



## Challenging Experiments?

Advanced TC™ cell culture vessels from Greiner Bio-One

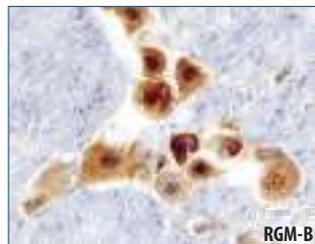
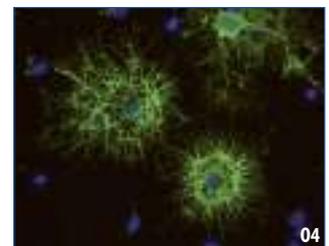
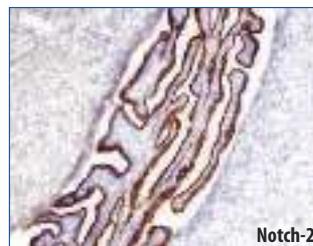
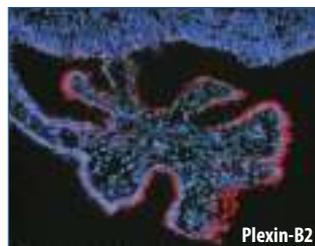


- Innovative polymer modification improves cellular adhesion
- Positive effects on cell functionality and performance
- Enhanced propagation of fastidious cells
- Improved cell expansion under limited growth conditions
- Better assay consistency
- Long-term stability and storage at room temperature

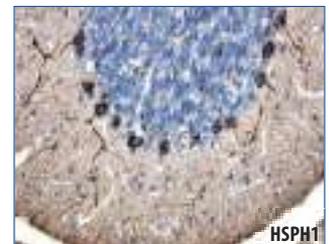
- Cancer
- Development
- Endocrinology
- Glycobiology
- Immunology
- Neuroscience
- Proteases
- Signal Transduction
- Stem Cells

# R&D Systems Products for Neuroscience Research

R&D Systems offers a wide range of high quality products for neuroscience research. In addition to high performance **antibodies**, we offer the most referenced collection of premium quality **proteins** and **ELISA kits** in the industry. Our catalog also includes primary rat and mouse cortical **stem cells**, and kits for the expansion, differentiation, and identification of neural stem cells.



Performance.  
Results.  
Progress.



For more information visit our website at [www.RnDSystems.com/go/Neuroscience](http://www.RnDSystems.com/go/Neuroscience)

For research use only. Not for use in diagnostic procedures.

R&D Systems, Inc. [www.RnDSystems.com](http://www.RnDSystems.com)

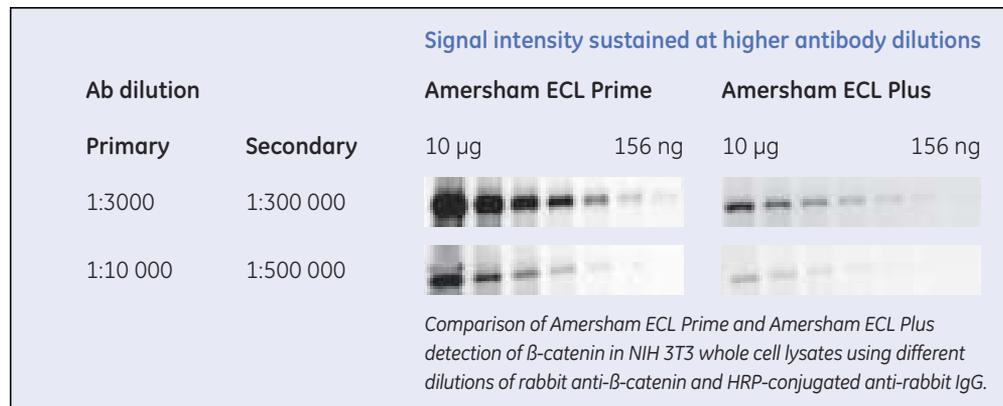
R&D Systems Europe, Ltd. [www.RnDSystems.co.uk](http://www.RnDSystems.co.uk)

R&D Systems China Co., Ltd. [www.RnDSystemsChina.com.cn](http://www.RnDSystemsChina.com.cn)



# Thank you ECL™ Plus, you've been great.

For every success there's a successor. It's called progress. So while we knew we had something special in Amersham™ ECL Plus, our Western blotting team was quietly working on the next generation of detection reagent. The result: a new substrate that operates with superior levels of sensitivity, signal intensity and stability than even its famous predecessor, making it an excellent choice for CCD imagers. **Welcome to ECL Prime.**



Find out more about Amersham ECL Prime at  
[www.gelifesciences.com/eclprime](http://www.gelifesciences.com/eclprime)

INTRODUCING

# AAAS MemberCentral



The exclusive new website for the AAAS member community.

