

# Get sequencing!

## Purification systems for Sanger and Next-Generation

### MAG-BIND™ SeqDTR™

Utilizes Omega Bio-tek's MAG-BIND paramagnetic bead based technology for Sanger sequencing DNA cleanup. Get Phred20 score averaging over 700 bps and pass rates of 85% or higher.

No centrifugation

Flexible: 96 or 384 format.  
Automation compatible

### MAG-BIND™ E-Z Pure™

Utilizes Omega Bio-tek's MAG-BIND paramagnetic bead based technology to purify PCR products from 100bp to 50kb. Efficiently removes excess dimers, primer-dimers, dNTPS and salts.

No centrifugation

Flexible: 96 or 384 format.  
Automation compatible

### E.Z.N.A.™ Size Select-IT™

Novel technology for DNA recovery from:

100bp - 300bp	300bp - 500bp
100bp - 500bp	300bp - 700bp
100bp - 700bp	

>100bp, >200bp and >300bp

**Fast: ~10 min to process**

Flexible: 1 prep to 96-well format.  
Automation compatible



Achieve excellent performance with a lower cost per prep.

For sample: <http://www.omegabiotek.com/seqkitsample>



innovations in nucleic acid isolation

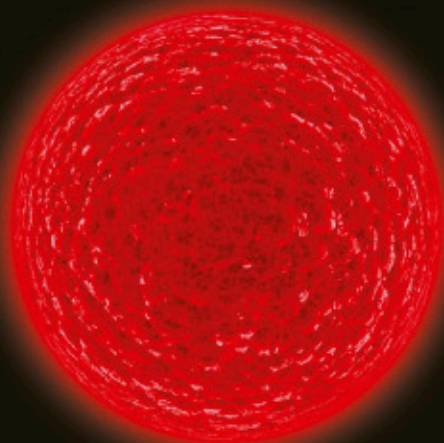
For promotional discount, use code: **GR-SEQKITS**

For more information, email: [seqkits@omegabiotek.com](mailto:seqkits@omegabiotek.com)

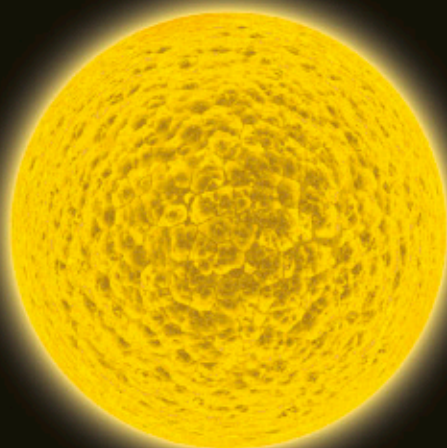
(U.S.) 800-832-8896, Outside U.S., dial 1+770-931-8400

Mag-Bind, SeqDTR, E-Z Pure, Size Select-IT are trademarks of Omega Bio-tek, Inc. For research purpose only.  
©2011, Omega Bio-tek, Inc. All rights reserved.

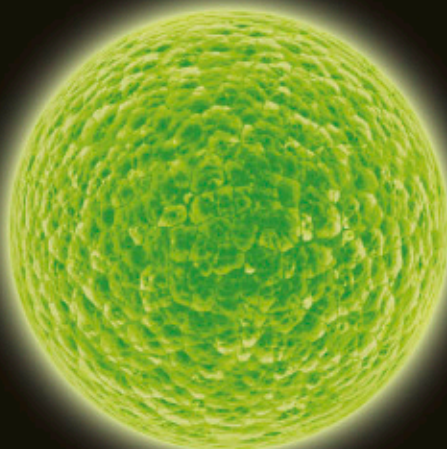
[www.omegabiotek.com](http://www.omegabiotek.com)



**I CAN'T STOP USING MICROARRAYS,  
MY INFRASTRUCTURE IS ALREADY IN PLACE.**



**I THINK I'LL WAIT IT OUT, MICROARRAYS HAVE  
WORKED FOR ME FOR MORE THAN A DECADE.**



**I'M GOING FOR IT. WITH MICROARRAY-  
COMPATIBLE DATA, THERE'S NOTHING TO LOSE.**

# ADOPT RNA SEQ ASAP

**TO MOVE YOUR RESEARCH  
IN THE RIGHT DIRECTION.**

Only Expression Analysis enables you to harness the power of mRNA-Seq with your existing microarray bioinformatics infrastructure. Now you can explore allele-specific expression, alternative splice sites, previously unknown isoforms, cSNPs, and rare and novel transcripts — all in a single experiment.

