

*Editorial*

## **Cardiovascular Developmental Biology Research— Elucidating Mechanisms Underlying Congenital and Acquired Heart Diseases**

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Cardiovascular diseases (CVDs) are the number one cause of death worldwide. According to a recent report from the World Health Organization, an estimated 17.3 million people died from CVDs in 2008, representing 30% of all global deaths. Despite significant advances in surgical approaches and increased survival rate, congenital heart disease (CHD) is still the primary cause of birth defect-related deaths in the western world. More than half of all babies born with a cardiac abnormality will require at least one invasive surgery in their lifetime. As a result of improvement in surgical procedures, many babies who once would have died of CHD now survive into adulthood. In fact, the number of adults with CHD in the USA is now greater than the number of babies born with CHD. However, many adults with congenital heart disease are suffering from functional abnormalities, including arrhythmias and heart failure [1,2] and require lifelong care. The cardiovascular problems can be either intrinsic to the perturbation of developmental events that led to the structural malformations in the first place, or can result from acquired conditions related to scar tissues resulting from the surgical procedures. The primary goals of cardiovascular developmental research are to elucidate the mechanisms that govern normal cardiac development and to determine the molecular and cellular mechanisms involved in the etiology of CHD. In addition, as it becomes increasingly clear that many so-called acquired heart diseases may also have developmental origins, an additional goal of cardiovascular developmental biologists is to identify the early events that may play a role in the pathogenesis of acquired diseases, such as mitral valve prolapse.

The primary goal of *The Journal of Cardiovascular Development and Disease* (JCDD) is to provide the growing scientific community studying heart development and heart disease with a platform to publish their scientific studies in their field in a quick and efficient way. We welcome a wide variety of

papers. Topics of papers submitted to JCDD can range from studies designed to decipher the transcriptional events underlying early heart development to studies focusing on the developmental origins of congenital and acquired heart disease. JCDD will also welcome papers that are specifically aimed at increasing our insight into the anatomical aspects of heart development; papers that discuss the latest advances in cardiac imaging techniques; papers describing patterns of gene expression and/or phenotypes; and case studies relevant to the overall scope of the journal. All papers submitted to *The Journal of Cardiovascular Development and Disease* will undergo a fast, yet thorough and rigorous, peer-review process to assess the quality of the work. In this process, we will apply strict ethical policies and standards. Reviewers for JCDD will be specifically asked to focus on the quality of the conducted research. While not completely irrelevant, perceived impact or significance of the work in the field will not be an important consideration in the review process as the determination of impact of a study is often difficult and can be very subjective. What may appear to be a low-impact study at one point could turn out to be a paper that led to a paradigm-shift in the field. Thus, we believe that if a study has been accurately conducted, if the methodology is sound and well described, and if the results are of quality, exciting and clearly reported, then that study is worthy of publication. While it often takes months before an accepted paper is published in other, more traditional, journals, the open access and online-only format of *The Journal of Cardiovascular Development and Disease* guarantees fast dissemination of results to a large scientific audience.

## References

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