



NMDC Newsletter

The Microbiome Standard

-Spring 2025-

Update from the Leadership Team

We are happy to share several updates about how the NMDC is advancing environmental microbiome research following Earth Day last week. We are excited to welcome the 2025 [Ambassadors](#) to the team. We are also delighted to announce the public launch of [Field Notes](#), a mobile application to collect real-time measurements in the field or in the laboratory, available now through the Google Play and Apple App Stores! We have two new publications, the first together with the 2023 Ambassadors on [quantifying their impact through workshops](#) and the second with Champions that explores the barriers to [microbiome data reuse](#). Lastly, our team is hard at work writing the NMDC Phase III proposal that will be submitted in May with a program review at the end of June. We invite you to read on to learn more about our activities and for opportunities to engage with the NMDC team.

Announcements

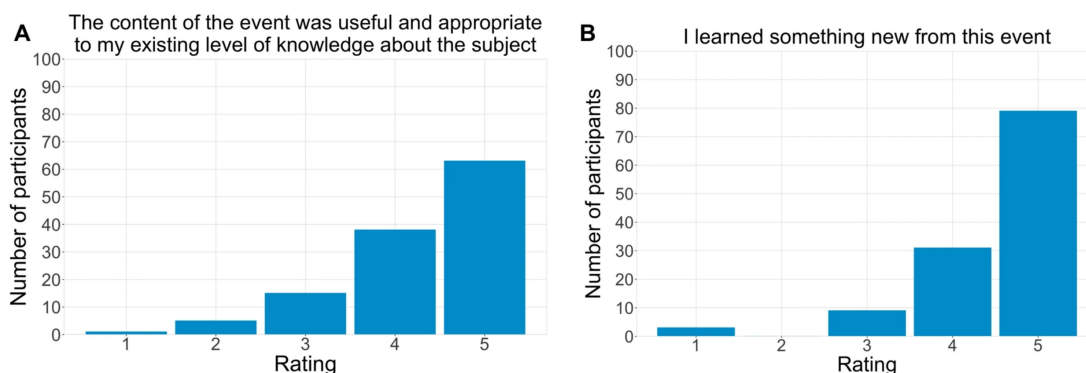
- We have officially welcomed the 2025 cohort of NMDC Ambassadors! Learn more about them and their research [here](#).



- Check out our latest Science Story [“NMDC Community members put mobile metadata management to the test”](#) highlighting NMDC Champion Thomas Pitot and how user research feedback aided the development of the NMDC Field Notes mobile app!

Publications

- In March, we published a paper in *Scientific Reports* with our 2023 Ambassadors titled [“Quantifying the impact of workshops promoting microbiome data standards and data stewardship”](#)



- We also collaboratively published a perspective article [“A cost and community perspective on the barriers to microbiome data reuse”](#) in *Frontiers in Bioinformatics* with our Champions paper writing subgroup!

Releases

Software updates

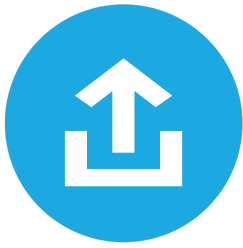
- We are now on version 11.6.1 of our schema. Highlights include improved modeling for mass spectrometry and [new visualizations](#) of relationships between our schema classes and database collections.
- Our workflow automation system now uses the [JGI Analysis Workflow Service \(JAWS\)](#) to schedule multi-omics data processing. We have had over 1,000 successful jobs since launching this update.
- We improved our data management practices by adopting the JGI Archive and Metadata Organizer (JAMO) system which manages backing up data to long term tape storage.
- Endpoints for our [public API](#) were updated to expand the validation performed on incoming records and we released a [new endpoint](#) which connects workflow records to sample and study information.
- We released a [Python package](#) for using the NMDC API along with two new [notebooks](#) to showcase multi-omics data integration and metaproteomic aggregation.



NMDC Field Notes mobile app

- The NMDC Field Notes mobile app is now available!
Download it now on the Google Play or Apple App Stores.





Updates to the NMDC Submission Portal

- The “Metadata Suggester” tool that suggests metadata fields based on provided information is now available!
 - Current functionality suggests an elevation based on latitude-longitude.
- The Submission Portal sandbox has been decommissioned, users can create test submissions in production instead.



Workflow updates in NMDC EDGE

- We recently published a [blog post](#) highlighting NMDC EDGE as well as success stories from several of the 2024 Ambassadors that used NMDC EDGE and the NMDC workflows in their workshops!



New data in the NMDC Data Portal

- We added nearly 4,000 samples in the last few months! Many of these samples are from studies from the Bioenergy Research Centers including a project from the Great Lakes Bioenergy Research Center studying how [switchgrass cropping systems affect soil carbon and nitrogen](#).
- We have processed several hundred datasets through our metagenomics workflow and added 459 metabolomics analysis results from the [Earth Microbiome Project](#).
- The first set of [results](#) using our [metagenome-reference free version of our proteomics workflow](#) have been generated using samples from the Harvard Forest Long Term Ecological Research site.

