Special Issue

Applications of Ultrasound and Light in Drug Targeting, Therapy and Diagnosis

Message from the Guest Editors

Ultrasound and light have long been used as essential tools in medical diagnosis via their imaging functions. Recently, they have been promoted as a new modality in drug targeting, therapy, as well as molecular diagnosis due to their excellent safety and high temporal and spatial resolution. Ultrasound and light facilitate drug targeting, including enhancing the efficiency of drug intake or remotely controlling the release of drugs delivered by microbubbles or nanoparticles. Furthermore, ultrasound and light have also been widely applied in therapy, such as cancer therapy and neuromodulation, due to their thermal, mechanical, or chemical effects. This Special Issue aims to highlight and capture contemporary progress and the current landscape of applications of ultrasound and light in preclinics and clinics. In this Special Issue, original research articles and reviews are welcome. Research areas may include (but are not limited to) the following: ultrasound and light-based drug delivery; application of ultrasound and light on disease therapy; molecular imaging; sonogenetics and optognetics.

Guest Editors

Dr. Jinghui Guo

Dr. Yingying Zhou

Dr. Zhihai Qiu

Prof. Dr. Puxiang Lai

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Pharmaceutics
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
pharmaceutics@mdpi.com

mdpi.com/journal/pharmaceutics





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Editor-in-Chief

Prof. Dr. Patrick J. Sinko

Ernest Mario School of Pharmacy, Rutgers, The State University of New Jersey, William Levine Hall, Room 225C, 160 Frelinghuysen Road, Piscataway, NJ 08854-8020, USA

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