# Careers in Science Publishing

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Publishing, particularly journal publishing, offers the chance to stay in contact with science and scientists and so appeals to people considering leaving the laboratory for another career. Professional editors of research journals review and select manuscripts for publication, negotiating as needed with authors and referees. Review journal editors commission articles on suitable topics and work with authors to shape manuscripts appropriately for the readership. Experienced individuals may advance to become a Managing Editor and further to a Publisher/Publishing Director position within a company or a not-for-profit organization, with responsibility for the business aspects of a publishing program. Would-be editors must be prepared to broaden their scientific knowledge, engage in person with community members, be tactful but firm in decision making, and work happily in the background. Evidence of a genuine interest in the communication of science beyond the usual writing and publishing of papers is necessary to compete successfully for entry positions.

No one reaches postgraduate level in science without reading and usually contributing to the professional literature. So it is not surprising that publishing comes readily to mind when postgrads or postdocs in the life sciences consider leaving the laboratory for another career. Editorial work, and the chance to stay in contact with science and scientists, is an appealing option.

The STM (science, technical, and medical) publishing industry produces journals, books, technical information and standards, databases and tools, and newsletters. Here, I pay particular attention to journal publishing because most scientists trained to doctoral level find employment in that sector. I do not discuss the better known businesses of publishing books on popular science or undergraduate textbooks, because these are usually the responsibility of people with sales and marketing expertise, not

postgraduate science degrees. For the same reason, my focus here is on editorial work rather than jobs in composition, production, marketing, or IT support.

Journals are arguably as essential to the progress of science as the experiments they describe. Journals communicate information but also register the precedence of an author's research, ensure quality through peer review, maintain archives for future scholarship, and provide navigation through the ever-increasing volume of published material. From their origins in 1665, with Journal des Scavons and Philosophical Transactions of the Royal Society, STM journals have become the product of a global industry of 5000-10,000 organizations, which publish around 30,000 journals with a collective output of 1.8-1.9 million articles a year and employ 110,000 people (not counting freelancers and the hundreds of thousands of unpaid referees).

 $Additional\ Perspectives\ on\ Career\ Options\ for\ Biomedical\ Scientists\ available\ at\ www.cshperspectives.org$ 

The number of journals and their output has grown steadily for more than two centuries by about 3% per year, driven by an equally steady 3% annual expansion in the number of research scientists. The United States produces the largest share of published articles ( $\sim$ 21%) but the most dramatic recent growth has been in China, which now has 10% of global output, followed by the United Kingdom (7%), Japan (6%), Germany (6%), and France (4%). Looking ahead, India's research productivity is predicted to overtake that of most G8 nations by 2020.

The number of English language STM publishers is estimated at around 650. Of these, 27% are commercial companies and the others not-for-profit organizations such as scientific societies and university presses. However, 64% of the articles come from commercial publishers (this includes many journals published on behalf of scientific societies), 30% from societies that publish for themselves, and the remaining 6% from university presses and others. The five largest companies publish nearly 35% of all journals, three of them (Elsevier, Springer, and Wiley-Blackwell) producing well over 2000 titles each.

Most journals are sold to institutions and researchers on a subscription basis. The STM market as a whole has had growth rates of 4%–5% since 2007, and it is projected to continue growing at around this rate in the short-to-medium term, despite concerns about a leveling off of institutional library budgets. The drivers of this growth are emerging regions such as Asia, India, and Brazil and the release of new titles, as well as traditional annual price increases.

The shift to web delivery of journal content, allied with concerns about increases in the price of some subscription journals, has prompted exploration of alternatives to the traditional journal subscription business model. Now an open access-publishing model in which authors or funders pay to publish a research paper that can be read free of charge online has firmly

established itself. The recognition of the revenue that can be generated by an open access journal when it publishes a large volume of manuscripts has fueled a wave of new publishers in the past decade and the launch of open access journals by both commercial companies and not-for-profits. The Directory of Open Access Journals now lists more than 9000 scholarly titles, a substantial proportion in STM.

