

## Updates for contributors: Rigor and reproducibility in stem cell research

The initial assessment of any manuscript submitted to *Stem Cell Reports* is carried out by the Editor-in-Chief, in collaboration with our Managing Editor, Dr. Yvonne Fischer, often in consultation with our associate editors and our editorial board. For original research studies, we undertake a general evaluation of the novelty of the study, its overall interest to our readership, and the quality of the experimental design and data. Unfortunately, we find all too frequently that we are forced to return manuscripts to authors prior to review in order to clarify significant concerns about rigor and reproducibility: questions about the design of experiments (for example, the nature and number of experimental replicates), statistical analyses, statistical inference, data presentation and visualization, and the use of sufficient numbers of stem cell lines and subclones in disease modeling studies and resource studies reporting new experimental techniques. Authors are strongly advised to consult the section in our [information for authors](#) entitled “Replication, statistical tests, and reporting of sample sizes” prior to preparing the manuscript for submission, to ensure compliance with these guidelines. Doing so will eliminate unnecessary delays in handling the manuscript and will enhance

its chances of a favorable reception with referees when it is sent for review.

With the massive growth in the number of pluripotent stem cell lines used in research, and in their widespread application to functional genomics and disease modeling and preclinical and clinical therapeutics, we are also concerned with matters related to quality control of this experimental material. These include approaches to defining pluripotency, cell line identification, genetic and epigenetic stability of stem cell lines, and basic cell culture quality control such as assessment for the presence of adventitious agents. The validity of both basic and translational research can be completely undermined by a lack of integrity of cellular platforms. Our editorial team will be undertaking consultation on reporting standards for cell line characterization and validation with appropriate bodies, including the International Stem Cell Initiative and the ISSCR. We welcome comments from interested parties regarding these matters (reply to [martin.pera@jax.org](mailto:martin.pera@jax.org)).

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