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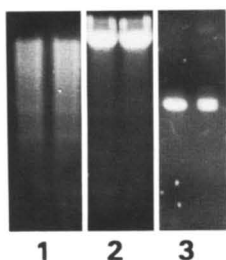
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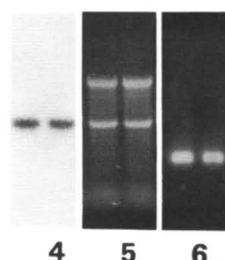
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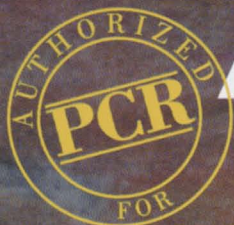
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PCR Primer: A Laboratory Manual

Edited by Carl Dieffenbach, *National Institute of Allergy and Infectious Diseases*, Gabriela 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, footprinting, 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, immune PCR, in situ PCR, and ligation-mediated PCR. Each protocol is augmented by analysis and troubleshooting sections and complete references.

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To our readers . . .

When the next issue of *PCR Methods and Applications* appears, it will have a new name and a new look. The journal will be called *Genome Research* and it will incorporate the current title *PCR Methods and Applications*, which will continue to publish the best of PCR- and amplification-oriented techniques papers. This is not a decision that was taken lightly. Of its kind, *PCR Methods and Applications* has been a most successful publication. However, the Editors and Cold Spring Harbor Laboratory Press have sensed in the last year or so that the many variations of PCR have become quite established in laboratory use and that the interesting work now is predominantly in the application of these techniques to biological questions. PCR now has a much larger context, most notably in the area of genome studies. Conversations with many investigators working in genome research assured us that the PCR journal, like the technique, should evolve into the larger context, and so become an even more valuable component of the biological literature.

Thus, in August 1995, *Genome Research* will begin as a monthly, international, peer-reviewed journal focusing on genome studies in all species, including genetic and physical mapping, DNA sequencing, gene discovery, informatics, statistical and mathematical methods, and genome structure and function, as well as technological innovations and applications. New data in these areas will be published as research papers and review articles. There will also be an electronic dimension to *Genome Research* with large data sets, visual data, and hyperlinked published papers appearing on the Cold Spring Harbor Laboratory World Wide Web site CLIO at <http://www.cshl.org>

To all of the Editors and Editorial Board members of *PCR Methods and Applications* we extend our sincere thanks for their enthusiasm and advice in helping us produce *PCR Methods and Applications*. We are also extremely grateful to the Perkin-Elmer Corporation for their 5-year sponsorship of *PCR Methods and Applications*. We hope that you, our readers, will continue to support the journal with your papers and subscriptions. You will find much of interest in *Genome Research*.

J.C.

Product News. . .

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Streptavidin-coated thin-wall polycarbonate plate

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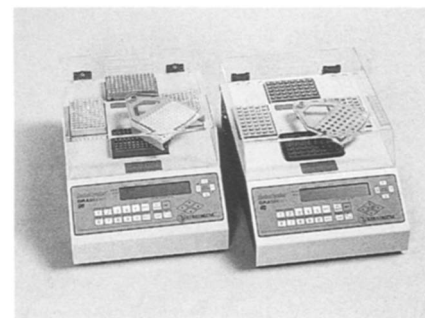
RapidPrep genomic DNA isolation kits for blood

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formance genomic DNA isolations kits. The Micro kit is designed specifically for PCR and contains reagents sufficient for 50 purifications from 10–500 µl of whole blood or 1–4×10⁶ lymphocytes. The Macro kit contains sufficient reagents for 10 purifications from 1–5 ml of whole blood or 5×10⁶ to 2×10⁷ lymphocytes, yielding genomic DNA of sufficient yield and purity for many subsequent applications, such as PCR, RFLP analysis, restriction analysis and other molecular manipulations.

Contact: Pharmacia Biotech, 800 Centennial Avenue, P.O. Box 1327, Piscataway, New Jersey 08855-1327; (800)526-3593. Reader Service No. 473.

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Savant Instruments, Inc. has introduced a new product line for molecular biology applications—the Gene Runner Temperature Cyclers (GR48/GR96), Gene Roller Hybridization Oven (GRH10), and Gene Transformer Electroporator (GTF100). Gene Runner high-capacity personal cyclers feature simple programming, excellent uniformity, and a choice of three temperature control modes, including direct sample control for highest accuracy and maximum speed. Optional heated lid is available. Gene Roller offers high capacity (10 bottles), uniform temperature between hybridization bottles (±0.25°C), and incorporates safety features that shield 99% of β emissions. Gene Transformer, a light-weight, portable electroporator with built-in power supply and safety cuvette holder, has optimized settings for consistently high transformation efficiencies in bacterial and mammalian cells.

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New plate for immuno-PCR

Xenopore Corporation has introduced a new covalent binding thin-wall polycarbonate plate for use in thermocyclers. Unlike standard polycarbonate plates, which have very low binding affinity for antibodies, these new plates will covalently attach antibodies to the surface in a simple incubation step. A standard sandwich immunoassay can be carried out in the wells, and then the detection step, which requires a DNA amplification, can be carried out in the same well. These polycarbonate plates are thermally stable up to 135°C and the thin-wall design ensures rapid heat transfer.

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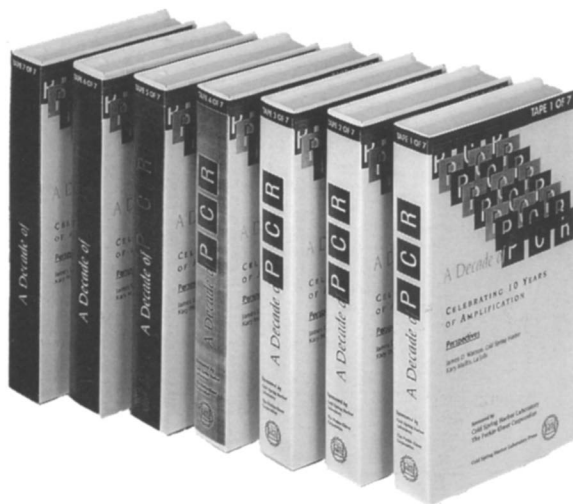
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Celebrating 10 Years of Amplification



A Decade of PCR

Cold Spring Harbor Laboratory and The Perkin-Elmer Corporation celebrate 10 years of amplification with a videotape library in which Nobel prize winners Kary Mullis and James Watson and 19 other distinguished scientists review the applications and evolution of the amplification technique hailed as one of the century's most important scientific tools.

In 1995, the polymerase chain reaction will be 10 years old. The technique that began as a late-night inspiration by an unrenowned scientist is now the bedrock of DNA research, gene discovery, diagnostics development, forensic investigation and environmental science. It has built an industry, provoked a court case, and spawned a dozen books, countless papers and a journal. Along the way, it earned its inventor, Kary Mullis, a Nobel prize.

To mark this anniversary, a conference sponsored by The Perkin-Elmer Corporation was held at Cold Spring Harbor Laboratory in September 1994. Beginning with perspectives from James Watson, famed for the discovery of the structure of DNA, and PCR-inventor Kary Mullis, outstanding scientists from a variety of fields reviewed the impact of the technique on their specialties, discussing the present and future applications of PCR technology.

A day and a half of wide-ranging, highly illustrated talks have been captured in this unique videotape library. The collection will amplify to

working scientists from the graduate student level upwards who apply PCR to problems in human, animal and plant genetics, cell biology, diagnostics, forensic science and molecular evolution.

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