

## Tentative Outline

### Special/Thematic Issue for the journal "Recent Patents on Nanotechnology"

**Tentative Title: Advances in nanotechnology for the health sciences**

**Guest Editor: João Francisco Justo & Elidamar Nunes de Carvalho Lima**

#### Scope of the Thematic Issue:

Providing knowledge about nanotechnology in health care is essential and urgent, given the growing demand for nanotechnology products with biomedical/biological applications. Even with several studies on nanotechnology bio products, it is important and challenging to certify the efficiency and especially the biosafety that involves nanotechnology/Nanobiotechnology products. Thus, applications, studies, and developments focused on Nano immunotherapies, Nano diagnostics, and/or nanotheranostics, have been gaining space in the scientific community. Facing this, the pandemic of the new coronavirus/COVID-19, as it was and is the AIDS epidemic, has brought different discussions and, consequently, promising results, with the possibility of working with nanotechnologies that can optimize, leverage new methodologies, aimed at applications in the solution of numerous pathologies. Thus, more generally, this special issue addresses the relationships/studies between efficiency and biosafety of nanotechnologies applied to health care. Secondly, it addresses avidity/efficacy in nanoimmunotherapies, especially those targeting viral infections and antitumors. In all these directions, several observations of monitoring nanotechnology techniques/methods can be made by systematic analysis of previous studies, of methods involving nanotechnology/nanobiotechnology. In this sense, this special issue "Advances in nanotechnology in health sciences" seeks submissions from academia and, in particular, industry, presenting innovative research on all theoretical and practical aspects of efficiency and biosafety of products using nanotechnology methods/tools, applied to health care. Thus, articles should have practical relevance for validation/application in areas of human health. The scope of this special issue is interdisciplinary, involving contributions from experts in the fields of nanobiotechnology, molecular biology with genomic applications, applied physics, and nanotechnology. The focus is on methods involving the functionalization of nanoparticles, which play important roles in regulating and interfering with biomolecules and/or improving experimental protocols in nanobiotechnology/nanotechnology focused on the medical/biological field.

**Keywords:** nanotechnology, nanotech, healthcare, bioproducts, infectious diseases, antitumor.

#### Sub-topics:

The sub-topics to be covered within the issue should be provided:

- Nanomedicine
- Nanobiotechnology
- Diagnostics and medical devices
- Drug Delivery and treatment
- Healthcare

#### Tentative titles:

- a) SYNTHESIS AND CHARACTERIZATION OF CARBON-BASED NANOMATERIAL APPLIED TO CANCER DIAGNOSIS.
- b) BIOCHEMISTRY OF CARBON-BASED NANOMATERIAL FOR APPLICATION AS MOLECULAR CHASSIS (DRUG DELIVERY) IN CANCER TREATMENT
- c) APPLICATIONS OF NEAR-INFRARED EMITTING NANOPARTICLES IN THE THERANOSTICS OF CANCER AND VIRAL-BACTERIAL INFECTIONS.
- d) ADVERSE IMPACTS OF NANOMATERIAL ON HUMAN HEALTH AND ENVIRONMENT.

- e) CARBON-BASED NANOMATERIAL IN THE TREATMENT AND CURE POSSIBILITY OF HIV.
- f) IMMOBILIZATION OF BIOMOLECULES ON CARBON NANOTUBES FOR CANCER THERANOSTICS

## Schedule

Complete Thematic issue submission deadline: **March 25, 2023**

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