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* For the purpose of this prize, molecular biology is defined as "that part of biology which attempts to interpret biological events in terms of the physico-chemical properties of molecules in a cell". (McGraw-Hill Dictionary of Scientific and Technical Terms, 4th Edition)

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Congratulations to Dr. Christopher Gregg on winning the 2010 Eppendorf & Science Prize for his studies on genes that alter their expression in the brains of offspring according to whether they were inherited from the father versus the mother. His findings suggest new pathways that may help to understand brain diseases such as autism, schizophrenia and eating disorders.

The annual international US$ 25,000 Eppendorf & Science Prize for Neurobiology honors young scientists for their outstanding contributions to neurobiological research based on methods of molecular and cell biology. The winner and finalists are selected by a committee of independent scientists, chaired by Science’s Senior Editor, Dr. Peter Stern.

To be eligible, you must be 35 years of age or younger. If you’re selected as this year’s winner, you will receive US$ 25,000, have your work published in Science and be invited to visit Eppendorf in Hamburg, Germany. Past winners and finalists have come from as far a field as China, Chile, India and New Zealand. Yes, it can happen to you!
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“"A dream told me to do it.”
Dr. Carl Alving on his inspiration for inventing the vaccine patch.

Carl R. Alving, M.D.
Chief of the Department of Adjuvant & Antigen Research, Division of Retrovirology at the Walter Reed Army Institute of Research
AAAS member

MemberCentral is the new website that looks at science through the eyes of AAAS members. It celebrates their achievements—like Dr. Alving’s vaccine patch—and their shared belief in the transformative power of science. Use MemberCentral to connect with other members, learn about work being done in other fields, and get fresh perspectives on issues ranging from speciation to STEM education.

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A selection of upcoming Gordon Research Seminars appears below. For a complete listing of all upcoming GRS, please visit our web site at www.grc.org.

**Adhesion, Science of**
Understanding and Controlling Adhesion through Interdisciplinary Research
Jul 23-24, 2011
Bates College
Lewiston, ME

**Elastin & Elastic Fibers**
The Future of Research in Elastin & Elastic Fibers
Jul 23-24, 2011
University of New England
Biddeford, ME

**Cell Growth & Proliferation**
Jun 25-26, 2011
University of New England
Biddeford, ME

**Cell-Cell Fusion**
Membrane Fusion
Aug 6-7, 2011
University of New England
Biddeford, ME

**Dynamics at Surfaces**
From Fundamental Molecule-Surface Reaction and Scattering Dynamics to Heterogeneous Catalysis
Aug 6-7, 2011
Salve Regina University
Newport, RI

**High Temperature Corrosion**
Jul 23-24, 2011
Colby-Sawyer College
New London, NH

**Hormone Action in Development & Cancer**
Hormonal Control of Development and Disease
Jul 30-31, 2011
Bryant University
Smithfield, RI

**Inhibition in the CNS**
Development and Function of Inhibitory Interneurons
Jul 23-24, 2011
Colby College
Waterville, ME

**Matrix Metalloproteinases**
Everything You Wanted to Know about MMPs and You Were Afraid to Ask
Aug 6-7, 2011
Bryant University
Smithfield, RI

**Photochemistry**
Jul 9-10, 2011
Stonehill College
Easton, MA

**Physical Metallurgy**
Jul 30-31, 2011
Stonehill College
Easton, MA

**Plant Metabolic Engineering**
Jul 23-24, 2011
Waterville Valley Resort
Waterville Valley, NH

**X-Ray Science**
Aug 6-7, 2011
Colby College
Waterville, ME
REAL-TIME PCR SYSTEM
The new BioMark HD Real-time Polymerase Chain Reaction (PCR) System is the company’s most advanced instrument for genomic analysis. The BioMark HD platform continues to support all the applications of the original BioMark System, including gene expression, single-cell gene expression, and genotyping. Using Digital Array chips, the BioMark HD System performs common digital PCR applications, such as mutation detection, copy number variation, and absolute quantitation of nucleic acid sequences. The system is designed for researchers who require the sensitivity and throughput needed to study gene expression down to the single-cell level—especially those who have limited amounts of sample or study rare populations of cells. A new fast thermal cycling protocol is compatible with commercially available assays and yields data that is equal in quality to standard cycling protocol data.

