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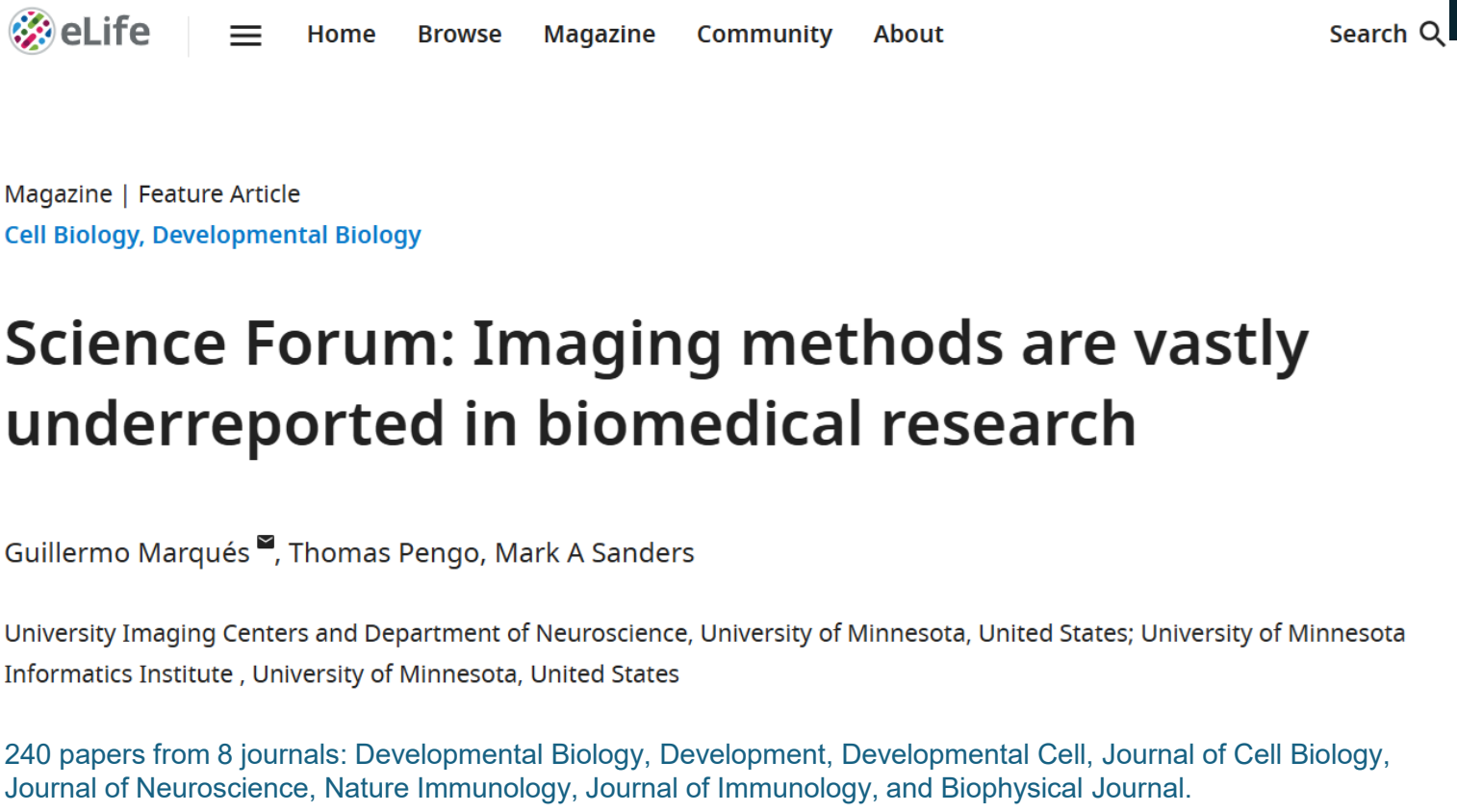
AGILE Data Management

Data Management Committee

Célia Baroux @ UZHa
Christophe Tatout @ UCA
Jean-Marie Burel @ UD
Fred Pontvianne @ UCA

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Why a Data Management Plan?



