

## Practice Abstract #31

### Open science - open data - data papers

Open science refers to the free availability or open access to scientific research results to any stakeholder, whether amateur or professional, at no financial cost beyond the cost of using the internet. The open-access policy has spread rapidly and has greatly influenced the scientific environment, especially publishing. The European Union has stipulated in its research programs that there is a contractual obligation for open access dissemination unless the results need to be protected from exploitation (e.g. by a patent). This makes science more accessible to society at large and can help to increase the potential for innovation. Open access to research results requires that the principles F.A.I.R. (Findable, Accessible, Interoperable, and Reusable) are respected. This does not only refer to research articles but covers the whole spectrum of research outputs. Reuse of primary data generated in the projects is of particular interest as it helps to avoid additional experimentation (e.g. on animals and thus adherence to the 3Rs principle), allows different and additional data analyses, and the use of data in a wider context such as meta-analyses or Big Data analyses. Data paper provides a way to share and reuse the data. It is a searchable metadata document that describes a data set without further analysis or interpretation. There are several advantages to creating a data paper. The data can be used for other purposes and ideas, the data paper is citable, and it can also open the door for new research collaborations.

