

Editorial

Finding a niche in a changing sociological, technological and scientific world—AIMS Biophysics

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It is my great pleasure to be invited to work with the editorial board and the managing team as we work towards establishing a new journal in the area of biophysics under the umbrella of the American Institute of Mathematical Sciences (AIMS) Press. I accepted this invitation because of two underlying personal convictions—1. That the way we publish and read scientific information is undergoing a dramatic change for the better, and it is thrilling to be part of that change. 2. That important “disruptive” scientific advances are set to be made in areas of research that span traditional boundaries, and that biophysics embodies this at the highest levels.

As most of our readers will know, decades ago scientific publishing used to be the domain of “learned societies”, such as the National Academy of Sciences in the USA or the Physiological Society in the UK. Over time, many of these societies delegated the publishing of papers to large for-profit publishing houses. While the established system of peer review ensured quality of publication, the necessity to run these publishing enterprises on a commercial basis meant that over time the costs to access these journals (largely born by libraries) and, for some journals, submission and publication costs charged to authors, increasingly presented a barrier to the dissemination of scientific results to the community. An opportunity to counter this came with the rise of the internet, which led to the establishment of open access journals. Open access philosophy is that scientific information should be as widely and as cheaply available as possible. This is made possible by the advance of information technology, where electronic submission, editorial oversight and web-based publishing can reduce costs dramatically. AIMS Biophysics is one such journal, and we will strive to fulfil our mandate to provide high quality scientific content as accessibly and widely as possible. Scientific quality is maintained by a rigorous review process, guided by the editorial board. However, we adhere to a policy that scientific quality is the sole determinant of a paper’s acceptability—potential impact (or “popularity”) is not a criterion for acceptance. My own view is that a paper’s impact is for history, and the readership, to determine. In this latter vein, I would like to see some form of post-publication review process, perhaps by inviting commentary on highly

downloaded papers.

My second conviction noted above is that traditional research boundaries are increasingly blurred, and that big advances will be made in areas that encompass many different approaches. Biophysics is the prime example of this. For example, studies of protein structure and interaction draw on areas as diverse as crystallography, information processing, molecular dynamics and computer modelling, as well as biochemistry and physics. Technology is changing rapidly in all these areas, and their convergence will undoubtedly lead to unexpected discoveries. I'm also confident that exciting discoveries will flow from application of such novel technologies as photonics (think "opto-genetics", for example), functional imaging and systems biology. It is the aim of AIMS Biophysics to be at the forefront of this new and exciting frontier. The editorial board and management sincerely hope you will join us.

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