How to expand the method details in your Cell Press paper with step-by-step STAR Protocols

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Publishing a primary research article is typically the result of a collaborative effort between a variety of researchers across differing career stages. STAR Protocols can complement a research article and empower authors to share the expertise they contributed to the larger study. In this Backstory, we interview members of the Gennarino lab, who published a Cell paper and four protocols, covering bioinformatics, culturing of patient-derived cell lines, neuroimaging from mouse brain sections and primary neurons, and mouse seizure recordings. For more information on the protocols related to this backstory, please refer to (Gennarino et al., 2018).

Above image: The Gennarino lab has published four STAR Protocols to complement their full research articles at Cell Press.
Tell me a bit about your experience publishing with Cell Press.

I have found Cell Press to be a publisher that follows the progress of manuscripts and the comments of reviewers closely. What impressed me most was how thoroughly its editors read our manuscripts, providing useful comments throughout the process. My impression is that Cell Press editors only send manuscripts to reviewers if they believe the manuscript is a strong candidate for publication. Furthermore, even for those manuscripts deemed not to be of sufficient quality for publication, I have found that editors were happy to explain their reasoning and remain on hand for further information. Overall, Cell Press strikes me as a well-organized publisher of high-quality scientific content.

How does your lab use STAR Protocols in its research?

We are a young lab with broad research interests ranging from the discovery of new genes to disease mechanisms related to the function of RNA binding proteins. We make every effort to stay current on new methodologies and to improve our own protocols. STAR Protocols, with its ever-expanding library, assists us greatly in this regard. To take advantage of this unique resource, we established a special STAR Protocols journal club in which we discuss a protocol and its corresponding original journal publication. We find this to be extremely useful, not only for expanding our knowledge, but also for fine-tuning details in our own protocols.

STAR Protocols also enables me to find interesting original articles. Although original articles understandably emphasize data presentation, I frequently scour the literature from a methodological standpoint. Going directly to STAR Protocols allows me to streamline this process and by clicking the link to the accompanying publication, I can see how the protocol was successfully applied.

How did you decide to publish in STAR Protocols? What interested you originally in publishing in STAR Protocols?

Accessibility was the first thing that attracted us to STAR Protocols. The open access model of STAR Protocols and the way in which its protocols are organized (by discipline and study field categorization) allows all members of our lab (from graduate students to the PI) to easily find what they are looking for. The second factor that went into our decision to publish in STAR Protocols was that the protocols are peer-reviewed. We believe strongly in the value of making protocols that have been reviewed by peers available to be used by everyone in the community.

Tell us about your experience publishing with STAR Protocols.

Our four published protocols have a very specific backstory. We began by submitting two comprehensive protocols that encompassed multiple approaches. Shawnna Buttery, the Lead Editor, spent a significant amount of time in helping us divide these manuscripts into four separate protocols. We believe that this process of re-structuring significantly improved the usefulness of the final protocols. We are grateful to the editors for their extensive editorial assistance, clear communication, and patience throughout this entire process.

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Tell us a bit about your peer review experience at STAR Protocols.

This step is critical for a well-constructed final protocol. When writing a protocol that has been used many times, it is critical to include all the small details. We aim to write the protocol so that the reader can feel as if they are in the lab with us, watching over all the steps. This is not an easy process, and the reviewers’ role is to ensure that everything in the protocol is clear and well explained. Our peer review experience at STAR Protocols was very positive, with comments and corrections that were both appropriate and useful. Furthermore, we found the organization of comments and corrections to be very simple. The fact that reviewer comments are directly annotated in the main Word document text using track-changes distinguishes STAR Protocols from other journals.

[Editor note: You can learn more about this unique element of our peer review process here (Pavlovich and Buttery, 2021)].

What are your thoughts on the final, published protocols?

We are very satisfied with all four of our published protocols (Wang et al., 2022; de Prisco et al., 2022a; de Prisco et al., 2022b). So much so that we submitted another protocol, which was published recently (Botta et al., 2022). The review process helped us greatly in improving them and the input provided by the editorial team made our protocols visually appealing and easy to follow. We find that the figures are very well integrated within the text of each protocol.

Have you gotten any feedback on the published protocols yet?

I have received positive feedback regarding the user-friendly format of our bioinformatics protocol (Lee et al., 2022) and seizure protocol (Wang et al., 2022), especially from those in unrelated fields. The author template used to present all protocols provides readers with useful information such as rationale and background, which is sometimes missing from other protocols. Another positive comment about our protocol was that it included specific supplemental datasets and results. This allowed the user to work through the provided example before adapting the technique to their own data.

Why should researchers publish in STAR Protocols?

We believe that STAR Protocols is an excellent resource, not only for exchanging protocols, but also for learning about what other labs are doing and how techniques are evolving. Protocol sharing and, consequently, data quality can only improve with more researchers publishing with STAR Protocols. Furthermore, researchers who publish with STAR Protocols may be pleasantly surprised at how easy and enjoyable the process can be. We think that STAR Protocols is a mutually beneficial resource where labs can get publication credit for their peer-reviewed protocols and the scientific community can benefit from new approaches and well-written step-by-step protocols.

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