The digital transformation of STM journal publishing in the past 20 years has opened other avenues for change. Anonymous peer review, for example, is under particular scrutiny. Some believe it can be improved by greater transparency, with publication of referees' reports alongside the paper, ideally signed by the referees concerned. Others consider that the selection of papers for novelty or importance is wrong and that peer review should be confined to the assessment of scientific validity rather than the "importance" of the findings. Yet others think the peer-review system is irretrievably broken and advocate instead for replacing it with postpublication, public commentary. There is also growing enthusiasm for the distribution of unrefereed preprints of research papers on sites such as arXiv and bioRxiv that allow authors to communicate findings more rapidly and get feedback before submission to a journal.

Anyone considering science publishing as a career today, therefore, should be aware that the industry has been in transition over the past decade. There has been a dramatic increase in start-up ventures intent on catalyzing and capitalizing on this disruption. The impact of digital technologies is the primary cause but in addition, the academic community, supported by some science funders, is pushing back against the established publishing ecosystem, concerned that large commercial companies are deriving excessive profit margins from the shrinking pool of public funds for research.

#### **IOBS**

Publishing organizations are diverse in structure and function, particularly with respect to titles and responsibilities. What follows is a

<sup>&</sup>lt;sup>1</sup>The STM Report, by Mark Ware and Michael Mabe, 2012.

<sup>&</sup>lt;sup>2</sup>Thomson-Reuters Journal Citation Database, 2011.



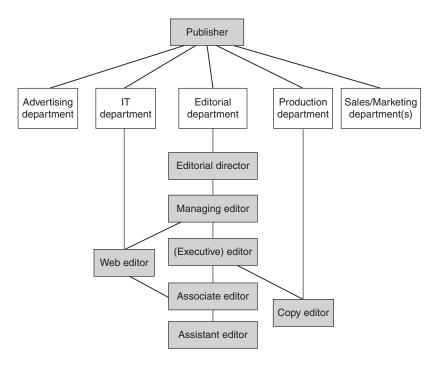


Figure 1. A typical career path for a science graduate within a generic publishing house. For clarity only positions that usually require a PhD are shown.

general view and should be checked against the particulars of any organization in which a prospective recruit is interested. A generalized career path in publishing for individuals with a science PhD is shown in Figure 1.

Regardless of the output (a book, a reference work, a review journal, or a research journal), the editorial department is always responsible for interactions with authors and the selection, and if necessary the reshaping, of manuscripts that accord with the desired scope, audience, and quality standard. The selection process usually requires some form of peer review, more often than not involving practicing scientists who specialize in that particular field. When a manuscript is accepted, it may undergo further editing for scientific content by a science editor. The production department then copyedits it, correcting spelling and grammar and imposing house style and design elements, and then works with a compositor to transform it into file formats that can be published online (HTML) or as an e-book (ePub), printed

(PDF), or conveyed to repositories and indexing services such as PubMed Central (XML). If advertisements or commercial sponsorship of content is appropriate and can be secured, a specific department is responsible for their acquisition. Marketing and sales departments promote the publication to researchers (as both authors and readers), clinch the purchase and the renewal of subscriptions if that is the journal's business model, and provide customer service. A finance department ensures appropriate record-keeping, analysis, reporting, and projections. In some organizations, responsibility for online functionality rests with a specific department. In others, this is handled by a hosting service. As emphasized above, however, editorial is the department most likely to contain the people with science qualifications.

#### **Journal Editors**

Journals are thriving in the digital world. Many types of publication are loosely referred to as

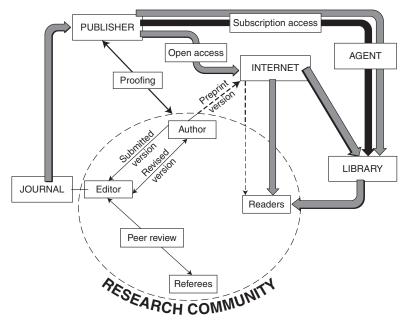


Figure 2. The publishing cycle for journal articles.

"journals" but here the term "research journal" is used to denote a periodical that publishes accounts of research written by the investigators themselves that have been subjected to a peerreview process (see Fig. 2).