AAAS MemberCentral is a new website focused on helping you — the scientists, engineers, educators, students, policymakers, and concerned citizens who make up the AAAS community — connect like never before.

On MemberCentral you can contribute to discussion groups or blogs, participate in a webinar, or share photos of your field research. You can exchange ideas, learn about your fellow members, and gain fresh insights into issues that matter to you the most. MemberCentral is also an easy access point for a wide variety of other AAAS membership benefits, like discounts on cars and books, travel opportunities, and more.

Experience MemberCentral for yourself. Visit [MemberCentral.aaas.org](http://MemberCentral.aaas.org) today and log in using your *Science* online username and password.



[MemberCentral.aaas.org](http://MemberCentral.aaas.org)



## GrantsNet.

The first comprehensive science grants database.

GrantsNet is expanding its listings of some 900 funding programs from private foundations and not-for-profit organizations to include 400 to 500 new entries from the grants.gov site.

**This provides the first comprehensive database of funding opportunities** to research scientists and administrators, career counselors, financial aid specialists, and undergraduate and graduate students.

For listings, go to

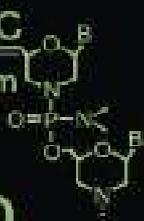
[www.grantsnet.org](http://www.grantsnet.org)

Science Careers

From the journal *Science*



GENE TOOLS, LLC  
www.gene-tools.com



## Morpholino Oligos

- modify splicing,
- block translation,
- inhibit miRNAs.

- ▶ No innate immune response,
- ▶ No nucleolytic degradation,
- ▶ Less off-target gene modulation than siRNA or S-DNA antisense.

## Call for Papers

**Chief Scientific Adviser**  
**Elias A. Zerhouni, M.D.**  
*Former Director,*  
National Institutes of Health

## Science Translational Medicine

### Integrating Medicine and Science

**Science Translational Medicine**, from AAAS, the publisher of *Science*, focuses on the conversion of basic biomedical research into practical applications, thus bridging the research-to-application gap, linking basic scientists and researchers.

For more information see  
[ScienceTranslationalMedicine.org](http://ScienceTranslationalMedicine.org) or  
contact [scitranslmededitors@aaas.org](mailto:scitranslmededitors@aaas.org)

Submit your research at  
[www.submit2scitranslmed.org](http://www.submit2scitranslmed.org)

Submit your manuscripts for review in the following areas of translational medicine:

- Cardiovascular Disease
- Neuroscience/Neurology/ Psychiatry
- Infectious Diseases
- Cancer
- Health Policy
- Bioengineering
- Chemical Genomics/ Drug Discovery
- Other Interdisciplinary Approaches to Medicine



[ScienceTranslationalMedicine.org](http://ScienceTranslationalMedicine.org)

“How do we know  
this lead molecule  
is novel?”

“SciFinder—  
of course.”

#### Need to assess the novelty of substances?

SciFinder is the answer.

It includes CAS REGISTRY<sup>SM</sup> the most comprehensive substance information available, integrated with relevant journal articles and patents.

Give your research team the highest quality and most timely scientific information resource.

Make SciFinder an essential part of your research process.

For more information about SciFinder, visit [www.cas.org](http://www.cas.org) or e-mail [help@cas.org](mailto:help@cas.org).

*an essential*  
✓  
**SciFinder®—Part of the process.™**

**CAS** | **SciFinder®**

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

CAS is a division of the American Chemical Society



## Because science never stands still.

Introducing the **FREE Mobile App** from *Science*. See what it can do for you.

Now you can access *Science* from anywhere. Our new app lets you:

- Read summaries and abstracts from *Science*, *Science Translational Medicine*, and *Science Signaling*.
- E-mail yourself links to full text.
- Stay updated with *ScienceNOW*, our free daily news service.
- Search job openings and tap other resources at *Science Careers*.
- Access the *Science* weekly podcast and other multimedia.
- Store content for reading without wi-fi access.

**Get it for your iPhone or iPod Touch. Get it for FREE. Get it today.**

To download the free app visit the iTunes App Store or log on to [content.aas.org/mobile](http://content.aas.org/mobile)

**NEW**

# Women in Science Booklet

*Science* and the L'Oréal Foundation present



Read inspiring profiles of women making a difference in biology.

