

## A Vision for *Physiology*—The Journal

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## A Vision for *Physiology*—The Journal

This issue marks the seventh anniversary of *Physiology*, created by morphing *News in Physiological Sciences*. As I write this editorial in late June, I am completing my eighth year as Editor-in-Chief (we invested 1 year in planning the transition to *Physiology*) and realize that I am about to begin my third year of my third 3-year term at the helm of the journal. I have also been thinking about where the journal ought to be heading in the next decade.

In creating *Physiology*—which is jointly published by the American Physiological Society (APS) and the International Union of Physiological Sciences (IUPS)—my goal was to make the journal the natural home for physiologists worldwide. Although it is really not up to me to judge the quality of the journal, I hope that we have become the premier venue for short-format reviews in the discipline of physiology, broadly defined, just as our sister journal *Physiological Reviews* has long been the premier venue for long, authoritative reviews. Along with publishing outstanding reviews with compelling artwork, *Physiology* also has attempted to capture the discipline by publishing editorials and by identifying “Highlights from the Literature.” I think that these are important first steps in making this journal the natural home for physiologists. However, I have long wanted *Physiology* to transition into something of a *Nature* format, including not just short reviews but also a small number of short, original articles. This last step could complete the process of making *Physiology* the de facto home of the discipline worldwide.

### Philosophy

*Physiology*—together with the APS and IUPS—has an *obligation* to do great things for the discipline of physiology. Moreover, we have an *opportunity* to do great things because our journal seems to be well regarded and thus has credibility. The readership—as well as potential authors—will likely expect that we have a high probability of succeeding in a bold, new venture.

I would note that *Physiology* has something important going for it: It has a corporate identity. We have created a potentially valuable brand. Just as the names *Cell* or *Neuron* embrace whole fields, *Physiology*—with no prefixes, suffixes, or adjectives—could embrace our whole discipline. *Physiology* could have a bright future, proudly advancing its impact factor—which is already quite respectable—into the mid-teens and being broadly recognized as a top-tier journal. I think that the worst-case scenario for *Physiology*, the APS, and the IUPS—and for the discipline of physiology worldwide—would be for *Physiology* to “coast.” By failing to continue to be aggressive, as we were at our inception, we invite an unfriendly intrusion from a *Nature* (MacMillan) or a *Trends* (Elsevier).

### What Physiologists Are Missing

The discipline of physiology boasts one of the finest high-impact journals in all of biomedical sciences for long reviews, *Physiological Reviews*. We also have a relatively high-impact journal for intermediate-length reviews, *Annual Review of Physiology*, and our own journal for short reviews. However, the discipline is totally lacking in a high-impact journal for original reports. In disciplines other than physiology, an author whose paper does not quite make the cut at (or is not even reviewed by) *Nature* or *Science* can turn to a discipline-branded journal. Not so in the discipline of physiology. It is true that journals such as *Proceedings of the National Academy of Science, USA* (PNAS) and *Journal of Clinical Investigation* (JCI) are often venues for physiological research reports. However, I think that neither is particularly well geared to review papers in the broad discipline of physiology. I think that we have an unmet need... and an untapped market.

### What We Physiologists Could Do

It would not be easy to create, de novo, a journal for original, high-impact, *Nature*- or *Science*-style physiology papers. Lacking corporate-style resources, how would you finance it? And what would you name it? An alternative could be to publish high-impact,

*Nature*-style letters in mainline physiology journals such as *American Journal of Physiology*, *Journal of Physiology*, and *Journal of General Physiology*. In fact, it has been tried and does not work very well. I think that the problem is that when an author wishes to publish what he or she imagines is a high-impact paper, the author wants to publish it in a journal with a high impact factor. The author is not easily convinced that the front portion of *Journal X* is as prestigious as PNAS, for example. A corollary of this theorem is that publishing a small number of outstanding short papers in *Physiology* would not represent competition to mainline physiology journals.

In its inaugural meeting in Bethesda in 2003, the first *Physiology* Editorial Board purposely chose the name *Physiology* to corner the market on “physiology.” The key thought was that the journal, in addition to publishing short reviews, would someday morph into a venue for a select group of high-impact, short papers describing original research in physiology. As *Physiology* flirts with double-digit impact factors—about twice those of the mainline journals where I publish most of my work—the journal could go toe-to-toe with PNAS or JCI in attracting superb physiology papers.

### The Good

*Physiology* could offer several unique advantages over the competition. First, our Editorial Board, which covers a large part of the physiological spectrum, could do a superior job—certainly better for physiologists than *Nature*, *Science*, PNAS, or JCI—at the triage step, which determines whether the subject and observation are of sufficient moment to warrant a full review. Second, *Physiology* could offer a format nearly identical to that of *Nature* or *Science* and thereby minimize the effort in reformatting an unsuccessful submission to *Nature* or *Science*. Morphing a paper, for example, from a *Nature* letter to a PNAS format is not trivial. Third, successful original papers in *Physiology* could receive the same artwork treatment as the short reviews. The paper would not only *be* beautiful, but *look* beautiful. Finally, the short research papers—which could appear instantly online—would be grouped as a contribution in the discipline of “physiology” and put in the hands of nearly 11,000 physiologists and institutions.

### ***Worries About The Bad***

One worry could be money. The financial cost could be minimal, consisting mainly of the charge for the artwork. Another worry could be that including original papers in *Physiology* could drag down our impact factor. In our survey of “physiology” papers published in *PNAS*, we found that the citations would translate to an impact factor of about 9. Moreover, original papers could bring added attention to our short reviews and vice versa, so

that the overall impact factor of *Physiology* could jump. I have long imagined, although without any data, that a significant jump in impact factor could trigger additional library subscriptions, which could in turn enhance the impact factor—a classic example of a positive feedback in *Physiology*.

### ***The Benefits***

*Nature This* and *Nature That*... but there is nothing of the sort out there with our name on it. Our discipline would benefit

immensely from a journal that could be for us what so many other disciplines already have. A *Physiology* morphed to include a little “nature” or “science” could be the center piece for every physiologist world wide... the place to go for the latest discoveries as well as the things (I hope) we already do pretty well. A morphed *Physiology* could be a beacon for the discipline, something of which we could all be especially proud, and a feather in the cap of both the APS and IUPS. ■