Special Issue

Nanotechnology-Driven Strategy Against Viral Infections

Message from the Guest Editor

Traditional therapies using classical antiviral drugs often face limitations including resistance, poor targeting, and systemic toxicity. Nanotechnology offers innovative solutions for preventing, diagnosing, and treating viral diseases, predominately through drug delivery using nanocarriers such as nanoparticles, liposomes, nanoemulsions, dendrimers, and quantum dots. In addition to classic antiviral delivery systems, other therapies are available, such as gene silencing strategies, immunomodulation, nanovaccines, photodynamic therapy, and combination therapies. Nanocarriers are capable of transporting and sustaining the release of classical antivirals, improving the bioavailability of active compounds and reducing adverse effects. Other active compounds can be encapsulated in nanocarriers, such as vaccine antigens, interfering RNA (siRNA), and photosensitizers for photodynamic therapy. Furthermore, nanocarriers can be administered topically for the treatment of skin and mucosal viruses or into the bloodstream to induce systemic effects. Nanotechnology is revolutionizing the development of antiviral strategies for therapy, diagnosis, and prevention.

Guest Editor

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Message from the Editor-in-Chief

Viruses (ISSN 1999-4915) is an open access journal which provides an advanced forum for studies of viruses. It publishes reviews, regular research papers, communications, conference reports and short notes. Our aim is to encourage scientists to publish their experimental and theoretical results in as much detail as possible. There is no restriction on the length of the papers. The full experimental details must be provided so that the results can be reproduced. We also encourage the publication of timely reviews and commentaries on topics of interest to the virology community and feature highlights from the virology literature in the 'News and Views' section.

Electronic files or software regarding the full details of the calculation and experimental procedure, if unable to be published in a normal way, can be deposited as supplementary material.

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