

Organic Process Research & Development

Organic Process Research & Development **2007**, 11, 783

Editorial

A Synthesis Is Not the Same as a Process

Process chemistry encompasses a wide range of different disciplines including elements of synthetic chemistry, analytical chemistry and chemical engineering; it sometimes includes elements of statistics (e.g., Design of Experiments optimisation) and pharmaceuticals (e.g., polymorphism studies). It is not merely synthetic organic chemistry. We have recently had a number of papers submitted to the journal that describe a synthesis of a new or generic drug but with little or no optimisation of the individual steps and with workups that are straight out of the academic laboratory (large number of unit operations, vast quantity of solvents for extraction, evaporation to dryness, drying using a drying agent). All of these procedures would need further optimisation before scale-up.

Papers such as these have been rejected by the referees and backed up by the editors, but the authors have occasionally objected to the decision on the grounds that there is some useful (though sometimes rather predictable) synthetic chemistry in the paper. My view is that papers that describe a synthetic route with little additional process chemistry are more suitable for dedicated organic chemistry journals. To be acceptable for Organic Process Research and Development, there needs to be additional work of a process nature. This could be a detailed optimisation study of the reaction or its workup or an attempt to prepare the chemistry for scale-up; this might be a study of the reaction mechanism or its kinetics, the understanding of which will assist in the scale-up of the process. Exceptions have been made particularly for special issues, where we have judged that some synthetic papers, where the synthesis has potential for scale-up, have enough interest for the reader to fit in with the scope of the journal, particularly given the topic of the special issue.

The Guidelines for Authors, published in the first issue of each year and on the journal Web site (<http://pubs.acs.org/journals/oprpdfk/index.html>), give a more comprehensive view of what is or is not acceptable. Authors should read the guidelines, ideally before starting to write their paper but definitely before submitting it. The editors and the Editorial Advisory Board discuss the scope and content of these guidelines periodically, and the Guidelines are updated to reflect current opinions and changing views. However, at the end of the day it is the referees who make the judgements and the editors who have the final decision to ensure that there is as much consistency as possible in the refereeing standards. This may mean overruling one of the referees, since in some cases the referees disagree with each other.

Fortunately the number of complaints we get is very low. More often than not we and the referees are thanked for pointing out errors and for improving the quality of the resultant manuscript. My thanks go to all our referees who are usually very conscientious and timely, as well as being considerate to the authors.

We are finding the number of referees is diminishing as scientists take early retirement or move to nonscientific jobs. We would welcome more volunteers from industry for the onerous but rewarding task of refereeing papers. Please email Sue at opr@scientificupdate.co.uk if you wish to volunteer.

Trevor Laird
Editor

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