

Manipulating the Mouse Embryo

A LABORATORY MANUAL • FOURTH EDITION

This fourth edition of "The Mouse Manual" is once again the definitive reference source for mouse development, transgenesis techniques, and molecular biology. Its preeminent authors Richard Behringer, Marina Gertsenstein, Kristina Nagy, and Andras Nagy have reorganized and updated this edition to include new information and protocols on:

- generation of induced pluripotent stem cells
- RNA microinjections
- lentiviral microinjections and infection
- assisted reproduction techniques for sperm and embryo cryopreservation
- isolation, generation, and transplantation of spermatogonial stem cell lines
- in utero electroporation of gene constructs into postimplantation embryos
- vibratome sectioning of live and fixed tissues for imaging thick tissue sections
- whole-mount fluorescent staining methods for three-dimensional visualization

Recombinant DNA techniques and methods for studies of mouse embryonic development have been updated from previous editions, as has the wealth of information on mouse laboratory strains, mouse housing and breeding, surgical procedures, assisted reproduction, handling of embryos, and micromanipulation setups. The first edition of this classic work appeared more than 20 years ago, and authors of the early editions included Brigid Hogan, Rosa Beddington, Frank Costantini, and Elizabeth Lacy. The field's technological sophistication has grown exponentially but the manual remains the essential practical and theoretical guide for all students, lab technicians, and investigators who work with mice.



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