

Ten years of *Nature Protocols*

On 27th June 2006, ten years ago this week, *Nature Protocols* officially published its first batch of protocols. In celebration of this fact, we are breaking with tradition to publish our first non-protocol articles: this editorial, as well as an upcoming series of Perspectives that showcase methodological developments over the last decade.

Nature Protocols was launched two years after our sister journal, *Nature Methods*, in response to the popularity of the protocols section in *Nature Methods* and our publisher's ongoing recognition of the importance to furthering research of being able to reproduce and accurately reuse methods. Then, as now, *Nature* was constantly highlighting the fundamental importance of ensuring that research is reliable, robust and reproducible. An important contributing factor toward that goal is making it clear just how experiments are carried out. Providing this information permits other researchers to both verify the validity of the research and repeat experiments to ensure that the results obtained are reproducible. *Nature Protocols* aims to support this aspect of the research process by providing step-by-step protocols of the highest quality, containing detailed information about how to carry out a particular method. Our protocols are designed to extend beyond simply presenting a prescriptive list of steps to provide the information required to enable confident adaptation, optimization and troubleshooting. Our articles focus on the practical information that is required to successfully implement the method. Such information is not usually found in the Methods sections of primary research papers, but can be key for researchers who want to adapt techniques to answer their own experimental questions.

At the time of our launch, there was no dedicated online source of peer-reviewed, extensively edited, detailed information about how to carry out many protocols. Given the capacity of the internet to rapidly disseminate information, our hope was that *Nature Protocols* would provide this resource alongside added functionalities afforded by our online format. By publishing articles on a weekly basis, we aimed to provide reliable information about the most exciting recently developed methods, as well as compiling a comprehensive database of all protocols currently in use.

The very nature of scientific research means that protocols are constantly evolving, and thus we felt it was also important to provide a forum for the instant communication of new methods. Because *Nature Protocols* requires prior use of the protocol in a primary research article by the authors, and then rigorous peer review, and because we take time to extensively edit the articles, *Nature Protocols* itself could not provide an immediate source of new protocols. Therefore, in spring 2006, we also launched the *Protocols Network* to provide a community-led forum for researchers to instantly share their methodological know-how, effectively providing a preprint server for protocols. The *Protocols Network* became the *Protocol Exchange* when it was re-launched with additional functionality in December 2010. Protocols

uploaded to the *Protocol Exchange* are not peer reviewed or substantially edited, and labs can create their own groups for storing and sharing their methods. Ten years on, the *Protocol Exchange* is a well-used open repository of detailed information about research methods.

Over the past ten years we have been encouraged by the feedback we have received from authors, reviewers and users. Through interactions with scientists, we have heard anecdotes about the positive impact our protocols have had on the progress of research projects. Several of our protocols have received, and continue to receive, thousands of citations, implying that the information they contain has contributed meaningfully to furthering research.

As the editorials and news articles published by *Nature* continue to testify, irreproducibility of important findings remains an issue for researchers. More can still be achieved to further the sharing of information about the research process. Thus, although *Nature Protocols* has now published over 2,000 protocols, comprising over 25,000 pages of detailed methodological information, we know that our work here is not yet done. Scientists will continue to develop new methods that can be adapted for use in many other research areas, and we are overwhelmed by the array of protocols that deserve wider dissemination.

To celebrate ten years of publishing protocols, we would like to reflect on the innovations and massive progress made in scientific methodology over the past decade. Thus, over the next few months we will also be publishing short, opinionated review-type articles giving overviews of areas in which there has been particular methodological progress over the past ten years. These articles, authored by experts in each research area, will also look to the future directions their fields might take, as a taster for the types of protocols you can expect us to cover over the next ten years. To whet your appetite, next month we will publish the first articles in this series, covering two methodological areas that have had a dramatic impact over the past decade: the generation of induced pluripotent stem cells and advances in genome-editing methodology.

Finally, and most importantly, we would like to take the opportunity to thank all of our authors, reviewers and readers. We appreciate the time and effort from the scientific community that goes into recommending methods we should cover and ensuring that our *Nature Protocols* articles are accurate and comprehensive. We look forward to working with you further over the next ten years, and beyond, to ensure that our content remains your primary source of top quality protocols.