

Special Issue

Advances in Electric and Magnetic Fields Induced Drug Delivery

Message from the Guest Editors

In recent years, the use of external electric and magnetic fields to enhance drug delivery has grown dramatically. Electric fields are being used to cross physical barriers such as vessels or cell membranes either by permeabilization (for example electroporation), electroendocytosis, iontophoresis, or by affecting the para-cellular pathway. Additionally, drug delivery systems such as electroresponsive systems facilitate the delivery of charged or magnetic nanoparticles and conductive polymer-based systems (hydrogel film or nanoparticles). Those systems enable a controlled and localized release of drugs to the desired tissue, limiting systemic side effects. Magnetic fields are being used in combination with magnetic nanoparticles to trigger drug release or to increase drug accumulation in a specific target. The aim of this Special Issue is to highlight electric and magnetic field-based drug delivery mechanisms. Authors are invited to submit their original research or review articles within this subject area. Preclinical (in vitro and in vivo) and clinical research as well as theoretical and technical papers are invited.

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Editor-in-Chief

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