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Molecular Drug Delivery Vehicle to Cross Blood Brain Barrier: Design, Synthesis, and Characterization of Linear Chain Molecules

Mr. Khole Niranjan and Miss. Shinde R. R Aditya Pharmacy College, Beed, India

Abstract: The brain is protected and isolated from the general circulation by a highly efficient bloodbrain barrier. This is characterised by relatively impermeable endothelial cells with tight junctions, enzymatic activity and active efflux transport systems. Consequently the blood-brain barrier is designed to permit selective transport of molecules that are essential for brain function. This creates a considerable challenge for the treatment of central nervous system diseases requiring therapeutic levels of drug to enter the brain. Some small lipophilic drugs diffuse across the blood-brain barriersufficiently well to be efficacious. However, many potentially useful drugs are excluded. This review provides an insight into the current research into technologies to target small molecules, peptides and proteins to the brain

Keywords: Blood-Brain Barrier(BB), Drug Delivery System, Molecular Drug Carriers, Linear Chain Molecules, Polymeric carriers, Synthesis of Drug Carriers



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