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Edited by Michael Bate, University of Cambridge; Alfonso Martinez Arias, University of Cambridge

The fruitfly Drosophila melanogaster offers the most powerful means of studying embryonic development in eukaryotes. New information from many different organ systems has accumulated rapidly in the past decade. This monograph, written by the most distinguished workers in the field, is the most authoritative and comprehensive synthesis of Drosophila developmental biology available and emphasizes the insights gained by molecular and genetic analysis. In two volumes, it is a lavishly illustrated, elegantly designed reference work illustrating principles of genetic regulation of embryogenesis that may apply to other eukaryotes. In addition, the text is complemented with a full-color Atlas for bench use, which graphically illustrates the day-by-day development of the Drosophila embryo.

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PCR Primer: A Laboratory Manual

Edited by Carl W. Dieffenbach, National Institute of Allergy and Infectious Diseases, Gabriela S. Dveksler, Uniformed Services University of the Health Sciences

From its first-published account in 1985, the polymerase chain reaction has become a standard research tool in a wide range of laboratories. Its impact has been felt in basic molecular biological research, clinical research, forensics, evolutionary studies, and the Human Genome Project. The PCR technique originally conceived by Nobel laureate Kary Mullis has proven to be exceptionally adaptable and has been transformed into a myriad array of methods, each with different applications.

PCR Primer: A Laboratory Manual introduces the complex world of PCR by beginning at an accessible level and then moving to more advanced levels of application. First, the practical requirements for performing PCR and other amplification techniques in the lab are introduced and then the basic aspects of the technique are explained by exploring important issues such as sample preparation, primer design, efficiency, detection of products, and quantitation. Protocols for a wide range of PCR and amplification techniques—each written by an expert investigator—are presented for cloning, sequencing, mutagenesis, library construction and screening, exon trapping, differential display, and expression, and these include RT-PCR, RNA PCR, LCR, multiplex PCR, panhandle PCR, capture PCR, expression PCR, 3' and 5' RACE, in situ PCR, and ligation-mediated PCR. Each protocol is augmented by analysis and troubleshooting sections and complete references.

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