



**Cold Spring Harbor Laboratory Press**

# **Manipulating the Mouse Embryo**

## **A Laboratory Manual, Second Edition**

By Brigid Hogan, *Vanderbilt University Medical School*; Rosa Beddington, *National Institute for Medical Research, London*; Frank Costantini, *Columbia University*; Elizabeth Lacy, *Memorial Sloan-Kettering Cancer Center*

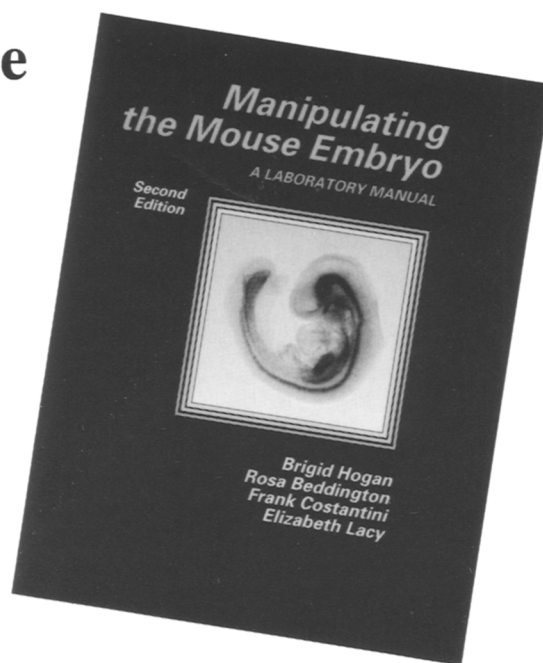
The 1986 publication of *Manipulating the Mouse Embryo* catalyzed the interaction between molecular biology and mammalian embryology. For the first time, detailed instructions on how to begin applying recombinant DNA technology to important questions about mammalian embryonic development were made available to a broad audience. The gathering pace of such studies in recent years has brought improvements to existing methods and fueled the creation of new and powerful technologies. The second edition of this classic manual has been completely revised and expanded to incorporate these advances. It contains new sections on the production and analysis of transgenic mice, the manipulation of preimplantation embryos to generate chimeras, the culture and manipulation of embryonic stem cells, including gene "knockouts," and techniques for visualizing genes, gene products, and specific cell types. As before, included with the protocols is a summary of current understanding of mouse development at a molecular level. In its new edition, this manual of proven distinction is again an authoritative and comprehensive source of technical guidance for experienced investigators and an essential resource for newcomers to mammalian genetics and embryology.

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## EDITORIAL

In the first issue of *Genome Research* (August 1995), we stated our wish to publish the best and most creative research on physical and genetic mapping, DNA sequencing, gene discovery, informatics, statistical and mathematical methods, technology development, and gene function. Thanks to the strong support of the genome community, the journal already has been able to publish papers that are at the cutting edge of contemporary genome research.

Through this early period, our vision for the journal has evolved, and, with our colleagues' encouragement, we have continually imposed exacting standards. As we look to this coming year and beyond, we will continue to refine *Genome Research* to reflect the ongoing growth, diversification, and success of the Genome Project.

In this spirit, we announce the following changes for the journal:

- We are pleased to welcome Mark Boguski of the National Center for Biotechnology Information as a fifth Editor. He brings considerable experience in computational approaches to genome analysis and electronic publication.

- We will increase our presence on the World Wide Web in the coming year. Information on the Web derived from *Genome Research* papers will retain the peer review and editorial assessment that are basic, critical features of traditional scientific communication, and yet will be innovative in exploiting the opportunities offered by electronic publication. One example was the real-time video enhancement of the "Optical Mapping" review article by Samad et al. in the first issue of the journal (August 1995). Electronic presentation will range from the simple provision of full or supplementary data sets in computable form, to the publication of full-text articles on line. The Editors will determine which papers will benefit from such enhancement, but beginning in the first quarter of 1996, the abstracts of all papers in the journal will be made available on our Web site as each issue is published.

- Starting with the current volume, *Genome Research* will expand the scope of the "PCR Methods and Applications" section. Many methods-oriented manuscripts germane to genome research, but not involving the polymerase chain

reaction, are being submitted. Accordingly, the section "Genome Methods" will replace the PCR section. Future submission of all high-quality methods papers that are relevant to the journal's scope will be published in this section.

- *Genome Research* has recently incorporated the publication of letters in addition to full-length articles. This forum is designed for concise reporting of important results. In response to a growing number of submitted papers that report aspects of single gene structures, we now welcome a shorter category of letters consisting of single gene reports. These papers are expected to focus on, but not be confined to, one or more genes with a description of their structure, sequence, expression, and/or other biologically relevant features. Such reports will be presented in a concise format in the journal, with supplementary data made available electronically where appropriate. The length of letters will range from one-half page to two pages in the journal, depending on the scope.

Members of the genome science community have enthusiastically supported this newcomer to the genome science literature—as authors, reviewers, advisors, and subscribers. We are grateful and encouraged and thank you for your efforts. As we said in our first editorial, the Genome Project is critical to the future of biomedical research. Six months on, we can say with certainty that *Genome Research* will be about that future.

Mark Boguski  
Aravinda Chakravarti  
Richard Gibbs  
Eric Green  
Richard Myers  
Editors, *Genome Research*