# Neuroprotective effects of arachidonic and docosahexaenoic acid in the extreme stages of life: An integrative view Efectos neuroprotectores del ácido araquidónico y del ácido docosahexaenoico en las etapas extremas de la vida: Una visión integradora

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 The study focused on elucidating the neuro-protective effects of ARA and DHA throughout the life cycle has become of increasingly interest since the continue discovering of mechanisms by which these long-chain polyunsaturated fatty acids (LCPUFA) modulate the metabolism. Both ARA and DHA are deposited into the membrane lipids of the cells that form the gray matter of the brain and represent approximately 25% of the total content of cerebral fatty acids. ARA and DHA have effects on the growth and neuronal differentiation through the modulation of the physical properties of the membrane, the signal transduction associated to G proteins and by the modulation of gene expression, acquiring a relevant role in neurogenesis and brain development. In addition, it is attributed to these fatty acids a neuro-protective role in neurodegenerative pathologies such as Alzheimer?s disease and Parkinson?s disease by de