A "review journal" is a periodical that publishes reviews or surveys of current research and commentaries rather than original data. A handful of publications, most notably *Nature* and *Science*, combine research papers with reviews, commentary, opinion pieces, features, and news, and are referred to in this chapter as "magazines."

#### Research Journal Editors

At a research journal, submitted manuscripts are evaluated, accepted, or rejected by an editorial team that will vary in size, depending on the journal. The Editor (or Executive Editor or Chief Editor or Editor-in-Chief) has ultimate responsibility for everything that appears in the journal, which includes the selection of articles, scientific scope of the content, the styles of article, and their relative balance within the journal. The Editor is ultimately responsible to

the Publisher for the success, or failure, of the journal in terms of its reputation or value within the community it serves. Although most STM journals are edited by academics who do the editor's job on a part-time basis, a number of journals have scientifically qualified editors who are paid employees of the publisher. Most review journals are staffed this way, as are many of the most prominent research journals and magazines in the life sciences. Because these "professional editors" are encouraged to visit research centers and attend conferences, of all the scientifically qualified individuals who work in publishing, they are the most visible to the research community. When scientists express interest in a publishing career, this is the job they most frequently imagine having and where those exiting academia most often get their start in editorial work.

There is a hierarchy of positions within professional editorial teams. An entry-level position is most likely that of Assistant Editor, with advancement possible to Associate Editor or Senior Editor. The Chief Editor or Executive Editor in a professional team has the broadranging responsibilities outlined above, and a

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more senior Managing Editor may have overall responsibility for more than one journal (see below). But the consuming task of all the professional editors of a research journal is the selection of manuscripts from among the thousands submitted each year. The editors must have training and expertise in relevant subject matter and a general magazine such as Nature or Science will have a large number of editors with different scientific backgrounds. Because their task is to identify the most significant research papers for publication, they must read all the submitted manuscripts in their subject area and employ their critical judgment to select only a portion of them for peer review, declining the rest with a regretful letter to the authors. The editors must then engage appropriate reviewers for each paper, usually three, bearing in mind the special technical expertise that may be required and any factors that might influence the objectivity of the opinion expressed. Having assembled the reviews, the editor must then make a decision on the paper: an unqualified yes or no, or-frequently-"revise," the initiation of a conversation with the authors about current inadequacies that would be removed if certain changes were made. Some of these changes may require additional data or experiments. The conversation with authors is often lengthy and occasionally testy. Every scientific paper is the product of intense and challenging work and editors must be prepared to deal with authors who are passionate in their defense against criticism, however well-intentioned or necessary.

For journals that have academic editors who do the job on a part-time basis (such as many commercial journals and journals owned by scientific societies), responsibility for managing the journal and relationships with its academic editors (and if applicable its client society) usually lies with a managing editor. That person may be trained to postdoc level in one scientific specialty but will often manage a list of journals in several different subject areas. The duties of the managing editor depend on the ownership of the journal. If the owner is a society, defining the journal's scope and assessing editorial functions such as manuscript flow and acceptance

rate are the responsibility of the society's publications committee, although the managing editor's views on weaknesses and improvements may be valued. In general, the managing editor is responsible for the negotiation, maintenance, and renewal of the contract that binds the society and the publisher and for reporting to the society on the business functions of the journal, including financial performance, subscription and advertising sales dynamics, market position, and usage metrics. For journals owned directly by a commercial publisher, the managing editor has similar business responsibilities but an additional obligation to assess the performance of the academic editors and the journal's competitive position, and take action to improve things if necessary. Managing editors are often science graduates but not always, particularly in some organizations in which the role is primarily administrative.

Some journals with academic editors also employ professional editors, sometimes called "staff editors" or "executive editors," to help with manuscript triage and oversee the peerreview process and administrative staff. These positions are occasionally filled by scientists fresh from research positions but more often by professional editors trained at the kind of journal described above. These individuals often combine the role of managing editor and research manuscript editor, bringing valuable publishing experience that permits the academic editors to focus primarily on manuscript selection.

