



NMDC Newsletter

The Microbiome Standard

-Winter 2025-

Update from the Leadership Team

Happy New Year - it's been a busy start to 2025! We have many updates to share including the annual call for applications for our [Ambassador program](#) and release of our [2024 Annual Report](#). There is new data available in the [Data Portal](#) and accessible through the [NMDC API](#), including lipidomics data and new ways to search by functional annotations. The [Submission Portal](#) and [NMDC Field Notes mobile app](#) now enable support for recording sample metadata from multiple environments into a single study, along with improvements for customized templates. Our new documentation website is now live and can be accessed at <https://docs.microbiomedata.org>. We invite you to read on to learn more about our activities and for opportunities to engage with the NMDC team.

Announcements

Applications for the 2025 NMDC Ambassador cohort open today! The application will be open until February 28th. Find out more [here](#) and apply [here](#)!

THE NATIONAL MICROBIOME DATA COLLABORATIVE

AMBASSADOR PROGRAM

Seeking early career microbiome researchers who wish to engage with their research communities to address the challenges of finding and reusing microbiome data.

ELIGIBILITY

- Early career researcher (graduate student or within **12 years** post-highest degree)
- Works with amplicon, metagenomic, metatranscriptomic, metaproteomic, and/or metabolomic data
- Works with microbiome data
- Willing to commit to a year-long term and attend virtual trainings
- Affiliated with a U.S. institution

BENEFITS

- Cohort-based training on data stewardship, data standards, and community engagement
- Event hosting opportunities
- Networking and professional development
- Financial (\$1000 for researchers from eligible institutions), logistical support
- Credit and recognition of contributions via NMDC channels
- Co-authorship opportunities



nmcdc

National Microbiome
Data Collaborative

APPLICATIONS ARE DUE FEBRUARY 28, 2025

LEARN MORE AND APPLY AT:

[MICROBIOMEDATA.ORG/AMBASSADORS/](https://microbiomedata.org/ambassadors/)

The [2024 NMDC Annual Report](#) is now available! Read about the past year's updates on software, data, and community partnerships.

Our new documentation website is now live! You can access all NMDC documentation in a single, easy to navigate site: <https://docs.microbiomedata.org>.

We are now on Bluesky! You can find us at [@microbiomedata.org](https://bsky.app/profile/microbiomedata.org).

The 2024 NMDC Ambassador cohort officially adjourned earlier this month. A huge thank you to them for their hard work promoting FAIR data! Collectively, they hosted 36 events in over six countries, reaching more than 900 researchers.

We discovered an issue where metagenome workflow records were associated with the incorrect samples for two studies in NMDC's Data Portal and in our APIs. The two studies are [Creating the GROW \(Genome Resolved Open Watershed\) Database: Leveraging Distributed Research Networks to Understand Watershed Systems](#) and [Bio-Scales: Defining plant gene function and its connection to ecosystem nitrogen and carbon cycle](#). Impacted records have been deleted and will be re-added. For more questions please contact support@microbiomedata.org.

Releases

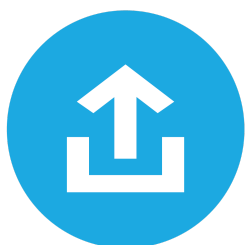
Software updates

- We have revamped the NMDC [documentation](#), so that all NMDC documentation is now integrated and consolidated under a common system that should be more intuitive for users to navigate. We have developed a pipeline that auto-generates documentation from across the various NMDC software repositories in a consistent manner.
- Key improvements to our database tools include a tool called [refscan](#) that helps ensure database integrity and compliance with the NMDC schema. We have also been enhancing our database to facilitate traversal across all NMDC objects, which allows users to query and access NMDC data in a more flexible manner using the API.
- Nmdc-schema is now on version [11.2.1](#) which includes support for amplicon data, updates to modeling of statistics for metagenome binning results, and introduces a [new class](#) to group samples which should be analyzed together.



NMDC Field Notes mobile app

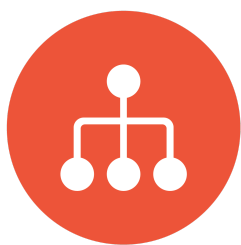
- We continue to implement bug fixes and enhancements identified by beta testing.
- Beta testing remains open and we continue to invite researchers to [join as a beta tester](#).
- We will launch full public access this Spring!



Updates to the NMDC Submission Portal

- Clearer login access and UI updates have been made.
- You can now delete submissions to clean up your Submission Portal interface, along with sharing your email with the NMDC team via your ORCID profile.
- The award DOI for DOE User Facility projects is now multivalued.

- Some bugs for selecting multiple sample types were resolved and are available again.



