THE VILCEK FOUNDATION CONGRATULATES THE
2009 RECIPIENTS OF THE VILCEK FOUNDATION PRIZES

THE VILCEK PRIZE
IN BIOMEDICAL SCIENCE
HUDA ZOGHBH
BAYLOR COLLEGE OF MEDICINE

THE VILCEK PRIZE
FOR CREATIVE PROMISE
IN BIOMEDICAL SCIENCE
HOWARD CHANG
STANFORD UNIVERSITY SCHOOL OF MEDICINE

THE VILCEK FOUNDATION PRIZES
are awarded annually to foreign-born individuals
who have made significant contributions to society
in the United States through extraordinary
achievement in the fields of biomedical science
or the arts.

VILCEK PRIZE FOR CREATIVE PROMISE
IN BIOMEDICAL SCIENCE 2009
FINALISTS

KATERINA AKASSOGLOU
University of California, San Francisco

EVGENY NUDLER
New York University School of Medicine

F. NINA PARAVASILIIOU
Rockefeller University

AVIV REGEV
Massachusetts Institute of Technology

WWW.VILCEK.ORG
Meet your new lab partner.

The new Thermo Scientific NanoDrop 2000 and 2000c Spectrophotometers offer true micro-sample analysis, with sample size capability as low as 0.5 µl and a measurement time of less than five seconds. Either of these is the perfect instrument for all your quantitation needs—DNA, RNA, proteins and more. Providing full spectrum UV-Vis results, both instruments can analyze samples with concentrations greater than 15,000 ng/µl (dsDNA) without dilutions. Innovative software makes it easy to build your own methods, design reports and export data. And with both pedestal and cuvette capability, the NanoDrop™ 2000c is the one spectrophotometer that does it all.

Test-drive the NanoDrop 2000 or 2000c in your own lab!*

Visit [www.nanodrop.com](http://www.nanodrop.com) to schedule your test-drive. Try out an instrument and run your own samples. It's completely free.

*Available only in US and Canada
Science Careers is the window that displays your vision.
Revealing your vision to employers is our job. We're your source for connecting with top employers in industry, academia, and government. We're the experts and entry point to the latest and most relevant career information across the globe.

Our newly designed website offers a set of tools that reveal career opportunities and your personal potential. Whether you're seeking a new job, career advancement in your chosen field, or ways to stay current on industry trends, Science Careers is your window to a limitless future.

**Improved Website Features:**
- Relevant Job E-mail Alerts
- Improved Resume Uploading
- Content Specific Multimedia Section
- Facebook Profile

**Job Search Functionality:**
- Save and Sort Jobs
- Track Your Activity
- Search by Geography
- Enhanced Job Sorting

Your Future Awaits.

Science Careers
From the journal Science
ScienceCareers.org
Coordinate your application focus. Achieve greater operational efficiency.

GE Healthcare is focused on helping you develop efficient biopharmaceutical process flows and eliminating wasteful practices, taking your value stream to new frontiers. Through our wide range of technology platforms and services, upstream and downstream from process development to final manufacturing scale, GE Healthcare can connect you to the power of operational excellence.

Learn more about operational excellence at: www.gelifesciences.com/opex
The SOLiD™ 3 System empowers you to discover new insights into gene regulation. With a hypothesis-generating, highly-sensitive assay that preserves the strand information of the original RNA molecule, the SOLiD 3 System enables you to detect novel transcripts, including non-coding RNA and distinguish strand-specific expression patterns. The combination of 400 million sequence tags and sample multiplexing capabilities allows for cost effective analysis of multiple samples in a single run while maintaining the sensitivity to detect low abundance transcripts. Combined with the SOLiD Small RNA Expression Kits, Whole Transcriptome Analysis Kits and application specific data analysis tools, the SOLiD 3 System provides a comprehensive solution that takes you from RNA to results.

For more SOLID PROOF, visit solid.appliedbiosystems.com
Each of your valuable samples deserves the best treatment. See for yourself how the eppendorf Plate® will save time and reduce costs.