- 100% array-compatible data
- Gene and isoform level relative abundance estimates
- 10 years of leadership in gene expression data processing

Learn more at [expressionanalysis.com/RNASEQ](http://expressionanalysis.com/RNASEQ)

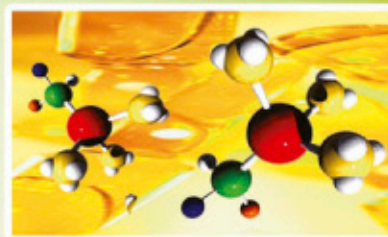


GENOMIC KNOW-HOW®



## ● Custom Oligonucleotides

- ◆ Regular oligos
- ◆ Long oligos
- ◆ Phosphorothioated oligos (S-Oligos)
- ◆ Modified oligos
- ◆ Dual-labeled fluorescent oligos
- ◆ Oligonucleotide-peptide conjugation
- ◆ OPC, PAGE, HPLC purification



## ● Custom Peptide Synthesis

- ◆ Purities from desalt to 98%
- ◆ Acetylation/Amidation free of charge
- ◆ Phosphorylated peptides
- ◆ Fluorescein/Biotin labeled peptides
- ◆ Specialty peptides with unnatural amino acids
- ◆ Cyclic peptides
- ◆ KLH/BSA/OVA Conjugation
- ◆ Multiple Antigenic Peptides





# When Zero Really Matters.

Remove cytoplasmic *and* mitochondrial rRNA.

Go for the gold with the new Ribo-Zero™ Gold Kit (Human/Mouse/Rat). The kit makes our flagship Ribo-Zero technology even better, removing >99% of cytoplasmic and mitochondrial rRNA. It delivers outstanding results with samples that other kits won't even touch, like partially degraded or FFPE RNA. For better RNA-Seq results without wasted rRNA reads, try Ribo-Zero kits today.

Single-pass method. Intact or degraded RNA.  
Performance guaranteed.

[www.epicentre.com/ribozero](http://www.epicentre.com/ribozero)



# If You're Not Using Complete Genomics for Human Sequencing, Your Study is Incomplete

When researching disease-associated variants, approaches like low-pass and exome-only sequencing leave you with incomplete data. As the world's leading provider of whole human genome sequencing, Complete Genomics delivers:

- More informative data—including non-coding variants
- Comprehensive CNV and SV data—information unavailable with exome sequencing
- Higher quality exome data than selection methods

Recent published studies have shown how non-coding variants are implicated in disease.

And finally, Complete Genomics has made whole genome human sequencing cost-effective.

Find out more at [www.completegenomics.com](http://www.completegenomics.com)



# When you need to search for scientific equipment and supplies use the NET!

## BIOsupplyNET.COM

Stop wasting time comparing prices . . .

Use the **BSN Rapid Request** feature.  
Contact multiple companies with  
just one email and watch the price  
quotes come directly to you.

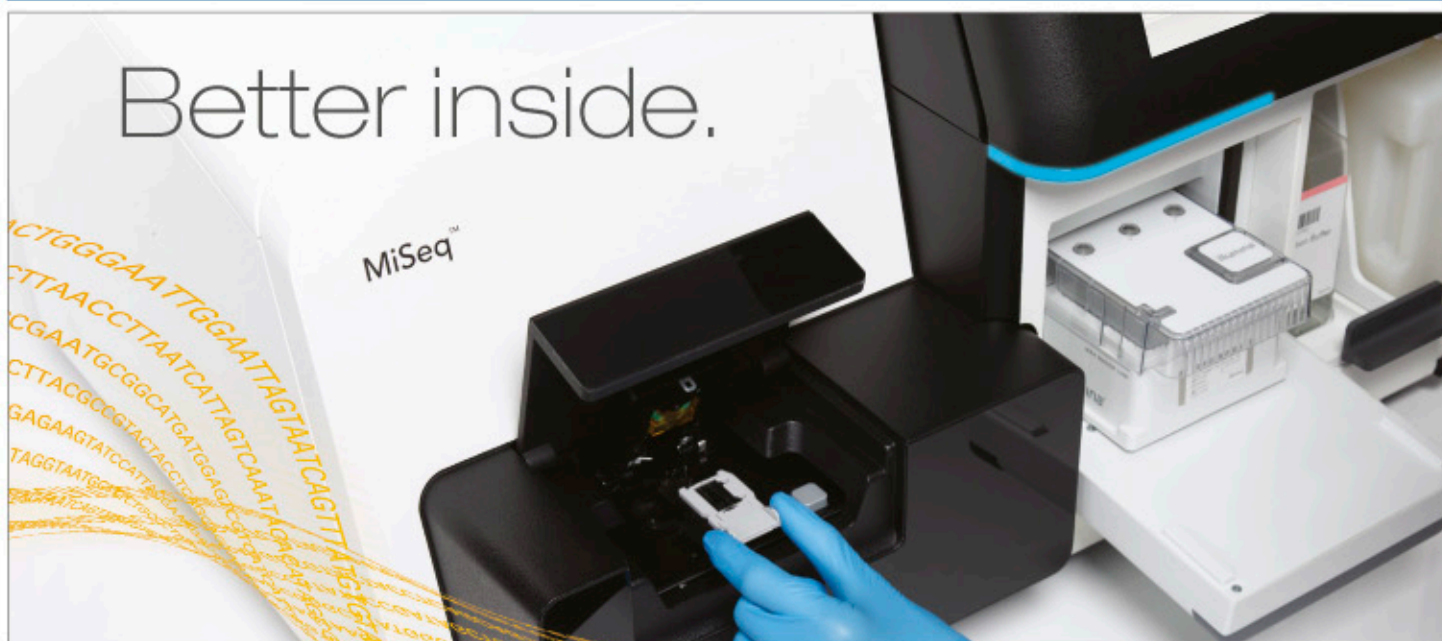
SAVE TIME . . . SAVE MONEY  
with **www.BioSupplyNet.com**

