Betreff: NFDI4BIOIMAGE Newsletter – September 10th, 2024
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Dear NAME,

here comes NFDI4BIOIMAGE's September Newsletter with current highlights collected for you:

What's new?

This Newsletter's "What's new?" is dedicated to **OME-Zarr, the Next Generation File Format** for Bioimage Data:

- OME-Zarr is advancing on its path to bring about cloud-readiness for large N-dimensional bioimage data. Started at the OME Community Meeting 2024, and kicked-off soon after through image.sc (https://forum.image.sc/t/ome2024-ngff-challenge/97363) this summer has brought us the **international OME-NGFF challenge** to which NFDI4BIOIMAGE contributes with expertise and data. The goal is to collect 1 PB of bioimaging data and convert to OME-Zarr v3. With this challenge, functionality and maturity of OME-Zarr is expected to advance significantly. OME-Zarr is a central component of NFDI4BIOIMAGE's FAIR-IO (FAIR Image Objects) Concept, a FAIR Digital Object Type for Bioimaging Data. Data submission is still possible until end of this month. If you are interested in contributing with data, please reach out to us!

- The potential of OME-Zarr, and the Zarr format in general, will also be highlighted jointly by Euro-BioImaging ERIC and NFDI4BIOIMAGE at this years **EOSC Symposium** taking place from October 21st to 23rd in Berlin. Come and visit our poster entitled „Enabling large, N-dimensional array data from imaging in EOSC with OME-Zarr". While in-person participation is booked out, online participation in the EOSC Symposium will be possible: https://eosc.eu/symposium2024/#registration

- Moreover, we highlight here the upcoming **OME-NGFF Worflows Hackathon 2024**. Leading developers will come together to facilitate the adoption of the Zarr V3 standard for bioimage data workflows. There are still free places left. Find more information here: https://www.ema.uzh.ch/de/register/ome-ngff-workflows-hackathon-2024.html

What's upcoming?

- Are you visiting the **3rd Open Science Festival in Mainz** on September 17th & 18th? Then come and visit the **Market Booth of NFDI consortia** to learn more about what the NFDI can contribute to Open Data and Open Science. Our Data Steward Ksenia Kroß will represent NFDI4BIOIMAGE. https://converia.uni-mainz.de/frontend/index.php?page_id=4538

- Taking place on September 23rd, and co-organized by Robert Haase from NFDI4BIOIMAGE, the **Leipzig Research Data Forum** will take place offering an excellent programme to learn about many NFDI consortia's activities in the area. Find more information and register for the event here: https://scads.ai/event/leipzig-research-data-forum/

- Also from September 23rd to 25th, the **FDM@Campus Göttingen Conference** will take place, organized by the Göttingen eResearch Alliance. Join Cornelia Wetzker, Data Steward in NFDI4BIOIMAGE, for this conference, and visit her poster about our consortium: Registration is still open until September 16th: https://events.gwdg.de/event/886/overview

- The **7th International Symposium on Image-based Systems Biology** takes place on September 26th & 27th in Jena, co-organized by our Co-Applicant Leibniz Institute for Natural Product Research and Infection Biology (HKI). Meet NFDI4BIOIMAGE members at this event. For more information, please visit: https://asb-conference.hki-jena.de/

- Also on September 26th & 27th, there is the opportunity to join us at the **GBM Compact Symposium in Frankfurt a.M.,** organized by the Gesellschaft für Biochemie und Molekularbiologie. Team members from NFDI4BIOIMAGE and I3D:bio will host a 1 hour workshop on the topic of bioimage data management. On-site registration is possible. Find all information here: https://gbm-compact.org/gbm-compact-2.html

- As stated unter "What's New?", find us at the **EOSC Symposium 2024** in Berlin from October 21st to 23rd.

