

# Quality standards for scientific publications – how to overcome “fake science”?

Joachim Schiemann

Julius Kühn Institute, Institute for Biosafety in Plant Biotechnology, Quedlinburg

E-mail of corresponding author: [joachim.schiemann@julius-kuehn.de](mailto:joachim.schiemann@julius-kuehn.de)

In the world of academia, getting published in an international research journal is almost the Holy Grail; it helps bump up the CV for hiring and helps in the competition for tenure or promotion. It takes rigorous research, an original contribution, and exhaustive peer or expert reviews.

In times of fake news, science is usually still one of the areas that provide orientation and on which one can rely. The search for truth, the critical discourse - they belong to the foundations of good science. However, these are obviously at risk. A concerted action of science journalists went public on July 19, 2018 with investigations against fake research papers, publishers, and conferences. Unfortunately, several hundreds of ‘predatory journals’ thrive, and cast shadow on quality of faculty and research worldwide.

How the pay-and-publish business works? The predatory publishers' scam works like this: they write to researchers and companies all over the world and recommend a publication in a scientific journal. Then they publish - for a fee - the contributions of the researchers within a few days, often without any significant examination of the contents. Thus even dubious studies receive an alleged seal of science and are in the world.

How to overcome the situation described above and to guarantee a rigid self-control of science? The author will describe his experience as Associate Editor for *Frontiers in Plant Science* (Plant Biotechnology) and as Topic Editor for the Research Topic ‘Plant Genome Editing – Policies and Governance’ (<http://journal.frontiersin.org/researchtopic/7596>) aiming at collecting articles on the latest advancements and future targets of genome editing, as well as contributions addressing the regulatory, social and socio-economic aspects, the ethics, risk assessment, management, and biosafety researches.

Frontiers is well aware of the potential impact of published research both on future research and on society and, hence, does not support superficial review, light review or no-review publishing models. Research must be certified by peers before entering a stream of knowledge that may eventually reach the public - and shape society. Frontiers has a number of procedures in place to support and ensure the quality of the research articles that are published which will be discussed in the talk.