Dr. Ratnesh Jain obtained B. Pharm. (2003) from RGPV, Bhopal and M. Pharm. from University of Mumbai, India (2005). After working in Lupin Research Park, India, he obtained his Ph. D. (Tech.) at the Department of Pharmaceutical Sciences and Technology, Institute of Chemical Technology, Mumbai (2009). Subsequently, he joined Saarland University, Saarbrucken as a postdoctoral fellow. He was awarded the prestigious Alexander von Humboldt Postdoctoral Fellowship and completed the associated research at the Department of Drug Delivery, Helmholtz Institute for Pharmaceutical Research Saarland (HIPS), Saarbrucken, Germany. Since January 2012 Ratnesh Jain has received Ramanujan Fellowship from Government of India and is associated with Department of Pharmaceutical Sciences and Technology, Institute of Chemical Technology, Matunga, Mumbai.

RESEARCH DESCRIPTION

Our current research focuses on to formulate and comprehensively characterize promising nanomedicines for cancer, infectious diseases and drug delivery devices. These nanomedicines are evaluated for cellular toxicity, cellular uptake and specific mechanisms of cell uptake. Our research aims to particularly focus on lung cancer; vaccine, drug eluting stents and fungal infections. We also characterize the interaction of the nanoparticles with the following biological models: supported phospholipid membranes of increasing complexity, in vitro models of cell and tissue culture, intracellular trafficking, molecular interactions and predicting outcomes of nanoparticulate drug through these cellular evaluations. An objective of our research is to simultaneously evaluate and compare different types of nanomedicines in various cellular models to have a set of general regulations relating their material, morphology, dimensions, shape and surface characteristics to their biological activity. Production of “standardized affordable nanomedicines” will be the direct measurable outcome of the successful attainment of our research.

SELECTED PUBLICATIONS