Workflow updates in NMDC EDGE

- We have updated our documentation and help resources! Check out our updated [user guide](#), practice running workflows and interpreting outputs with our new step-by-step [tutorial](#), and review the updated [tutorial video](#).



New data in the NMDC Data Portal

- Major updates to the functional search include COG and Pfam, along with search for GO terms based on mapping from KEGG.
- Three studies have been added to the Data Portal including [soil samples](#) from a warming plot at Barre Woods at the [Harvard Forest Long Term Ecological Research \(LTER\) site](#), [aquatic samples](#) from the [Northern Great Lakes LTER site](#), and [plant-associated samples](#) from North Carolina.
- We have also added 458 more samples from the [Earth Microbiome Project](#) and have processed 313 metagenome datasets through our binning workflow.
- The Data Portal now supports lipidomics and has 192 workflow results covering three studies. If you are interested in learning more about the lipidomics workflow please see our [documentation](#).

For usability feedback, errors, or questions on all NMDC products and software, please contact us through support@microbiomedata.org.

Events

[NDiSTEM 2024](#) in Phoenix, AZ

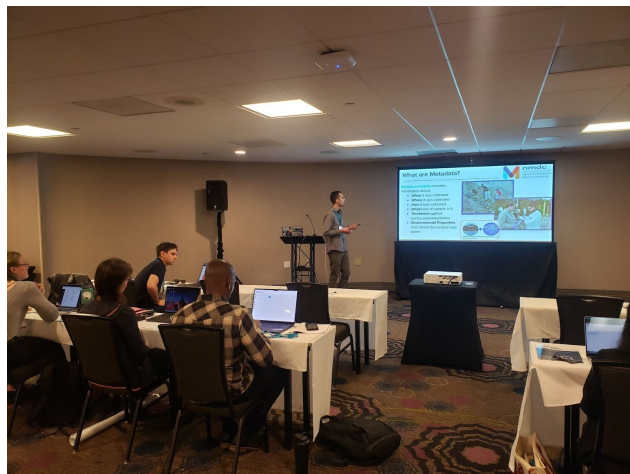
- NMDC team members Francie Rodriguez and Leah Johnson attended

[ASA, CSSA, SSSA Annual Meeting: AI Innovations for a Changing Climate](#) in San Antonio, TX

- NMDC Ambassador Lennel Camuy-Vélez hosted a [workshop](#)

[ASMCUE](#) in Pittsburgh, PA

- NMDC team member Julia Kelliher presented the Environmental Microbiome Certificate Program that the NMDC is developing for undergraduate researchers



[CMiC](#) in San Diego, CA

- NMDC Ambassadors Michael Sieler and Winston Anthony led a workshop titled [Mastering Metadata: Utilizing NMDC Resources for Microbiome Research Reproducibility](#)

[AGU](#) in Washington, DC

- The NMDC hosted a panel discussion focused on how data standards can unlock new research opportunities which featured Ambassador Patrick Sorensen

[Sixth International Metaproteomics Symposium](#) in Oslo, Norway

- NMDC team members Paul Piehowski and Camilo Posso presented their work on the NMDC metaproteomics workflows

[Interdisciplinary Approaches in Microbiome Research Conference](#) in San Francisco, CA

- The Benioff Center for Microbiome Medicine at UCSF hosted the Interdisciplinary Approaches in Microbiome Research Conference. NMDC program lead Emiley Eloie-Fadrosch presented.

Upcoming Events

- February 4-6: NMDC team members will be attending the [MONet Community Science Meeting](#) both virtually and in-person in Richland, WA.
 - February 12: The next NMDC Champions Quarterly Call will take place at 1PM MST. Interested in attending? [Apply](#) to join our [Champions program](#)!
 - March 31-April 2: NMDC team members will be attending the [2025 BSSD Annual Principal Investigator \(PI\) Meeting](#) in Arlington, VA.
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Opportunities

Applications for the 2025 NMDC Ambassador cohort open today! The application will be open until February 28th. Find out more [here](#) and apply at this [link](#)!

Are you passionate about FAIR microbiome data and are interested in being more engaged with the NMDC? [Apply](#) to join our [Champions program](#)!

Would you like to help us create intuitive, user-friendly, and community-driven products? Explore our current call and sign up for user research on our [website](#). Thanks to the 21 NMDC community members who participated in user research this past year! We received your feedback for the NMDC Data Portal, API, and NMDC Field Notes mobile app, which translated into 78 action items!

The NMDC Community Slack now has a #jobs-and-opportunities board! Check it out and contribute.

Connect with us on [Instagram](#), [X](#), [Bluesky](#) and [LinkedIn](#)!



[Check out our 2024 Annual Report!](#)

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