Keeping it real

Scientific endeavors benefit from transparency and open declarations of real or perceived conflicts of interest.

Recent scandals have stimulated a call for greater operational transparency and enhanced openness by corporations, governments and organizations worldwide. Scientists have not escaped scrutiny, as recent high-profile news stories have emphasized that scientists, like other people, are not immune to outside influences. We all know from experience that many factors affect human behavior. For scientists, career advancement, independent funding, and personal or professional relationships all have an influence on one’s scientific perspective. Scientific advances may also translate into significant financial benefits for entrepreneurial scientists and their institutions. Though the positive societal benefits of blending ‘pure’ and ‘applied’ science are substantial, the fact remains that scientists must accept responsibility for the integrity of the scientific enterprise and a favorable public perception of science. An effective first step toward these goals is the open declaration of potential conflicts of interest by individual scientists.

Many types of potential conflict exist, but financial conflicts have received the greatest attention from universities, funding agencies and scientific publishers in the form of financial conflict of interest policies. The ‘competing financial interests’ (CFI) policy of Nature journals requires that the corresponding authors of published papers disclose, on behalf of all of the paper’s authors, any financial factors that could be perceived to “undermine the objectivity, integrity or perceived value of a publication” (http://www.nature.com/authors/editorial_policies/competing.html). Since 2003, all original research, review and perspective articles published in Nature journals have included a CFI statement. Effective as of February 2007, readers of Nature Chemical Biology and many other Nature journals will now find CFI statements in all published articles (see, for example, p.191). No particular concern initiated this policy update. Instead, a consensus grew over time among the journal editors that a consistent policy across our content would reduce reader confusion and enhance the transparency of published work.

Yet scientists may have difficulty evaluating whether their circumstances pose potential conflicts that should be declared. Some cases are clear: authors should report conflicts of financial interest when they are employed by or receive funding from an organization that may be financially affected by publication of their paper. Authors should also declare CFI when they have personal financial interests that could be affected by publication of the article—for example, scientists who have filed for or have been issued a patent whose claims derive from work described in the accepted paper, or authors whose consulting activity may be related to the published work.

Some possible conflicts may be less clear-cut, particularly at the time of publication. For example, commercial applications of a study may not be realized for many years. Though editors may provide guidance on these cases, authors, in consultation with their employers, are ultimately responsible for identifying and declaring potential conflicts of interest. In doing so, authors should familiarize themselves with each journal’s CFI policy, consider the future commercial potential of their work, and answer two simple questions: (i) could a reasonable person question whether my financial interests may have influenced these scientific studies? and (ii) would I suffer embarrassment if my undeclared financial interests became known after publication? Affirmative answers to either of these questions could indicate that a conflict exists and should be declared.

Scientists will also benefit from increasing the transparency of their work in other ways. First, we encourage Nature Chemical Biology authors to include author contribution statements (see, for example, p.237), which spell out the role of each coauthor in collaborative papers. Second, we recommend that authors avoid the use of “data not shown” statements in their papers. Instead, authors should assert the result directly, or (preferably) include the appropriate data. While we appreciate that space is limited in published papers, authors should use online supplementary information to ensure that all data necessary to understand and support the paper’s conclusions are available to editors and referees during the review process, and to readers of the published work. Finally, authors are asked to include with their manuscript submissions copies of any related studies that are under consideration by other journals.

Although we strive for transparency in scientific publishing, there is an inherent need for opacity in the peer review process so that editors can receive candid information about the technical merit and potential impact of each manuscript. Given the limitation of referee confidentiality, the editorial team at Nature Chemical Biology is committed to making peer review as transparent as possible. Referee selection is a critical element in this process. We request that potential referees notify us of possible conflicts of interest that may affect their ability to provide an objective assessment of a manuscript. When potential conflicts arise, referees may recuse themselves. Conflicts may include competing financial interests related to the science reported in the article or personal or professional relationships with authors that may affect the referee’s impartiality. To minimize conflicts in which scientists may be in competition or hold opposing views on a scientific controversy, the editorial team generally honors author requests to exclude particular scientists from the referee pool. Finally, to enhance transparency, Nature Chemical Biology editors communicate with referees after a decision has been sent to authors. In addition to informing referees of our editorial decision, we send copies of all referee comments, while maintaining the confidentiality of all referees, to each reviewer who was consulted on the manuscript.

Scientific pursuits are ultimately human-driven processes and thus are subject to human foibles. We are grateful for the continued efforts of our authors and referees who maintain the integrity of peer review and improve manuscripts on their way toward publication. For our part, the Nature Chemical Biology editorial team continues our efforts to guarantee timely and impartial review and publishing processes that are as transparent as possible.