

Special Issue

Inherited Disorders in Neurotransmitters: A Molecular, Cellular and Systemic Perspective

Message from the Guest Editors

Aromatic amino acid decarboxylase (AADC) is a pyridoxal 5'-phosphate-dependent enzyme-producing dopamine and serotonin from L-Dopa and 5-hydroxytryptophan. Genetic mutations in its gene cause a devastating disease called AADC deficiency, which leads to dramatic consequences and premature death. AADC deficiency patients are treated by a combination of drugs (pyridoxine, monoamine oxidase inhibitors, dopamine agonists, and others) to ameliorate the symptoms. Although an increasing number of papers have been published leading to both the identification of mutations in the AADC gene and many case reports about patients, a lot of information regarding molecular causes, cellular effects and systemic approaches is still lacking. This represents a fundamental question for a full understanding that could be the rationale for the development of new drugs. This Special Issue will include a selection of research papers and reviews about different aspects of AADC deficiency, with a particular focus on the molecular and cellular level, as well as the wider approach of system biology.

Guest Editors

Dr. Mariarita Bertoldi

Department of Neuroscience, Biomedicine and Movement Sciences, University of Verona, 37134 Verona, Italy

Dr. Patrizia Polverino de Laureto

Department of Pharmaceutical Sciences, CRIBI Biotechnology Centre, University of Padova, 30131 Padova, Italy

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MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
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Prof. Dr. José L. Quiles
Department of Physiology, Institute of Nutrition and Food Technology
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Avda. Conocimiento s/n, 18100 Armilla, Granada, Spain

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