

Open Science Manifesto

We promote open sharing, transparency, reproducibility and accountability as means to advance science, innovations and service to society

Inclusivity

As scientists and responsible members of the society at large, we promote diversity and inclusivity of individuals from any socioeconomic, ethnic and religious backgrounds. We never discriminate based on age, gender or disability.

Accountability

As scientists whose salaries and research are for the most part funded by taxpayers, patient-driven Foundations and through the generous donations of ordinary citizens from all over the world, we feel a strong sense of responsibility and obligation to take every measure necessary to ensure that our efforts and research practices are directed toward advancing human knowledge and addressing current and emerging societal needs and challenges. We will strive to always put the patients and serving society at the center of everything we do.

Reproducibility

As scientists who believe that establishing a culture of replication is crucial for advancing science and translational research, we are committed to building a laboratory research culture that recognizes and rewards high quality, innovative and reproducible science regardless whether the outcome is positive, negative or simply confirmatory. As scientists, we believe that science is self-correcting only when individual researchers employ best the highest integrity and best practices in their research, and subscribe to the view that “this process of self-correction is most effective only when both positive and negative results are published”[1].

Collaborations with academic community and industry partners

As scientists who believe that transforming scientific discoveries into new products, services, technologies and medicine requires close collaboration between researchers in academia and their counterparts in industry, we pledge to work with our partners in industry to explore and experiment with new approaches and collaborative models to facilitate and promote the sharing and exchange of knowledge and resources to advance science, improve the efficiency of research and to maximize the benefit to society.

We understand that there are some risks associated with open science, but we also believe that the benefits of openness, transparency, reproducibility and collaborations to science and society are enormous and far outweigh those risks.

We would greatly appreciate receiving your constructive feedback and input on the Manifesto or any recommendations that would help us improve our open science and collaborative practices.

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Towards achieving our goals and fulfilling our responsibilities to the taxpayers, funders, donors and society, we pledge to develop and introduce new measures to:

Advocate for open and collaborative science and the development of incentives and recognition and reward systems that guarantee and actively promote integrity, transparency and reproducibility of research.

Foster collaborations between our laboratory and industry to accelerate the translation of discoveries and tools made in the laboratory into novel diagnostics and therapies for neurodegenerative diseases without compromising our ability to share these discoveries and tools in a timely manner.

Advocate for practices and policies that incentivize, recognize and reward collaborative and team-based science, and which promote a closer interaction between scientists and patients, whose needs represent the main driver for our efforts

Create a laboratory culture that encourages, recognizes and rewards high quality science with equal emphasis on positive and negative results, where innovation on the basis of high quality and reproducible science is the principal driver for career development.

Ensure that the outcome of our research (positive, negative or confirmatory results) is disseminated and widely accessible to the scientific community and the general public.

Contribute actively to promoting a culture of replication by 1) encouraging post-publication discussion of our data (as well as pre-publication data as much as possible); 2) sharing all the reagents and protocols used to generate our data; and 3) encouraging constructive criticism of our work and working closely with other scientists and research groups to address such criticism and/or reconcile our differences and communicate the outcome in a timely manner.

Take a proactive approach to inform the scientific community about all the valuable tools, reagents, protocols and methods developed in our laboratory and to the extent we are free to do so make these tools available in a timely manner.

Implement additional measures to make our knowledge, expertise, and resources accessible to researchers in developing countries and/or in underfunded institutions at fair cost and/or under fair terms.

Contribute to promoting transparency, accountability and fairness in the publication process by making our review comments accessible and signing all review produced in a referee capacity. Contribute to global initiatives and consortia aimed at improving data reproducibility, standardization

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Specific Actions

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In all our actions, we will take all measures necessary to protect the public and patient interest, the interest of our home institution and collaborators and to fulfill all our obligations to our funders and partners.
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Publish all our research results rapidly in preprint servers (e.g. bioRxiv or the equivalent and in publically accessible registries and data repositories) and invite members of the scientific community to review our work, share their constructive criticism and input and collaborate. Publish all our research results (including data, materials, and methods) in open access journals, and/or ensure that all our published work is accessible free of charge. For example, via the EPFL publication repository, Infoscience (<https://infoscience.epfl.ch>).
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Deposit all our data (including raw data) of future publications in online journal repositories and in the relevant archival-quality repositories with documented preservation strategies.
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Contribute to the development of novel tools and standards and reagents that could help improve the quality and/or reproducibility of research in the field of neurodegenerative diseases.
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Publish all our experimental protocols and standard operating procedures used in existing publication online or in open access methods/protocols journals.
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Publish a complete list of all our plasmids, protein and peptide libraries online.
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Introduce measures to minimize unintentional biases by constantly improving the design of our studies and validation of our experimental models and research findings. We believe that this is necessary to ensure that our work contributes to advancing translational research and the development of new strategies for the prevention, treatment and/or management of neurodegenerative diseases.
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Contribute to the development of novel tools and standards and reagents that could help improve the quality and/or reproducibility of research in the field of neurodegenerative diseases.
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Contribute actively to the dissemination of best practices through the participation in and/or organizing special training courses and workshops.
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Participate actively in local, regional and international consortia to improve research transparency, integrity and reproducibility through sharing of our expertise, tools and resources (see <https://lashuel-lab.epfl.ch/page-146105-en.html>)
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Contribute to building a culture that promote and enable openness, transparency and reproducibility in research.
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Participate regularly in seminars, webinars or structured courses on open science and new approaches to improve the efficiency, reliability and reproducibility of research.



- Only tools and reagents wholly owned by EPFL will be shared, and if derived/ modified from material owned by a third party, only with such third party's authorization.
- Open science is great but it needs to be managed carefully so that it is in balance with the requirements to innovate.
- We are confident that these measures will lead to constructive feedback and exciting collaborations with researchers around the world.