Editorial

One of the challenges of journal publishing is to satisfy the conflicting demands for high-quality, rigorous review, and expeditious publication. It is therefore important that The Journal of General Physiology has been able to maintain its reviewing standards and yet decrease the median time from initial submission to publication to less than five months—and we regularly publish articles less than three months from submission. This reduction in the time to publication results from two factors. First, we continually tighten our editorial and copyediting procedures, as evidenced by the fact that the number of open manuscripts is now only ~25% of the number received each year. Second, the transition to electronic publication has enabled us to publish the contents of each printed issue in two separate web-based sections, which appear on the web in the middle and toward the end of the preceding month. The contents of the January 2000 issue, for example, appeared on 13 December and 27 December 1999. Taken together with changes in production procedures, the interval from acceptance to publication has been reduced by 20 days. The transition to electronic publication has other advantages. First, because The Journal of General Physiology Online is published with the assistance of Stanford University Libraries’ HighWire Press, the references in the HTML version link to Medline, Genbank, ISI’s Web of Science, and to many full-text articles, some of which can be downloaded even when the reader does not have a subscription to the journal in question. Second, it becomes easier to stay current: individual subscribers to The Journal can choose to receive advance notification of Tables of Contents, as well as notification about articles in a wide selection of other journals according to user-defined criteria. Third, Supplemental Material to an article, which will not be published in the paper version, will be readily available as an electronic link from the web version. Furthermore, presently, all articles in The Journal become freely available 18 months after publication, which will further increase the articles’ impact. Given the pace of evolution in electronic publication, these developments are only the beginning, but readers of The Journal can be assured that the emphasis on quality will continue to be a defining characteristic that will shape all future developments. Next steps include electronic submission of articles and figures directly into our tracking system, which will allow for electronic peer review, further decreasing turnaround time.

The mission of The Journal of General Physiology is to publish concise articles that elucidate basic biological, chemical, or physical mechanisms of broad physiological significance. Conciseness does not necessarily mean brevity, because biological function at any level of complexity is an emergent property of interactions among “simpler” elements. Increasingly, mechanistic insights into biological function will depend on quantitative modeling and simulations, which are needed to fully interpret the experimental results. These modeling efforts will be based on a physical analysis of the interrelated elements, and the quality of the models will be judged by whether the underlying physical model is appropriate (see editorial in the October 1999 issue of The Journal) and by their ability to provide quantitative insights into higher-level function, such as adaptive responses to perturbations. This emphasis on mechanistic, often physical, analysis of biological function also means that the resulting articles may become long and complex. This creates a challenge for the authors, as they need to make their articles accessible to The Journal’s general readership. To help our authors in this respect, we encourage them to separate information that will be important to only a limited readership, such as an exhaustive summary of models that were tested in a kinetic analysis, into Supplemental Material. All supplemental information—whether tables, figures, detailed derivations of equations, or movies that depict the results of experiments or simulations—will be subject to the same rigorous review as the main manuscript. We hope this will ensure that all articles in The Journal provide a clear message, which clearly delineates the important issues in a manner that will appeal to the broad readership of The Journal, not just a small group of experts.

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Editor
The Journal of General Physiology