OMICS International
conferenceseries.com

Jayant Rai et al., J Pharma Care Health Sys 2015, 2:5
http://dx.doi.org/10.4172/2376-0419.C1.009

Pharmaceutical Summit and Expo

October 08-10, 2015 New Delhi, India

Brain targeted drug delivery system: An overview of recent developments and challenges

Jayant Rai, Preeti Yadav, Aashal Shah and **N D Kantharia**
Government Medical College Surat, India

Targeted drug delivery is a method of delivering drug in a manner that increases the concentration of the drug at the desired site of action in the body and produces fewer side effects. The treatment of Central Nervous System diseases is particularly challenging because the delivery of drug molecules to the brain is prevented by a variety of factors like physiological, metabolic and bio-chemical barriers that collectively comprise the BBB (Blood Brain Barrier), and B-CSF barrier. Various pharmacological agents have been used to open BBB and direct invasive methods can introduce therapeutic agents into the brain. It is important to consider not only the net delivery of the agent to the brain, but also the ability of the agent to access the relevant target site within the brain. Various strategies that have been used for manipulating the BBB for drug delivery to the brain include osmotic and chemical opening of the blood-brain barrier as well as the use of transport/carrier systems. Various routes of administration as well as conjugations of drugs, e.g., with liposomes and nanoparticles, are considered. Now-a-days nanotechnology is proved to be more efficient for enhancing drug delivery to brain. It includes coated nano-particles, pegylated nano-particles, solid lipid nano-particles and nanogels. Liposomes have shown versatility and can play a significant role in formulation of potent drugs to improve therapeutics in drug delivery system in brain. The most advantageous features of liposomes are their ability to incorporate and deliver large amounts of drug and the possibility to decorate their surface with different ligands. This poster focuses on targeted drug delivery system for delivery of drugs in brain.

Biography

Jayant Rai is pursuing his Post-Graduation in MD Pharmacology at Government Medical College, Surat, Gujarat. Currently, he is doing his research work on effect of anti-epileptic drugs on cognition in patients of complex partial seizure at New Civil Hospital and Government Medical College, Surat.

raijayant02@gmail.com

Notes: