Janelia Research Campus works with Figshare's Curation Service to enhance metadata for reuse and discoverability
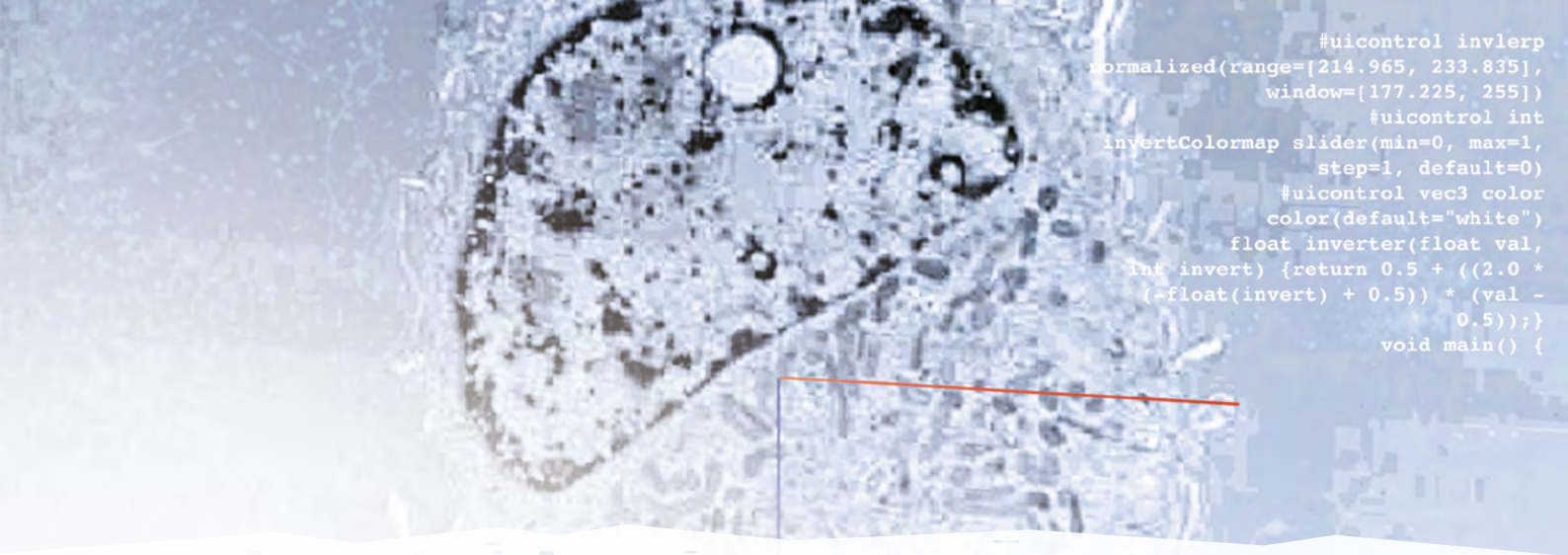
The Howard Hughes Medical Institute's (HHMI) Janelia Research Campus focuses on multidisciplinary, collaborative biomedical research that incorporates biology, physics, engineering, and computer science.

In 2017, they began using Figshare for Institutions as a direct response to researchers' needs for a system to make data available publicly. Since their launch, they've uploaded over 1,200 items into their repository, all of them Open Access.

Get in touch:

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In 2020, Janelia added the newly-launched [Figshare Curation Service][1] to their repository to enhance metadata published alongside Janelia research data, ensuring documentation is as thorough and [FAIR][2] as possible. These values are in line with [HHMI's commitment to open access][3] and to ensuring public engagement is at the heart of their role in the community. Figshare designed the Figshare Curation Service to provide data sharing guidance and review of submissions by data experts via the Figshare for Institutions infrastructure after completing a [repository pilot with the NIH][4] and seeing the significant difference that metadata checks had on the FAIRness of open data.

Ana Van Gulick, Figshare's Government and Funder Lead and Head of Curation Services, worked closely with Janelia to create a workflow that made it easy for researchers to deposit their data and work with Figshare's curation team to enhance the metadata and documentation of their research results. This goal is to support researchers with the flexibility to openly share any research files in any format, while including comprehensive metadata and documentation to make the data as discoverable and reusable as possible.

The Figshare curation team has provided guidance to Janelia researchers on:

- How to organize files into zipped folders, linked files, individual file formats, items, and collections so they could best be reused and cited

- Meaningful titles for datasets and other research outputs

- Descriptions to provide context to the research question and research methods

- Links to other resources including project web pages, visualizations, related publications, GitHub repositories, other datasets or code

- Authorship

- Sharing data in a way that can be managed by research projects in the future and released in future versions

Some examples of data published by Janelia researchers who worked with the Figshare team when sharing their research include:

doi.org/10.25378/janelia.c.4932540.v2 **collection - datasets were updated with improved metadata**

A collection of calcium imaging data, pre-processed data, and analysis code supporting a peer-reviewed publication in Nature by Dr. Sung Soo Kim and collaborators. Guidance was provided on item titles and descriptions to provide context to the work and to link related materials.

doi.org/10.25378/janelia.c.5179721.v2

A collection of behavior, calcium imaging, and Drosophila skeleton and synapse datasets supporting a peer-reviewed publication in Neuron by Dr. Daniel Turner-Evans and collaborators. Figshare experts met with the researcher in advance of data deposit to provide advice on how best to organize the datasets as items and a collection in Figshare. Guidance was provided on item titles and descriptions as well as linking to related resources including project websites and GitHub repositories. The deposited data is also available on Janelia websites, but depositing a copy in Janelia Figshare enhances the preservation and accessibility of the dataset as well as providing a trackable citation with a unique DOI for each dataset and more discoverability of the work across search engines such as Google Dataset Search.

janelia.figshare.com/authors/Aubrey_Weigel/9302851

Raw and processed microscopy datasets authored by Dr. Aubrey Weigel and a number of collaborators that span multiple Janelia research projects. These datasets are linked files that live on Janelia websites where they can be managed and visualized, however, sharing them in Janelia Figshare provides a clear citation for the data that includes a unique DOI and author list as well as a description of the data and links to other resources that enhances its discoverability.

Tips for how to encourage researchers to deposit FAIR metadata

It's important to remember that providing public access to research data, code, and other materials by depositing them in a trusted repository like Janelia Figshare is a quite recent addition to the scholarly publishing process and so many researchers have not received any training on data sharing best practices and are new to the data deposit process.

Clear, easy to follow guidance about how to prepare files and documentation for public access and how to create good metadata, as well as why this is important to do, will go a long way to helping your researchers. Figshare Curation Service includes a training webinar, which we designed around walking through the Janelia Figshare data sharing process and best practices and recorded so researchers can watch it whenever they are ready to share their first dataset.

A "top tips for data sharing" page or document would provide the same guidance in a written format, like this Guide to Sharing NIH-funded research on Figshare.com[5] or these Best Practices for Managing your Outputs on Figshare[6].

For more information on Janelia Research Campus' Figshare repository, visit janelia.figshare.com

For more information on Figshare's Curation Services, visit knowledge.figshare.com/curation

Or get in touch at info@figshare.com

References:
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2. https://knowledge.figshare.com/publisher/fair-figshare
3. https://www.hhmi.org/about/policies/sharing-research-materials-data-and-software
4. https://datascience.nih.gov/data-ecosystem/exploring-a-generalist-repository-for-nih-funded-data
5. https://help.figshare.com/article/guide-to-sharing-nih-funded-research-on-figshare-com
6. https://help.figshare.com/article/best-practice-for-managing-your-outputs-on-figshare

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