

Nanomaterials *for* Biomedical Application

Nanomaterials

for Biomedical Application

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PREFACE

Nanomaterials for Biomedical Applications focusses on the use of various nanomaterials in the biomedical field. The prefix ‘nano’ is derived from Greek, indicating something very small or ‘dwarf’, and a nanomaterial refers to any material with a size below 100 nanometers. This book explores the diverse applications of nanomaterials in the biomedical field, particularly in the design and fabrication of nanomaterials for developing drugs that are beneficial for healthcare and public health. In today’s biomedical sciences landscape, the pursuit of knowledge is not merely a noble endeavor it is a necessity. Hence, this book aims to understand the research and innovation of nanomaterials in addressing critical challenges and regulatory issues in public health today, as well as to anticipate the future impact of nanomaterials on healthcare.

Therefore, this book will cover both scientific and regulatory matters in the development of nanomaterials for biomedical applications. The topics include the emerging applications of nanomaterials in healthcare, such as applications for antibacterial/microbial, cancer treatment, immunotherapy, toxicological landscape, and molecular mechanistic pathways on how cancerous cells can be destroyed. This book also provides an insight into the regulatory issues surrounding the development of nanomaterials and their grand challenges as well as future prospects are also discussed. Finally, we appreciate all the authors who have contributed to the book *Nanomaterials for Biomedical Applications*.

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