**Free download at**  
**[ScienceCareers.org/LOréalWIS](http://ScienceCareers.org/LOréalWIS)**

## NEW PRODUCTS



## FLAME PHOTOMETER

The model 360 Flame Photometer responds to the current demand that five filters come standard in a low-cost instrument. This instrument brings unrivalled precision, ergonomic design, and ease of maintenance to industrial flame photometers. The photometer is fundamentally more stable, less noisy, and has lower limits of detection than would be expected in such a cost-effective instrument. Ease of operation is ensured by the ergonomic design, which uniquely places all the controls, the pressure gauge, air regulator, and sample introduction on the front of the instrument. The large unobstructed sample work area features an innovative spill containment tray which is easy to remove and clean. LEDs on the front panel indicate the filter selected—sodium, potassium, lithium, calcium, or barium—and the flame status. Applications include the analysis of sodium in food, drinking water, waste water, and cement manufacture. The 360 is also an ideal choice for the education sector. The instrument has a conveniently small footprint of 20 x 30 cm and provides exceptional ease-of-maintenance.

Sherwood Scientific

For info: +44-1223-243444 | [www.sherwood-scientific.com](http://www.sherwood-scientific.com)

## AMINE COUPLING

HOOK NHS-dPEG<sub>4</sub>-Biotin couples to proteins and peptides through its N-hydroxysuccinimide (NHS) ester, and the long polyethylene glycol (PEG) spacer arm imparts water solubility, reducing aggregation. The product is available in two sizes. The larger format is designed for the coupling of 1–10 mg of protein per reaction and is suitable for 10 couplings. The micro kit is supplied with the single use OneQuant HOOK NHS-dPEG<sub>4</sub>-Biotin and is designed for the coupling of 50–250 µg of protein per reaction and is suitable for 8–10 reactions. Each kit is supplied with a specific Optimizer Buffer for greater coupling efficiency and SpinOUT columns for the removal of uncoupled biotin. The large format has a HABA-Biotin assay to quantitate coupling efficiency.

G-Biosciences

For info: 800-628-7730 | [www.GBiosciences.com](http://www.GBiosciences.com)

## RECIRCULATING CHILLERS

Designed as a modular platform, the ThermoFlex Series of Recirculating Chillers offers a wide variety of options and cooling capacities that can be configured for diverse applications in markets such as aerospace, industrial, laser, medical, printing, and semiconductor processing. The latest addition, the ThermoFlex 24000, has a cooling capacity of 24,000 watts to meet the needs of researchers who require a high level of cooling performance. The ThermoFlex chiller platform was developed to be an easy-to-use low maintenance, high performance chiller platform configurable to the most demanding applications. Each chiller includes water filters that can be changed while the unit is in operation and an intuitive user interface for ease-of-operation. End-users benefit from a quick start guide for seamless start up in minutes.

Thermo Fisher Scientific

For info: 800-258-0830 | [www.thermoscientific.com/thermoflex](http://www.thermoscientific.com/thermoflex)

## SYRINGE PUMP

The Mitos P-Pump provides a pulseless liquid flow, using a precise

pressure driven pumping mechanism. With excellent response time and accuracy, this pressure driven flow is ideal for microfluidic systems where a highly stable flow is required. This includes applications such as compartmentalized chemistry and alginate polymerization, which necessitate the stable formation of oil-in-water or water-in-oil droplets; however their monodispersity (size consistency) is key to obtaining accurate and repeatable results. The Mitos P-Pump provides a coefficient of variation in the droplet diameter of less than 0.6 percent. Its precise pressure-driven pumping mechanism delivers liquid with a smooth and even flow, whereas even the best motor drives and mechanics of a syringe pump have slight nonlinearities, which cause unwanted pulsation.

Dolomite

For info: 617-848-1211 | [www.dolomite-microfluidics.com](http://www.dolomite-microfluidics.com)

## 3D IMAGE ANALYSIS

The universal 3D image analysis Volocity software is designed to give research institutions working with confocal microscopes a deeper understanding of cellular biology. Analyzing images in 3D delivers more accurate measurements and the quantitative data to advance scientific breakthroughs in cellular sciences, including cancer and stem cell research and neurological and infectious diseases. The Volocity software platform is a portfolio of high performance 3D image analysis products for the visualization and measurement of cells. The new Volocity Demo is a fully functional analysis version of the software that allows researchers to take their own microscope image data, and explore and evaluate Volocity's analysis capabilities on their own time without time limitations. This free downloadable version allows scientists to measure and analyze the crucial relationships between tissues, cells, and their organelles; generate quantitative data; and create 3D images and movies, which they can then go on to publish with a full Volocity license.

