

Submission
deadline
August 1

Your name here.



The GE & Science Prize for Young Life Scientists. Because brilliant ideas build better realities.

Imagine standing on the podium at the Grand Hotel in Stockholm, making your acceptance speech for the GE & Science Prize for Young Life Scientists. Imagine having your essay read by your peers around the world. Imagine discussing your work in a seminar with other prize winners and Nobel Laureates. Imagine what you could do with the \$25,000 prize money. Now stop imagining. If you were awarded your Ph.D. in molecular biology in 2010, then submit your 1000-word essay by August 1, and you can make it a reality.

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GE & Science
Prize for Young
Life Scientists



* 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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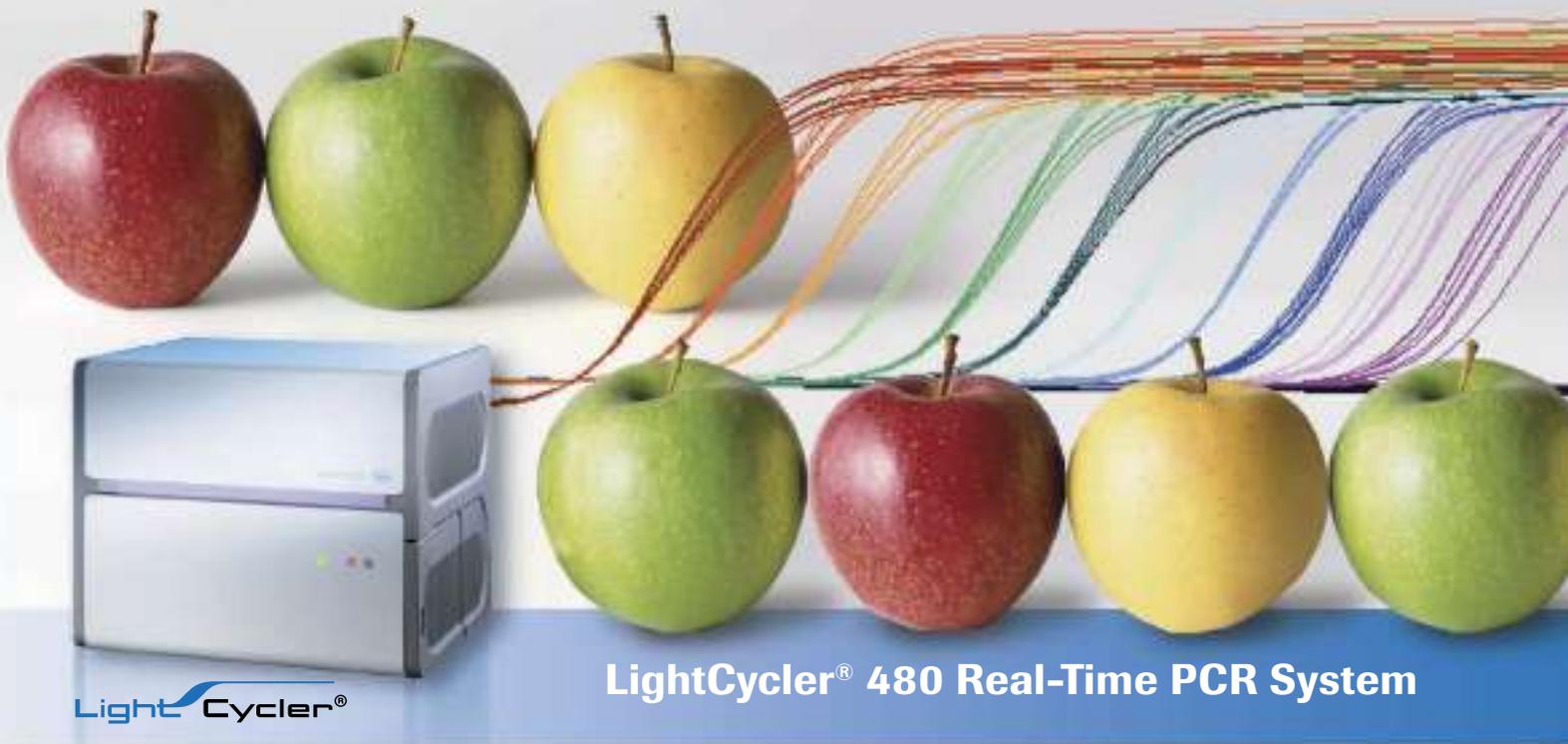
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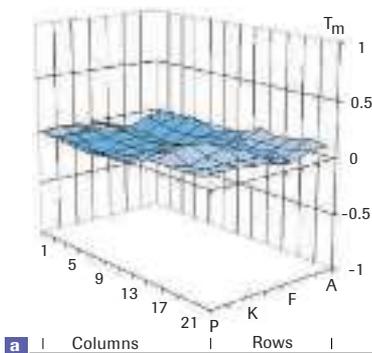
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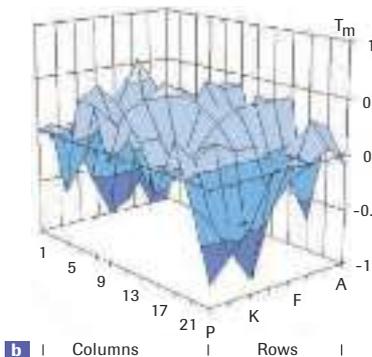


