



# A different vowel. A different kind of gene expression company.

You have a choice in gene expression.  
Switch to “i” and:

- ▶ Spend just \$160 per whole-genome array
- ▶ Process multiple whole-genome arrays per BeadChip
- ▶ Use 1/20<sup>th</sup> the amount of sample
- ▶ Get 100% oligo and array quality control
- ▶ Profile partially degraded RNA (FFPE samples) using the DASL® solution

Join the growing Illumina gene expression user community and enjoy the support of over 500 Illumina employees who are committed to your success.

Visit [www.switchtoi.com](http://www.switchtoi.com)  
and find out why it makes  
sense to switch to “i”.

[www.switchtoi.com](http://www.switchtoi.com)





# Cold Spring Harbor Protocols



## Subject Coverage

Antibodies  
Bioinformatics/Genomics  
Cell Biology  
Chromatography  
Computational Biology  
DNA Delivery/Gene Transfer  
Electrophoresis  
Genetics  
High Throughput Analysis  
Imaging/Microscopy  
Immunology  
Laboratory Organisms  
Molecular Biology  
Neuroscience  
Plant Biology  
Polymerase Chain Reaction (PCR)  
Proteins and Proteomics  
RNA Interference (RNAi)/siRNA  
Stem Cells  
Transgenic Technology

## Lights, Camera, Methods!

Now you can see results of the finest methods in action with new online movies in *CSH Protocols*.

The November issue of *CSH Protocols* features methods for tracking RNA and protein molecules in both cells and organisms, and introduces new multimedia content made possible by online presentation: movies showing examples of these techniques in action.

Read—and see—these newly featured protocols online at [www.cshprotocols.org](http://www.cshprotocols.org):

- Photoactivation-Based Labeling and In Vivo Tracking of RNA Molecules in the Nucleus
- Selection of Appropriate Imaging Equipment and Methodology for Live Cell Imaging in *Drosophila*

*CSH Protocols* offers cutting edge and classic protocols in molecular and cell biology from laboratories worldwide, along with methods from Cold Spring Harbor Laboratory's renowned manuals and on-site courses. Free trials and discounted subscriptions are available for a limited time.

*CSH Protocols* is created by Cold Spring Harbor Laboratory Press in association with HighWire Press of Stanford University.

Cold Spring Harbor Protocols • Executive Editor: Dr. Michael Ronemus  
ISSN 1559-6095 / online, monthly • Available exclusively via institutional site license

**www.cshprotocols.org**  
The First Choice in Protocols.

For pricing information or to request a free trial visit the website or:

Phone: 1-800-843-4388 (Continental US and Canada) or 516-422-4100 (all other locations)

FAX: 516-422-4097 E-mail: [cshpress@cshl.edu](mailto:cshpress@cshl.edu)

Write: Cold Spring Harbor Laboratory Press, 500 Sunnyside Blvd., Woodbury, NY 11797-2924



# High Yields. High Purity. High Throughput. Low Cost.

## Clean DNA.

EPICENTRE's New

**BACMAX96™ DNA Purification Kit** gives you high throughput purification of high quality BAC and Fosmid DNA in a 96-well plate.

#### **High throughput—**

Up to 384 BAC or Fosmid preps in 2.5 hours,  
with or without automation.

#### **Yields—**

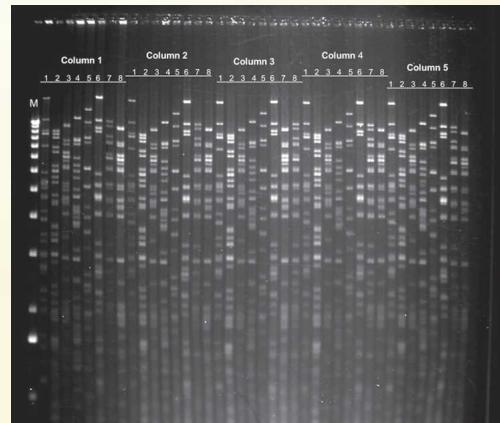
Up to 900ng with standard single-copy BACs  
and to over 2.5ug with induced CopyControl™  
vectors.

