Listing](#)



A Message from the Director

Dear DMC Community,

I wish each of you and your laboratory members a happy new year! Looking back at 2022, it was quite an eventful year with plenty to celebrate.

- We successfully completed our 5-year review by the Duke University School of Medicine, resulting in renewed support for the DMC.
- We added several new faculty to our DMC community. In addition to several new existing Duke faculty joining the DMC, we had two successful external hires. [Dr. Shuo Han](#) was hired as an Assistant Professor in a joint search between the DMC and the Department of Biochemistry, and [Dr. Jason Arnold](#) was hired as a Research Assistant Professor and Assistant Director for the DMC (read more about Dr. Arnold below).
- DMC Associate Director and Professor Dr. Claudia Gunsch successfully led a large team of investigators from Duke, NC A&T, NCSU, UNC-CH, and UNC-Charlotte that was awarded an [NSF Engineering Research Center grant for Precision Microbiome Engineering \(PreMiEr\)](#). Learn more [here](#).
- The DMC organized several community building events including weekly breakfasts, our monthly [DMC Seminar Series](#), and a symposium on [Quantitative Biology of the Microbiome](#) with the [Duke Center for Quantitative BioDesign](#).

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 in 2023 as always, please let us know how we can better support your work. Lastly, I want to express my gratitude to Dr. Lawrence David who served as Interim Director for the DMC while I was on sabbatical last summer. Dr. David will continue as DMC Co-Director. If you're curious about what I did on sabbatical, you can learn more [here](#). I wish all of you a happy and fulfilling 2023!

Sincerely,

John Rawls

Director, Duke Microbiome Center

Dr. Jason Arnold announced as new DMC Assistant Director



We are excited to introduce [Jason W. Arnold, Ph.D.](#) as the new Assistant Director of the Duke Microbiome Center and Assistant Research Professor in the Department of Molecular Genetics and Microbiology in the Duke University School of Medicine. Read more about Dr. Jason Arnold [here](#):

NCDRC 2023 Gut Microbiomes & Diabetes Mini-Symposium

Please save the date for the virtual NCDRC Mini-Symposium on Tuesday, **January 31st, 2023 from 9.00 am to 12.00 pm EST.**

Join us for an exciting morning of speakers, presentations and discussions aligning with our theme “Gut Microbiomes & Diabetes”. Click here for [agenda](#)

Please click here to register: <https://redcap.link/lwtmzOf0>

[Duke Microbiome Center's Lawrence David Awarded Science Diversity Leadership Grant](#)



Two researchers from Duke University School of Medicine and one from Duke's Department of Biology have been named recipients of the 2022 Science Diversity Leadership Awards from the Chan Zuckerberg Initiative—read more [here](#):

[Save-the-date for upcoming NC Microbiome Consortium Events](#)

The primary statewide forum for microbiome scientists in North Carolina is the [NC Microbiome Consortium](#) which is supported by the North Carolina Biotechnology Center as an "Intellectual Exchange Group" or IEG. Please mark your calendars now for two upcoming events organized by the NC Microbiome Consortium, and additional information will be distributed via the DMC listerv closer to these dates

- **NC Advancing Collaborative Research Excellence (NC ACRE) Webinar - February 14, 2023.** The NC Microbiome Consortium will be hosting an interactive webinar and panel discussion on microbiome

science in NC and associated opportunities and challenges. This is being conducted in collaboration with NC ACRE. NC ACRE is a collaborative space and community that convenes researchers from around the state to explore areas of mutual research interest. They host monthly webinars to spotlight researchers from across the state and their work with the goal of catalyzing multi-lateral teaming to bid on externally funded opportunities.

- **NC Microbiome Symposium - May 24 OR May 25, 2022.** The annual NC Microbiome Symposium will be an all-day event held at the NCBC campus in RTP consisting of oral and poster presentations from academic and industrial microbiome scientists from around the state, plus an invited keynote speaker. The date has not been finalized yet, so please mark your calendar now for both dates and updates will be sent closer to May.

