

Special Issue

The Molecular Footprint of Fetal Alcohol Spectrum Disorders and Prenatal Alcohol Exposure: Genetics, Epigenetics, Oxidative Stress and Neurodevelopment

Message from the Guest Editor

Prenatal alcohol exposure (PAE) is a major environmental risk factor affecting fetal development, leading to a range of physical, cognitive, and behavioral impairments collectively known as Fetal Alcohol Spectrum Disorders (FASD). Recent advances in genetics, epigenomics, and molecular biology have shed light on the mechanisms by which alcohol disrupts neurodevelopment, yet many critical questions remain unanswered.

Individual genetic susceptibility, epigenetic modifications, and oxidative stress pathways all contribute to the diverse phenotypes observed in FASD. However, the complex interplay between these factors, and their role in long-term or even transgenerational outcomes, is still not fully understood. Identifying robust molecular biomarkers of exposure and outcome, understanding neuroinflammatory and neurotrophic signaling disruptions, and developing targeted interventions remain urgent goals. In this Special Issue, we welcome original research, reviews, and methodological papers focusing on the molecular, genetic, epigenetic, oxidative, and neurodevelopmental consequences of PAE and their role in FASD.

Guest Editor

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Deadline for manuscript submissions

closed (15 January 2026)

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Genes is central to our understanding of biology, and modern advances such as genomics and genome editing have maintained genetics as a vibrant, diverse and fast-moving field. There is a need for good quality, open access journals in this area, and the *Genes* team aims to provide expert manuscript handling, serious peer review, and rapid publication across the whole discipline of genetics. Starting in 2010, the journal is now well established and recognised. Why not consider *Genes* for your next genetics paper?

Editor-in-Chief

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