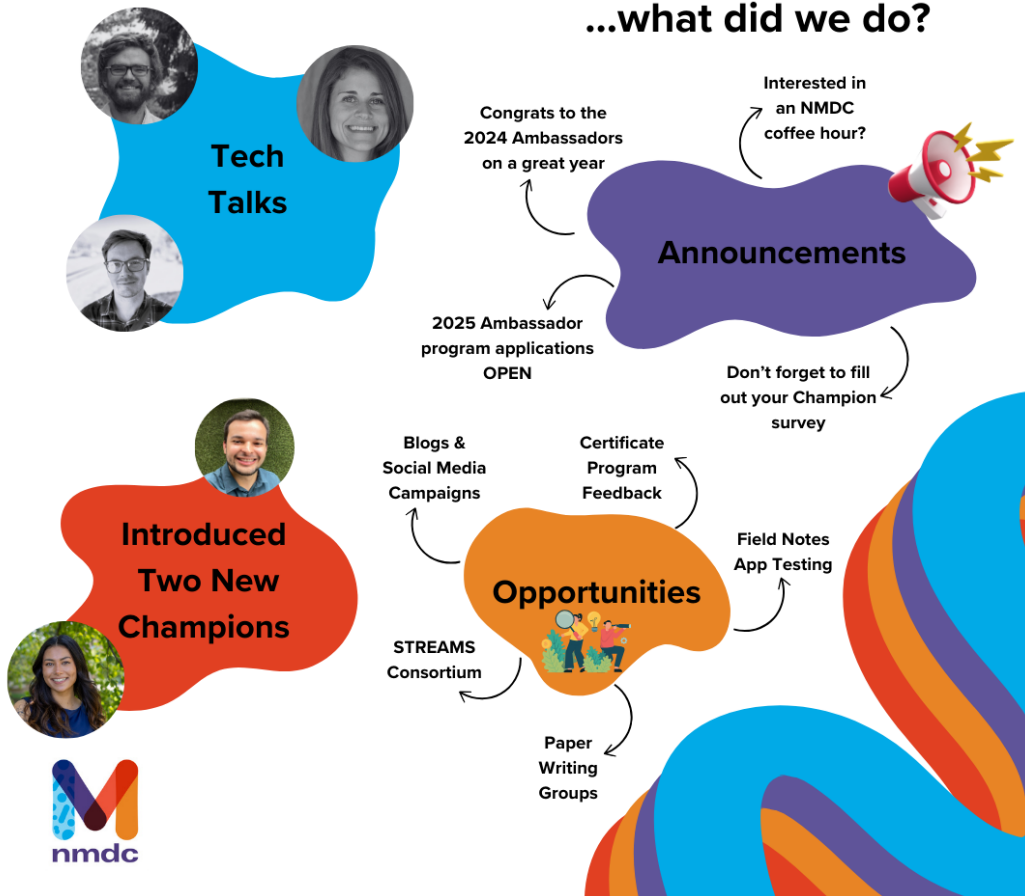
For usability feedback, errors, or questions on all NMDC products and software, please contact us through support@microbiomedata.org.

Events

- January 30: The Benioff Center for Microbiome Medicine at UCSF hosted the Interdisciplinary Approaches in Microbiome Research Conference. NMDC program lead Emile Eloie-Fadrosch presented.
- February 4-6: NMDC team members attended the [MONet Community Science Meeting](#) both virtually and in-person in Richland, WA.
- February 12: The last NMDC Champions Quarterly Call featured updates from the NMDC Team, Tech Talks from Champions, and opportunities to connect.

We just had our quarterly Champions call!

...what did we do?



- March 31-April 2: NMDC team members attended the [2025 BSSD Annual Principal Investigator \(PI\) Meeting](#) in Arlington, VA.



Upcoming Events

- May 14: The next NMDC Champions Quarterly Call will take place at 11AM MST.
- May 20-22: [Sequence to Function: Applications and Analysis for the Future](#) conference in Santa Fe, NM. The NMDC team will present a workshop and several posters.
- June 17-18: [Microbiome Centers Consortium](#) meeting
- June 17th: [NSURP](#) presentation
- June 19-23: [ASM Microbe 2025](#) in Los Angeles, CA. NMDC team members will be hosting a [session](#), “Standardizing Success: Best Practices for Microbial Data Collection and Reuse in Diverse and Extreme Environments” and presenting several other exciting efforts!
- June 28-July 2: [Mycological Society of America \(MSA\) annual meeting](#) in Madison, WI. Several team members will be in attendance!

Opportunities

Would you like to help us create intuitive, user-friendly, and community-driven products? Sign up for user research on our [website](#).

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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