

Advances in nano drugs for cancer chemotherapy: Biopharmaceutical trends and perspectives and case studies

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Abstract

There have been major advances and achievements in the use of nanoparticles for cancer drug delivery and targeting. Directing therapeutics to intracellular targets and selectively killing cancer cells is the primary driving force behind the rapid evolution of nanoparticle-based approaches. The most promising approaches are those combining disease diagnosis with therapy using multifunctional nanoparticles. These approaches and specific nanoparticle technologies will be discussed along with representative case studies of nanoparticulate drug products on the market and in clinical and preclinical development. Nanoparticle design, characterization and biopharmaceutical properties in relation to nanoparticle pharmacokinetics, biodistribution and their impact on efficacy and toxicity/ safety will be highlighted throughout the talk

Biography

Panayiotis P. Constantinides received a University Diploma in Chemistry from Athens University in 1977 and PhD in Biochemistry from Brown University in 1983. He was a postdoctoral fellow in the Pharmacology Department and Associate Research Scientist in the Comprehensive Cancer Center of Yale University School of Medicine (1983 -1987). Dr. Constantinides since 2004 is the Founder and Principal of Biopharmaceutical & Drug Delivery Consulting, LLC based in Gurnee, IL and currently Affiliated Associate Professor of Pharmaceutical Sciences at Roosevelt University, College of Pharmacy, in Schaumburg, IL. Past industrial positions held included: Vice President of R&D with DOR BioPharma and Morton Grove Pharmaceuticals (2001-2004), Director of Research at SONUS Pharmaceuticals (1997-2000) and from 1987 to 1997 a number of R&D positions of increasing responsibilities with LipoGen, SmithKline Beecham Pharmaceuticals and Abbott Laboratories. He is inventor in 33 patents and patent applications, has authored more than 100 publications/book chapters/abstracts and he has been invited speaker at many national and international conferences, biotech and pharmaceutical companies and universities. Dr. Constantinides is AAPS Fellow, Vice Chair of the AAPS Formulation Design and Development Section, Past Chair of the Nanotechnology and Lipid-Based Drug Delivery Systems Focus Groups..