LightCycler® 480 Real-Time PCR System

Perform an Apples-to-Apples Comparison to any 384-Well PCR System



a | Columns | Rows |



b | Columns | Rows |

Figure 1: Influence of the Therma-Base layer on temperature homogeneity across a 384-well plate. (a): LightCycler® 480 Real-Time PCR System including Therma-Base; **(b):** 384-well plate on Applied Biosystems 7900HT without Therma-Base. Data generated at Roche Applied Science.

Does Life Technologies' launch of the new ViiA 7 Real-Time PCR System have you seeking a replacement for your 384-well system? Before rushing into any purchase, check out the time-tested, peer-published **LightCycler® 480 Real-Time PCR System** from Roche Applied Science — the 384-well solution of choice for hundreds of researchers during the past five years.

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The ever-growing worldwide demand for efficient road transportation translates into the need to reduce urban pollution, green house gas emissions, traffic congestion, energy consumption, and hazards. Michelin, a world leader in tyre manufacturing, works to invent new materials and processes that help the automotive industry tackle these enormous challenges. Convinced that innovation will not come only from the optimization of existing materials but from technological and conceptual leaps, Michelin has initiated an ambitious research program that promotes close and in-depth partnerships with world class academic institutions.

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“The Materials Science Chair at ESPCI ParisTech” was launched in 2008 as part of a partnership between Michelin and ESPCI ParisTech (École supérieure de physique et de chimie industrielles de la Ville de Paris). Located in the heart of Paris, within the famous Quartier Latin, ESPCI ParisTech is a leading French Grande École training scientists and engineers at the graduate level, as well as a world renowned research institution and an engine of innovation for industry. It counts a number of prominent scientists and Nobel laureates, including Pierre-Gilles de Gennes and Georges Charpak. The Chair fosters collaborations and exchanges between scientists at ESPCI ParisTech and research engineers at Michelin, and supports the research-driven education provided by ESPCI ParisTech.

To mark two years of successful collaboration and to strengthen its field of expertise, the Chair recently organized a two-day international workshop at ESPCI ParisTech. The event brought together chemists, materials scientists, physicists, and engineers committed to the understanding, processing, and applications of polymer nanocomposites, rubbers, filled elastomers, and multi-component polymer nanostructures. The workshop featured best-in-their-field speakers who reviewed the latest achievements in the dynamics of polymeric materials at different scales. The lectures, which combined simulation, theory and advanced experimentation, emphasized the need for multi-scale approaches connecting the microscopic properties (macromolecular architecture, local deformation, glass dynamics) to the macroscopic behaviour (aging, mechanics at large deformation, fracture, rheology) of polymeric materials.

Information on “The Materials Science Chair at ESPCI ParisTech” and on the “Multi-scale Dynamics of Structured Polymeric Materials” workshop is available at: www.chairemichelin.espci.fr/home/

Contact with the Scientific Direction of Michelin is through: pierrick.travert@fr.michelin.com

“A dream told me to do it.”



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

Dr. Carl Alving on his inspiration for inventing the vaccine patch.

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Science Translational Medicine
Integrating Medicine and Science

“The 2010 selection for the Nobel Prize in Physiology or Medicine as well as the three Lasker Awards brought welcome opportunities to celebrate truly groundbreaking translational research.”*

This quote illuminates the importance of translational medicine discoveries. A recent journal article features the sequencing of fetal DNA from plasma of a pregnant woman to permit prenatal, noninvasive genome-wide screening to diagnose fetal genetic disorders.

