

# nature cell biology

## An interdisciplinary forum: integrating new horizons

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The publishers of *Nature* have launched five monthly journals over the past seven years. Each journal carries the *Nature* name and, by upholding *Nature's* commitment to the highest standards in scientific publishing, each has become a leading journal in its respective field. Encouraged by this success, we are now pleased to add *Nature Cell Biology* to the fold.

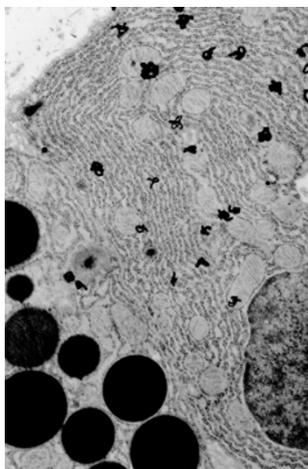
Before going further, it is worth defining what we mean by 'cell biology', as it means many things to many people. Understanding how cells function and communicate with each other is one of biology's great challenges, and unravelling the fundamental molecular processes responsible defines the core of cell biology. Cell biology is by definition, therefore, a broad discipline and includes topics from cell division to apoptosis, from membrane traffic to cytoskeletal dynamics, from the function of molecular motors to adhesion, and from the organization of the nucleus to signal transduction. Seeking to understand such a wide range of processes requires an equally wide range of experimental and conceptual approaches, and modern cell biologists combine the power of genetics, biophysics, morphology, molecular biology, biochemistry and ultrastructural analysis to gain insight into cell function. This integrative approach is at the heart of cell biology.

But why launch such a journal now? One reason is the rapid expansion of the field. A prominent sign of this is the number of new cell biology institutes that have opened over the past few years (for example, in London, Paris and, soon, in Dresden), and the increased investment in cell biology programmes around the world. Research in the area is booming, motivated in part by the fact that cell biology is the starting point for defining normal biological function, and, by extension, for understanding the abnormalities associated with disease processes.

The horizons of cell biology are expanding and it is having an increasing impact on other disciplines, partly because it forms an essential bridge between fields such as immunology, neurobiology, genetics, medicine and developmental biology. In fact, the interface between cell and developmental biology is one of the most rapidly expanding areas in the life sciences, and is providing clues as to how fundamental cellular processes (such as the transmission of signals from cell surface to nucleus) regulate the development of complex organisms.

But at the same time, cell biology is becoming more cohesive, as researchers cross disciplinary divides. The study of topics such as apoptosis, the cell cycle and the cytoskeleton in isolation is beginning to give way to a real appreciation of how all of these processes affect each other, and how they fit together to define cell function as a whole. Yet major issues remain unresolved. We are only beginning to unravel the intracellular signalling pathways involved in controlling the size of organelles, for example, and they will no doubt be just as complex as those that transmit signals from the plasma membrane to the nucleus.

All this, we believe, provides a strong foundation for the launch of *Nature Cell Biology*. Many cell biologists have told us that the field could benefit from a new interdisciplinary forum designed to foster the exchange of ideas between all areas of cell biology and we hope to be able to provide it. Our aim is to publish a relatively small number of papers of exceptional significance and quality drawn from all areas of cell biology, as examples of what seems to us most important and interesting. By presenting the best papers in every



**In the 1950s and 60s, pioneers such as George Palade combined state-of-the-art imaging techniques with biochemistry to understand cell function. This integrative approach revolutionized the discipline and gave birth to modern cell biology. One major development in this era was the mapping of the secretory pathway, from protein synthesis to exocytosis (this 1966 micrograph shows newly synthesized proteins on the rough endoplasmic reticulum).**

area of cell biology, we hope to give our readers a clear picture of the fields' diversity, while at the same time allowing them to appreciate the common threads that bind the community together.

