
Preface

I have the pleasure of introducing this edition of *Nanotoxicity: Methods and Protocols* in the successful *Methods in Molecular Biology* series. I must express my humble gratitude for the work done by the many contributors of this book and for the patience and assistance of the series editor, John Walker. Their many efforts have enabled the fruition of this project.

The field of nanotechnology has developed very rapidly over the past decade lending great promise to medical applications in drug delivery, therapeutics, and biological imaging. Additionally, broad arrays of consumer products have utilized nanomaterials including cosmetics, food products, textiles, and agriculture. Due to the great promise, rapid development, and broad application of nanomaterials, it is imperative that researchers from development through application seek an understanding of nanotoxicity. Many existing toxicology techniques have been applied to nanomaterials, and many newly developed methods to address the unique considerations of nanomaterials are continually emerging. The methods, protocols, and perspectives highlighted in *Nanotoxicity: Methods and Protocols* address the special considerations when applying toxicity studies to nanomaterials and detail newly developed methods for the study of nanotoxicity. These methods span in vitro cell culture, model tissues, in situ exposure, in vivo models, analysis in plants, and mathematical modeling. The diverse protocols covered are relevant to pharmaceutical scientists, material scientists, bioengineers, toxicologists, environmentalists, immunologists, and cellular and molecular biologists to name a few. This timely edition aims to diversify the capabilities of current researchers involved in nanotoxicology and to enable researchers in related fields to expand the knowledge of how nanomaterials interface with the biological environment. Expansion in the field of nanotoxicology will enable the progression of nanotechnology to its full potential.

Detroit, MI, USA

Joshua Reineke

Nanotoxicity

Methods and Protocols

Reineke, J. (Ed.)

2012, XII, 414 p. 85 illus., 47 illus. in color., Hardcover

ISBN: 978-1-62703-001-4

A product of Humana Press