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Delivering science to the public

Much as we would like to see *Nature Medicine* sold at street newsstands, it is unlikely to happen any time soon; instead, we are pleased at the prospect of working more closely with the media to bring to the attention of the public the most exciting and promising work that the research community has to offer. It is easy to assume that researchers, journal editors and the media have a mutual desire to work together towards this end. After all, few would argue that presenting the latest science is all the more important today as the pace of discovery quickens and the prospects for a more fundamental effect on the human condition grows. Unfortunately, the press, the research community and the journals find themselves squabbling more than collaborating.

Perhaps the greatest tension exists between the press and journals, such as this one, involved in biomedical research. (It is, after all, in the biomedical arena that we can expect frequent developments that are likely to affect all our lives.) Part of the discomfort stems from the widespread practice of the Ingelfinger rule, by which journals warn authors that the newsworthiness of their research is important to a journal, and that journals may decline to publish their work if the editors think that prior discussion in the press has damaged that newsworthiness. This upsets the press, because they view it as editors controlling access to newly completed work and unreasonably interfering in the reporting of the research.

The Ingelfinger rule will continue to be cited as an area of friction between journals and the media (but, in our experience at least, is rarely a concern for authors), yet other factors must surely be at work.

Although we are involved in writing, editing and publishing, and share with much of the media a desire to disseminate carefully crafted words and images,

few research journal editors refer to themselves as journalists (other than when we seek quick passage through immigration checks at international airports). Instead we see ourselves as slaving away for the benefit of the science and medical communities, ensuring that the most important work is presented to best effect and in such a way that it represents a genuine service to the research community. Indeed, journal editors have their roots in science, are entirely earnest about the science and journalism only rarely enters into it.

At a recent one-day meeting ("Breakthrough?", March 13th, 1999) organized by *The Lancet* and The Columbia University Graduate School of Journalism to debate "the science and politics of medical journalism," the focus was on all the things that can go wrong: Fraudulent research; journalists inappropriately sensationalizing a discovery; political agendas brushing aside the science; financial considerations dictating publishing policies; and a few examples of the old idiom "lies, damned lies and statistics." These are indeed real problems and deserve our attention, because they prevent us all from delivering good science to a public that seems eager to hear from us.

Perhaps an even bigger issue is what the former editor of *Nature*, Sir John Maddox, often referred to as the "prevalent distrust of science." It is certainly true that far too often the public has a negative reaction to science: Cloning is distrusted; advances in forensic science are thought by some to have failed to convict the guilty but threatened the innocent; gene therapy has yet to deliver on any of its promises; and angiogenesis is not about cure cancer. It is little wonder that the public remains to be convinced that the scientific community is working for them.

Editors and researchers should take

heed that although the above events were hardly our finest hours, they were all very attractive and successful stories for journalists, variously incorporating the perception of dramatic breakthroughs, human interest angles and science gone astray. And therein lies the biggest difference between many journalists and journal editors. The scientific community must therefore make it a priority to address the difference between their interest in science and its application to humanity, and the media's interest in an eye-catching story.

Perhaps the first step should be to challenge the pervasive notion that science advances by short, well-defined projects that often culminate in a climactic breakthrough and a tidy conclusion on which we can base public, national or international policies. We need to foster a deeper understanding and interest in the long-term iterative process of science—a process that is only rarely characterized by real breakthroughs, yet is certainly exciting in its own right and does not need the short-lived and fragile support of a 'breakthrough' label.

Scientists must resist the temptation of hyperbole, as attention-grabbing as it may be, and find a more meaningful way of getting across their excitement and pleasure in the latest findings. They must also be willing to discuss more openly with the media times of disagreement and dispute, as these will always be part of an adventurous and healthy scientific community.

The media have a tremendous influence on how the public sees science and, in turn, on science policy, as there are policy makers the world over who react most strongly to public sentiment. Closer cooperation between researchers, editors and journalists is needed to present a more articulate, accurate and deeper understanding of science.