Sample loss in plates can be time consuming and expensive. Therefore, the close environment of each sample should be adapted to its specific quality and purity needs. This can involve a specific purity level or the absence of certain substances, but also stability, reliability, or geometry. The eppendorf Plate® is designed to cover all of the specific needs of your samples!

Eppendorf twin.tec real-time PCR plates*
- White wells for increased fluorescence reflection
- Raised rims for effective sealing
- "skirted" (stackable) and "semi-skirted" plates
- Optimal heat transfer due to reduced wall thickness
- Autoclavable (121 °C, 20 min.)


Learn more about Eppendorf consumables: www.eppendorf.com/consumables
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
The Merck/AAAS Undergraduate Science Research Program (USRP), a national competitive awards program, is proud to announce its 2009 awardees. Each award provides $60,000 ($20,000 per year over three years) for joint use by the biology and chemistry departments at each recipient institution to support undergraduate research activities.

Since 1994 USRP grants have been awarded to over 200 colleges and universities and have supported over 2,000 undergraduates, providing them the opportunity to work with and learn from faculty in the laboratory and engage in basic research. The Program’s support is provided by The Merck Company Foundation, which will have contributed over $11,500,000 when the awardees grant term ends in 2011.

The purpose is to promote interdisciplinary research experience for undergraduate students in chemistry and biology.

Congressional

to the Merck/AAAS USRP 2009 Award Winners

1. Ashland University
2. Bowdoin College
3. Colorado College
4. Furman University
5. Harvey Mudd College
6. Kean University
7. Lebanon Valley College
8. Niagara University
9. Otterbein College
10. Siena College
11. State University of New York at New Paltz
12. University of Colorado at Colorado Springs
13. University of West Florida
14. University of Wisconsin at Whitewater

Send questions and requests for additional information to: Merck@AAAS.org For full program details: www.merckaaususrp.org
**Benchtop Cell Culture System**

The BioLevator 3-D Cell Culture System is designed to deliver productivity gains to researchers in drug discovery and development, therapeutics, and regenerative medicine. The BioLevator eliminates traditional peripheral cell culture instruments, such as incubators and centrifuges, and minimizes manual handling. Each of the BioLevator’s four hydrophilic, PTFE-filtered, 50-ml cell culture tubes can produce cell growth equivalent to up to 10 T75 flasks, depending on the cell line. The system features a user-friendly touch-screen interface with real-time monitoring and control of environmental temperature and carbon dioxide levels.

**Hamilton Company**
For information 775-858-3000
www.hamiltoncompany.com

**Temperature-Responsive Surface**

The Nunc UpCell Surface for temperature-induced cell harvesting is designed to enable quick dissociation of cells from the culture surface at a simple change in temperature. This process negates the need for enzymatic treatment and cell scraping, while maintaining cell viability and the integrity of surface receptors and antigens. Even cell types that are difficult to detach by other methods and contiguous cell sheets can be harvested from the Nunc UpCell Surface. Harvested cell sheets can be stacked on top of each other to create three-dimensional models and cocultures. It is available as sterile MicroWell plates, dishes, and multidishes. The surface consists of a covalently immobilized polymer that forms a thin, even layer on the culture dish or plate. The surface is slightly hydrophobic at 37°C, allowing cells to attach and grow, but it turns hydrophilic at temperatures below 32°C, binding water and swelling, and releasing adherent cells with their underlying extracellular matrix.

**ThermoFisher Scientific**
For information 508-742-5254
www.thermo.com/UpCell

**Cell-Based ECIS Instruments**

The new Electric Cell-substrate Impedance Sensing (ECIS) models Z and Zθ provide multiple frequency measurements, broad bandwidth, speed, high sensitivity, and comprehensive data analysis capabilities. In ECIS, cells are cultured on small gold electrodes whose impedance is measured with a weak AC signal. When cells attach and spread on these electrodes, their insulating membranes constrain the current. These impedance changes can be used to quantify real-time data on cell behavior without the use of fluorescence or radiolabeled materials. Cell behaviors that can be measured include cell attachment and spreading on extracellular matrix proteins, cell migration, extravasation of endothelial cell layers, barrier function, signal transduction, cytopathic effects of viral infections, cytotoxicity, cell proliferation, and more. The ECIS Zθ system adds the capability to measure complex impedance and report its constituent components of resistance and capacitance over a spectrum of frequencies.