PerkinElmer

For info: 800-762-4000 | [www.perkinelmer.com/imaging](http://www.perkinelmer.com/imaging)

Electronically submit your new product description or product literature information! Go to [www.sciencemag.org/products/newproducts.dtl](http://www.sciencemag.org/products/newproducts.dtl) for more information. Newly offered instrumentation, apparatus, and laboratory materials of interest to researchers in all disciplines in academic, industrial, and governmental organizations are featured in this space. Emphasis is given to purpose, chief characteristics, and availability of products and materials. Endorsement by *Science* or AAAS of any products or materials mentioned is not implied. Additional information may be obtained from the manufacturer or supplier.

# LabAutomation 2011

Where Science, Technology and Industry Come Together

Palm Springs Convention Center  
Palm Springs, CA, USA  
January 29–February 2, 2011  
SLAS.org/LA11



*“Participants can expect the very best—a conference packed with engaging educational sessions and activities, and a world-class exhibition showcasing the latest trends and technologies.”*

*— Malcolm Crook, Ph.D.  
Process Analysis & Automation, Ltd.  
2010-2011 ALA President*

**Register Now!**—Register by December 13, 2010 and save up to \$200. Visit [SLAS.org/LA11](http://SLAS.org/LA11) or call +1.630.208.6830.

## Extraordinary Discounts for Registration, Hotel and Travel

LabAutomation2011 participants can enjoy maximum savings by taking advantage of the Smart Savers Discount Program. This innovative cost-savings program offers discounts on everything from registration to hotel to travel, including: hotel rates as low as \$139 per night, \$200 off airfare, complimentary registration for academics and those unemployed, and more. *For further details, visit [SLAS.org/LA11](http://SLAS.org/LA11).*

## LabAutomation Offers Leading-Edge Education

- Chad Mirkin, Ph.D., member of the President's Council of Advisors on Science and Technology, joins an already impressive plenary series.
- Two new Special Sessions offer participants the opportunity to engage in panel discussions focused on innovation and developing graduate-level talent.

### An Exceptional Line-Up of Influential Plenary Speakers:



**John M. Butler, Ph.D.**—NIST Fellow & Group Leader; Applied Genetics Group; Biochemical Science Division; Chemical Science & Technology Laboratory; National Institute of Standards and Technology



**Daryl Lund, Ph.D.**—Editor-in-Chief, *Journal of Food Science*, Institute of Food Technologists; Emeritus Professor at the University of Wisconsin, Madison



**Chad A. Mirkin, Ph.D.**—George B. Rathmann Professor of Chemistry and Director of International Institute for Nanotechnology at Northwestern University; Member of the President's Council of Advisors on Science and Technology

### A Diversity of Industries Including:

- Drug Discovery and Development
- Clinical Diagnostics
- Agriculture and Food
- Forensics and Security
- Energy Generation and Petrochemicals
- And More...

### LabAutomation2011 Key Education Tracks:

- Detection and Separation
- Micro- and Nanotechnologies
- High-Throughput Technologies
- Informatics
- Evolving Applications of Laboratory Automation: *Featuring Agriculture and Food*

Premier  
Sponsor:



Agilent Technologies

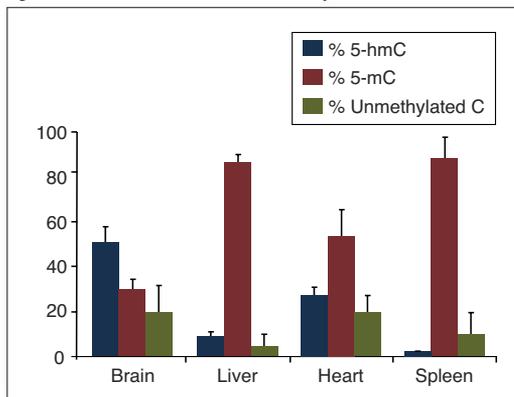


# MASTERING CHANGE

## Breakthrough in 5-hmC quantitation for epigenetics

Interested in simplifying the study of DNA methylation, particularly 5-hydroxymethylcytosine? Try the EpiMark™ 5-hmC and 5-mC Analysis Kit, a robust enzymatic method for the locus-specific detection of methylated (5-mC) and hydroxymethylated (5-hmC) cytosine. As the first commercially available PCR-based kit to reproducibly identify and quantitate the presence of 5-hmC, this simple 3-step protocol will expand your potential for epigenetics research and biomarker discovery.

Identify and quantitate methylation states with the EpiMark™ 5-hmC and 5-mC Analysis Kit



Analysis of the different methylation states in Balb/C mouse tissue samples shows a variation in the amount of 5-hmC present at locus 12.

### Advantages:

- Reproducible quantitation of 5-hmC and 5-mC
- Easy-to-use protocols
- Compatible with existing techniques (PCR)
- Amenable to high throughput

Visit [neb.com/epigenetics](http://neb.com/epigenetics) to learn more, and explore the complete listing of EpiMark validated products from NEB.

