Special Issue

Innovative Methods to Optimize Prediction of Oral Drug Bioavailability: More than a Gut Feeling

Message from the Guest Editor

The optimization of in vitro and in silico methods for studying drug intestinal transport and metabolism is critical for predicting the oral bioavailability of therapeutic drugs. There are research findings that 3D intestinal organoids can be maintained long-term in vitro and develop into fully differentiated epithelial cells. Data generated in these systems could help in refining existing in silico models for optimizing the prediction of oral permeability, while assessing the impact of dosage forms, drug–drug interactions, and pharmacogenetic variability on drug–exposure–response relationships. This Special Issue of *Pharmaceutics* invites papers focusing on the development of novel 3D models (either static systems such as organoids, or dynamic microfluidic organ-on-a-chip technologies) to improve the prediction of oral drug bioavailability for small molecules and biologics. This Issue will also welcome research articles discussing spontaneous animal models to characterize the impact of disease on drug absorption, as well as innovative computational models for in vitro to in vivo extrapolations.

Guest Editor

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