Funding Opportunities through the DMC

The DMC Diversity Matters Award

The Duke Microbiome Center (DMC) is committed to advancing diversity, equity, and inclusion as fundamental to our center's success and excellence. The annual DMC "Diversity Matters Award" is designed to recognize individuals within our DMC community that have made significant advances towards these ends within Duke and our broader scientific and geographic communities. Nominees can be any student, fellow, faculty, or staff employed at Duke University in a DMC laboratory for at least 6 months prior to the nomination deadline. A list of DMC laboratories can be found [here](#). All nominations must be received by 5:00PM EST on Tuesday January 3rd, 2023. Further details on the simple nomination process and previous awardees can be found at [here](#). Please consider nominating a deserving colleague for this year's award!

The Duke Microbiome Center invites applications for two

development grant programs described below. The deadline for both programs is 1 May 2023.

Duke Child Health Discovery Initiative – Duke Microbiome Center Joint Partnership Development Grant

The early stages of life are critically important for human health throughout the lifespan and also for assembly and activity of the microbiome. Understanding the associations and interactions between microbiomes and their hosts during early life stages is therefore an important area of research. The Duke Microbiome Center (DMC) is partnering with the Duke Children's Health and Discovery Initiative (CHDI) to offer a CHDI-DMC Joint Partnership Development Grant. The objective is to support interdisciplinary and collaborative research projects at the intersection of child health and the microbiome sciences at Duke University. For more information, see the program announcement.

Duke Microbiome Center Development Grants

The Duke Microbiome Center (DMC) supports microbiome science at Duke University through pilot project funding. The DMC is pleased to announce this new request for proposals for DMC Development Grants. The objective of the DMC Development Grant program is to support interdisciplinary and collaborative research projects in the microbiome sciences at Duke University. For more information, see the program announcement.

In addition to these two Development Grant RFAs mentioned above, the DMC continues to offer the DMC Rolling Voucher Program.

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 offer the Duke Microbiome Center Rolling Voucher Program. This rolling voucher program provides 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](#).

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 Molecular and Cell Biology of Symbiosis](#), hosted by the Marine Biological Laboratory in Woods Hole, MA, USA. This is an immersive research-based course designed to teach basic concepts, open research questions, and facilitate state-of-the-art experimental approaches in symbiosis research. The course will take place **10 May – 8 June 2023**, with an application deadline of **10 February 2023**.

The [Gordon Research Conference on Animal Microbe Symbioses](#) is a premier, international scientific conference focused on advancing the frontiers of science through the presentation of cutting-edge and unpublished research, prioritizing time for discussion after each talk and fostering informal interactions among scientists of all career stages. The GRC will be held **June 18-23, 2023** at a small and relatively isolated location in Italy to minimize distractions and transportation issues. The [GRC](#) will be accompanied by a [Gordon Research Seminar \(GRS\)](#). This GRS is a 2-day event predating the GRC (**June 17-18, 2023**) that will enhance scientific education by attracting the brightest young minds in symbioses to network and exchange cutting-edge ideas in a highly-stimulating and non-intimidating environment.

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).

The [25th Annual NIEHS Biomedical Career Symposium](#) is one of the largest assemblies of biomedical organizations and young scientists in Research Triangle Park, North Carolina. Targeting postdoctoral fellows and graduate students, the Career Symposium provides young scientists with an opportunity to explore a myriad of career options and create a contact network as they plan for their future careers in the biomedical sciences. Date: December 8-9 and December 12-13, 2022. [Registration](#) opens on November 9, 2022

Upcoming DMC Meetings

DMC Seminar Series: This monthly seminar series is held on *third* Mondays each month at 4PM in-person in MSRB3 1125 with a Zoom option. The DMC Seminar Series is organized by graduate students, postdocs, and fellows in DMC labs, and provides DMC trainees opportunities to build their networks and meet leaders in the field. Currently, nominations for speakers are invited for the upcoming year.

DMC Faculty Meetings: The next Faculty meeting will be Monday, February 27, 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!

News

Rawls and Miao Among Duke's Most-Cited Scholars

John Rawls and Ed Miao appear on the list of most cited researchers, as compile Thirty Duke faculty, including Duke Microbiome Center Director John Rawls, were included in a listing of the most cited scholars. Each was among the top one percent of citations in their fields for the year. Characteristic of Duke, most researchers on the list conduct interdisciplinary research. (read more here).

