nature immunology

Under review

Relating the facts on the editorial process helps to maintain the integrity of the peer review system.

Recent experiments with alternative review processes such as open peer review provide the opportunity for us to explain the editorial practices at *Nature Immunology* and to offer our perspectives on some issues concerning the standard practice of 'blind' peer review.

This month, *Nature* announced the start of an experimental open peer review process to determine both how the community feels about it and whether it works well (http://www.nature.com/nature/peerreview/index.html). At the beginning of 2006, *Biology Direct* began its experiment with open peer review, announcing their "unapologetically ambitious" aim to solve problems inherent to the standard peer review system (http://www.biology-direct.com/content/1/1/1). What problems are those? Most commonly, it is said that 'blind' peer review is inherently unfair because the anonymous reviewer has absolute power, while the author has no recourse; however, supporting documentation of actual cases of widespread abuse or failures of the present system is rarely offered. We cannot speak for the whole scientific editorial enterprise or the commonness of fair standards at all journals, but we can offer facts about what happens at *Nature Immunology*.

Unlike most other journals, *Nature Immunology* has no editorial board. Editorial decisions are instead made by a team of four full-time professional editors. Each editor has been on the 'other side' as an author-scientist, has a Ph.D. and has postdoctoral experience. The editors all work in the New York offices with the editorial staff of most of the Nature research journals of Nature Publishing Group. Although side by side, the editorial teams of the separate journals are completely independent of one another.

All manuscripts submitted to *Nature Immunology* are printed and catalogued by the editorial assistant, who delivers the daily arrivals to the chief editor. The chief editor evaluates the manuscripts and distributes them among the other editors who act as 'primary editors' for those manuscripts. The primary editor then carefully reads each manuscript, evaluating any past related submissions and or published papers. Every afternoon the editorial team convenes to discuss new submissions. Decisions are made at that time, and if a paper is to be sent out to review, possible reviewers are discussed. Usually two reviewers from our ever-growing list of hundreds of reviewers are chosen, based on the subject area and our experience with individual reviewers. *Nature Immunology* strives to make decisions on manuscripts within 48 hours of submission.

Reviewers are requested to complete their evaluations within 10 days, after which the primary editor evaluates the recommendations and comments. More often than not the reviews are similar and thus the fate of the manuscript is clear. Sometimes, however, the reviewers have very different opinions. In such cases, the editor will evaluate the arguments and determine how to proceed based on their understanding of the paper and its importance to the field. To help in this, editors often ask authors to provide detailed responses to reviewers' comments and to explain how they would rectify potential problems if given the opportunity to revise the manuscript. Consultation and discussion among the editorial staff is central to the decision process at this stage. When final decisions are made, usually within 3 weeks of submission, both authors and reviewers are sent the complete set of reviews. Accepted papers are carefully edited — a topic covered in a previous editorial this year (http://www.nature.com/ni/journal/ v6/n11/full/ni1105-1061.html) — to ensure uniformity of presentation and style.

It is the experience of *Nature Immunology* editors that the 'blind' peer review process works well. Authors are given ample opportunity to interact by phone or e-mail with the editorial team at every point. Although editors' decisions may sometimes frustrate authors, we do provide a venue for free exchange of ideas and argument. A formal appeal process provides the author of a rejected paper the opportunity to offer scientific reasons why a decision should be reversed. For the reviewer, rather than being a corrupting thing, the 'veil of anonymity' provides the possibility of offering critical evaluations to the author; the editors certainly know who the reviewers are and thus the possibility of anonymity corrupting as 'absolute power' is excluded. Moreover, each reviewer is sent copies of all the reviews for the paper, which we hope is informative and useful to the reviewers. The bottom line is that it would become apparent very quickly to an unfair reviewer that he or she was the 'odd person out'.

What does *Nature Immunology* look for in a paper? We seek good solid science that addresses important questions and provides definitive conclusions. New ways of approaching questions or new questions approached are also plusses; merely being 'high impact' is not. And providing definitive functional data — showing in animals that something is necessary and sufficient or in humans a statistically significant correlation — is usually expected. Occasionally, the mere originality of a finding or the likelihood that a paper would be deemed highly significant in the given field is sufficient for publication. But our basic aim is to publish the best papers in immunology and to publish them in the very best way possible.

Can a persuasive case be made for changing the system of peer review at *Nature Immunology*? At present, we feel the answer is no. Feedback from reviewers and authors suggests that the system works well most of the time. However, other forms of peer review could work as well or even better depending on the journal format. But at *Nature Immunology,* the relatively unique combination of the world's leaders in immunology as both authors and reviewers and the dedicated team of professional editors have forged a highly productive and creative source for the best science in immunology. We hope you agree.