eLife | Home | Browse | Magazine | Community | About | Search

Magazine | Feature Article
Cell Biology, Developmental Biology

Science Forum: Imaging methods are vastly underreported in biomedical research

Guillermo Marqués, Thomas Pengo, Mark A Sanders

University Imaging Centers and Department of Neuroscience, University of Minnesota, United States; University of Minnesota Informatics Institute , University of Minnesota, United States

240 papers from 8 journals: Developmental Biology, Development, Developmental Cell, Journal of Cell Biology, Journal of Neuroscience, Nature Immunology, Journal of Immunology, and Biophysical Journal.

https://doi.org/10.7554/eLife.55133

17%

of 240 research articles passed a test for the minimal imaging information needed to repeat the experiment

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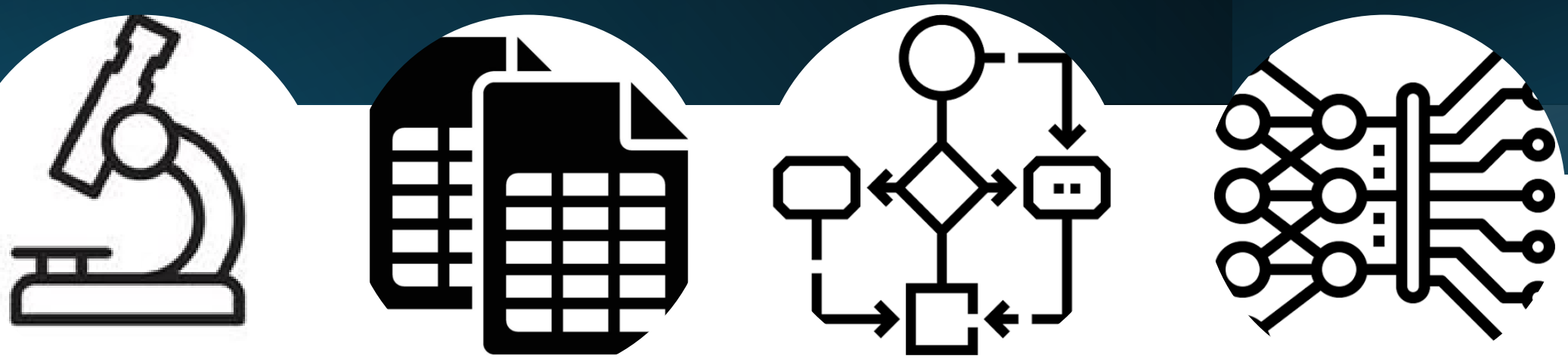
Why a Data Management Plan?



- **Prevent data loss**, saving time and money
- **Safeguard research integrity** and maintain trust
- **Enable data reuse**, saving time and money
- **Meet publication requirements**, since journals and funders increasingly require data to be deposited in a repository