Highlighted Microbiome Funding Opportunities

RFA-MH-22-230: Understanding the role of Gut Immune dysfunction and Gut Microbiome in pathogenesis of Central Nervous System co-morbidities in people living with HIV (R21 Clinical Trial Not Allowed)

See more microbiome funding opportunities here

Highlighted Recent DMC Publications

["Horizontal gene transfer enables programmable gene stability in synthetic microbiota"](#)

["Rapid changes in coastal ocean microbiomes uncoupled with shifts in environmental variables"](#)

["Microbiome subcommunity learning with logistic-tree normal latent Dirichlet allocation"](#)

["Dirichlet-tree multinomial mixtures for clustering microbiome compositions"](#)

["Age-Related Changes in the Nasopharyngeal Microbiome Are Associated With Severe Acute Respiratory Syndrome Coronavirus 2 \(SARS-CoV-2\) Infection and Symptoms Among Children, Adolescents, and Young Adults"](#)

["Conserved roles for Hnf4 family transcription factors in zebrafish development and intestinal function"](#)

["Prebiotic galactooligosaccharides interact with mouse gut microbiota to attenuate acute graft-versus-host disease"](#)

See additional DMC publications [here](#).

[Jobs Listing](#)

[Postdoctoral position](#) in metabolic modeling in the Schmid Lab, Duke

Biology Department, is open for applications. See link above.

Postdoctoral Scholar position at UC-Davis

The Fan lab at the Departments of Biological and Agricultural Engineering at the University of California, Davis, invites applications for a Postdoctoral Scholar - Employee position on engineering filamentous fungus for biofuels and chemicals production. Dr. Fan's primary research interests are advancing technologies for producing fuels and chemicals from renewable resources, including metabolic engineering, biocatalyst development, fermentation process development, and modeling. The postdoctoral scholar will work on an exciting fungal genetic engineering project funded by the US Department of Agriculture (USDA) and in collaboration with a biotech company. Position Qualifications: A Ph.D. with a strong background in genetic engineering, molecular microbiology, and biochemistry is required. Experience with filamentous fungus genome editing using CRISPR technology is a plus. The salary range is approximately \$55,631 to \$66,598 per year, depending on qualifications and experience. Applicants should submit a CV and a summary of research experience via email to Dr. Zhiliang Fan (jzfan@ucdavis.edu). Minorities and women are encouraged to apply.

The Department of Pathology and Microbiology at the University of Nebraska

Medical Center seeks outstanding applicants for a tenure-leading [faculty position](#) within the area of virology and infectious diseases. The department is building a core of strong virology researchers by recruiting an investigator with expertise in the molecular and cell biology of viral pathogens, including mechanisms of pathogenesis, in vitro and in vivo hostpathogen interactions, and therapeutic development. We are particularly interested in investigators focusing on emerging viruses of public health importance who can interface with multidisciplinary teams to support biopreparedness and response efforts, including national and international initiatives led by the UNMC Global Center for Health Security. The department envisions the growth and strength of the virology group to complement the established large groups of investigators studying staphylococcal biology and obligate intracellular pathogens. Candidates must have a Ph.D. and/or M.D. with 3-4 years of post-doctoral training or faculty experience, will synergize with the existing research interests in the program, have (or exhibit the potential to build) an extramurally-funded research program, and contribute to graduate education, including the successful mentorship of trainees. Salary will be commensurate with experience and will include a university benefits package.

Scientist 3, Immunology/B cell Biology [THE POSITION](#) **The Yewdell Lab in the Department of Immunology at Genentech** is seeking two highly creative and collaborative Scientists to join a dynamic research team investigating the role of B cells and antibodies in inflammatory and autoimmune diseases. The successful candidate will implement cutting edge technologies and methods in cellular immunology, molecular biology, genomics and genetically engineered mouse models to advance exciting research stage programs into early clinical development, as well as explore new areas of B cell biology ripe for target discovery. Excellent communication skills are essential to facilitate fruitful collaborations with colleagues across a diverse array of departments, including bioinformatics, cellular and tissue genomics, human pathobiology & reverse translation, early clinical development, and biomarker discovery.

Cornell University, Biomedical Sciences

The Department of Biomedical Sciences at Cornell University in Ithaca, NY is seeking two tenure-track Assistant Professors with active programs in one of two areas of fundamental research. One in reproductive science and another that is more broad. Both emphasize genomic, genetic, molecular, and/or physiological approaches.

<https://academicjobsonline.org/ajo/jobs/22987>



To subscribe or unsubscribe to this mailing list email [Cindy Wicker](#)