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MYCOPLASMA DETECTION KIT
The Universal Mycoplasma Detection Kit brings together universal primers, optimized reagents, and touchdown polymerase chain reaction (PCR) to offer a highly sensitive and specific assay at an economical price. The kit provides all the components needed for an optimized PCR reaction, including buffers for cell lysis, sample lysis tubes, PCR mixes, and primers. Universal primers that are specific to the 16S rRNA coding region in the Mycoplasma genome are used with a thermostable DNA polymerase. Touchdown PCR avoids amplification of nonspecific sequences, and increases specificity to the extent that DNA originating from other sources is not amplified. In approximately three hours, the kit will detect as few as 10 genomes of *M. arginini*. The ATCC Kit is highly selective recognizing over 60 species of *Mycoplasma*, *Acholeplasma*, *Spiroplasma*, and *Ureaplasma* including the eight species most likely to contaminate cell cultures: *M. arginini*, *M. fermentans*, *M. hominis*, *M. hyorhinis*, *M. orale*, *M. pirum*, *M. salivarium*, and *A. laidlawii*. ATCC
For info: 800-638-6597 | www.atcc.org

PREDESIGNED qPCR ASSAYS
Well-designed real-time polymerase chain reaction (qPCR) assays require the careful consideration of primer placement, specificity, avoidance of SNPs, oligo interactions, and accurate T_m calculations. In order to meet these requirements, PrimeTime Predesigned qPCR Assays are offered for all genes in the human, mouse, and rat genome. These assays avoid any cross-reactivity within that genome, known SNPs, and primer interactions, while providing full disclosure of all sequence information, as recommended by MIQE guidelines. By including the ZEN double-quenched probes, these assays provide outstanding levels of sensitivity, with the added security of knowing the precise probe location. The ZEN double-quenched probe technology increases the accuracy and reliability of 5’ nuclease qPCR experiments by positioning an internal ZEN quencher nine bases from the 5’ fluorophore. When combined with the standard 3’ quencher, this significantly decreases background fluorescence and increases sensitivity.
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CHROMATIN ANALYSIS KIT
The new EpIQ chromatin analysis kit is a real-time polymerase chain reaction (qPCR) assay for the rapid quantitative assessment of chromatin structure. Complementing existing epigenetic assays such as DNA methylation and chromatin immunoprecipitation, the EpIQ kit is the first commercial research tool that helps scientists quantify the impact of epigenetic events on gene expression regulation through chromatin state changes. The EpIQ kit can provide quantitative information about chromatin accessibility, which correlates very strongly with gene expression. With the EpIQ kit, chromatin structure data can be obtained within six hours from as few as 50,000 cultured cells, without the need for nuclei isolation. The kit includes buffers for cell permeabilization and in situ chromatin digestion, optimized nuclease, materials for genomic DNA purification, control assays (qPCR primers) for chromatin assessment of a reference (epigenetically silenced) and control (constitutively expressed) gene, and EpIQ Chromatin SYBR Green Supermix, a real-time PCR reagent designed to amplify genomic DNA.
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Two new thermal cyclers, the Piko and the Arktik, are designed to meet the needs of a broad range of researchers, for applications covering individual polymerase chain reactions through to high throughput projects. The Piko Thermal Cycler provides best-in-class thermal performance, fast ramping rates, and quick settling times, offering excellent PCR efficiency and well-to-well consistency within an extremely compact footprint. The Piko also uses ultrathin-walled (UTW) vessels for better temperature transfer, which enables protocols to be completed more quickly. The Arktik Thermal Cycler provides the flexibility of three interchangeable blocks for standard 96-, 384-, and 2x48-well PCR plates. Both the Piko and Arktik Thermal Cyclers feature highly intuitive user interfaces, with a clear display of protocols for highly efficient programming and operation.
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