# Review Journal Editors

Review journals primarily publish articles that are commissioned and subsequently edited by professional editors. These individuals have the task of filling their issues with articles commissioned from groups of expert authors. Although there may be some volunteered articles, most of the time this responsibility requires a close eye on the progress of science in the journal's area and the generation of ideas for articles that summarize important new directions, concepts, or technologies. Suitable authors then have to be identified and persuaded to

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take on the task, with an agreed deadline. Because those deadlines are seldom met, prudent planning is required to ensure that issues of the journal can be published on time with sufficient content to satisfy the readership. Whereas the editors of research journals are usually dealing with an oversupply of papers, review editors have the constant challenge of filling the article pipeline with high-quality material and keeping it full.

As well as choosing referees and overseeing peer review of commissioned articles, review journal editors also "developmentally edit" the manuscript to make it accessible even to readers who do not work in the same field. This may involve rewriting parts of the manuscript, simplifying language used, and frequently querying aspects of the science. There can be much discussion with the author and it is critical that the editor has confidence in his/her opinions but deals tactfully with authors when asking for revision to a manuscript.

# Web Editors

Although many journals retain print editions for various reasons, all science journals are now published online, a transition from printonly that began in the mid-1990s. For the first decade of the transition, journal content had the same look and feel online as in print and the impact of the change was felt more by production, marketing, and sales staff than by editors. Now the online journal, with its wealth of features and functions, is the primary focus for most publishers, and editors and publishers have a multitude of new and emerging creative opportunities. This can involve web-only material, as well as new initiatives outside the traditional journal format, such as portals, knowledge environments, and social-media sites aimed at scientists. Some of these are initiated by publishers, but many are start-ups. There are jobs for web editors who maintain this type of content in many larger publishers, and an increasing number of scientists are moving into start-ups in this area straight from, or even while at, the bench.

#### **Book Editors**

For books for professional use or reference works, editorial activities are usually divided up into "acquisition" and "development." A book acquisition editor is responsible for the maintenance and expansion of a list of books in topic areas that the publisher has targeted for business reasons, and does so by finding and engaging with authors and editors who can create appropriate titles. In this respect the job resembles that of a review journal editor. Prospective authors may volunteer manuscripts but in science publishing, this is rare. Usually an acquisition editor, through reading or networking in the communities concerned, must instead come up with ideas for books that would be commercially attractive. These ideas must be validated by experts, before academic authors or editors able to create the manuscript are sought out. Not all ideas may be judged viable and not all projects may find willing participants.

When the manuscript arrives, it must be assessed. If it is not judged suitable for its intended purpose or audience, the acquisition editor may request changes from the author and/or engage the services of a developmental editor. Developmental editors edit the book manuscript in much the same way a review journal editor would edit a review article. To work effectively, they need a background in the subject matter, usually at postgraduate level, together with the editing skills required to adjust the manuscript's content, scope, or style for its intended market.

Developmental editors are usually freelancers who are engaged for a fee to work on a project-by-project basis and many scientifically qualified people take on such work in their specialties as an adjunct to other activities. Book acquisition editors, on the other hand, are full-time employees who are judged in part on the numbers of titles they commission and the sales of those books in relation to the publisher's total output and to competing books from other houses. Sales of print books in STM are declining in response to the availability of online information and the increasing share of shrinking library budgets being taken up by journals. Pub-

lishers with large book lists now often convert them to electronic formats and offer them for sale in bundles to libraries. However, as a medium for current scientific information, the book format is no longer as influential, or as profitable for publishers, as it once was.

#### **Publisher**

This position, the most senior in a publishing company, is also often filled by a science graduate. The Publisher is responsible for overall management and for meeting business goals and is involved in functions such as finance and personnel management and the fulfillment of legal obligations and ethical requirements. The Publisher's key responsibility is strategic planning in accord with the mission and standards of the owner, whether that is a commercial company or a not-for-profit. If entrepreneurial zeal for the development of new publications and services is expected or encouraged by the owner, it will be driven by the Publisher, although the novel ideas themselves may percolate from other parts of the organization, such as editorial and marketing. Publishers are often, but not always, drawn from the editorial track and larger organizations frequently have intermediate positions such as Publishing Manager or Assistant Publisher that are stepping-stones to this role editors can take.

