

Launching SwissMedPreprints, the Swiss Medical Weekly's biomedical preprint server

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The purpose of scientific communication is to rapidly disseminate advances in knowledge among communities of scientists and, beyond that, to the general public. For many decades, this was primarily accomplished through publishing peer-reviewed manuscripts. Peer review is expected to provide a certain level of validation: It confirms that specialised experts have scrutinised each published manuscript's methodology, results, and conclusions and found them to satisfy generally accepted quality criteria. This system has served the biomedical community very well over a long period.

However, an increasing number of cracks are starting to appear beneath the surface of what continues to be a well-oiled machine. Firstly, peer review is anything but perfect. Peers are often conscientious and provide detailed, helpful reviews. However, reviews can also be superficial, suffer from implicit bias, and be sometimes claimed to be abused by unscrupulous peers (although experienced editors will catch and correct such situations). Secondly, different journals adopt different definitions of what they consider peer review. Therefore, there is a spectrum of divergent quality standards, ranging from highly professional to sloppy to nonexistent. This problem is exacerbated by the pay-for-play policy of most open-access journals (a policy that Swiss Medical Weekly has always rejected), which links the publishers' revenues to the number of published articles regardless of their quality.

While peer review undisputedly provides robust quality control of scientific communications despite its aforementioned shortcomings, it suffers from decisive drawbacks. Peer review can take a long time, creating month-long (sometimes year-long) delays in science communication. Moreover, the burden on reviewers has increased immensely due to the sheer volume of scientific manuscripts that inundate journals worldwide. Consequently, it has become hard for editors to motivate expert reviewers willing to donate their time for what is essentially a philanthropic, altruistic activity. Swiss Medical Weekly provides a small honorarium to its peer reviewers, but it admittedly represents a symbolic token rather than a proper compensation. Therefore, many manuscripts submitted to biomedical journals can linger in limbo before authors can be provided with competent, critical feedback.

However, a profound revolution has occurred over the past several years, thanks mainly to the herculean efforts of Cold Spring Harbor's Richard Sever with the support of the innovative and helpful Chan Zuckerberg Initiative. The tangible result of their efforts is the establishment of two preprint servers: [bioRxiv](#) and [medRxiv](#). Authors can submit non-peer-reviewed versions of their manuscripts that will be published on the respective websites after a cursory sanity check. While the culture of publishing preprints had long been established in physics, it is a novelty in the biomedical sciences, which has long followed a culture of secrecy (often explicitly demanded by major journals around unpublished findings). However, these antiquated precepts are being increasingly regarded as obsolete, and preprints have become the primary means of scientific communication by many leading laboratories.

In this context, we at Swiss Medical Weekly are pleased to announce the launch of a preprint server aimed at fulfilling the needs of the biomedical community. Specifically, we welcome the publication of case reports and small case series. In this respect, the Swiss Medical Weekly addresses a gap not serviced by medRxiv, which consciously decided (for understandable reasons) to abstain from publishing such manuscripts.

Case reports are often said to represent the highest form of medical publishing. Indeed, the importance of reporting unusual syndromes, new diseases, or complications from therapy can hardly be overstated: the discovery of many emerging human diseases (including AIDS and COVID-19) is often heralded by the report of an index patient or very small case series. However, because of the intrinsic difficulties of extrapolating from a single case report to universally valid concepts, such reports often lack in-depth analyses of the patients being reported, such as new molecular technology or cutting-edge imaging. Consequently, case reports often remain anecdotal and lack the statistical basis and in-depth understanding of what has happened, which is needed to establish firm causal relationships. Because of these limitations, Swiss Medical Weekly rarely publishes case reports and only does so if they report new pathogenetic concepts or describe a novel aspect of a known disease.

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But even those case reports that might be of limited novelty at first glance can ultimately be extremely useful when aggregated. For example, a frequent description of intoxication cases in a specific geographic area may point to a common source of poisoning.

The increased frequency of prion diseases in young individuals in the late 1990s in the United Kingdom helped establish that bovine spongiform encephalopathy ("mad cow disease") had indeed been transmitted to humans.

Similarly, case reports and series often herald the detection of newly emerging infectious diseases such as HIV, SARS-CoV-1 and -2, *Candida auris*, the association of *Helicobacter pylori* with gastric ulcers, and so many more. Therefore, it is vital to maintain a shareable and findable database of such reports since they can become a trove of essential information for future meta-analyses. The preprint server we are launching aims to provide the solution to the above.

Naturally, it is important to highlight that preprints do not constitute established medical knowledge, and their content has not been scrutinised by peers. In other words, the responsibility for the content of a preprint rests solely with its authors. The editorial team at Swiss Medical Weekly will do its best to prevent articles lacking a scientific foundation, or promoting ideological or commercial interests, from appearing on the server.

As our first and foremost criterion, only manuscripts that report actual biomedical science will be accepted. You will never read manuscripts that extol homoeopathy or any other "magical" pseudoscience. Furthermore, we will take care to prevent the publication of preprints that do not adhere to established ethical standards or case reports that are insufficiently anonymised.

Finally, SwissMedPreprints will not be limited to the publication of case reports. Biomedical publications of any kind are welcome. However, all articles must first be submitted to the Swiss Medical Weekly. When articles suitable for publication in Swiss Medical Weekly are sent for external review, the authors will receive an offer to post them in parallel on SwissMedPreprints (figure 1). It will also be possible to publish articles on the preprint server even if they receive a desktop rejection for Swiss Medical Weekly; they can then be submitted to another journal.

SwissMedPreprints is a genuinely philanthropic endeavour, in stark contrast to analogous ventures by several large commercial publishers whose primary purpose is to capture authors into their ecosystem of pay-to-play journals.

We hope this innovation will provide a valuable and much-needed service for the current generation of biomedical scientists in Switzerland and worldwide and future generations of physicians who may harken back, maybe in decades, to what we publish today.

Figure 1: Submission workflow Swiss Medical Weekly.