

## Reproducibility of Scientific Data

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Science has always tried to produce knowledge that is useful for mankind. Transparency, open access, and reproducibility are the main characteristics of science. Scientific findings are published in journal articles to promote awareness and allow other researchers to use them. Although the methods and results are explained in the articles, some presented data are not being reproducible due to various factors such as selective reporting, insufficient replication, a pressure to publish, poor mentoring and fraud. In recent years, researchers, the pharmaceutical companies and funding agencies have been concerned with this problem. These concerns have led to consider the new policies for review and publication process of papers. The practical solutions to increase reproducibility and data validation are preregistration of studies and analysis plans, creating archive databases and independent reproduction of the experiments and analysis via other scientific centers. The science should be reproducible if not that is not in the field of experimental science. The increase in reproducibility of data is required to collaboration among research institutes, researchers, funding agencies and publishers. The committee, known as TOP (Transparency and Openness Promotion), has developed the standards in order to increase the scientific data validation, if they are considered, they will greatly enhance the reproducibility.

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