A division of Cold Spring Harbor Laboratory Press



# Better inside.

MiSeq™



MiSeq™

*Inside* you'll find a fully integrated sequencing solution with automated amplification, sequencing, and analysis—all on one instrument. MiSeq delivers >85% Q30 bases and workflow times as fast as 8 hours from sample to data.

[www.illumina.com/MiSeq](http://www.illumina.com/MiSeq)

illumina®



# Announcing Keystone Symposia's Genome Research Meetings

*outstanding opportunities for learning, debate and collaboration-building*

## **Epigenomics**, joint with meeting on **Chromatin Dynamics**

January 17–22, 2012 • Keystone Resort • Keystone, Colorado • USA

Organizers: Steven E. Jacobsen and Steven Henikoff

### **Keynote Speaker:**

**Richard A. Young**, Whitehead Institute for Biomedical Research  
*Chromatin and the Control of Pluripotency and Differentiation*

[www.keystonesymposia.org/12J3](http://www.keystonesymposia.org/12J3)

## **Gene Silencing by Small RNAs**

February 7–12, 2012 • Fairmont Vancouver • Vancouver, British Columbia • Canada

Organizers: Evan D. Rosen, Dawn L. Brasaemle and Bart Staels

### **Keynote Speaker:**

**Susan Gottesman**, NCI, National Institutes of Health, USA  
*Unraveling Small RNA Function in *E. coli**

[www.keystonesymposia.org/12B1](http://www.keystonesymposia.org/12B1)

## **Complex Traits: Genomics and Computational Approaches**

February 20–25, 2012 • Beaver Run Resort • Breckenridge, Colorado • USA

Organizers: Eric Schadt, Stephen H. Friend and Iya G. Khalil

### **Keynote Speaker:**

**Leroy E. Hood**, Institute for Systems Biology  
*The Need to Integrate and Build Systems-Level Models of Disease  
to Revolutionize Medicine and Impact on Patient and Human Well-Being*

[www.keystonesymposia.org/12B5](http://www.keystonesymposia.org/12B5)

## **Eukaryotic Transcription**, joint with meeting on **Non-Coding RNAs**

March 31–April 5, 2012 • Snowbird Resort • Snowbird, Utah • USA

Organizers: David S. Gilmour, Ramin Shiekhattar, Barbara Panning  
and Irwin Davidson

### **Keynote Speaker:**

**Gerald R. Crabtree**, Stanford University  
*ATP-Dependent Chromatin Remodeling:  
Developmental Roles That Go Bad in Human Cancer*

[www.keystonesymposia.org/12Z2](http://www.keystonesymposia.org/12Z2)

## **Proteomics, Interactomes**

May 7–12, 2012 • Clarion Hotel Sign • Stockholm • Sweden

Organizers: Matthias Mann, Rudolf H. Aebersold and Mathias Uhlén

### **Keynote Speaker:**

**Susan Lindquist**, Whitehead Institute for Biomedical Research, USA  
*Protein Misfolding in Evolution and Disease*

[www.keystonesymposia.org/12F2](http://www.keystonesymposia.org/12F2)

Keystone Symposia conferences are held in intimate venues that maximize the opportunities for high-quality interaction. Scholarships are available to students and postdoctoral fellows, and short talks are selected from abstracts. Note that scholarship application/abstract deadlines precede meetings by four months and early registration deadlines by two months.

