Special Issue

Lipid-Based Drug Carriers and Nanoparticles

Message from the Guest Editors

Lipid-based delivery systems play critical roles in the delivery of therapeutic and diagnostic agents. Their popularity arises from their ability to improve drug delivery by improving drug stability and by altering pharmacokinetic parameters. This allows lipid-based carriers to achieve exposure profiles not possible with free drugs. Further, the addition of diagnostic agents has allowed lipid-based carriers to assist in noninvasively tracking drug disposition and disease progression. Advances in molecular biology have identified targeting ligands. Despite these advances, several gaps in knowledge, as well as barriers, exist for lipid-based carriers. This includes knowledge of their biologic disposition, long-term toxicity, targeting specificity and issues with their large-scale production, stability, and their disposition in the environment. Further, while lipid-based carriers have enjoyed enhanced use in the laboratory, their use in the clinic is comparatively somewhat limited. This Special Issue on lipid-based delivery focuses on these issues, as well as on the diversity of platforms for generation of these carriers and their pharmaceutical and diagnostic applications.

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Deadline for manuscript submissions

closed (31 May 2021)



International Journal of Molecular Sciences

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Message from the Editor-in-Chief

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