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Poster X

**A plea to preserve microalgae and cyanobacterial diversity in public microbial resource centres**

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Open science aims at sharing scientific output in order to maximize the impact of research. This allows follow-on studies, facilitates new discoveries, improves reproducibility of experiments and favours transparency of results. Although open data is becoming a well-known concept, less attention is given to the availability of research materials. In life sciences, public algae collections represent an historical example of open science, thanks to their longstanding experience in the preservation of living microalgal strains and their distribution for further scientific investigations or development. These microbial resource centres provide well-characterized, quality-controlled and authenticated strains and associated data. In phycology, the diversity of microalgae is an invaluable source of applications for the bio-industry. It needs to be secured following (inter)national legislations for future utilizations and research questions. The responsibility to make microalgae available is shared by researchers, funding agencies and publishers. Phycologists need to be more aware towards strain conservation. Governmental funding policies should request the deposit of strains isolated during financed projects. Regarding publishers, most journals encourage authors to deposit their datasets (codes, sequences, etc) in public repositories but very few specifically require deposit of biological material and cultivated strains in scientific collections. However, this is a key prerequisite to “make it possible to repeat the experiments and perform future research”1. Editors should therefore implement mechanisms for active agreement by authors to deposit strains when submitting an article. Such mechanisms could follow Transparency and Openness Promotion guidelines2 for journals that include standards for research materials.

1. https://onlinelibrary.wiley.com/page/journal/15298817/homepage/forauthors.html

2. Nosek BA et al. (2015). Promoting an open research culture. Science 348: 1422-1425.