

Editorial

Editor-in-Chief appointed to *The Journal of Experimental Biology*

The *Journal of Experimental Biology* changed significantly over the past ten years under the guidance of the Editor-in-Chief, Bob Boutilier: a significant increase in submissions, a substantially boosted impact factor (for what it is worth) and the introduction of a colourful and intuitively accessible front section being some of the most obvious changes. Sadly, Bob's time with the Journal was cruelly cut short. We were all deeply saddened towards the end of 2003 when it became obvious that Bob's condition was slowly deteriorating, and he died peacefully on 21st December 2003 in Addenbrookes Hospital, Cambridge, UK.

The remaining Editors agreed to share the burden of keeping the Journal going until a new Editor-in-Chief could be found to take Bob's place. In a meeting in early 2004 the Editors suggested a policy for the future of the Journal, in accordance with the prevailing opinion of the Company of Biologists' Board of Directors and the Advisory Group appointed to oversee the Journal's well being. The Editors recognized that the Journal should maintain its foundation in classical Integrative and Systems Biology covering all animal phyla, and no massive changes in the orientation or style of the Journal was deemed necessary. However it was felt that the techniques of the post-genomic era should increasingly be embraced, as long as they serve the purpose of elucidating physiological mechanisms in a Kroghian context.

During the months following the Editors' meeting, the Journal's Advisory Group began searching for a suitable candidate, and in September 2004, I was invited to become *The Journal of Experimental Biology's* sixth Editor-in-Chief. I see it as both an honour that the board of Directors entrusted me with the role of Editor-in-Chief of JEB and as a major commitment on my part to continue the development of the Journal.

As it is mainly through the electronic media that scientists keep in touch with the rapid advances made in biological sciences, scientific publishing needs to reflect these developments. This is further accentuated by an increasing pressure to put research accounts immediately into the public domain (open access). These trends have the potential to erode the economical basis of scientific publishing and to influence the way in which scientific results are valued and made publicly available.

As Editor-in-Chief I see my role as the mediator between the front end of science – the authors, referees and editors – and the professional staff that are required to structure and implement peer review, production and dissemination of

scientific prose. In this position, it is necessary to plan the future of the Journal taking into account the needs of both sides.

I surmise that the success of a scientific Journal is mainly linked to the perceived quality of the material that it publishes. This depends critically on two components: the scientific quality of the submitted material (which cannot be directly controlled by the Journal) and the quality of the reviewing process implemented by the Journal. Why is the quality of peer review such a critical aspect of scientific publication? As our knowledge of biological processes at all levels of organization grows exponentially, scientists need reliable information about the ever expanding number of topics outside their own fields of competence. This knowledge is needed not just to design innovative new experiments but for teaching science at all levels of expertise. Consequently, there is a fast growing need for information with a high degree of plausibility, i.e. information filtered by a high-quality reviewing process.

As a consequence, it is a clear priority for the Journal to care for and maintain the high quality of peer review for which it is already renowned. This is especially necessary in areas generating large-scale biological datasets that require complex statistical treatment and modelling. Peer review is an onerous task for both the referees and the authors involved – and it is a service that is essentially provided free among scientists. The Journal places a high value on the services of its reviewers (currently we list over 3000 on our database) and Editors make every effort to implement the sometimes painful process in a transparent, courteous and efficient manner. It is the tool by which the *Journal of Experimental Biology* provides the scientific community and the public with the best possible view on the fruits of our labour that we conduct for the sake of science and community.

My personal wish would be that the Journal, in addition to publishing good science, could convey some of the excitement and fun we have in conducting our research. The Journal with its broad, high-quality coverage of all areas of comparative animal research from biomechanics to cognition, is in a unique position to advance 'life sciences' as much as to satisfy our intellectual curiosity regarding the marvels and diversity of evolutionary outcomes...

Hans Hoppeler

Editor-in-Chief