

A Foreword from the Editor

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Welcome to the inaugural issue of the *Journal of Medicines Development Sciences*. This new open access journal will publish articles on the entire process of discovery and development of new medicinal products, with a particular emphasis on translational research. This inaugural issue is devoted to “Open Innovation”, a booming concept that is starting to deeply change the context of medicines development.

“Open Innovation” was the title of a book published in 2003 by Henry Chesbrough^[1]. It is defined by this author as “a paradigm that assumes that firms can and should use external ideas as well as internal ideas” and also as “innovating with partners by sharing risk and sharing rewards”. Obviously this concept may be applied in every industrial sector and is not specific to the biopharmaceutical industry. Good examples of this very wide scope are provided by the brewing company AB InBev, asking people to provide new ideas on their Open Innovation portal^[2], or the “Open Innovation Contest” launched by BMW to help design cars of the future^[3].

Classically the development of new medicines by the biopharmaceutical industry complied with a closed innovation model in which generation of new ideas and their development up to market access were entirely an internal process designed to protect intellectual property. But the biopharmaceutical industry is facing huge challenges: increased costs and risks of medicines development, decreased research productivity, more demanding patients and payers and competition from generics, among others^[4-6]. A strategy of

mergers and acquisitions has not succeeded in solving these issues. This has led a company like Eli Lilly to start moving as early as 2002 from the traditional “Fully Integrated Pharmaceutical Company” (FIPCO) to the “Fully Integrated Pharmaceutical Network” (FIPNET)^[7]. In practice, the PD² and TargetD² programs allow external investigators to have their new compounds tested in the internal screening assays of Eli Lilly^[8]. A similar platform has been created by AstraZeneca^[9]. Other individual initiatives include the “Centers for Therapeutic Innovation” where Pfizer’s scientists and academic investigators share their expertise^[10] or “GSK Consumer Healthcare Open Innovation” that invites new product ideas^[11]. This was followed by the creation of wide public–private partnerships like the Innovative Medicines Initiative (IMI) in the European Union^[12] and the Critical Path Institute in USA^[13], as well as a worldwide consortium of pharmaceutical companies, TransCelerate BioPharma^[14].

The purpose of this inaugural issue is to provide a general overview of these ongoing initiatives as well as a more detailed account of some specific projects. It will show the diversity of “Open Innovation” both in terms of partners and objectives. Partners include biopharmaceutical companies, academic laboratories, regulatory authorities, hospitals, patients associations and philanthropic organizations. The multiple purposes of these partnerships include: creation and testing of new libraries of compounds, development of a collaborative and translational safety strategy, discovery of new treatments for tuberculosis and neglected tropical diseases, enhancement of clinical research performance by the creation of a global shared system, better training of scientists and clinical investigators, education of patients to increase their role in clinical research, and more.

Other thematic issues on hot topics in medicines

development will be published in the future. In the meantime, the journal is now ready to receive submission of research articles or reviews for publication in the first regular issue.

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