#### **DNA purity—**

Plasmid-Safe™ ATP-Dependent DNase and  
BACMAX96™ RNase blend remove genomic  
DNA and RNA contaminants.

#### **Autoinduction protocol—**

An optional overnight autoinduction step induces  
CopyControl™ vectors, increasing yields without  
time-consuming sub-culturing.



Fingerprints of  
eight autoinduced  
CopyControl™  
BACs in five rep-  
licates purified in  
a 96-well plate  
using BACMAX96™.  
Consistent high  
yields and banding  
patterns indicate the  
stability of the  
BAC throughout the  
autoinduction and  
purification process.



**EPICENTRE®**  
Biotechnologies

For more information, go to  
[www.EpiBio.com](http://www.EpiBio.com) & enter  
QuickInfo code: **BMAX4**



NEW  
ENGLAND  
BIO LABS

in a word, fast.

## Phusion™ High-Fidelity DNA Polymerase from New England Biolabs

### EXTREME PRECISION WITH UNPARALLELED SPEED AND ROBUSTNESS

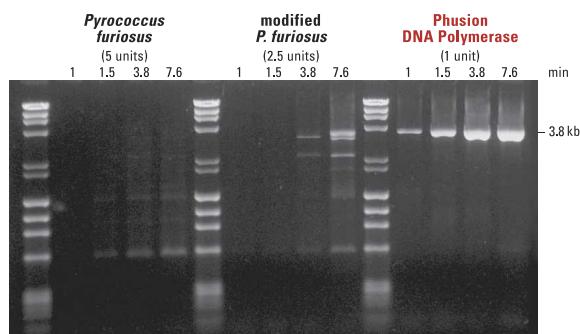
With Phusion High-Fidelity DNA Polymerase, there is no need to compromise any aspect of your PCR performance. A superior choice for cloning, this recombinant polymerase has an error rate 50-fold lower than *Taq* DNA Polymerase, making it the most accurate thermostable polymerase available. Phusion DNA Polymerase is supplied in a variety of formats, or with a **hot start modification** for increased specificity.

#### Advantages:

- Extreme Fidelity – Highest of any thermostable polymerase
- High Speed – Extension times are dramatically reduced
- Robustness – Reduce reaction failures with minimal optimization
- High Yield – Increase product yields with minimal enzyme amounts
- Specificity – Hot start modification reduces non-specific amplification

- Phusion High-Fidelity DNA Polymerase  F-530S/L
- Phusion Hot Start High-Fidelity DNA Polymerase  F-540S/L
- Phusion High-Fidelity PCR Master Mix  with HF Buffer with GC Buffer F-531S/L  
F-532S/L
- Phusion High-Fidelity PCR Kit  F-553S/L

 = Recombinant



**Experience extreme speed and yield with Phusion High-Fidelity DNA Polymerase.** A 3.8 kb fragment from human beta globin gene was amplified according to suppliers' recommendations using varying extension times. Phusion DNA Polymerase was able to amplify the fragment with a combined annealing and extension step of only 1 minute. Also, a single unit of Phusion DNA Polymerase produced higher yields than 2.5 or 5 units of *Pyrococcus furiosus* DNA Polymerases. Phusion™ is a trademark of Finnzymes Oy

For more information please visit [WWW.neb.com](http://WWW.neb.com)

- **New England Biolabs Inc.** 1-800-NEB-LABS Tel. (978) 927-5054 Fax (978) 921-1350 [info@neb.com](mailto:info@neb.com)
- **Canada** Tel. (800) 387-1095 [info@ca.neb.com](mailto:info@ca.neb.com)
- **UK** Tel. (0800) 318486 [info@uk.neb.com](mailto:info@uk.neb.com)
- **Germany** Tel. 0800/246 5227 [info@de.neb.com](mailto:info@de.neb.com)
- **China** Tel. 010-82378266 [beijing@neb-china.com](mailto:beijing@neb-china.com)

Produced by

 FINNZYMES  
TOOLS FOR MOLECULAR BIOLOGY

Distributed by

 NEW ENGLAND  
BioLabs® Inc.  
the leader in enzyme technology

# BIOSUPPLYNET

A Current, Integrated Information Source  
for Life Science Laboratory Supplies



BIOSUPPLYNET

## Find A Kit

Many suppliers offer time and effort saving kits to perform research techniques. Search our exclusive database of available research kits.