#### **SKILLS AND QUALIFICATIONS**

To get a job as a professional editor, a PhD and some postdoc experience in a relevant science discipline is generally required. This ensures that the candidate has an understanding of the values and functions of the research community the journal serves. An ability to critically assess research manuscripts within the scope of the journal is essential. Would-be editors must be able to show they are familiar with and can discuss the key advances in any area they hope to cover. They must also be comfortable with discussing and rapidly coming to grips with subjects they have not worked on and are less familiar with. An eye for detail is important and, for review editors in particular, excellent written

English and the ability to write about science clearly and concisely are required. All of these are skills candidates must demonstrate in formal tests that are set before and/or during the interviews for new positions.

The ability to build and maintain strong personal relationships with scientists is essential for any editor and this requires diplomacy, effective negotiation and problem-solving skills, and an ability to stand firm on decisions when required, even in response to angry authors, who can often be very senior and take exception to the judgments of an editor who may be younger and have much less research experience. Similarly, an editor may occasionally have to justify a decision to referees who feel their views have been too easily dismissed. Authors and referees, and sometimes referees of the same paper, all too often have starkly contrasting views of the merits of a particular paper, and it is the editor who ultimately has to make a decision. It is not a job for the faint hearted and editors must be able to deal calmly and tactfully with such situations.

Editorial positions require the juggling of multiple tasks often within strict deadlines, so excellent organizational skills are required, plus an ability to preserve them under pressure. Journals run to tight production schedules that must be maintained despite the ebbs and flows of manuscript submissions and revisions and referee delays. The ability to work in teams is vital, because publishing is a collaborative activity involving individuals with complementary skills. Many of them will not be scientists but professionals who have followed very different career paths. An editor must be able to interact well with people in production, marketing, and other departments, including those who do not consider that having a PhD warrants special treatment.

An important consideration for a scientist considering transition from research to a publishing position is the recognition that one is giving up the goal of being deeply conversant with one particular aspect of science for the requirement to be broadly informed across a discipline. It helps to be curious and excited by new ideas and approaches and to have the self-confidence to go alone to conferences and take part in conversations in which your companions know much more about the details of a topic than you do. Being comfortable in such situations and enjoying discussing science in person is essential. If you would rather e-mail someone a response than talk in person, a job as a journal editor is not for you. Similarly, it is important to remember that the editor is not the star of the show. Your best work will go unnoticed by most readers and you must be content that others—the authors who did the research—have center stage. The rewards of editorial work may be quiet but it can be satisfying to get the first glimpses of emerging concepts, novel technologies, or rising stars and have the opportunity and the means to bring them the focus and attention you think they deserve.

Finally, it is important for would-be editors to understand that STM publishing is a business that is going through the most significant shift in communication since the invention of the printing press. The internet, mobile devices, and their associated technologies are reshaping publishing. The blog "The Scholarly Kitchen," run by the Society for Scholarly Publishing, is an often lively forum for discussion of the trends, threats, and opportunities that preoccupy professional publishers. Scientists entering publishing should bring-or be prepared to quickly acquire—skills and awareness beyond their research specialty. Business modeling, technology development, design, social-media engagement, and marketing and sales strategies are all functions that are becoming ever more integrated with editorial work as the digital landscape evolves.

#### **GETTING A FOOT IN THE DOOR**

Every advertised editorial position attracts hundreds of applications from people with a PhD. Some say frankly that they are having difficulty staying in research and are looking to enter publishing to stay in touch with science. Such honesty, although perhaps commendable, is not recommended. Recruiters are looking for applicants for whom publishing is an active choice,

not a fallback. What is needed is evidence of an intrinsic interest in the process of science communication that will make an application stand out from the rest, and the usual experience of writing papers based on your own research and publishing them is not enough. Any prior experience of science writing or editorial work should be emphasized. There are several things you might do to gain such experience and demonstrate a genuine interest in publishing.

One approach might include a track record of editing other scientists' manuscripts before they are submitted for publication, especially if the applicant's help is acknowledged. Some large publishers offer internships for postdocs to gain experience in editing and these are a good way to test the water and make contacts in the industry. There are also companies such as Edanz, American Journal Experts, and others who employ working scientists to help authors of papers whose first language is not English. Other noticeable experience might include reviewing manuscripts for journals, either as designated referee or as a principal investigator's proxy. You should include any evidence you can provide in your application and list the journals.

