



METHODS • AND • APPLICATIONS

Associate Editors

David Bentley
Guy's Hospital, London
Richard Gibbs
Baylor College of Medicine
Eric Green
*Washington University
School of Medicine*
Richard Myers
University of California, San Francisco

Editorial Board

Johannes Bos
University of Utrecht
David Botstein
Stanford University School of Medicine
Jeff Chamberlain
University of Michigan Medical School
Henry Erlich
Roche Molecular Systems
Kenshi Hayashi
National Cancer Research Institute, Tokyo
Bernhard Horsthemke
University of Essen
Pieter de Jong
Lawrence Livermore National Laboratory
David Kemp
Menzies School of Health Research
Kenneth Kidd
Yale University School of Medicine
Ulf Landegren
University of Uppsala Medical Center
Eric Lander
*Whitehead Institute of
Medical Research*
Hans Lehrach
Imperial Cancer Research Fund
Kary Mullis
La Jolla, California
David Nelson
Baylor College of Medicine
Debbie Nickerson
*University of Washington
School of Medicine*
Svante Pääbo
University of Munich
Steve Sommer
Mayo Foundation
Lap-Chee Tsui
Hospital for Sick Children, Toronto
James Weber
*Marshfield Medical
Research Foundation*
Mark Zoller
Genentech, Inc.

Editor

Judy Cuddihy
Cold Spring Harbor Laboratory

Editorial Staff

Doris Lawrence, Editorial/Production
Secretary

Jim Suddaby, Design

Advertising

Nancy Kuhle

**August, 1992
Volume 2, Number 1**

PERSPECTIVE

- 1 Quantitative or Semi-Quantitative PCR: Reality Versus Myth**
Francois Ferre

RESEARCH

- 10 F-SSCP: Fluorescence-based Polymerase Chain Reaction-Single Strand Conformation Polymorphism (PCR-SSCP) Analysis**
Reiko Makino, Hiromichi Yazyu, Yosuke Kishimoto, Takao Sekiya, and Kenshi Hayashi
- 14 Mismatch Amplification Mutation Assay (MAMA): Application to the c-H-ras Gene**
Rita S. Cha, Helmut Zarbl, Phouthone Keohavong, and William G. Thilly
- 21 Ligation-mediated PCR of Restriction Fragments from Large DNA Molecules**
Douglas R. Smith
- 28 Randomization of Genes by PCR Mutagenesis**
R. Craig Cadwell and Gerald F. Joyce
- 34 Automated DNA Profiling by Fluorescent Labeling of PCR Products**
Kevin M. Sullivan, Susan Pope, Peter Gill, and James M. Robertson
- 41 The Use of Hybrid-Selected Template Increases the Specificity of the Polymerase Chain Reaction**
William T. Lucas and Julius S. Youngner
- 45 PCR Regimen for Enhanced Specificity and Yield of Targeted Genomic DNA Sequences: ras and p53**
Donald J. Phillips, Jane M. Benson, Janet M. Pruckler, and W. Craig Hooper
- 51 Optimization of Long-distance PCR Using a Transposon-based Model System**
Lynne D. Ohler and Elise A. Rose
- 60 A Method for Nested PCR with Single Closed Reaction Tubes**
Joseph Yourno
- 66 Rapid Synthesis of DNA Deletion Constructs for mRNA Quantitation: Analysis of Astrocyte mRNAs**
Elena Galea and Douglas L. Feinstein
- 70 Amplification and Cloning of Sugarcane Sucrose Synthase cDNA by Anchored PCR**
A. Suresh Kumar, Paul H. Moore, and A. Maretzki
- 76 Rapid Quantitation by PCR of Endomycorrhizal Fungi Colonizing Roots**
Luc Simon, Roger C. Lévesque, and Maurice Lalonde

TECHNICAL TIPS

- 81 An Improved Method for Cloning PCR Fragments**
David B. Mitchell, Nicolas Ruggli, and Jon-Duri Tratschin
- 83 A Simple Method to Attach a Universal 50-bp GC-Clamp to PCR Fragments used for Mutation Analysis by DGGE**
Bert Top

(continued)