

THE ZEBRAFISH: DISEASE MODELS AND CHEMICAL SCREENS

THIRD EDITION

Edited by

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Building on the foundation of the first and second editions of *Methods in Cell Biology: The Zebrafish*, this new volume is devoted to two rapidly emerging uses of zebrafish in biomedical research: *Disease Models and Chemical Screens*. Contributors present 20 chapters on compelling zebrafish models of human diseases and three new chapters on chemical screens.

KEY FEATURES

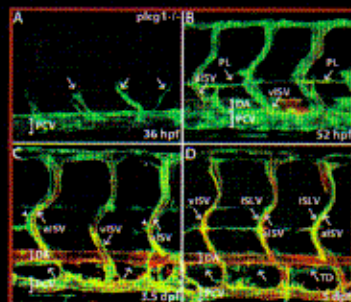
- Techniques and protocols for creating and studying zebrafish models of major diseases of humans are covered.
- Transgenic models of human leukemias, pancreatic carcinoma, rhabdomyosarcoma, and melanoma are described together with a plethora of experimental methods.
- Tumor intravasation and metastasis can now be studied in the ghostly transparent *casper* line.
- Zebrafish models of human ciliopathies have been established in lines with null mutations in intraflagellar transport or basal body genes.
- Micro RNA-based gene silencing in zebrafish has been exploited to create temporally and spatially controlled haploinsufficiency phenotypes.
- Three chapters describe high-throughput technologies for identification of useful small molecules from large chemical libraries.

Cover image: Embryonic development of the lymphatic vasculature in zebrafish.

Credit: Terhi Karpanen and Stefan Schulte-Merker (see Chapter 9, this volume)

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