

Special Issue

Toxicity of Nanoparticles: Second Edition

Message from the Guest Editor

The rapid expansion of nanotechnologies promises to have significant beneficial impacts on society, yet there is increasing concern that exposure to nanoparticles (NPs) will have a negative impact on both human and environmental health. Nanoparticles can easily enter the human body and cross all intrinsic barriers, making them very useful as drug delivery vectors; on the other hand, NPs may interact with biological systems and induce potentially negative effects. Studies have shown that the toxic effects of NPs are mainly determined by several factors, such as physicochemical properties, dose, exposure pathways, and duration. The unique physicochemical properties of NPs confer not only promising biological effects but also pose unexpected toxic threats to the human body at the same time. This Special Issue focuses on the in vitro and in vivo interactions of nanomaterials with biological systems at different levels of organization. We welcome both experimental works and review papers regarding the negative effects of nanoparticles on the molecular and cellular levels, on tissues and organs, and on whole organisms.

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