

Special Issue

Genetics and Epigenetics of Human Congenital Heart Disease

Message from the Guest Editors

Congenital heart disease (CHD), a birth defect involving structural anomalies of the cardiovascular system, is one of the most common birth defects. Clinical studies and analysis of mouse models have shown a genetic etiology for CHD. The finding of incomplete penetrance and variable expressivity would suggest the involvement of complex genetics and with additional modifying effects from epigenetic mechanisms. While many genes have now been identified to contribute to CHD, the genetic architecture of CHD is still poorly understood. Moreover, gene-environment interactions are likely important contributing factors impacting the risk of having CHD. With surgical advances now allowing more adults to survive with CHD there is also the realization that CHD patients surviving to adulthood often suffer neurocognitive impairment, neurobehavioral deficits, increased risk of Alzheimer's disease, heart failure, renal dysfunction, and other defects. Hence insights into the genetic and epigenetic mechanisms contributing to CHD is very much needed to help elucidate the molecular mechanism driving not only the cardiovascular defects, but also the clinical sequelae associated with CHD.

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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?

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