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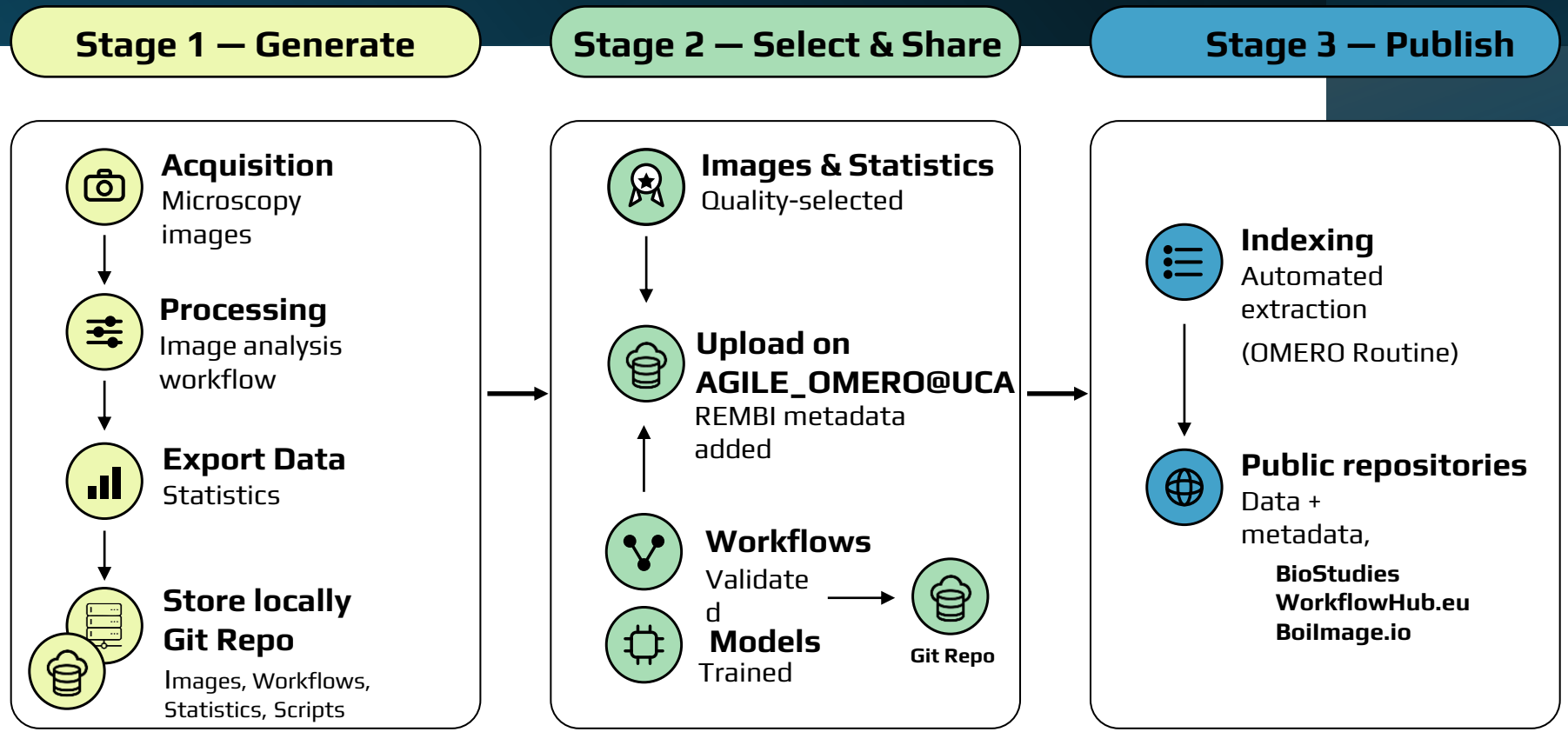
AGILE output: Data & Resources



- **Images** = microscopy images, raw & processed, open source, proprietary file formats & OME-Zarr
- **Workflows** = pipeline of image analysis steps
- **Statistics** = results derived from quantitative image analysis, (ex: .csv dataframes)
- **Models** = deep-learning models and alike used for image processing

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AGILE data handling – three stages



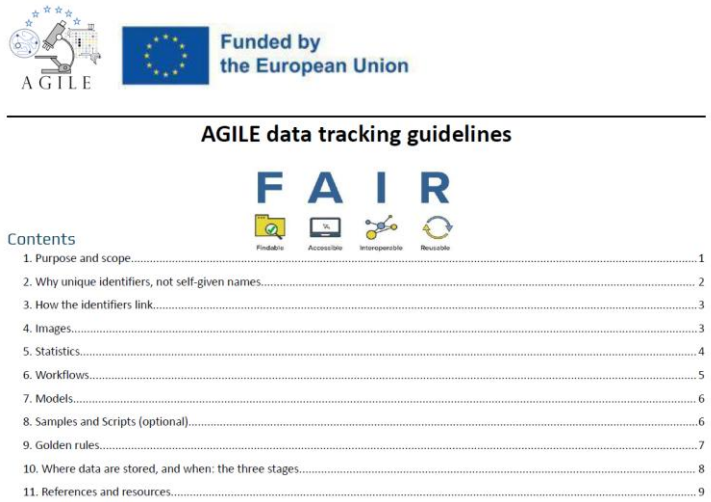
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The DMP made Easy

