

For authors

Nature Publishing Group has established new responsibilities for authors and has introduced changes in reporting methodology.

Readers of *Nature Immunology* may have noticed the subtle change introduced in July 2006 when ‘author contributions’ statements began to appear at the end of primary research articles. These statements, although not mandatory at the time, identified the efforts of each author who contributed to the work. The editorial staff strongly encouraged authors to provide such a statement, and compliance with these requests was generally high. In a *Nature* editorial dated 30 April 2009 (<http://www.nature.com/nature/journal/v458/n7242/full/4581078a.html>), Nature Publishing Group (NPG) announced that all *Nature*-branded journals, including *Nature Immunology*, will require that an ‘author contributions’ statement accompany all original research papers. Authors can decide how detailed these descriptions can be, but no author should be left out.

The purpose of authorship statements is to give coauthors due credit for their relative contributions. This concern is not insignificant to a ‘middle author’, who may be seeking promotion or a new position. Such an investigator may not have a ‘first author’ publication to their record but nevertheless has provided a substantial contribution to the development or execution of certain studies. Likewise, for studies that result from the collaboration of multiple laboratories, authorship order can sometimes be difficult to ascribe. Identifying who did what provides greater transparency to the process of assigning authorship.

In the same *Nature* editorial, new responsibilities were announced for ‘senior authors’. These responsibilities include ensuring that the original data described in the study are preserved and retrievable for reanalysis, confirming that the data presented in the manuscript are representative of the original data collected, and anticipating and minimizing any obstacles to the sharing of data, reagents, materials or algorithms described in the published work. For collaborative studies, at least one senior author who represents their group must assume these responsibilities for their contributions to the study. Often the ‘corresponding author’ is the laboratory chief and is thus in a position of authority to speak for others in their group. But this is not always the case. Sometimes the laboratory head, acting as a mentor, will assign ‘corresponding authorship’ to another author as training toward the development of independent research career skills. However, the responsibilities outlined above would remain with the most senior researcher of the group, who is not necessarily the corresponding author. Additional details about NPG policies on authorship can be found at http://www.nature.com/authors/editorial_policies/authorship.html.

Another change implemented this month at *Nature Immunology* is the move toward publishing methods online only. Original research papers published in *Nature Immunology* will be accompanied by a description of the methodology used in the study that will appear only with the online version of the manuscript. As with many other publications today, most *Nature Immunology* readers reach our content online, hence this move

toward the ‘paper of the future’. Print readers interested in the methodology will be directed to the Online Methods section of the article. This ‘page’ will look similar to previous Methods sections in print; it will typically run up to 1,000 words in length and can include additional references associated only with the methodology. This Online Methods section will continue to be edited by the staff of *Nature Immunology*, and certain publication requirements must still be met. For example, the institutional committees that approved experimentation with humans or animals must be identified, and statements on animal welfare or informed consent, as specified by NPG policy for the publication of such work, must be included.

Many papers published by *Nature Immunology* use monoclonal antibody reagents to identify cell subsets or to localize molecules of interest, or as agonists or antagonists of various signaling pathways. Although we previously recommended reporting antibodies by vendor and clone number in the Methods section, this policy is now formally a requirement for publication. Henceforth, authors must provide in the Online Methods the clone identifier and vendor of all antibody reagents and, if labeled, the fluorochrome or marker used as the tag, such as biotin.

Immunology studies commonly use flow cytometry to sort specific cell populations for further study. In consultation with many experts in the immunology community, we have derived several minimal requirements for the reporting of flow cytometry experiments. In addition to describing antibody reagents as noted above, authors should identify the instrument(s) and software used to collect and analyze the data. Authors should provide numerical analysis and statistics of the sorted cell populations, and plots or graphs presenting these data should be labeled with the marker (such as CD4) and the axes scale (log or linear) should be clearly visible. Often a particular sorted cell population is central to the main message reported by the new work; thus, a detailed description of the isolation protocol is necessary to allow others to replicate isolation of the same cell subset in future studies of function and physiological interactions. For such studies, authors should provide a supplementary figure that describes the sorting strategy and gates used to obtain this cell population, as well as any markers used to exclude certain populations. Referees are also asked to carefully inspect these data sets during their manuscript review to ensure that sufficient detail has been provided for the relevant cell population. Further details on reporting flow cytometry data can be found in the ‘authors & referees@npg’ section at http://www.nature.com/authors/editorial_policies/availability.html.

These new policies are not meant to place onerous burdens on authors. Instead, this is an evolving process intended to clarify the record and ensure future reproducibility and transparency in the reporting of research results. Such moves can only increase the integrity of science, not detract from it. We hope you agree.