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Diversity-Oriented Organic Synthesis and Proteomics: New Frontiers for *Chemistry & Biology*

Editorial

This strikingly new-look issue of *Chemistry & Biology*—the first to be published under the auspices of Cell Press—gives new meaning to the term "combinatorial chemistry." For those keeping score, this marks the journal's fourth home in the past five years, as operations have flipped from San Francisco to London and then, after the acquisition of Current Biology Ltd. by Elsevier, to Amsterdam. While these earlier moves were largely beyond our control, the latest—and one hopes final—move to the Cambridge, Massachusetts, home of Cell Press, is of our own choosing, and it marks what we hope is the beginning of a fruitful long-term relationship.

The opportunity to join Cell Press presented itself midway through 2001 and makes great sense for *Chemistry & Biology* and our loyal community of readers and contributors. Cell Press is the publisher of *Cell* and seven other outstanding journals (including our original sister journals, *Current Biology* and *Structure*) spanning the realm of biomedical research. The editorial principles evident at Cell Press are in keeping with those that guided the launch of *Chemistry & Biology* back in 1994: expert editorial assessment, efficient manuscript handling, and prompt publication. The visibility afforded by Cell Press both in print and online will help us to find many new potential readers and contributors within the biology community. We are also excited to reach out to more traditional chemists who are just starting to appreciate the new opportunities afforded by the interface of chemistry and biology.

So what changes lie in store for *Chemistry & Biology* in 2002 and beyond? The most obvious is the journal's new appearance, one that will be familiar to readers of other Cell Press titles. Allowing greater flexibility for cover design, we have retired the sky-blue trim that adorned every cover until now. The layout of the research papers is now in the sans serif Cell Press format. Authors should note some minor changes to the style of research papers; while we are retaining the Vancouver (numerical) citation method and the "Significance" section, articles will no longer have numbered sections in the text, and the new abstract style consists of a single, seamless paragraph. We are also keen to consider more succinct papers that might occupy only a few printed pages, "Communications" in the language of American Chemical Society journals, provided they report results of unusual significance for the field.

Our major priority for 2002 is to improve the handling and speed of publication of all research manuscripts, former hallmarks of *Chemistry & Biology*. We are delighted to welcome Dr. Victoria Mountain as *Chemistry & Biology's* new Assistant Editor; Victoria will provide authors with expert scientific advice at Cell Press and oversee the peer review system in conjunction with our Associate Editors. (If authors should experience any difficulties or delays during this transition period, we will do everything possible to set matters straight.) We are delighted that Ronald Breaker and Michael Famulok have joined the team of Associate Editors, but we are sorry to lose the services of Patrick Baeuerle, who is stepping down after having served *Chemistry & Biology* since its inception. A replacement for Patrick will be named shortly. Finally, it is a great pleasure to welcome back Rebecca Ward, the founding managing editor of *Chemistry & Biology* and currently Director of Research Affairs at the Harvard Institute of Chemistry and Cell Biology, as the journal's Consulting Editor.

From the editorial perspective, *Chemistry & Biology* will continue to present exciting cross-disciplinary research and will renew its commitment to publishing accessible and informative front matter, including previews, Crosstalk essays, and occasional features. Following last year's completion of the draft human genome sequence, there has never been greater interest in the interface between chemistry, biology, and other disciplines. For example, the Howard Hughes Medical Institute recently purchased near Washington D.C.'s Dulles Airport some 300 acres of land, known as Janelia Farm, where it will open a modern research facility housing more than 20 research groups drawn from the fields of chemistry, physics, engineering, bioinformatics, and molecular biology. Similar initiatives are sprouting at universities across the United States and elsewhere. We feel that *Chemistry & Biology* is ideally placed to capture this excitement and become essential reading for a growing number of researchers who are helping to blur traditional boundary lines.

Having said this, there are two areas that we are particularly keen to see flourish this year. The first is diversity-oriented synthesis (DOS), which aims to produce structurally complex and diverse small molecules efficiently. When coupled with small-molecule screening (both phenotypic and proteomic) and informatics, DOS promises to facilitate a chemical approach to exploring biology in a systematic way. As synthetic chemists trained in target-oriented synthesis (TOS) begin to explore the challenges of DOS, they also often experience the growing pains of journals centered about traditional aspects of synthesis. *Chemistry & Biology* has a clear appreciation of the significance of advances in (1) the planning of DOS syntheses (pathway development), (2) the realization of library syntheses in useful formats, and (3) the use of DOS-derived small molecules in biological experiments. We aim to be flexible and inviting in our interactions with synthetic chemists who encounter the many challenges of a new field. We aim to learn from our contributors what constitutes an important advance in this field, rather than to dictate in advance a rigid set of rules.

The second area where *Chemistry & Biology* is well placed to present cutting-edge research is—not unpredictably—proteomics. There has been an explosion of interest in both academia and industry in new techniques and procedures for studying protein chemistry and function, including structural determination, localization, protein-protein interactions, and so on. This field is intrinsically dependent on advances in both chemistry *and* biology, and we strongly encourage authors in this field to consider *Chemistry & Biology* in disseminating their results. This is a wide-open field that means different things to different people. We again take a learning, open view of the field and anticipate contributions ranging from analytic chemistry to array technology to high-throughput methods for vector and recombinant protein production. We envision applica-

tions ranging from analyses of protein functions to protein profiling to comparisons of whole proteomes.

This promises to be an exciting new chapter for *Chemistry & Biology* and our field. It only remains for us to thank our former publisher, Bas van der Hoek, in-house editor Gepke Uiterdijk, and colleagues in Amsterdam for their efforts during 2001 and assistance in facilitating the move to Cell Press. We are indebted to Lynne Herndon, CEO of Cell Press, for her belief in *Chemistry & Biology*, our community, and above all, combinatorial chemistry.

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