

GLOBAL CONGRESS ON FOOD AND NUTRITION

NOVEMBER 25-26, PORTO, PORTUGAL



Mark Slevin

Amelia Tero-Vescan, Ylenia Pastorello Universitatea de Medicina, Farmacie, Stiinte se Tehnologie; "George Emil Palade" din Targu-Mures, Romania

Pharmacological modulation of monomeric C-reactive protein to control chronic inflammatory disease

Abstract: Growing evidence shows that inflammation is involved in the pathophysiology of inflammatory-based conditions including cardiovascular, neurological and anxiety disorders. C-reactive protein (CRP) is the most widely used marker of inflammation and is increased in the serum of patients concomitant with increased risk of development of these disorders. In inflammatory conditions, CRP, a pentameric molecule, dissociates into monomeric CRP (mCRP), which has strong proinflammatory effects, unlike the parent molecule, for example by stimulating proinflammatory cytokines, abnormally activating vascular endothelial cells, and for example, increasing permeability and leakage, impairment of the blood-brain barrier, accumulation of toxic proteins such as tau and beta-amyloid ($A\beta$), involvement in the formation of $A\beta$ -mCRP hybrid plaques, thereby creating an increased vulnerability to neurodegeneration and dementia. A recently synthesised synthetic inhibitor of mCRP known as C10M has been shown to abrogate CRP dissociation through contact with lysophosphocholine on the membrane of cells, effectively blocking both local and systemic inflammation. Here an overview of these protective mechanisms will be supported by in vitro and in vivo evidence showing potential pharmacological protection against development of long-term morbidity with consideration of lifestyle, nutritional and other biological manipulation providing pharmacological relief.

Keywords: C-reactive protein, inflammation, chronic disease, pharmacological intervention

Biography: First European BBVA Professor in clinical Biomedicine-EU grant-at ICC-Barcelona 2007-1009-Institute of Cardiovascular disease in Spain; Innovate UK consultant for industrial grant review and decision making; Panel board member for National grant reviewing in Poland, Spain, Romania; Optics Valley, Wuhan-Senior international advisor; Professor of Pathology, Weifang University and hospital honorary consultant; Council member and Fellow of/for American Heart and Stroke Association; Chairman of Kidscan cancer charity, UK and co-founder-director of KIBOSE charity foundation; Consultant for Smith and Nephew-FDA (UK and USA);