Rosiglitazone loaded in nano-liposome carriers for enhanced bioavailability and brain targeting for ischemic stroke

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Abstract (300 word limit)

Rosiglitazone (RSG), marketed as an antidiabetic drug, is a potent peroxisome-proliferator activated receptor-γ (PPAR-γ) agonist working on insulin-sensitizing and increase of glucose influx into adipose tissue and muscle. It has shown neuroprotective effect against ischemic stroke in recent clinical studies, whereas, severe side effect including cardiac toxicity restricted clinical use. RSG is.. The purpose of the study is to develop a better liposome formulation of RSG to enhanced CNS penetration and limited systemic side effect. Liposome is produced by thin layer method. With different ingredient of liposome, we try a better formula to change tissue distribution and penetration through blood brain barrier for neuroprotection effect against ischemic injury from stroke.

The characterization of rosiglitazone liposome is produced by dynamic light scattering including particle size and zeta potential. Pharmacokinetic and bio-distribution is carried out on Wistar rats. We use high performance liquid chromatography with fluoresecnt detector to check blood concentration and drug encapsulation efficiency. We also tested the effect of rosiglitazone embedded in liposome for enhancing brain targeting and reduced systemic side effect in the rat animal models of ischemic stroke.



Biography (150 word limit)

Ming-Jun Tsai (also known as Ming-Chun Tsai)
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Dr. Ming-Jun Tsai graduated from School of Medicine, Chung Shan Medical University and finished his PhD program on Cheng-Kung University. Dr. Ming-Jun Tsai is now the Chief of Department of Neurology, China Medical University-an Nan Hospital and the associate Professor of China Medical University, Taichung, Taiwan.

Dr. Tsai focused on the research of drug delivery in clinical diseases. He has published more than 20 papers in drug delivery in clinical diseases, especially in neurologic diseases including stroke and parkinson's diseases.

Dr. Tsai also has extensive experience in international regulation of Medical Device and Drugs. Prior to join China Medical University, Taichung, Taiwan, Dr. Tsai served from 2007 through 2011 as Senior Reviewer of Pharmaceutical affair of DOH, which integrated into Taiwan Food and Drug Administration (Taiwan FDA) on 2009. Dr. Tsai has been signed to the US authority of medical device, CDRH of US FDA and Canada authority of medical device, Food and Drug branch, Health Canada for medical device regulation training. On behalf of DOH, Dr. Tsai also participated in WHO international pharmacovigilance program on 2008. On behalf of Taiwan Food and Drug Administration, Dr. Tsai has been invited to Drug Information Association and APEC as a speaker for regulation of Drugs and Medical Devices in Taiwan on 2009 and 2010, respectively.

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