Program details and speakers shown here are current as of November 2, 2011 but subject to change. Please visit the meeting web pages for impending deadlines and the most current program information. And visit Keystone Symposia's website at [www.keystonesymposia.org/meetings](http://www.keystonesymposia.org/meetings) for details on more than 50 other conferences taking place in 2012.

Keystone Symposia on Molecular and Cellular Biology is a 501(c)3 nonprofit organization headquartered in Colorado, USA that is directed and supported by the scientific community.

[www.keystonesymposia.org](http://www.keystonesymposia.org)

1.970.262.1230 • 1.800.253.0685 (in US & Canada)

**KEYSTONE SYMPOSIA™**  
on Molecular and Cellular Biology  
*Accelerating Life Science Discovery*







# Cold Spring Harbor Perspectives in Biology

## The Authoritative View

[www.cshperspectives.org](http://www.cshperspectives.org)

### A New Type of Review Journal

Cold Spring Harbor Laboratory Press announces the launch of a new monthly online publication, *Cold Spring Harbor Perspectives in Biology*. Spanning the complete spectrum of the molecular life sciences, the journal offers article collections that comprehensively survey topics in molecular, cell, and developmental biology, genetics, neuroscience, immunology, cancer biology, and molecular pathology. Written by leading researchers and commissioned by an eminent board of editors, subject collections grow with every issue of the journal. *Cold Spring Harbor Perspectives in Biology* is thus unmatched in its depth of coverage and represents an essential source for informed surveys and critical discussion of advances in emerging areas of biology.

**Scope:** Molecular Biology, Cell Biology, Developmental Biology, Genetics, Neurobiology

**Monthly, online**

**ISSN: 1943-0264**

#### Subject Coverage

Angiogenesis  
Antigen Processing  
Apoptosis  
Auxin Signaling  
Calcium Signaling  
Cell-Cell Junctions  
Cilia and Flagella  
The Cytoskeleton  
DNA Damage and Repair

The Extracellular Matrix  
The Endoplasmic Reticulum  
The Evolution of Gene Networks  
Generation and Interpretation of Morphogen Gradients  
Germ Cells  
The Golgi Apparatus  
Growth Factor Receptors  
Immune Cell Signaling

Immune Tolerance  
Lipid Cell Biology  
Lymphocyte Cell Biology  
Mammary Gland Biology  
Mechanotransduction  
Membrane Fusion and Exocytosis  
Mitochondria  
Mitosis  
Molecular Motors

Muscle Cell Biology  
Neuronal Guidance  
The NF- $\kappa$ B Family  
Nuclear Hormone Receptors  
The Nucleus  
The Origin of Life  
The p53 Family  
Prions  
Prokaryote Cell Biology  
Protein Homeostasis

Receptor Tyrosine Kinases  
Recombination Mechanisms  
Regeneration  
RNA Worlds  
Sex Determination  
Symmetry Breaking in Biology  
Synapses  
Transcriptional Regulation  
Wnt Signaling  
The Y Chromosome



To order or request additional information, please visit our website or:

Call: 1-800-843-4388 (Continental US and Canada)

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



# Better outside.



## MiSeq™

**Outside** you'll find a streamlined user experience, with load-and-go sequencing reagents and single-tube library preparation in just 1.5 hours. Data management is made simple with onboard informatics apps and BaseSpace™, our new cloud-based analysis environment.

[www.illumina.com/MiSeq](http://www.illumina.com/MiSeq)

**illumina®**



# ABRF 2012

LEARNING FROM BIOMOLECULES: THE TECHNOLOGY BEHIND THE STORY

MARCH 17 - 20, 2012 • DISNEY'S CONTEMPORARY RESORT • ORLANDO, FLORIDA

✓ **EARLY-BIRD REGISTRATION**

will save you \$50 - Register by February 4th and save!

✓ **SATELLITE WORKSHOPS**

focusing on lab management, pathways analysis, RNA & methyl sequencing and manual interpretation of ETD mass spectra of peptides.

✓ **SCIENTIFIC SESSIONS**

and technical workshops will focus on genomics, proteomics, imaging and other technologies.