- The **I2K Conference 2024 (From Images to Knowledge)** will take place as an in-person event from October 23rd to 25th in Milano, Italy, followed by the Online I2K Virtual Conference with plenty of tutorials on image analysis taking place from October 28th to 30th. Find several contributions from members of NFDI4BIOIMAGE in both events, including a workshop on JiPipe (visual macro programming for Fiji) from Ruman Gerst and Carl-Magnus Svensson, and a tutorial on BioImage Analysis Code Generation from Robert Haase. Find more information at: https://www.i2kconference.org/

- The **Global BioImaging Exchange of Experience IX** meeting on Research Data Managmeent will take place from October 29th to 31st in Kyoto, Japan. Online participation is possible! Find more information here: https://globalbioimaging.org/exchange-of-experience/exchange-of-experience-ix

- The **Base4NFDI User Conference** is taking place on November 20th and 21st in Berlin, providing an overview and latest updates on the developments for basic services that shall form cross-consortia solutions for RDM. Several contributions to the conference will come from NFDI4BIOIMAGE, too, among others from Markus Becker (INP Greifswald), Yi Sun (EMBL Heidelberg), and the team of Dirk v. Suchodoletz (Freiburg University). Find more information and the (soon-to-be-open) registration link here: https://events.gwdg.de/event/658/

- Closely related, another chance to learn about Base4NFDI will be the online **Services Roadshow** on December 4th: https://base4nfdi.de/?view=article&id=100:services-roadshow-by-base4nfdi-%E2%80%93-save-the-date&catid=8

- Picking up on last year's success, NFDI4BIOIMAGE again contributes a **Hackathon Project to the 3rd de.NBI Biohackathon Germany,** taking place in Kassel from December 9th to 13th. This year's project focuses on Increasing interoperability for

bioimage dataset resources. Find more information and the change to register here: https://www.denbi.de/de-nbi-events/1678-biohackathon-germany-3

What's to read?

- You would like to learn more about the research data management strategy envisioned by NFDI4BIOIMAGE, and the work programme to achieve the consortium's goals? **NFDI4BIOIMAGE has recently published its original grant proposal** on Zenodo:

  - J. Moore *et al.* (2024) "NFDI4BIOIMAGE - National Research Data Infrastructure for Microscopy and Bioimage Analysis", https://zenodo.org/doi/10.5281/zenodo.13168692

- In collaboration with the Core Facility Cellular Imaging at Medical Faculty of TU Dresden, members of NFDI4BIOIMAGE and I3D:bio contributed to the **setup of a new OMERO instance. Read a detailed use case report** in the nearest future in the Journal of Microscopy:

  - A. Jannasch *et al.* (2024) "Setting up an institutional OMERO environment for bioimage data: perspectives from both facility staff and users." Journal of Microscopy, *in the press*.

- Already started but ongoing is the GloBIAS (Global BioImage Analysis Society) BioImage Analysis Seminar Series: https://www.globias.org/activities/bia-seminar-series. In case you missed the first seminar of the session, find the talk slides on Large Language Models - an Introduction for Life Scientists" online on Zenodo: https://zenodo.org/records/13374649

Publications from presentations and conference proceedings:

- Wagner, R., Waltemath, D., Yordanova, K., and Becker, M. (2024). Towards FAIR Data Workflows for Multidisciplinary Science: Ongoing Endeavors and Future Perspectives in Plasma Technology. In Proceedings of the 13th International Conference on Data Science, Technology and Applications, SciTePress, https://doi.org/10.5220/0012808000003756

- Moore, J., & Kunis, S. (2024). [ELMI 2024] AI's Dirty Little Secret: Without FAIR Data, It's Just Fancy Math. European Light Microscopy Initiative 2024 (elmi), Liverpool, UK. Zenodo. https://doi.org/10.5281/zenodo.11235513

- Presentation at the NFDI4Microbiota Digital Preservation Workshop (Sept 3rd),

  - Slides: https://zenodo.org/records/13506641

- "From Cells to Pixels: Bridging Biologists and Image Analysts Through a Common Language" https://zenodo.org/records/13331351

- Lecture materials "Bio-image Data Science" / Uni Leipzig

  - Slides: https://zenodo.org/records/12623730

  - Exercises: https://github.com/ScaDS/BIDS-lecture-2024

- From the „Workshop AI in Microscopy" (August 2024, Copenhagen / Online): https://zenodo.org/records/13371196

Best wishes,

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(NFDI4BIOIMAGE Project Office)

To review previous editions of our quarterly Newsletter, please visit:
https://nfdi4bioimage.de/community-integration/newsletter/

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represent the contributions from their respective affiliated institutions
and work together on the consortium.