stage 1

www.msca-agile.eu\Resources

1. **Guidelines** how to name & track your data



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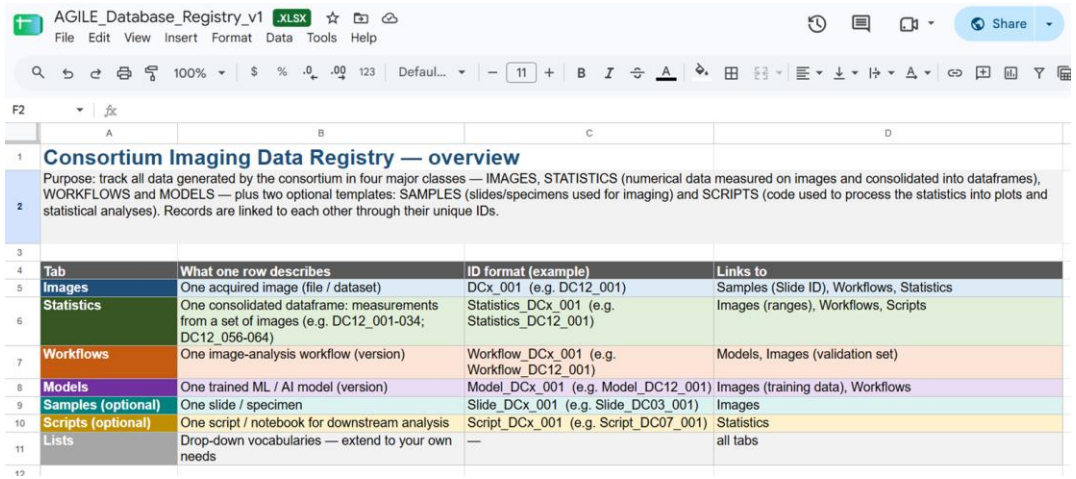
AGILE data tracking guidelines

F A I R

Contents

1. Purpose and scope 1
2. Why unique identifiers, not self-given names 2
3. How the identifiers link 3
4. Images 3
5. Statistics 4
6. Workflows 5
7. Models 6
8. Samples and Scripts (optional) 6
9. Golden rules 7
10. Where data are stored, and when: the three stages 8
11. References and resources 9

2. **Template** to register your data using **unique** identifiers



AGILE_Database_Registry_v1 .XLSX

File Edit View Insert Format Data Tools Help

Share

Consortium Imaging Data Registry — overview

Purpose: track all data generated by the consortium in four major classes — IMAGES, STATISTICS (numerical data measured on images and consolidated into dataframes), WORKFLOWS and MODELS — plus two optional templates: SAMPLES (slides/specimens used for imaging) and SCRIPTS (code used to process the statistics into plots and statistical analyses). Records are linked to each other through their unique IDs.

Tab	What one row describes	ID format (example)	Links to
Images	One acquired image (file / dataset)	DCx_001 (e.g. DC12_001)	Samples (Slide ID), Workflows, Statistics
Statistics	One consolidated dataframe: measurements from a set of images (e.g. DC12_001-034; DC12_056-064)	Statistics_DCx_001 (e.g. Statistics_DC12_001)	Images (ranges), Workflows, Scripts
Workflows	One image-analysis workflow (version)	Workflow_DCx_001 (e.g. Workflow_DC12_001)	Models, Images (validation set)
Models	One trained ML / AI model (version)	Model_DCx_001 (e.g. Model_DC12_001)	Images (training data), Workflows
Samples (optional)	One slide / specimen	Slide_DCx_001 (e.g. Slide_DC03_001)	Images
Scripts (optional)	One script / notebook for downstream analysis	Script_DCx_001 (e.g. Script_DC07_001)	Statistics
Lists	Drop-down vocabularies — extend to your own needs	—	all tabs

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The DMP made Easy

stage 2-3

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More Guidelines and Tutorials to come

- AGILE website : Resources
- how to select stage 1 data (criteria) -> become stage 2 data
- how to complete the annotation at REMBI format
- how to upload on OMERO

Training Event #3 (online Dec2026-Jan2027)