* Sci Transl Med 22 December 2010:
Vol. 2, Issue 63, p. 63ed9
DOI: 10.1126/scitranslmed.3001816

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DNA/RNA TRANSFORMATION

The newly launched Eppendorf Eporator offers a fast, simple, and safe way to transform bacteria, yeast, and other microorganisms with DNA/RNA. Results are highly reproducible and, compared with chemical methods, electroporation yields to significantly higher transformation efficiency. Designed to deliver ideal conditions for electroporation of bacteria and yeast, the Eppendorf Eporator has been shown to give transformation efficiencies 10 times higher than with chemical transformation (heat shock method). The new Eppendorf Eporator not only saves valuable time and delivers higher transformation rates, but, crucially, the instrument is also extremely user friendly. Two new program buttons allow for storage and recall of the most commonly used parameters, and a simple one-button operation ensures intuitive use for faster sample handling. Eppendorf Eporator has a compact, space-saving design for easy storage and transport and comes with a USB port facilitating export of data for analysis and GLP-compliant documentation.

Eppendorf

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DNA REPAIR KNOCKDOWN CELL LINES

A range of highly efficient knockdown cell lines covering the base excision DNA repair pathway enable scientists to study the molecular etiology of tumor genomic instability and to exploit it for oncology research. The new range includes 20 DNA repair knockdown cell lines, which are based upon target-specific LN428 glioblastoma shRNA lentivirus-transduced cells that are rigorously qualified and mycoplasma free. DNA repair pathways maintain the integrity of the genome, reducing the onset of cancer, disease, and aging phenotypes. The DNA repair knockdown cell lines provide essential tools to address these needs. All DNA repair knockdown cell line products are evaluated by reverse transcription polymerase chain reactions (RT-PCR) and Western blot analysis, and functional assays are performed when feasible. The knockdown efficiency of the new DNA repair knockdown cell lines on target genes, as measured by RT-PCR, is 63 to 98%.

AMS Biotechnology

For info: +44-(0)-1235-828200 | www.amsbio.com

HIGH THROUGHPUT DNA LABELING

New high throughput genomic DNA labeling kits and sample tracking spike-ins can further streamline workflow and minimize sample-tracking errors for researchers performing array comparative genomic hybridization (aCGH). The new CytoSure HT Genomic DNA Labeling Kit makes it possible to simultaneously label up to 96 samples using a 96-well plate format, boosting cost-effectiveness, increasing processing speed, and facilitating automated sample handling. The unique formulation and mastermix-based approach maximizes signal-to-noise ratio and reduces sample-to-sample variation, facilitating the confident detection of even the smallest aberrations. CytoSure ISCA Sample Tracking Spike-ins ensure that any potential sample mix-up during array processing can be easily identified, safeguarding against mistakes and maximizing data confidence. When used in combination with CytoSure ISCA arrays and the CytoSure Interpret Software, these new products make it easy to correlate individual data sets with sample origin.

Oxford Gene Technology

For info: +44-(0)-1865-856826 | www.ogt.co.uk

HIGH THROUGHPUT SAMPLE PREPARATION

The Smplicity Filtration System is an innovative new technology that provides a convenient, high throughput alternative to syringe-tip filters when preparing samples for chromatography. The Smplicity system allows up to eight samples—even those with high viscosity or particulates—to be simultaneously vacuum-filtered in seconds. Samples are quickly and easily loaded using a pipettor and are filtered directly into LC vials. The filtered samples are immediately ready for subsequent analyses. The Smplicity system provides relief from the repetition of manual filtration and offers a throughput capacity well-aligned with the needs of most labs. The Smplicity system is designed for use with Millex Smplicity filter units with a hydrophilic Teflon membrane filter in either a 0.45 or 0.2 μm pore size. Millex Smplicity filter units have low extractables, low analyte binding properties, and a low hold-up volume, which allows processing of samples as small as 200 μL .

