Open Science movement

The Open Science movement aims at ensuring accessibility, reproducibility, and transparency of research. The adoption of Open Science practices in animal science, however, is still at an early stage. To move ahead as a field, we here provide seven practical steps to embrace Open Science in animal science. We hope that this paper contributes to the shift in research practices of animal scientists towards open, reproducible, and transparent science, enabling the field to gain additional public trust and deal with future challenges to guarantee reliable research. Although the paper targets primarily animal science researchers, the steps discussed here are also applicable to other research domains ¹⁾

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Open science is the movement to make scientific research and its dissemination accessible to all levels of society, amateur or professional. Open science is transparent and accessible knowledge that is shared and developed through collaborative networks.

As the global health crisis unfolded, many academic conferences moved online in 2020. This move has been hailed as a positive step towards inclusivity in its attenuation of economic, physical, and legal barriers and effectively enabled many individuals from groups that have traditionally been underrepresented to join and participate. A number of studies have outlined how moving online made it possible to gather a more global community and has increased opportunities for individuals with various constraints, e.g., caregiving responsibilities. Yet, the mere existence of online conferences is no guarantee that everyone can attend and participate meaningfully. In fact, many elements of an online conference are still significant barriers to truly diverse participation: the tools used can be inaccessible for some individuals; the scheduling choices can favour some geographical locations; the set-up of the conference can provide more visibility to well-established researchers and reduce opportunities for early-career researchers. While acknowledging the benefits of an online setting, especially for individuals who have traditionally been underrepresented or excluded, we recognize that fostering social justice requires inclusivity to actively be centered in every aspect of online conference design. Here, we draw from the literature and from our own experiences to identify practices that purposefully encourage a diverse community to attend, participate in, and lead online conferences. Reflecting on how to design more inclusive online events is especially important as multiple scientific organizations have announced that they will continue offering an online version of their event when in-person conferences can resume²⁾.

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Unrestricted dissemination of methodological developments in neuroimaging became the propelling force in advancing our understanding of brain function. However, despite such a rich legacy, it remains not uncommon to encounter software and datasets that are distributed under unnecessarily restricted terms, or that violate terms of third-party products (software or data). With this brief correspondence we would like to recapitulate four important aspects of scientific research practice, which should be taken into consideration as early as possible in the course of any project. Keeping these in check will help neuroimaging to stay at the forefront of the open science movement ³⁾

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