Cell and organ drug targeting: Nano spheres embedded micro particulates dry powder as lungs targeting/ lungs mediated drug delivery

Vishnu Vardhan Reddy Beeram¹, Venkata Nadh R², Krupanidhi S¹ and Gnanaprakash K³

¹Vignan's University, India
²GITAM University, India
³P Rami Reddy Memorial College of Pharmacy, India

Targeted drug delivery is also can called as Smart drug delivery. It is a method of delivering a drug or medication to a patient in a manner that increases the concentration of a medication in some parts of the body relative to others. The targeted drug delivery is largely founded on Nano medicine, which plans combat the major downfalls of the conventional drug delivery by employing Nano-particulate medicated drug delivery. The site targeted drug delivery works by targeting the specific cell/organs of the patient, to facilitate the release of the drug candidate at required quantity, rate and to avoid the unwanted adverse or side effects. Inhalation therapies have until now primarily provided fast acting treatment for respiratory illness such as asthma and chronic obstructive pulmonary disease (COPD). Relative to oral delivery, inhalation of therapeutic drugs to the airways often produces maximum therapeutic levels in the respiratory tract while maintaining low systemic concentrations and thereby minimizing side effects. The inhalation drug delivery has exposed an unmet need for the controlled release of inhaled drugs and also can benefit future therapies whose success depends critically on multiple daily dosing. A logical strategy to achieve sustained release of drugs in the respiratory tract involves encapsulating drugs in slowly degrading particles that can be inhaled. This strategy can however be foiled by the relatively rapid natural clearance of insoluble particles from the respiratory system. The Nanospheres embedded Micro particulates based dry powder inhaler therapy is gaining interest for most of the therapies like diabetes, tuberculosis, HIV associated tuberculosis and many other local or systemic infections with minimal dose of dug for prolonged time to avoid most side effects and emerging drug resistance.

Biography
Vishnu Vardhan Reddy Beeram pursuing PhD from Vignan’s University at Vadlamudi, Guntur in Andhra Pradesh, India. He has completed Master of pharmacy in Pharmaceutics from Rajiv Gandhi University of Health and Sciences at Bengaluru in Karnataka, India. He has published more than 12 papers in reputed scientific journals and author for a book in life sciences.

Notes: