

A Paradigm Shift - Modern era of Nanobiosensors for combating Cancers and Pandemics

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Abstract

The earliest tumors/cancers can be identified, the better the probability and mitigation can be done. The treatment protocol follows a severe drawback that many types of cancers are diagnosed and detected only when they reach metastasis at the cellular level. Thus more efficient and specific techniques for the detection and proper clinical management and diagnosis are the need of the hour. The advent of Nanobiosensors has proven to exhibit a promising future for designing and discovering a definite biological analyte by converting the biological entity (such as proteins, DNA, RNA) in the form of electrical signals that can be efficiently detected and significantly analyzed. The modern applicability of nano-based biosensors in cancer/ tumor detection and identifying the novel viruses that outburst into pandemics can be an important segment where molecular and biotechnological sciences have vast exploring potential. These devices and technological advancements could be dedicated and designed to identify emerging cancer biomarkers to determine drug effectiveness at various target sites. Thus the Nanobiosensor technology could provide faster and accurate detection, trusted imaging of cancer/tumor cells, efficient monitoring of angiogenesis and cancer metastasis, and therapeutic effectiveness of anticancer chemotherapy agents. This presentation will briefly explain the current scenario for the early detection of cancer and other viral diseases and the expanding use of various types of biosensors as a diagnostic tool, as well as some future applications of nano-biosensor technology in decades to come.

Biography:

(Dr.) Debashish Ghose is a Research Scholar at the Biju Patnaik University of Technology, Rourkela, Odisha. He has 8 years of expertise in the field of academics and research, currently working as Asst. Professor in Department of Pharmaceutics at Roland Institute of Pharmaceutical Sciences, Berhampur, Odisha. He has contributed many research and review papers in international acclaimed journals based on bioavailability and solubility enhancement techniques with assisted QbD approach.

References:

1. AQbD Driven Development of a RP-HPLC Method for the Quantitation of Abiraterone acetate for Its Pharmaceutical Formulations in presence of Degradants
2. Qbd-Based Formulation Optimization and Characterization of Polymeric Nanoparticles of Cinacalcet Hydrochloride with Improved Biopharmaceutical Attributes
3. Cleaning validation in analytical development: Current challenges and future prospectives
4. Applications of QbD-based Software's in Analytical Research and Development

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