Editorial

The past year was a good one for *The Journal of General Physiology*. The number of manuscripts submitted did not increase, but the quality of the submitted articles remains high (and seems to be increasing), and their scope is expanding. Our readers' appreciation for the *Journal* is evident not only from the objective evaluators (impact factor and immediacy index), but also from the informal comments we receive. The challenge remains how to satisfy the conflicting demands for high quality, rigorous review and expeditious publication in a journal that is aimed at a broad readership. We do so, in part, simply by adhering to *The Journal's* mission, which has guided its editors for over 80 years—namely, to publish concise articles of the highest quality that elucidate basic biological, chemical, or physical mechanisms of broad physiological significance. The emphasis on mechanistic insights is central to *The Journal's* mission, but it may be overridden by the sheer novelty of the findings.

We are fortunate to have conscientious reviewers, who provide detailed and constructive reviews in a remarkably short time, such that the median time from the initial manuscript submission to the first decision letter is five weeks. The quality and timeliness of the reviews are among the core ingredients of any successful journal, and we thank our reviewers for their efforts.

Given the complexity of current studies of biological function, which frequently rely on quantitative analysis and model building, it is important that articles published in *The Journal* be written so that they are accessible to a general readership. It is often difficult to write an article that is useful both to experts in the field and to a broader audience. Therefore, we encourage authors to submit information that will be appreciated primarily by a smaller group of experts as Supplemental Material, which will be available in the online version of *The Journal*. This should help ensure that articles in *The Journal* provide a clear message, which delineates the important issues in a manner that will increase the articles' impact.

Once a manuscript is accepted, it usually appears online within five weeks, i.e., if the authors return the proofs expeditiously. All correspondence between the editorial office and authors or reviewers is by e-mail or fax, and an increasing number of manuscripts are submitted electronically. We send the proofs to the authors as pdf files attached to e-mails, but the technology remains such that the authors should mark the pdf printout and return it by fax (or mail). During the coming year, we will increase our capability for receiving manuscripts, and distributing them to the reviewers, electronically. This will facilitate the manuscript processing and, therefore, further shorten the time from submission to publication. The two major components of the interval from submission to acceptance, however, are the time it takes to review the manuscript and the time it takes the authors to implement the revisions, with the latter being the longer. Electronic submission and manuscript distribution will streamline the editorial process and (perhaps) save paper, which will help everybody, but they are unlikely to produce major time savings.

The impact of the online version of *The Journal* is growing rapidly. Each month the online version is accessed from ~4,500 unique IP addresses, with >7,000 articles being downloaded. It is possible to do more with the online version. We e-mail electronic tables of contents, with links to the articles, to anyone requesting them when the semi-monthly releases of the web version appear, which will further enhance *The Journal's* impact. Eventually, the web is likely to become the dominant medium for *The Journal*; but, the utility of the interactive (html) version is balanced, in part, by the "friendliness" of the hardcopy version, and we do not expect the paper version to disappear any time soon.

Physiology is an embattled discipline, but there is every reason to be optimistic about the future. Complete genome sequences are known for an increasing number of organisms, which will impact on all biomedical research, and methodological advances allow for increasingly detailed analysis of function at all levels of complexity, from single molecules to intact organisms. It is possible to design not only new molecules, but also new organisms, which gives new meaning to August Krogh's dictum that "for any [important] problem there is a preparation of choice in which to study it." The combination of careful genetic and functional studies will provide real insights into the molecular, cellular, and systems basis for normal and abnormal function. The challenge will be to move beyond phenotyping to define the underlying mechanisms that produce a given phenotype, the variations in phenotypic expression that arise when a given alteration is introduced in different (genetic) backgrounds, and the homeostatic mechanisms that cause an apparent lack of phenotype. The emphasis on mechanistic studies of biological function is not only central to the mission of *The Journal of General Physiology*, it is also a defining feature of physiology; and recent advances in genetic and experimental manipulations of molecules and organisms will inevitably lead to an increasing emphasis on the commonality of the principles that underlie biological function, i.e., on general physiology. This bodes well for *The Journal's* future.

Olaf Sparre Andersen
for the Editors
The Journal of General Physiology

J. Gen. Physiol. © The Rockefeller University Press • 0022-1295/2001/01/1/1 $5.00
Volume 117 January 2001 1
http://www.jgp.org/cgi/content/full/117/1/1