This first issue illustrates the diversity we hope to achieve, with research on topics ranging from membrane traffic and vesicle fusion, to cytoskeletal dynamics, the cell cycle and proteolysis. Future issues will extend this mix to additional topics such as the cellular mechanisms of development and apoptosis. These papers also illustrate the spectrum of experimental techniques available to cell biologists today. Research Articles in *Nature Cell Biology* will typically be about 6–8 pages long, allowing ample space for the presentation of results and discussion of their significance. Each issue will also contain one or two Brief Communications; this section will be peer-reviewed but is intended for shorter items that are nevertheless of broad interest to the cell biology community.

*Nature Cell Biology* will also publish a timely and informative mixture of editorial material, including News and Views, Reviews and Historical Perspectives. Each News and Views article is intended to highlight a particular paper (or group of papers) and to put the findings in a broader context for non-specialists. Some will discuss papers that appear in the pages of *Nature Cell Biology*, but others will focus on significant papers published elsewhere (see, for instance, p E10). These so-called 'unlinked' News and Views articles are an excellent opportunity for us to widen our perspective and cover the entire breadth of cell biology. We welcome suggestions for such unlinked pieces, and authors need not be shy about alerting us to their own forthcoming publications. Our first Review appears this month (p E17), and we hope that it (and future Reviews) will not only provide an overview of an interesting topic, but also synthesize a new view which the community will find useful, and which will ideally stimulate further experimentation and debate.

As we approach a new millennium, many of us seem to be increasingly curious about how the past has influenced the present, and we hope that our Historical Perspectives section will satisfy this curiosity. Articles in this section will focus on past discoveries and attempt to describe the research climate at the time, how well the discoveries were received, who was involved and how the events unfolded. Looking to the future of cell biology, we also plan to add New Technology articles focusing on recent technological advances that will have a significant impact on the field. Commentaries (which will focus on matters arising from our previous publications, or on any other topic of interest to our readership) and Book Reviews complete the editorial picture.

Cell biology is a rapidly moving discipline and *Nature Cell Biology* is committed to keeping its readers abreast of the most recent developments. While the full text of each issue will be available on our website (<http://cellbio.nature.com>), we also appreciate that it is vital for scientists to have immediate access to the most important research, and we will therefore publish our Articles and Brief Communications continuously on our website. Papers will be published on our website shortly after final proofs are returned and they will appear in print in the following issue. We hope our readers and authors will appreciate this service, but we welcome your views on how it might be improved.

### Relationship to *Nature*

A word about our relationship to *Nature* is in order. Like *Nature*, *Nature Cell Biology* has a full-time editorial staff and no external editorial board. Instead, decisions are made by the editorial staff, often after consultation with outside experts. This is a long-standing policy at both *Nature* and the monthly *Nature* titles; it allows editorial flexibility and ensures that the opinions of a particular individual or group do not dominate editorial policy in any given field.

Despite having much in common, however, the two journals are editorially independent. Thus, it will be for authors alone to decide where to submit their manuscripts, and *Nature* will not divert papers to *Nature Cell Biology* unless authors specifically request it. *Nature* itself will continue to publish the most significant advances in cell biology just as it has always done, and it will judge manuscripts it receives on their merits, without involving *Nature Cell Biology*. If a paper cannot be accepted by *Nature*, however, authors are welcome to resubmit to *Nature Cell Biology*. *Nature* will then release referees' comments to the editors of *Nature Cell Biology*, allowing a rapid editorial decision. This system has served *Nature* and its monthly titles well, and has played a key part in the success of all the *Nature* journals. We firmly believe that for a journal to become the leading publication in its field, most of its papers must be submitted directly to that journal by authors who freely choose to do so.

Our aim, then, is to publish the best, most important and most interesting research and place it in a context that can be appreciated by a broad range of cell biologists. We hope to both inform and involve the cell biology community, and we look forward to working with you to make *Nature Cell Biology* a valuable, enjoyable source of information. We place a high priority on maintaining an open, active dialogue with the community, and we look forward to hearing from you.