



## Nanosuspensions for the Improvement of Drug Bioavailability

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### Message from the Guest Editors

Dear Colleagues,

The majority of new chemical entities in discovery and development, and a number of approved compounds listed in classes II and IV of the Biopharmaceutical Classification System, are characterized by poor water solubility. Low solubility often results in limited or erratic bioavailability, which might impose higher doses to achieve a pharmacological effect, increasing the risk of toxicity and the waste of material. The reduction of drug particle size below 1  $\mu\text{m}$  generates nanocrystals, which delivered the promise of increasing drug solubility and improving bioavailability. Nanocrystals can be dispersed in aqueous or non-aqueous media to produce nanosuspensions. Nanosuspensions, in addition to allowing high drug concentrations, have proved to be efficient in crossing a number of biological barriers, including the skin, the pulmonary epithelium, and the intestinal wall.

The Guest Editors welcome contributions focused on production processes and characterization methods, on the development of novel nanosuspensions, and on their assay in relevant *in vitro/in vivo* models.

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