To build a collection or portfolio of your own writing, seek out prospects for communicating science in your community, for example, by working on an undergraduate or graduate student magazine or the college newspaper. Development or public affairs/communications offices at your institution may provide possibilities and welcome independent proposals. You might offer to interview and write a profile of a faculty member, describing research that has attracted interest in the community. Consider participating in or organizing a student journal; the Yale Journal of Biology and Medicine is an example of a student-run journal that gives students experience in science writing and publishing. Establish an online presence by writing a science-themed blog. An active Twitter account used for commentary on research results might also catch a recruiter's eye, as might posting comments on published papers on journal websites, preprint servers or blogs. In all such endeavors, particularly longer-form writing such as personal or bylined blog posts, work should be carefully crafted and proofread. These efforts can become writing samples that influence how the author is perceived by potential employers.

Evidence of such activities and enthusiasm may be sufficient to get an applicant shortlisted for the position. At that point, journals may send out written tests or exercises to candidates, which are often followed by further tests at an interview. A research journal will typically ask candidates to provide a critical assessment and recommendation for unpublished manuscripts that have already been decided on and then justify their recommendation to the in-house team. A review journal will usually give candidates a poorly written manuscript and ask them to improve it and draft a letter to the author detailing the revisions that are necessary.

Finally, be sure to look at papers published in the journal before you apply. Familiarity with them will impress interviewers, who will often ask your opinion about papers that have been published and whether, in your view, they should have been accepted.

# **CAREER PROGRESSION**

Advancement in editorial positions is based on experience as well as competence. Assistant Editors can advance to Associate Editor and then to Senior Editor. In larger editorial teams there may be the opportunity to become a Deputy Editor and eventually Editor. At each stage of advancement, there is more and more diverse responsibility. Some promoted positions may offer the opportunity of commissioning articles for specific purposes or writing editorials. There is a growing trend for conferences to be sponsored by journals and in many cases, the more experienced editors at the journal are engaged in devising the program, inviting the speakers, and representing the journal at the meeting.

At some publishers, there is also the opportunity to launch new journals. This can be an exciting challenge, allowing an editor to shape something new rather than assume the reins of an existing project. As the online activities of science publishers continue to diversify, this opportunity may extend to other publishing projects, not just journals. In larger organizations, editors may have the opportunity to move into an Assistant or Associate Publisher position in which they become more engaged with the business functions of one or more journals and have a different career progression. Such advancement might be helped by acquisition of professional qualifications such as an MBA that can be earned part-time.

An additional potential career fork for people on an editorial track is the opportunity to become a managing editor for a suite of journals and their editorial functions. This may in time lead to advancement to a Publisher's position in the commercial sector in which the responsibilities are more business oriented. Another transition within the industry is into the role of acquisition editor for books and reference works (as described above), a position that benefits from extensive knowledge of research communities and their makeup.

Although I refer here almost exclusively to opportunities in English language publishing, research communities in Asia and other regions of the world have many established publications in local languages. As these communities have prospered through government investment in science, and their research output has increased, Western publishers have begun to pay attention. Many have established publishing partnerships with societies in Asia and are exploring ways of raising the profile of journals based there. The Middle East and South America are other potential growth areas. As these connections deepen, scientifically qualified people who have editorial skills but can also speak languages such as Mandarin, Arabic, Spanish, or Portuguese may have additional opportunities.

#### THE WAY OUT

STM publishing is a global industry with both commercial and not-for-profit employment sectors. There are extensive opportunities to move within the industry, especially for those with the freedom to change location, particularly internationally. Publishing, and in particular editorial work, gives scientifically qualified people an opportunity to gain a deep awareness www.cshperspectives.org

of knowledge creation in major scientific disciplines such as neuroscience, stem cell biology, genetics, cancer biology, or immunology. They also acquire an extensive network of connections with prominent scientists in the field and a mutual degree of trust and confidence in their interactions with these individuals. These qualities, along with strong organizational skills and a well-developed capacity for critical thinking, may lead editorially experienced people back into academic life. The opportunities are many, for example, becoming administrative director for a university-based research institute or chief of staff for the president of a center for science and medicine. Additional avenues for individuals with publishing skills include organizing conferences, working with scientific societies and foundations, government jobs, and various other rewarding career options described elsewhere in this book.

