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DFG Underlines Importance of Scientific Quality Standards in Publications

Amid the global spread of SARS-CoV-2, a growing number of publications are being made available on preprint servers without having undergone peer review. It is good news that research data is being shared without delay and with no thought of competition, making it available for further research. Preprints are one suitable way of publishing scientific findings, as conventional publication processes in peer-reviewed journals can sometimes take years.

However, preprints require a high degree of responsibility on the part of everyone involved, because the same quality criteria apply as for traditional journal publication and owing to the lack of peer review, authors need to document compliance with all quality criteria even more diligently. Recipients must also be able to evaluate the published data and the documented quality assurance measures.

In addition, non-specialist readers should be aware that whoever reads preprints and interprets the results, should be capable of distinguishing between good and less good research. It can be problematic when non-specialists – for example journalists – attempt to interpret results if the provisional nature of the findings has not been made clear. In the view of the DFG, the provisional nature of research results should be clearly indicated and explained both by researchers and in media reports.

Now, as at any other time, scientific quality standards must be consistently upheld. Relevant, meaningful conclusions can only be drawn from meticulously executed research. The use of results from studies that do not reflect the state of the art would be unethical, and could potentially even endanger those whom the findings are intended to benefit.

Nevertheless, there is considerable variance in the spectrum of available study types, in terms of scope, standardisation and scheduled duration. Each type of study has its advantages and drawbacks and none is in itself dispensable.

With respect to drug development, for example, there is off-label use of already approved medicines. This has the advantage of rapid feasibility, whereas the disadvantage is that the potentially promising substance is not approved for the particular application under investigation. In the case of first-in-humans studies, the treatment attempt will be implemented more quickly than an initial proof-of-concept study. However, the treatment attempt is by definition not standardised and does not provide scientifically sound statistical data.

In all cases, it would seem appropriate to be aware of different research activities being conducted in parallel and to coordinate them as far as possible. This will ensure that less significant but faster

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procedures are always accompanied by longer-term research approaches that ultimately provide more robust data.