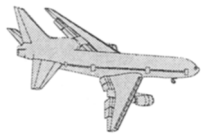

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PCR Primer:
A Laboratory Manual

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, 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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Pre-Mixed PCR Reagents

Life Technologies, producer of Gibco-BRL products, introduces PCR SuperMix, a ready-to-use reaction mix for amplification of DNA templates by PCR. Formulated in a 1.1× mix, PCR SuperMix contains the *rTaq* DNA Polymerase, dNTPs, Mg^{2+}, and salts needed for a broad range of PCR applications. Typically, the user prepares a template-primer mix in 5 ml, adds 45 μl of PCR SuperMix (stored at 4°C, so no thawing is required), and the reaction is ready for cycling; reactions can be scaled according to the particular experimental requirements. Thus, reaction set-up time is reduced, fewer pipette tips are used, and the risk of contamination is reduced. PCR SuperMix is priced at $89 per 100 reactions.

For additional information, contact Life Technologies at 1-(800)-828-6686. Reader Service No. 165

Filmless Autoradiography Plus Fluorescent and Chemifluorescent Gel and Blot Analysis

Molecular Dynamics' Storm™ 840 system offers quantitative chemifluorescence detection plus storage autoradiography in a single instrument, allowing investigators to use non-radioactive chemifluorescence and blue-excited fluorescence, as well as traditional radioisotope-based methods, for DNA and protein studies on blots and gels (e.g., western blotting, membrane-based ELISA assays, Southern and Northern blots, gel-shift assays, multiplex DNA sequencing, and membrane-based DNA dot-blot hybridization assays). In addition, the system's quantitative, filmless autoradiography capability can be used for any application traditionally visualized with autoradiography film. The Storm system has a 35 × 43 cm scan area that accommodates sequencing gels and other large samples; ImageQuant™ software for Macintosh or PC platforms enables system control and data analysis.

For more information, contact Molecular Dynamics at (800)-333-5703 (www: http://www.mdyn.com). Reader Service No. 166

Pipetting System Eliminates Aerosol Contamination in PCR Reactions

Tri-Continent has developed a new range of PCR pipettes and tips combining a highly accurate, positive displacement design, patented tip-locking mechanism, and longer, narrower tips. In positive displacement, the tip plunger comes in direct contact with the sample and, during dispensing, extends to the bottom of the tip to ensure that all of the sample is expelled. In the patented Tri-Continent design, the tip plunger creates a seal inside the microsyringe, preventing any molecules, even in aerosol form, from passing into the barrel of the pipette and causing cross-contamination. Pipettes are available in volume ranges of 0.5 to 25 μl (adjustable in 0.1 μl increments) and 25 to 250 μl (adjustable in 1 μl increments).

For more information, contact Tri-Continent at (800)-937-4738. Reader Service No. 167

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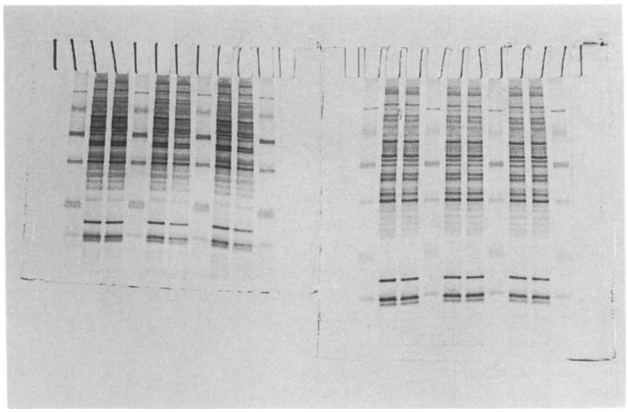

Integrated Separation Systems offers an expanded line of Mini and MiniPlus SepraGels. ISS SepraGels, made with highest quality reagents, are produced in glass cassettes for the most efficient heat transfer and are available in a variety of gradients and single percentages. SepraGels are produced with a basic Laemmli formulation and are compatible with Tris-GLycine-SDS, Tris-GLycine and TBE-Urea, and Tricine compatible gels are also available.

For information, contact Integrated Separation Systems at (800) 433-6433. Reader Service No. 168

Molecular Probes of the Nervous System

Volume 1 Selected Methods for Antibody and Nucleic Acid Probes

By Susan Hockfield, *Yale University School of Medicine;* Steve Carlson, *University of Washington;* Chris Evans, *University of California, Los Angeles;* Pat Levitt, *Medical College of Pennsylvania;* John Pintar, *Columbia University College of Physicians & Surgeons;* Laura Silberstein, *San Jose State University*

Over the past ten years, new techniques have transformed most branches of neuroscience. The most powerful of them have been adapted from cell and molecular biology and immunology to permit analysis of nerve cell structure and function at a level of detail never before possible. With this volume, CSHL Press introduces a new series of manuals designed specifically for neuroscientists who wish to acquire the skills of molecular analysis. A laboratory course taught each year at Cold Spring Harbor demonstrates the potential and pitfalls of antibody and nucleic acid probes as biochemical and anatomical reagents. This first volume in the series, designed for ease of use at the lab bench, is a distillation by the instructors of much of the material covered in several years of the course. As an aid to understanding the strategy and rationale of the protocols, brief supplementary explanations are included. The manual is a valuable resource for established investigators and for anyone working with nervous system tissue for the first time.

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