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TITLE

Marine Phospholipids Based Potential Brain Drugs

Su Chen

Chainon Neurotrophin Biotechnology Inc., USA

This presentation reviews the study of chemistry, biochemistry and pharmacology of marine phospholipids based potential brain drugs for the prevention and treatment of neurodegenerative diseases such as Alzheimer's disease. They include: (1) docosahexaenoyl (DHA) phospholipidome of marine biomass by mass spectrometry; (2) metabolic profiles of 1-acyl-2-DHA phospholipids and how the lipids can pass across the blood-brain barrier under the assistance of endothelial lipase; (3) 1-acyl-2-DHA aminophospholipids promote neurotrophic-cholinergic function in aged neurons; and (4) advantages of marine phospholipids based DHA brain donors for the prevention and treatment of Alzheimer's disease. Finally, the novel groups of phospholipids including DHA ether species and 1-DHA-2-acyl-phospholipids and further investigation of the lipids as new drugs are introduced.

Biography

Su Chen (CEO at the Chainon Neurotrophin Biotechnology Inc, Texas USA since 2006) got his Ph.D. in Mario Negri Institute for Pharmacological Research in Milan of Italy in 1989, and was a post doctoral fellow in Italian National Research Council at Padova from 1990 - 1992. After his research position as Senior Research Fellow at Department of Chemistry of the University of Warwick in UK from 1992-1997, he was appointed as a Faculty member in Department of Pharmacology at Rush University School of Medicine (1998-2002), and then Quest Diagnostic Nichols Institute as departmental associate scientific director (2002-2005) in the US. He contributed significantly in areas of chemistry, biochemistry and pharmacology of marine phospholipids, particularly development of DHA - containing phospholipids for prevention and treatment of neurodegenerative disorders. He already published more than 40 articles and 3 book chapters in the fields of chemistry, biochemistry and biotechnology of lipids/bioactive lipid molecules. Su Chen now is the Secretary-General of the International Society of Dietary Supplement and Phytotherapy from 2011 - 2014.