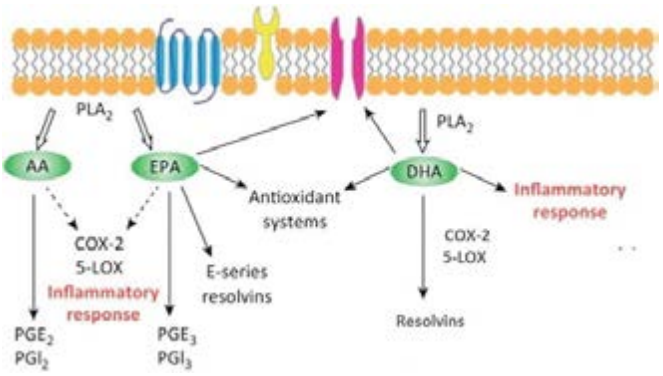
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Targeting fatty acids metabolism as treatment strategy of autism

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Autism is a neurodevelopmental disorder clinically presented as abnormalities in social interaction and communication, repetitive behaviors, usually accompanied by various neurobehavioral disorders, such as learning disability, hyperactivity and anxiety. It is well known that more than 50% of human brain weight is composed of lipids with a remarkably high content of long-chain polyunsaturated fatty acids (LCPUFA). Adequate supply of different fatty acids and lipids is critically needed by developing brain to achieve normal growth. Essential polyunsaturated fatty acids (PUFAs) are critical for normal prenatal brain development. There has been increasing evidence that impairment of PUFAs metabolic pathway could affect the normal function of nervous system which is related to pathogenesis of autism. Studies have demonstrate that autistic patients may exhibit abnormal PUFAs metabolism, which manifests as varying impaired levels of lipid mediators such as prostaglandins, eicosanoids, and isoprostanes in serum and plasma of autistic patients. Consequently, interventions related to metabolic correction of fatty acids, phospholipids, prostaglandins, eicosanoids, and isoprostanes as fatty acids–derived signaling molecules were discussed in details with special reference to Omega-3 Fatty Acids supplementation and its recognized role in the correction of oxidative stress, neuroinflammation, and glutamate excitotoxicity as ascertained etiological mechanisms in autism.



Biography

Afaf El-Ansary has completed her PhD in 1990 from Ain Shams University, Egypt. She is a Senior Scientist, Central laboratory, King Saud University, supervising the Biochemistry, Proteomic and biomarkers units. She was recognized by the Marquis Who's Who in science and engineering, Eight's edition, 2005-2006. She has published more than 120 papers related to biomarkers in reputed journals and has been serving as reviewer and editorial board member of multiple Journals in the field of neuroscience and translational Medicine.

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