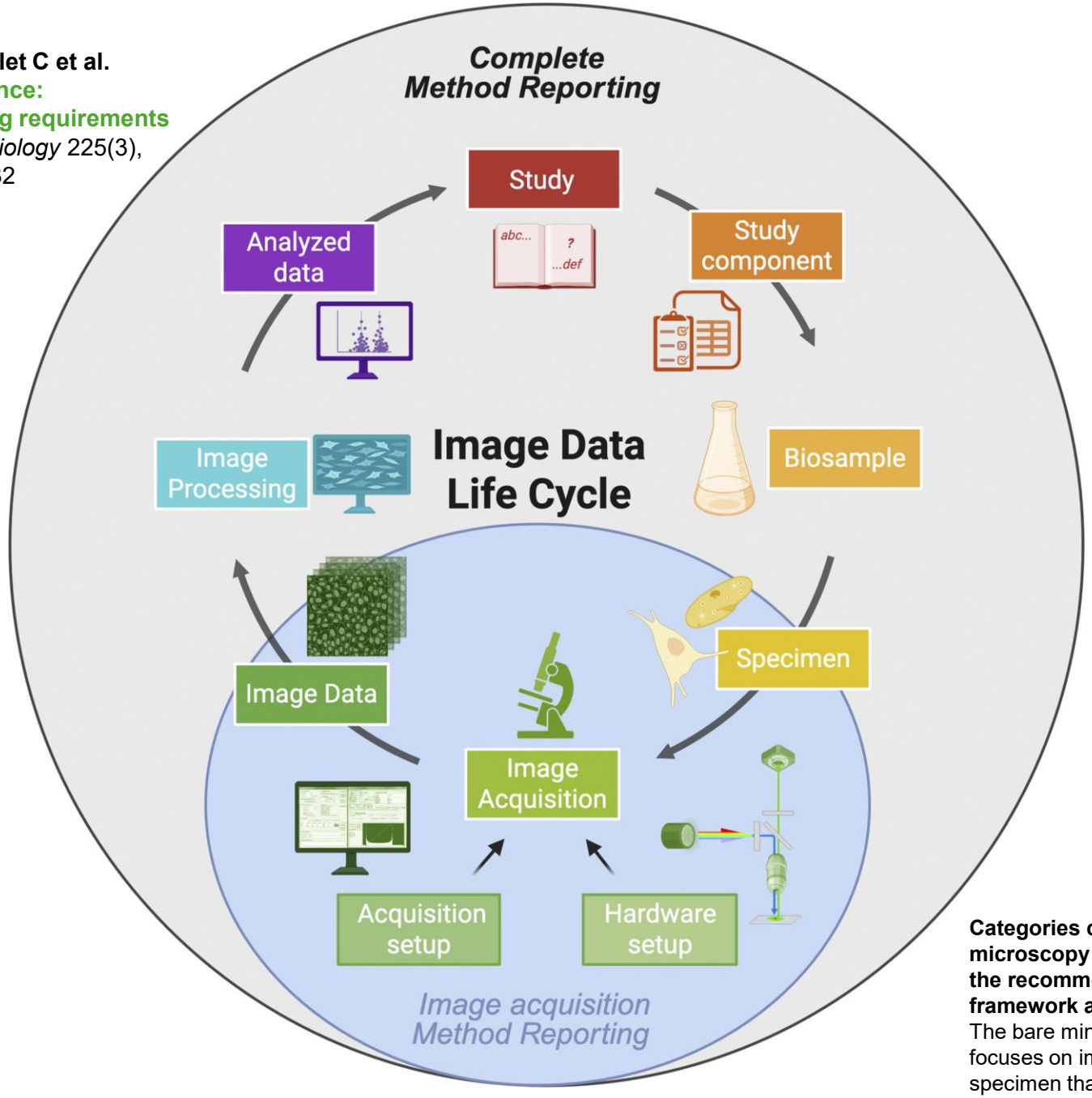
- AGILE website : Training
- FAIR data - REMBI annotation
- Image data management using OMERO

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References

1. **Schmied C et al. (2024).** Community-developed checklists for publishing images and image analyses. *Nature Methods* 21(2), 170–181. doi:10.1038/s41592-023-01987-9
2. **Montero Llopis P, van Oostende-Triplet C et al. (2026).** Better reporting is better science: Community-defined minimal reporting requirements for light microscopy. *Journal of Cell Biology* 225(3), e202601032. doi:10.1083/jcb.20260103
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Montero Llopis P, van Oostende-Triplet C et al. (2026). Better reporting is better science: Community-defined minimal reporting requirements for light microscopy. *Journal of Cell Biology* 225(3), e202601032. doi:10.1083/jcb.202601032



Categories critical to producing complete and accurate microscopy methods reporting, structured according to the recommended metadata for biological images (REMBI) framework and the QUAREP-LiMi–endorsed LiMi-model. The bare minimal microscopy reporting requirements checklist focuses on image acquisition metadata and aspects of the specimen that affect image acquisition (shaded blue).