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*Human genomic DNA.* Traditional manual agarose slab gel shows intact gDNA in the second lane. Gel images in remaining lanes show varying levels of gDNA degradation.

**Human genomic DNA.**

**The Future**

Same sample of human gDNA, identical results.

**Below:** Raw data is captured by automated capillary electrophoresis system, as seen in electropherogram overlay. >20000 bp peak indicates intact gDNA on the upper-most trace.

**Above:** Data can then be processed and presented in a variety of ways, such as this digital gel image.

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ANNOUNCING
Molecular Cloning 4

By Michael R. Green, Howard Hughes Medical Institute, University of Massachusetts Medical School and Joseph Sambrook, Peter MacCallum Cancer Institute, Melbourne, Australia

Molecular Cloning: A Laboratory Manual has always been the one indispensable molecular biology laboratory manual for protocols and techniques. The fourth edition of this classic manual preserves the detail and clarity of previous editions as well as the theoretical and historical underpinnings of the techniques presented. Ten original core chapters reflect developments and innovation in standard techniques and introduce new cutting-edge protocols. Twelve entirely new chapters are devoted to the most exciting current research strategies, including epigenetic analysis, RNA interference, genome sequencing, and bioinformatics. This manual is essential for both the inexperienced and the advanced user.

2012, 2,028 pp., illus., appendices, index
Cloth (three-volume set)
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- **Human and Stem Cell Genomics** — the ability to decipher human genomes completely and accurately is transforming our understanding of normal somatic variation, cancer mutation, and genome stability during cellular reprogramming. This is opening new avenues to understand the effect of genome variation in health and disease.

- **Immunology** — the human immune system plays a critical role in combating infectious disease. However, an over exuberant and unstratified immune response can lead to inflammatory and autoimmune disease. The application of genomic and systems biology approaches promises to reveal the genetic determinants that control this delicate balance.

- **Host-Microbe Interactions** — the results of interrogating the human microbiome highlights how little we understand about the ways that microbes living in and on us contribute to our health and well-being. The next phase of these investigations will focus heavily on the interactions with the host.

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California Institute of Technology, USA

David G. Baulcombe
University of Cambridge, United Kingdom

Julius Brennecke
Institute of Molecular Biotechnology, Austria

Marc Bühler
Friedrich Miescher Institute for Biomedical Research, Switzerland

Howard Y. Chang
Stanford University, USA

Ling-Ling Chen
Institute of Biochemistry and Cell Biology, China

Jennifer A. Doudna
University of California, Berkeley and Howard Hughes Medical Institute, USA

Witold Filipowicz
Friedrich Miescher Institute for Biomedical Research, Switzerland

Antonio J. Giraldez
Yale University, USA

Shiv Grewal
National Institutes of Health, National Cancer Institute, Laboratory of Biochemistry and Molecular Biology, USA

Ingrid Grummt
German Cancer Research Center, Germany

Edith Heard
Institut Curie, France

V. Narry Kim
Seoul National University, Korea

Jeannie T. Lee
Howard Hughes Medical Institute and Harvard Medical School, USA

John Mattick
Garvan Institute of Medical Research, Australia

Craig C. Melo
University of Massachusetts Medical School, USA

Eric Olson
UT Southwestern Medical Center, USA

Dinshaw J. Patel
Memorial Sloan-Kettering Cancer Center, USA

Nikolaus Rajewsky
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Mikiko C. Siomi
University of Tokyo, Japan

Gisela Storz
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Wageningen University, The Netherlands

Olivier Voinnet
Swiss Federal Institute of Technology Zurich, Switzerland

Gerhard Wagner
Uppsala University, Sweden

ABSTRACT SUBMISSION DEADLINE
18 JULY 2013

REGISTRATION DEADLINE
22 AUGUST 2013

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David P. Bartel
HHMI/Janelia Farm Research Institute, USA

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Würzburg University, Germany

Additional speakers will be selected from abstracts.

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Confirmed Speakers

Ido Amit
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Sam Aparicio
BC Cancer Agency, Canada

Ewan Birney
EMBL-EBI, UK

Andrea Califano
Columbia University, USA

Peter Campbell
Welcome Trust Sanger Institute, UK

Stephen Chanock
National Cancer Institute, USA

Lynda Chin
MD Anderson Cancer Center, USA

Ivo Gut
National Genome Analysis Centre, Spain

Jan Korbel
EMBL, Heidelberg, Germany

Peter Lichter
German Cancer Research Center, Germany

Elaine Mardis
The Genome Institute at Washington University, USA

Ulan McDermott
Welcome Trust Sanger Institute, UK

Katerina Politi
Yale University, USA

Yijun Ruan
Genome Institute of Singapore, Singapore

Reiner Siebert
Kiel University, Germany

Jessica Zucman-Rossi
Inserm U874, France

Keynote Speakers

Elias Campo
Hospital Clinic, University of Barcelona, Spain

Andy Futreal
MD Anderson Cancer Center, USA

Nazneen Rahman
The Institute of Cancer Research, UK

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UPCOMING CONFERENCES IN GENETICS AND GENOMICS

The Genomics of Common Diseases
7-10 September 2013 (Oxford, UK)
The Wellcome Trust in association with Nature Genetics is pleased to announce the 7th Genomics of Common Diseases meeting. This year’s programme will focus on understanding the genetic and mechanistic basis of common diseases and moving toward clinical translation.
Abstract deadline: 26 June
Registration deadline: 22 July

Infectious Disease Genomics and Global Health
16-18 October 2013
Infectious disease is a major burden on healthcare throughout the world, particularly in developing countries. The 6th Infectious Disease Genomics and Global Health conference will emphasize the application of genomic technologies to problems of infectious disease in a global health context.
Registration opens shortly

Cancer Pharmacogenomics and Targeted Therapies
15-17 September 2013
This exciting new conference is aimed at scientists and clinician-scientists in academia or industry. The programme will seek to address many of the key challenges in the design, development and clinical implementation of targeted cancer therapies.
Registration and abstract deadline: 28 June

Epigenomics of Common Diseases
7-10 November 2013
Epigenetic variation is now acknowledged to make a significant contribution to several common diseases in addition to cancer. This conference will bring together leading scientists from the fields of epigenomics, genetics and bioinformatics to discuss the latest developments in this fast-moving field.
Abstract deadline: 2 September
Registration deadline: 7 October

Mouse Molecular Genetics
18-21 September 2013
The 26th annual Mouse Molecular Genetics conference will once again provide a leading forum for researchers who apply genetics and genomics techniques to address fundamental issues in mammalian biology.
Abstract deadline: 19 July
Registration deadline: 7 August

Functional Genomics and Systems Biology
21-23 November 2013
This popular conference provides a forum for discussions on post-genomic research in humans and other organisms. Full details will be available on our website shortly.
Registration opens shortly