### **BOX 1.** My Experience

My research experience at the University of Edinburgh, first at the veterinary school as a Research Associate, then at the medical school as a PhD student in immunology, was instructive and productive but largely self-directed and susceptible to new ideas. I graduated knowing there were many more exciting things happening in medical research than could be engaged in as a postdoc. So I applied to be, and was fortunate to be appointed, an Assistant Editor at the distinguished journal *The Lancet* in London and learn from its brilliantly and broadly erudite staff.

Nearly three years later, after a chance meeting with directors of Elsevier Biomedical Press, I was given the privilege to create and edit the journal *Immunology Today* (now *Trends in Immunology*) in Cambridge. Its timing captured an extraordinary wave of discoveries in the field—T-cell recognition, immunoglobulin structure, monoclonal antibodies, the HIVs—and it quickly caught on. Its success created the opportunity to launch *Parasitology Today* (now *Trends in Parasitology*) and begin laying the groundwork for future titles. I also contributed some articles on science to daily newspapers.

After 7 years in Cambridge, I was invited to meet Jim Watson, whose Nobel Prize—winning discovery of the structure of DNA with Francis Crick at the age of 24 was the first step in a remarkable career as a scientist, a teacher, an impresario of research, and the author of best-selling textbooks and the classic memoir *The Double Helix*. The Director of Cold Spring Harbor Laboratory in New York since 1968, Jim had personally built a small but highly regarded book publishing program at the laboratory that had just launched a research journal, *Genes & Development*. He extended an invitation to come to Cold Spring Harbor and develop from this foundation a fully fledged publishing house that could extend the name and reputation of Cold Spring Harbor Laboratory and contribute to its economic well-being.

Cold Spring Harbor Laboratory Press (www.cshlpress.org) is now one of five education divisions of the laboratory, one of the world's leading research institutions with programs in cancer, neuroscience, genomics, plant science, and quantitative biology. The Press has 44 staff members, including 10 talented people with postdoctoral qualifications in a variety of editorial positions. Its publications are sold through marketing and sales agents worldwide. I am the Executive Director of the Press and have been the Publisher of Genes & Development and Genome Research as they became two of the most successful and respected journals in molecular biology and genetics, as well as the more specialized research journals Learning & Memory and RNA. In recent years, I conceived and launched three review journals, Cold Spring Harbor Protocols, Cold Spring Harbor Perspectives in Biology, and Cold Spring Harbor Perspectives in Medicine. More new journals are planned. I have also commissioned and published several hundred books and manuals, including titles such as Molecular Cloning and At the Bench that have become essential resources for laboratories worldwide. At the dawn of the World Wide Web, I founded a venture-capital-funded start-up, BioSupplyNet.com, and more recently, cofounded the laboratory's preprint service for the life sciences, bioRxiv. Since Cold Spring Harbor Laboratory's graduate school began, I have been the academic mentor for 10 PhD students.

# CSH SPECTIVES

#### **BOX 2.** Ten Dos and Don'ts

- 1. Do not go into science publishing if you are determined to remain as specialized as you were in research.
- 2. Do remember that publishing is a business, even within a not-for-profit organization.
- 3. Do make yourself aware of what trends, threats, and opportunities preoccupy publishers.
- 4. Do not say "I want to get into science publishing because I want/have to leave bench science."
- 5. Do not think you know about science publishing just because you have written some papers and had them published.
- 6. Do not say "I have always been interested in science publishing" unless you can back that up with evidence.
- 7. Do get some real experience in the communication and assessment of science, such as writing about research in blogs or magazines or posting commentary on research papers on appropriate websites.
- 8. Do be honest with yourself about how comfortable you are in social and professional interactions with other scientists whose field is not yours.
- 9. Do remember that editors work in the wings, not on center stage.
- 10. Do not go into science publishing because you think you will be better off financially than by staying in research.

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