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Cell Chemical Biology

Editorial

CellPress

From Powerful Review Articles to Research Breakthroughs

For those who are working at the interface of chemistry and biology, chemical biology may seem like old news. Although most would agree that chemical biology is not yet a mature discipline like cell biology or physical chemistry, those who have dedicated their research careers to untangling the secrets of biological function using chemical approaches likely feel that chemical biology is a road well traveled. However, chemical biology is still in many ways a new kid on the block, and we, as editors of one of the leading journals dedicated to supporting the field, feel that it is our responsibility to help chemical biologists tell and hear each other's stories as well as to help them place chemical biology contributions in the broader context.

One way in which those thoughts are summarized, explained, and shared is through the review content that we publish. A useful review article is significantly more than a laundry list of facts: it is a snapshot of the thinking in the field delivered in a way that is both instructive for novices and deeply intellectually engaging for experts.

Building on the description of a useful review article, an exceptional review article is one that not only informs and educates, but also provokes alternative ways of looking at a problem and inspires further research and discussion. A great review helps us not only to navigate the existing scientific literature and information overload, but leads us to discover new galaxies of scientific knowledge. We like to think that all of the review articles we publish are useful, and we hope that most of them are exceptional and play substantial roles in setting the research agenda for different fields we cover.

Review articles are also a way in which editors engage more actively with the direction of the field. Most review articles published by *Cell Chemical Biology* are editorially commissioned, which means that the Editors decide on the topic for a review article and invite experts in the field to write it. Overall, there are many different ways in which editors identify a timely topic. Our ideas may crystallize while we browse through the existing literature, flip through meeting programs, watch webinars, or listen to talks at scientific conferences. We may get inspired by a newspaper article discussing a specific medical need, news of a drug approval, or a chance remark on social media. Often times, ideas pour in as we engage in conversations with members of the community or as we work with our authors and reviewers on shepherding the research papers submitted to *Cell Chemical Biology* through the peer review process. We also receive tips and suggestions from our Editorial Board members, who are our ambassadors and our eyes and ears in the community. Finally, some proposals are unsolicited and come to us through our presubmission inquiry process. These presubmission inquiries usually contain a brief explanation of why a certain topic would benefit from a synthesis and include a rough outline of the key points that the proposed review will cover, as well as a list of the key references that will be discussed.

Regardless of where ideas and suggestions for our review articles come from, they all go through a process of careful evaluation before they become a formal invitation. Based on our experience, the best *Cell Chemical Biology* review articles are those that cover a topic of core current interest to chemical biologists, a topic that is undergoing rapid growth in terms of research interests, a scientific problem that requires major rethinking, a controversial issue with broad impact on the entire field, or a combination of all of these factors. Determining whether a topic we have in mind or a topic someone has proposed to us checks any of these broad guidelines is not trivial. It requires taking several steps back to look at the entire general area of research in which the given topic sits as well as related areas that may potentially be influenced by the discussion we publish. We consider both the quality and quantity of the research output that the potential review may cover because we want to publish reviews on topics that people actively care about. We also try to anticipate specific questions and issues that will be important points of debate and discussion in the near future, because great reviews don't just appear—they are written by people who are passionate about carefully crafting their arguments and discussions and dedicated to delivering new galaxies of knowledge. This means that, on average, it takes about 8–12 months for a review article to go from idea to publication. Finally, we also take care to cover a variety of topics and issues that are of particular interest to chemical biologists and to invest effort into ensuring diversity in our review content. Unfortunately, this also means that we have to decline some of the unsolicited proposals to avoid overlap with what we already have in our review article pipeline.

In the past, everyone on our editorial team has shared the responsibility for our review content. Although we enjoyed doing so, we felt that the journal, and the field, would benefit from a more focused and dedicated approach. Therefore, we have decided to expand our editorial team and bring on board a Reviews Editor who will lead our reviews strategy. We are pleased to announce that Michelle Arkin, Associate Professor of Pharmaceutical Chemistry and the Director of Biology at the Small Molecule Discovery Center at UCSF will serve as the *Cell Chemical Biology* Reviews Editor. Michelle's research is focused on structure/function and chemical biology of allosterically regulated enzymes and protein-protein interactions (PPI). In addition, her lab has a strong interest in developing probes and drug leads to address mechanisms of neurodegeneration, cancer, and parasitic disease. Over the years, Michelle has co-authored several key review articles in the area of targeting PPI

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(see http://www.nature.com/nrd/journal/v3/n4/full/nrd1343.html and http://www.cell.com/cell-chemical-biology/fulltext/S1074-5521(14)00291-9) that stand as examples of the power of reviews to shape the direction of the field. We look forward to seeing what mark Michelle makes in her new role as our Reviews Editor.

If you have an idea for a review, please email your suggestions to chembiol@cell.com.

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Craig M. Crews
Christian Hertweck
Kevan Shokat
Hiroaki Suga
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