

## EDITORIAL

# CPT: Pharmacometrics & Systems Pharmacology Publishes Its 100th Article

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*CPT: Pharmacometrics & Systems Pharmacology (PSP)* was launched in September 2012 and, since then, has published at least one new article every week on average. As a result, the journal has now already reached the milestone of publishing its 100th manuscript,<sup>1</sup> which is a rare achievement for a new Open Access journal to reach in such a short period of time. Clearly, the success of *PSP* demonstrates the tremendous growth of the disciplines of pharmacometrics and systems pharmacology and the need for a journal dedicated to these growing areas of science.

Approximately half of the publications have been original research articles. In addition, *PSP* has published Reviews, Tutorials, Perspectives, Commentaries, Book Reviews, and Editorials (see refs 2–7 for examples from each category). Broadly speaking, the content of *PSP* to date represents a balanced mix between pharmacometrics and systems pharmacology-/physiology-based pharmacokinetics (PBPK). One of the aims of the journal is to facilitate the integration of pharmacometrics and systems pharmacology, and the first examples of the application of such a combined approach in drug development have been published.<sup>8</sup>

Tutorials were established as a new article type at the launch of *PSP* and have been a remarkable success, based on the very positive feedback from our readers and the impressive download statistics. To date, eight tutorials have been published (<http://www.nature.com/psp/tutorials/index.html>), providing practical hands-on introductions to a variety of modeling and simulation methodologies and tools. The Open Access and online format of the journal provides an excellent platform for the free and efficient dissemination of this material to researchers and students worldwide, and over time, the journal should grow into a comprehensive and authoritative educational resource. Tutorials are typically accompanied by example data sets and model codes, enabling the reader to work through the case studies in a “hands-on” manner. We plan to build on this success and have already commissioned a series of new Tutorials for publication in 2014; moreover, we are continuously looking for input on new ideas. Additionally, *PSP* just released its first podcast, *PSPod*, which features an interview with Dr Diane Mould discussing the three Tutorials she coauthored with Dr Richard Upton on basic concepts in population modeling, simulation, and model-based drug development (<http://www.nature.com/psp/podcast/index.html>). *PSPod* will be a quarterly feature of *PSP* that will delve into the advances in quantitative methods as applied in pharmacology, physiology, and therapeutics in humans; the next scheduled topics are “Diabetes” and “PBPK.”

The quality and the efficiency of peer review are crucial aspects to the success of a journal, and the ~50 distinguished international members of our Editorial Board (<http://www.nature.com/psp/editors.html>) play a pivotal role in this process.

The online nature of *PSP* provides unique opportunities to communicate Pharmacometrics and Systems Pharmacology science in new and more effective ways to our readers. For example, our aim is that every article is accompanied by readily downloadable model codes to allow readers to replicate the key modeling and simulation steps described in the manuscript. Over time, this collection of example codes should grow into a unique, freely available library of a wide variety of Pharmacometrics and Systems Pharmacology models. Another example illustrating how we strive to serve our readers by utilizing the online features of *PSP* is the recent introduction of so-called *Themed Virtual Issues*, which are continuously updated collections of all articles on specific topics, such as Tutorials, Diabetes, Cancer, and PBPK (see e.g., <http://www.nature.com/psp/diabetes/index.html>).

We are committed to building on the successful launch of *PSP* and to helping it grow further as the leading journal and online publication platform for developing and bridging the disciplines of Pharmacometrics and Systems Pharmacology. We hope that this will not only stimulate scientific and methodological innovation but also contribute to broader application and better integration of model-based approaches in drug discovery and development. As mentioned before,<sup>9</sup> the ultimate measure of success of these efforts will be a demonstrable increase in the impact of integrated Pharmacometrics and Systems Pharmacology approaches on pharmaceutical innovation and the delivery of new medicines to patients in areas of high medical need.

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