



## Animal Models of Inherited and Acquired Birth Defects

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### Message from the Guest Editor

Dear Colleagues,

Birth defects are disorders that exist at or before birth, regardless of cause. Although ~4000 different kinds of birth defects, of varying severities, have been described, most have unknown etiologies. Generally, congenital birth defects are thought to be caused by a combination of insults, including genetic susceptibilities, metabolic anomalies, toxic environment and maternal lifestyle influences. Both inherited and acquired defects are present at birth, but recent progress is beginning to uncover the underlying in utero genetic causes of numerous inherited birth defects. A great deal of this rapid advancement is due to the myriad of transgenic animal systems being used to model both structural and functional birth defects regularly observed in the clinic. This Special Issue of the Journal of Developmental Biology will provide an overview of the current standing of this large multidisciplinary research field. Contributions can be reviews, as well as research papers, covering individual and comparative transgenic models of inherited and acquired congenital birth defect pathogenesis.

Prof. Simon J. Conway

*Guest Editor*

### Keywords:

- Embryonic and fetal anomalies
- Structural and functional phenotypes
- *In utero* and neonatal lethality
- Transgenic animal models
- Inherited and acquired birth defects





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## Message from the Editor-in-Chief

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