**Applied BioPhysics**
For information 866-301-3247
www.biophysics.com

**Stem Cell Picker**

The CellCelector automated stem cell picker consists of an inverted Olympus microscope, robotic arm, and liquid handling station integrated with powerful image acquisition and analysis software. This walkaway system allows researchers to set parameters for the cell or colony types they want, including size, proximity to other colonies, or roundness. The picking tool on the robotic arm gently picks and dispenses cells into a microplate well in just 30 seconds, while assuring that the cells chosen are of consistent quality. The compact unit can fit under any standard laminar flow hood to keep the cells free of contamination. The system can also be fitted with an autoclavable metal tool for scraping adherent cells or a disposable glass capillary for picking single cells, both of which are designed to maintain cell integrity and viability.

**The Automation Partnership**
For information +44-(0)-1763-227200
www.automationpartnership.com

**Cell Analyzer**

The MACSQuant Analyzer is a benchtop cell analyzer for sensitive multicolor flow analysis. The analyzer features a compact design, multiparameter cell analysis, absolute cell counting, sensitive rare cell analysis using MACS technology, multisample processing, and autolabeling of samples.

**Miltenyi Biotec**
For information 800-367-6227
www.miltenyibiotec.com

**Stem Cell Sorting and Analysis**

The BD Human Pluripotent Stem Cell Sorting and Analysis Kit makes use of flow cytometry for reliable characterization and sorting. This ready-to-use kit includes pre-titrated fluochrome conjugated antibodies, experiment setup beads, validated protocols, and software analysis templates. The kit is optimized for use on the widely used BD flow cytometry instruments. The system’s integrated approach minimizes assay-to-assay variability to produce dependable, comparable results quickly. Its open design allows for the easy addition of supplementary antibodies to adapt the kit to meet specific research objectives.

**BD Biosciences**
For information 201-847-5533
www.bdbiosciences.com/stemcellsourcing

---

Electronically submit your new product description or product literature information! Go to 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.
Now it’s easier to go green.

GoTaq® Hot Start with Green Buffer:

- High-performance PCR buffer
- Built-in gel loading buffer and tracking dyes
- Master mix and standalone formats


GoTaq® Hot Start Polymerase with Colorless Flexi Buffer (C) and with Green Flexi Buffer (G) outperforms antibody (I) or chemically modified (A) competitor hot-start DNA polymerases for amplification of a 2.4kb fragment of the human APC gene.

Purchase GoTaq Hot Start, and Promega will plant a tree*


©2009 Promega Corporation, 17335-AD-GN
INFINITE POSSIBILITIES

Cellular Imaging & Analysis

NEB introduces SNAP-tag™ and CLIP-tag™ protein labeling systems. These innovative technologies provide simplicity and extraordinary versatility to the imaging of mammalian proteins in vivo, and to protein capture experiments in vitro. The creation of a single genetic construct generates a fusion protein which, when covalently attached to a variety of fluorophores, biotin, or beads provides a powerful tool for studying the role of proteins in living and fixed cells.

Advantages:

Versatile - Compatible systems enable dual labeling

Flexible - Multiple fluorophores allow for choice & flexibility

Innovative - A range of applications is possible with a single construct

Live COS-7 cells transiently transfected with pSNAP-α-Tubulinβ. Cells were labeled with SNAP-Cell TMR-Star (green pseudo-color) for 30 minutes and counterstained with Hoechst 33342 (blue) for nuclei.

SNAP-tag Technology: SNAP-tag (gold) fused to the protein of interest (blue) cell labels releasing guanine.

CLONING & MAPPING  DNA AMPLIFICATION & PCR  RNA ANALYSIS  PROTEIN EXPRESSION & ANALYSIS  GENE EXPRESSION & CELLULAR ANALYSIS

www.neb.com