## BioToolKit

An annotated directory of over 1000 links to online molecular biology resources, including basic research tools and advanced applications for genome, transcriptome, and proteome data retrieval, analysis, and visualization.

## Featured Subject Areas

Download free protocols, background information and find suppliers for reagents and equipment for the hottest fast-growing research methods and areas of interest.

## Featured Protocols

Download free protocols from Cold Spring Harbor Laboratory Press manuals, and find sources for the reagents and equipment needed.

## Career Center

Find or place listings for available positions in academic research, pharmaceutical companies, clinical research facilities, and the biotechnology industry.

## Searching

Searching is very convenient. Info on over 20,000 products from over 6,500 suppliers is right at your finger tips.



## CSHL Press Announces the New and Improved BioSupplyNet.com!

- CSHL Press has relaunched BioSupplyNet, adding new features and improved functionality
- SAVE TIME! No need to search through stacks of catalogs and numerous websites
- Over 20,000 products and supplies listed (indexed by type and/or by company)
- Over 6,500 prominent suppliers participating and the number continues to grow
- Searching is FAST and EASY
- NO REGISTRATION necessary

**In addition to searching for products, Scientists can quickly:**

- Get immediate inside info about new products and special deals
- Find kits to perform research techniques
- Visit Featured Subject Areas containing background info, free protocols, hottest fast-growing research methods and more! Now featuring PCR and RNAi
- Download free protocols from Cold Spring Harbor Laboratory Press manuals
- Visit our Career Center to search and post job listings
- Get up to the minute Science news
- Order Catalogs
- Sign up for Newsletters

**Visit BioSupplyNet Today!**





focus on discovery.

## Discover More with the World's Finest Full-Length Clone Collection

The Mammalian Gene Collection (MGC) is quite simply the best clone collection in the world, brought to you by the greatest minds in genomic research. Generated and sequenced by a consortium of leading NIH funded laboratories, our cDNA resource contains a complete open reading frame (ORF) for every human, mouse, and rat gene represented. The power of discovery is at your fingertips.

- Every MGC clone is fully sequenced with complete ORF
- Assay-ready DNA in microplate format upon request
- Online clone query quickly identifies the clone you need

Your expert partner for  
Genomic, RNAi and Proteomic resources.

*"Open Biosystems' MGC collection is an invaluable resource for CCSB, the Dana-Farber Center for Cancer Systems Biology. It has cut years off the development of a human protein-protein interaction map."*

Marc Vidal  
Dana-Farber Cancer Institute

**Why experiment when you can discover?**

GENOMICS • RNAi • PROTEOMICS  
express      repress      detect



Toll Free 888.412.2225  
[www.openbiosystems.com](http://www.openbiosystems.com)

# CAREER TRACKS

Dedicated entirely to Employment, Conferences, Meetings, Fellowships, and Grants

## COLUMBIA UNIVERSITY Department of Biological Sciences STAFF ASSOCIATE

A full time Staff Associate position is available on 4/1/07 to study regulatory networks, how these networks vary across individuals and how they are dysfunctional in cancer. The successful candidate must have a Bachelors degree in computer science, at least six years of experience in algorithm and software development, machine learning and signal processing.

Salary commensurate with experience.

Closing date for applications is 3/5/07. Apply in writing with curriculum vitae and cover letter giving the names and addresses of three references to:

John Lacqua  
Columbia University  
Department of Biological Sciences  
500 Fairchild Center, MC 2401  
1212 Amsterdam Avenue  
New York, NY 10027

Columbia University is an equal opportunity/affirmative action employer. Minorities and women are encouraged to apply.

## Fred Hutchinson Cancer Research Center Staff Scientist

Staff Scientist #G-20135: Perform research on evolution of mammalian olfactory receptor genes using bioinformatics software.

