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# **Genetics of Congenital Heart Diseases**

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## **Message from the Guest Editors**

Congenital heart diseases (CHDs) are the most common birth defect, affecting about 1% of neonates. A genetic contribution is strongly implicated in the pathogenesis of CHDs. Copy-number variations and chromosomal anomalies/aneuploidy are found in 8 to 25% of CHD patients. The largest genetic study of CHD from the Paediatric Cardiac Genomics Consortium (PCGC) using whole-exome sequencing identified that 8% of individuals are associated with de novo autosomal dominant variation and 2% of cases are attributed to autosomal recessive variation. There is mounting evidence that therapies targeting the treatment of adult heart failure have been ineffective in the treatment of heart failure in patients with CHD. It implies different pathomechanisms of congestive heart failure in patients with CHD and structurally normal hearts. Therefore, there is an urgent and increasing need to understand the genetic basis of CHDs for precise diagnosis, identifying at-risk patients before clinical symptoms develop, appropriate management, the determination of prognosis, and estimation of the risk of recurrence. This Special Issue is focused on the genetic contribution to congenital heart defects.













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## Message from the Editor-in-Chief

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