Information sheet on the conscious use of open access journals

The publication of research results and data in journals or data platforms that are accessible worldwide at any time without user fees (open access) facilitates scientific exchange and also makes research results easily available to society. Open access is therefore regarded as a quality feature of publications and is in some cases publicly subsidised.

Unlike subscription-based journals, the costs of open access are not borne by the reader, but by the authors or their institutions. In some cases, publication costs can be reimbursed as part of third-party funding or explicit publication funds. However, some journals have increased their article processing charges to of over €10,000.

The shift in funding away from readers towards researchers results in a shift in economic interests: while subscription-based journals must primarily motivate potential readers to purchase a subscription or an individual article through high quality of a journal, the actual reception of articles only plays a subordinate role in the success of open access journals, as they primarily benefit from a high number of published and paid articles, potentially regardless of their quality. This creates a conflict of interest between scientific quality assurance on the one hand and economic incentives to publish as many (paid) articles as possible per unit of time on the other. One consequence is that an increasing number of 'mega journals' have emerged, some of which publish more than 10,000 articles per year. It is unclear to what extent the quality standards of scientific publishing can always be maintained with such article numbers.

In addition, a large number of clearly fraudulent publication platforms and journals have emerged that claim to carry out quality checks on submitted articles, but in fact do not do so or do so only in a rudimentary way. Although publishers of such 'predatory journals' and 'fake conferences' have already been convicted of fraud, publications in dubious journals now represent a relevant proportion of published medical literature, some of which have found their way into prestigious publication databases and threaten the integrity of medical and scientific discourse.

This 'predatory publishing' involves aggressively soliciting articles from researchers for publication in return for payment of fees. Automated emails refer to recently published articles that have supposedly been read with interest but often do not match the title of the journal, use journal names that are reminiscent of established journals, list reputable scientists as co-editors on their websites - sometimes without their knowledge - without mentioning their role in the review process or advertise with alleged impact factors that do not stand up to scrutiny.

There is also a grey area of journals that have listed impact factors but at the same time exhibit characteristics of predatory publishing. Here, researchers may also be tempted to pay fees to bypass a rigorous peer review process and use the journal's impact factor as supposed proof of performance. However, the circumvention of established quality assurance tools for publications is a problem and, if used deliberately, is a form of scientific misconduct. Accidental publication in a dubious journal can also damage the reputation of researchers and should therefore be avoided.

Before submitting a manuscript to an open access journal, the suitability of the journal should therefore be carefully checked.

If the journal is not already known to the authors as reputable and recognised in the respective discipline, for example as an official organ of a scientific society, a quick search in the Directory of Open Access Journals (https://doaj.org/) and in the catalogue of the National Library of Medicine (https://www.ncbi.nlm.nih.gov/nlmcatalog) is a good first step. Journals that are not listed there require further research. However, some of these directories are already infiltrated by dubious journals; on the other hand, new, even reputable, journals may not yet be found here.

The online checklist 'Think, Check, Submit' (https://thinkchecksubmit.org/journals/), for example, is helpful for further narrowing down suitable journals. However, a single indicator should never be used on its own, as dubious publishers also want to give the impression that they fulfil the selection criteria. Important indicators can therefore be, in addition to familiarity in your own specialist community:

- Professionalism of the journal website
- Check whether a website really belongs to the journal you are looking for or just imitates its name with a slight deviation
- Transparency with regard to responsibilities, including verifiable contact details of the editors, affiliation with a recognised specialist society, review process, publication costs, etc.
- Match between professional orientation and content of published articles

Untypical for serious journals, on the other hand, are

- The predominant publication of special issues, often with a blurred focus
- The active solicitation of articles, often with reference to previous articles by those contacted, some of which have no recognisable thematic connection to the title of the journal
- Beginning the invitation with phrases such as 'we tried to contact you several times but there is no response from you', without a corresponding enquiry having been made beforehand
- The indication of short submission deadlines, allegedly in order to quickly complete an issue of the journal with some arbitrary contribution. In most cases, these journals do not even have definable issues, so that a certain number of articles is not required for publication.
- Letters via unprofessional or changing e-mail addresses (to avoid spam filters)

Before submitting, you should talk to colleagues or working group leaders and/or search the journal manually for thematically related articles and authors known in the specialist scientific community, who may also be able to provide information about the quality of the review process.