

# Reporting light microscopy data in our pages

**We outline a pilot starting at several Nature Portfolio journals aimed at improving and standardizing the reporting of light and fluorescence microscopy experiments.**

We at *Nature Structural & Molecular Biology* are committed to helping researchers to provide clear and transparent accounts of the experiments reported in their manuscripts<sup>1</sup>. Nature Portfolio journals, including *NSMB*, ask authors to make data publicly available at publication for several data types. We believe that having data available for the community to check, along with detailed descriptions of the methods, is needed for readers to interpret the published data and re-use them in their own research.

In published articles across journals, light and fluorescence imaging datasets are often incompletely described<sup>2</sup>. Efforts to enhance and standardize reporting for this data type<sup>3,4</sup> are important not only for critical assessment of the data in review and over time but also to promote re-use and reproducibility. Good stewardship in data management and data availability are essential for researchers to build on our published articles, to increase our knowledge of biological systems and drive discovery, as laid out by FAIR principles<sup>5</sup>.

Our journal, alongside *Nature Cell Biology*<sup>6</sup>, *Nature Methods*<sup>7</sup> and *Nature Communications*, is starting a pilot aimed at enhancing reporting for light and fluorescence microscopy results. We have designed a [reporting table](#) that describes the basic elements of light microscopy experimental and analytical processes. In this pilot, we are asking our authors to provide the completed table with their manuscript revision if the body of work under consideration includes light and fluorescence imaging. We are not asking for this table to be filled out at first submission. The reporting table will be available to reviewers in re-review alongside the other manuscript files and will be published in the event of acceptance.

To conceive the table, we consulted researchers from QUAREP-LiMi and the published literature, together with editors across the Springer Nature portfolio. We sought to create a modality-agnostic, minimal set of descriptors as we appreciate the burden of having to fill out yet another file for our journals. We see impetus in our community for increased reproducibility, re-use and reporting of this data type. We hope that you may come to see this table as another way to facilitate reporting of the details of your experimental approaches by creating a dedicated space for clear, concise and complete descriptions of key aspects of the protocols and analytical pipelines. Your feedback on the reporting elements in the table is welcome – please contact us at [nsmb@us.nature.com](mailto:nsmb@us.nature.com).

Alongside this table, we encourage our authors to deposit light and fluorescence microscopy datasets in public repositories (such as the [Image Data Resource](#); the [BioStudies database](#); the [BioImage Archive](#)) or using [figshare](#), which is integrated in our submission system. With more precise experimental reporting and increased access to the datasets after publication<sup>8</sup>, we hope to promote the re-use of these valuable collections of data.

We will trial this reporting table for one year and will run a survey among our authors and reviewers to gather feedback. Please don't hesitate to share your thoughts, it can only help us improve. We hope that the reporting table is useful and look forward to your input. Most importantly, we want to thank our readers, authors and reviewers for their cooperation and enthusiasm in developing policies and workflows to enhance the quality and impact of the work we publish.

Published online: 17 June 2025

## References

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