Nanoparticles are used by several vaccines against COVID-19, in order to protect the antigen cargo, and increase the efficacy and immunogenicity. Due to their intrinsic complexity, characterizing these vaccines is challenging.

PEG was classified as a non-immunogenic polymer, for a long while and has been adopted to reduce the immunogenicity of some biotech drugs. Read more about this research and findings.

Past Conferences on Nanotechnology

6th International Conference of Theoretical and Applied Nanoscience and Nanotechnology (TANN’22) had the honor of hosting keynotes from around the world

Dr. Qammer H. Abbasi
University of Glasgow, UK
Keynote Speaker

Dr. Anna Bershteyn
University of Washington, USA
Keynote Speaker

Dr. Karl Böhringer
University of Washington, USA
Keynote Speaker

Dr. Jinju Chen
Newcastle University, UK
Keynote Speaker

Dr. Daria Smirnova
The Australian National University, Australia
Keynote Speaker

Dr. Shirley Tang
The University of Waterloo, Canada
Keynote Speaker

Polyethylene Glycol: The role and impact on anaphylactic reactions to COVID-19 nano-vaccines

The polymer used in these vaccines for coating the solid lipid nanoparticles (SLNPs) is Polyethylene glycol (PEG). To maintain the colloidal stability of nanoparticles in biological fluids and to reduce their uptake by filter organs, improving their efficacy and safety after inoculation the activity of PEG is crucial.

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Cancer can be considered a case to be made for personalized medicine. With the yearly statistics of individuals being detected with cancer, and the number of individuals succumbing to this disease, diagnosing, treating, and tracking the progress of therapy for each type of cancer has long been a dream among oncologists. Read more about how nanotechnology is moving ahead in curing cancer and how these nanotechnology products face unique hurdles in doing so.

Multidisciplinary techniques and competencies are to used characterize them. This characterization can be conceptualized as a combination of physicochemical, immunological and toxicological assays, which helps in addressing the key challenges in preclinical characterization and guiding the rapid development of safe and effective vaccines for current and future health crises and will streamline the regulatory process.

Nanotechnology opening the door to a new generation of diagnostics and aiming to cure Cancer

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