✓ **PLENARY SPEAKERS**

- Dr. George Church, Harvard University
- Dr. Kris Gevaert, Flanders Institute for Biotechnology
- Dr. Trisha Davis, University of Washington
- Dr. Ram Sasisekharan, Massachusetts Institute of Technology

✓ **ABSTRACTS**

are currently being accepted - submit by January 17<sup>th</sup> for consideration.

✓ **EXHIBIT and SPONSORSHIP**

opportunities are available - drive business, capture leads and make your mark at this year's meeting.

✓ **HOUSING**

reservations made by February 10<sup>th</sup> receive the discounted room rate. Visit [www.mydisneymeetings.com/abrf2012](http://www.mydisneymeetings.com/abrf2012) to reserve your room at Disney's Contemporary Resort today!

✓ **NETWORK**

with fellow attendees at a roundtable discussion, reception, vendor seminar, meet the speaker or the not-to-be-missed closing social being held at **Universal Studios!**

**The Association of Biomolecular Resource Facilities** is an international society dedicated to advancing core and research biotechnology laboratories through research, communication, and education.

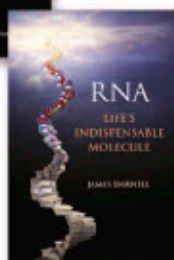
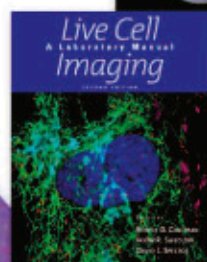
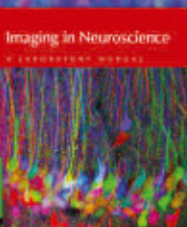
Visit us on the web for information, schedules, registration and more!  
**ABRF2012.ABRF.org**

For more information, please contact:

✉ [abrf@courtesyassoc.com](mailto:abrf@courtesyassoc.com)  
☎ 202-973-8670 | 📠 202-331-0111



# New from Cold Spring Harbor Laboratory Press



## Imaging: A Laboratory Manual

Edited by and Series Editor Rafael Yuste, *Howard Hughes Medical Institute, Columbia University*

Hardcover \$240 Paperback \$165

## Imaging in Neuroscience: A Laboratory Manual

Edited By Fritjof Helmchen, *Brain Research Institute, University of Zurich* and Arthur Konnerth, *Institute for Neurosciences, Technical University Munich*; Series Editor, Rafael Yuste, *Howard Hughes Medical Institute, Columbia University*

Hardcover \$280 Paperback \$195

## Imaging in Developmental Biology: A Laboratory Manual

Edited By James Sharpe, *EMBL-CRG Systems Biology Unit, Barcelona, Spain* and Rachel Wong, *University of Washington*; Series Editor, Rafael Yuste, *Howard Hughes Medical Institute, Columbia University*

Hardcover \$240 Paperback \$165

## RNA: A Laboratory Manual

By Donald C. Rio, *University of California, Berkeley*, Manuel Ares, Jr., *University of California, Santa Cruz*, Gregory J. Hannon, *Cold Spring Harbor Laboratory*, and Timothy W. Nilsen, *Case Western Reserve University School of Medicine*

Hardcover \$240 Paperback \$165

## Live Cell Imaging: A Laboratory Manual, Second Edition

Edited By Robert D. Goldman, *Feinberg School of Medicine Northwestern University*, Jason R. Swedlow, *The University of Dundee*, and David L. Spector, *Cold Spring Harbor Laboratory*

Hardcover \$240 Paperback \$165

## RNA: Life's Indispensable Molecule

By James E. Darnell, *The Rockefeller University*

Hardcover \$39

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

# Better upside.



## MiSeq™

**The upside** is what you can do with it. With the broadest application base and a global community of sequencing insight behind it, MiSeq took the best in next-generation sequencing and made it better.

Go to [www.illumina.com/MiSeq](http://www.illumina.com/MiSeq)

**illumina**



# BioRadiations

## The Next Generation



## Old Favorite, New Forum

Since 1965, *BioRadiations* has been the go-to resource for researchers around the world to learn about the latest Bio-Rad products and services.

The next generation of this classic publication offers deeper and more lively content in an online format:

- Video interviews with renowned researchers
- Tips and techniques, product insights, and technical reports
- A searchable archive

Browse the latest articles and multimedia content at [www.bioradiations.com](http://www.bioradiations.com). Register to become an active participant in the scientific dialog — receive advance updates, rate articles, and post comments on them.

**Research. Together.**



Interested in what's going on in the George Church Lab at Harvard University's Wyss Institute? Visit our multimedia section to watch our interview with postdoctoral fellow Sriram Kosuri.