EMD Millipore

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PLATE WASHER

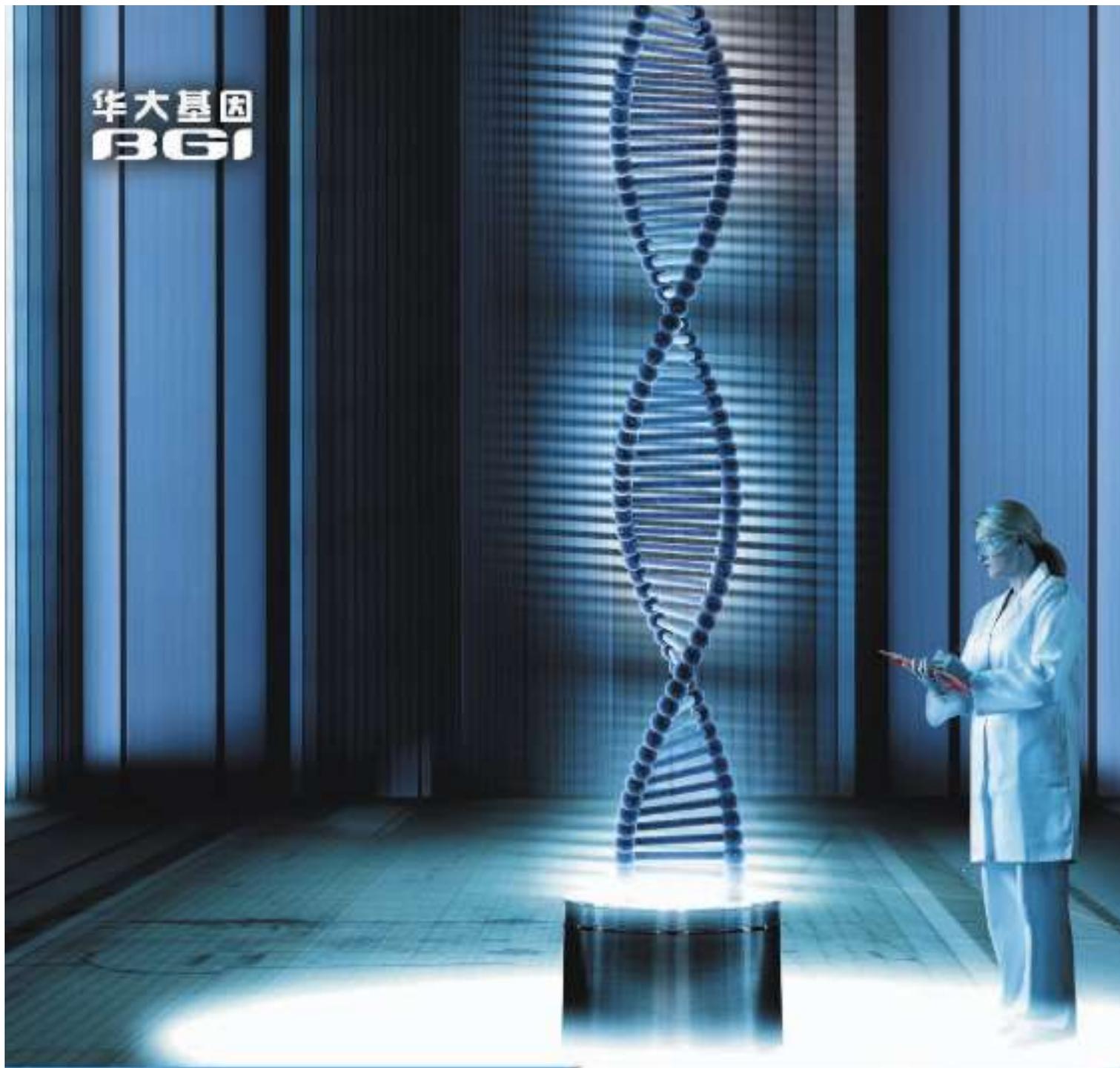
The HydroSpeed plate washer is an advanced system optimized for washing of cells, beads, and enzyme-linked immunosorbent assays (ELISA) in 96- and 384-well formats. It offers full control over critical wash parameters via an intuitive touchscreen interface, with extra gentle drop-wise dispensing, and tunable aspiration settings to help avoid loss of material and maximize assay efficiency. The HydroSpeed features advanced Cell Protection settings for washing of adherent and loosely adherent cells, allowing the user to dial-in extra gentle wash parameters to suit their cells, microplates, and application. The system's innovative AntiClogging function takes the hassle out of ELISA washing by automatically rinsing and soaking the wash head when the system is idle between runs. The HydroSpeed uses two magnets per well for high performance magnetic bead washing, offering fast bead settling and excellent recovery rates, and can also be equipped with a vacuum filtration module for processing of nonmagnetic beads.

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