Requirements: PhD in Genetics/related field, or foreign degree equivalent; 2 yrs postdoc research experience including mammalian genetics, mammalian olfaction, & large-scale genomics utilizing standard molecular biology techniques, large-scale genomics techniques, & standard & custom bioinformatics software (including database design & admin using acedb prog.), & including staff supervision & 1st authorship of at least 1 peer-reviewed scientific publication.

FT, Seattle WA.

Send resumes to: [www.fhcrc.org](http://www.fhcrc.org).  
Please reference G-20135 on your resume.

*Fred Hutchinson Cancer Research Center is an AA/EEO.*

## The UCSF Fellows Program

Nominations are being solicited for appointment as a 'UCSF Fellow' in a program at the University of California, San Francisco that brings talented young scientists into our diverse and interactive research community. UCSF Fellows independently pursue biomedical research without the obligations of faculty membership or the constraints of a conventional postdoctoral fellowship. Thus, the UCSF Fellows Program provides an alternative or a supplement to traditional postdoctoral study following the M.D. or Ph.D. degree, and an opportunity to establish a creative and successful research program prior to obtaining a faculty position.

UCSF Fellows are independent group leaders who occupy small laboratories adjunct to UCSF faculty; they receive an annual financial award to cover their salary and partially defray the costs of their research program. UCSF Fellows may recruit postdoctoral fellows and are encouraged to seek extramural funds to support research groups of 3-5 members. The UCSF Fellow award is nonrenewable, for a term of five years.

A candidate must be nominated by a mentor/advisor who is able to comment in some depth on the accomplishments and future potential of the candidate. The nomination letter should be accompanied by the nominee's curriculum vitae. Subsequently, selected candidates will be asked to arrange for three additional letters of recommendation, and to submit a brief research plan. Nominees working in any area of modern biomedical sciences will be considered. Although the UCSF Fellows Program is eager to consider nominations of all exceptional individuals, we are particularly interested in attracting minorities and women to our campus.

The deadline for letters of nomination is **February 16, 2007**. We anticipate interviewing selected candidates in the spring of 2007, and aim to appoint a new UCSF Fellow to start in the second half of 2007. Nominations should be sent to the attention of:

Dr. Douglas Hanahan  
Chair, UCSF Fellows Steering Committee  
University of California, San Francisco  
c/o The UCSF Diabetes Center  
513 Parnassus Avenue, Room HSW1090  
San Francisco, California 94143-0534  
EM: [dh@biochem.ucsf.edu](mailto:dh@biochem.ucsf.edu)

*The UCSF Fellows Program is sponsored by the Sandler Family Supporting Foundation.*



## ***Genome Research* seeks an Assistant Editor**

***Genome Research*** is an international, continuously published, peer-reviewed journal that focuses on research that provides novel insights into the genome biology of all organisms, including advances in genomic medicine. The journal was launched in August 1995 by Cold Spring Harbor Laboratory (CSHL) Press and is currently ranked fourth among all primary research genetics publications, second in biotechnology, and in the top ten of all biochemistry and molecular biology publications.

Cold Spring Harbor Laboratory Press seeks a scientist interested in making a career in the communication of science to fill the position of Assistant Editor at *Genome Research*.

The applicant must have, or be about to receive, a Ph.D. in the biological sciences, preferably with experience in genetics and genomic science. The successful candidate will assist the Executive Editor of the journal in manuscript selection and negotiation with authors, peer reviewers, and Editorial Board members; commissioning reviews and features; representing the journal at conferences; and identifying emerging trends. Strong communication and organizational skills, creativity, ability to meet deadlines, and the capacity to handle many projects at once are significant requirements. Broad interests in science and experience in the communication of science would be helpful. We seek a team player with energy, enthusiasm, and excellent interpersonal skills who is comfortable interacting with scientists at all levels.

CSHL Press is affiliated with Cold Spring Harbor Laboratory, located on the North Shore of Long Island, 35 miles from New York City. We offer a competitive salary and benefits package.

Please submit a curriculum vitae and a cover letter explaining your interest in the position to:

**Human Resources Department  
Cold Spring Harbor Laboratory  
1 Bungtown Road  
Cold Spring Harbor, NY 11724  
[jobline@cshl.org](mailto:jobline@cshl.org)  
FAX 516-367-6850**