

Innovations in Medicinal Chemistry

Since its inception six and half years ago, the editorial staff at ACS Medicinal Chemistry Letters (ACS MCL) has strived to position the journal as the premier international venue for rapid communication of cutting edge studies that span all aspects of medicinal chemistry and related fields. During this time ACS MCL has instituted several innovative features. These include:

- **Viewpoints** – Expert commentaries that explain, analyze, and contextualize emerging topics in the medicinal chemistry field. This manuscript type consistently makes the Most Read Articles list for the journal. *Viewpoints* showcase timely issues that span the scope of science covered by ACS MCL.
- **Patent Highlights** – Short summaries of recently issued patents in high-interest areas with brief commentaries on their potential impact to the medicinal chemistry field. As an example, highlights can include patents for therapeutics to treat specific diseases, as well as those currently in clinical trials. This section is written by members of the journal's Patent Panel, appointed by the Editors, and deals with recently published medicinal chemistry IP selected by the expert panelists.
- **Technology Notes** – The “Drug Discovery Toolbox” is a basket term that encompasses a myriad of technologies (high-throughput/high-content screening, robotics, structure-based drug design, fragment-based drug design, combinatorial chemistry/parallel synthesis, etc.) that facilitate and partially define modern medicinal chemistry. In the past, innovations in these areas were: (a) published only in specialized journals, (b) published as a part of a larger medicinal chemistry article, or (c) simply not reported. The net result of this situation is that no single source of information was available for medicinal chemists to learn about new “Toolbox” innovations. For this reason, we initiated a *Technology Notes* section in ACS MCL. These articles have consistently been very highly cited.
- **Special Issues** – ACS MCL has teamed up with several other ACS journals to publish thematic issues in several areas including, *inter alia*: Alzheimer's disease, HCV therapies, Kinases, and Epigenetics.

In an effort to better serve the medicinal chemistry community, the editorial staff of ACS MCL is pleased to announce a number of new features that we believe will further enhance the quality of our journal. These include:

- **Innovations** – Given the vast numbers of scientific articles published each week that impinge on medicinal chemistry, the mere act of staying current on publications directly related to specific areas of interest is quite challenging. Indeed, that process might be metaphorically described by the response of the Red Queen to Alice in *Lewis Carroll's Through the Looking-Glass and What Alice Found There*: “Now, here, you see, it takes all the running you can do, to keep in the same place. If you want to get

somewhere else, you must run at least twice as fast as that.”

Consequently, many of us may miss innovations that have broad applicability simply because they were described in articles that are not on our routine reading panel. While we often learn later about them in oral presentations, review articles, or in discussions once their broader applicability becomes apparent, medicinal chemists would benefit from a comprehensive overview of the scope and limitations of the innovation in question in a timely manner. For example, over the past decade we have seen new techniques and methodologies that have simultaneously reduced the scale and increased the throughput of screening and optimization processes in both chemistry and biology. While these approaches were initiated to facilitate specific projects, their potential impact goes well beyond those original goals. Wouldn't it be nice if articles that focused on actual innovations were available as a complement to the project-related articles already being published?!

In order to address this shortcoming, ACS MCL is initiating a new manuscript type, called *Innovations*. These personalized reviews are intended to highlight innovations that were integral to a discovery or development campaign, but have broader implications. While their main focus is on science, these articles may also include, when appropriate, parts of the innovation's backstory (i.e., relevant intellectual property issues, strategic business decisions, regulatory issues, etc.) that impinged on the path that was ultimately pursued.

A particularly good example is the first of our *Innovations in Medicinal Chemistry* articles, written by Bruce Maryanoff (DOI: 10.1021/acsmchemlett.6b00176), that describes the discovery and development of topiramate, as the framework for a discussion about relative advantages and disadvantages of phenotypic versus molecular target-based screening. Of course, the types of innovations that could be described can vary significantly and we have consciously avoided to arbitrarily limit the subject matter of the articles we will consider for publication. The ACS MCL editorial staff welcomes presubmission inquiries from the medicinal chemistry community about the appropriateness of potential articles for this new manuscript type.

- **Notes** – Although scientific research is often presented as a straight path toward a single end point (which, in medicinal chemistry, usually represents the development of a successful drug), those conducting research understand that there are many starts, stops, turns, and bumps along the way. For example, progress on a project that may be of high interest to the field may have to be halted, either temporarily or permanently, due to a variety of circumstances (e.g., limitations in current technology, program closures, loss of key personnel, loss of funding, etc.). To address these situations, we are introducing *Notes* that will allow the

Published: July 14, 2016



presentation of early stage findings that are of significant interest to the field. These articles may feature research that presents a minimal amount of highly impactful data and may be the starting points for future letters or full-length articles to be published elsewhere. As one example of this, a submission might serve as the first report of a series of new tool compounds (generally, leads that minimally exhibit single digit μM IC_{50} values) for potential use in diseases that have no other known modulators. Alternatively, this manuscript type is also well suited for reporting limited, but nonetheless interesting findings on projects that are near completion. The ACS MCL editorial staff welcomes submission from the medicinal chemistry community for this new manuscript category.

- *Letter to the Editor* – In an attempt to encourage dialogue within the medicinal chemistry community, we will initiate the publication of nonpeer reviewed correspondence to ACS MCL. This manuscript type will primarily consist of commentaries on previously published work from the journal. In addition, *Letter to the Editor* is intended to serve as a forum to generate discussion on issues that directly or indirectly impact medicinal chemistry research. Some examples include descriptions of unpublished or published works that might expand the scope or enhance our understanding of concepts and data from recently published ACS MCL articles. The ACS MCL editorial staff will determine the appropriateness of these submissions for publication and will stipulate that the views expressed do not represent those of ACS MCL or the American Chemical Society.

As the rate of data generation continues to rise, it is becoming increasingly important to not only capture advances in the field but to also ensure that this information is readily accessible and presented in a meaningful way. The ACS MCL Editorial Board views these new manuscript types as providing new mechanisms for capturing important concepts and data that reflect the broadest view of medicinal chemistry. In this way, we aim to make the journal an increasingly valuable resource for medicinal chemists to learn from the stories presented in our *Innovations* articles, to find promising insights from our *Notes*, and to enable the open discussion of differing perspectives in our *Letter to the Editor*.

Dennis Liotta, Editor-in-Chief

■ AUTHOR INFORMATION

Notes

Views expressed in this editorial are those of the author and not necessarily the views of the ACS.