

THE ZEBRAFISH: 2ND EDITION CELLULAR AND DEVELOPMENTAL BIOLOGY

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A major organizing concept of developmental biology is that the fundamental genetic programs controlling the development of complex, multi-cellular animals have been conserved during evolution. However, some aspects of development are uniquely "vertebrate" and can only be studied with a genetically malleable vertebrate organism. The development of complex organ systems, such as the brain, heart, and kidneys, cannot be easily studied in flies. In the mouse, historically the species of choice for studies of vertebrate development, most of embryonic development is difficult to follow because it occurs out of sight in the mother's uterus. For developmental analysis of vertebrates, the zebrafish *Danio rerio* has emerged as the genetic system of choice.

Cellular and Developmental Biology, the first of two parts on the subject of zebrafish, provides a comprehensive compendium of laboratory protocols and reviews covering all the new methods developed since 1999.

KEY FEATURES

- Provides state-of-the-art descriptions of novel cellular imaging technologies and methods for culture of zebrafish stem cells
- Summarizes protocols for analyzing the development of major organ systems including the central nervous system
- Introduces the use of the zebrafish as a model system for human diseases

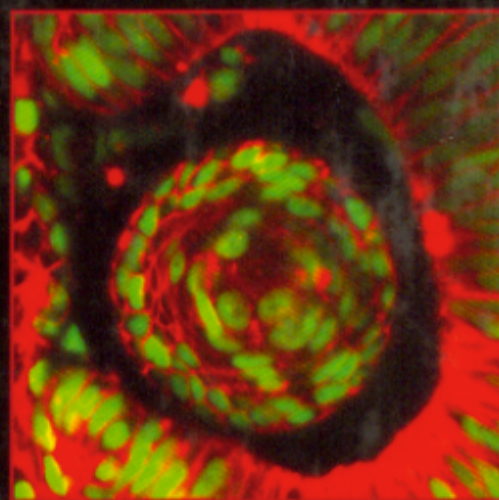
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