

## Agilent, ExonHit work together to optimize microarray technology

16 December 2004 | News



### Agilent, ExonHit work together to optimize microarray technology

Agilent Technologies and ExonHit Therapeutics, a private drug discovery company, announced a research collaboration to combine Agilent's microarray platform and ExonHit's alternative RNA splicing technologies and expertise. This collaboration explores the development of a microarray-based solution that will enable scientists to properly monitor the expression of splice variants.

Splice variants are variable sequences of RNA produced from the same gene in DNA, resulting in the creation of different proteins potentially affecting cellular regulation. Scientists developing therapeutics are increasingly interested in this emerging field as the expression of splice variants can provide novel targets, may indicate disease states, and can be altered by exposure to drugs and toxins.

Agilent and ExonHit are working together to optimize microarray design, reagent protocols and data analysis methods for splice variant studies. ExonHit realized that the proper characterization of splice variant expression required dedicated profiling platforms. The company has received notice of the allowance of its patent, which broadly claims nucleic acid arrays that enable the detection of alternative RNA splicing events via either intron or exon and splice junction-specific probes. Agilent is providing researchers highly flexible and sensitive printed microarrays.

Initial results from an experimental splicing array of G-protein coupled receptors, designed by ExonHit and produced by Agilent pursuant to the collaboration, showed good reproducibility and specificity. The companies are expected to work with

early test sites to generate additional experimental results.

"Our mutual goal is to better enable alternative RNA splicing analysis using microarray technologies," said Fran DiNuzzo, vice president and general manager of Agilent's Integrated Biology Solutions business unit. "We are confident that our collaboration will result in scientists being able to conduct cutting-edge genomic research and to study more thoroughly the gene families and signaling pathways important for their research. The effectiveness of Agilent's microarray platform, combined with ExonHit's pioneering alternative RNA splicing technology and strong intellectual property position, will ultimately provide an ideal expression-profiling solution for researchers worldwide," said Bruno Tocque, CEO of ExonHit Therapeutics

## Pall to acquire chromatography business from CIPHERGEN Biosystems

Pall Corporation announced that it would acquire the BioSeptra Process Division from CIPHERGEN Biosystems, Inc. at price of approximately \$32 million. The transaction is expected to close within 45 days. The BioSeptra Process Division develops, manufactures and markets chromatography sorbents that greatly simplify protein purification development and significantly improve biopharmaceutical-manufacturing productivity.

Pall and CIPHERGEN also announced an alliance to develop and promote CIPHERGEN's patented SELDI ProteinChip® technology as a bridge between the research lab and large-scale drug production. This technology will be used to optimize chromatography resin selection for protein purification.

Pall also plans to establish Process Proteomics Service Centers that will assist customers in selecting and optimizing sorbents and membranes for the purification of proteins used in the production of therapeutic proteins and other bioprocess applications. The addition of these sorbent technologies will enable Pall to provide a highly integrated solution for the bioprocess separations market.

Eric Krasnoff, chairman and CEO of Pall Corporation, said, "BioSeptra is a welcome addition to Pall's Life Sciences business. Their innovative and broad range of chromatography chemistries fit in well with our significant market position in drug discovery and protein purification. We are very pleased to strengthen Pall's ability to serve the needs of our Biotechnology customers."

William E. Rich, president and CEO of CIPHERGEN, said, "We are excited about working with Pall and their customers to continue expansion of our pioneering work in Process Proteomics in order to speed process development using our ProteinChip Systems for protein purification and expression optimization and process monitoring."

## Applied Biosystems introduces genetic analyzers

Applied Biosystems, an Applied Biosystems Corporation business, has introduced a new line of Genetic Analyzers for low-to medium-throughput laboratories. The Applied Biosystems 3130 Series Genetic Analyzers, which replace the ABI PRISM® 3100 and 3100-Avant Genetic Analyzers, deliver enhanced automation, faster turnaround times, higher reliability, and higher data quality than previous generation technologies across a wide range of applications, including de novo sequencing, resequencing, mutation detection, single nucleotide polymorphism (SNP) analysis, and microsatellite analysis.

The Applied Biosystems 3130 Genetic Analyzer is a four-capillary system, and the 3130xl Genetic Analyzer is a 16-capillary system. Customers purchasing the 3130 System have the flexibility to easily upgrade their system to the 16-capillary 3130xl system if they require higher throughput in the future.

The 3130 and 3130xl Genetic Analyzers were co-developed under a product development collaboration that began in 1997 with Hitachi High-Technologies Corporation, an affiliate of Hitachi, Ltd., of Tokyo, Japan.

Clinical research trials represent a growing market opportunity for these systems, where sequencing can be used to correlate the clinical responses of patients to an experimental treatment and to indicate that patients with specific gene sequences may be more responsive to the potential therapies under investigation.

"Even in today's post-human genome sequencing era, genetic analysis continues to play a vital and growing role in the life sciences industries," said Catherine M. Burzik, president of Applied Biosystems. "Our DNA analyzers are increasingly being used for such applications as genotyping and mutational profiling (resequencing), in addition to the ongoing genome sequencing projects," he added.

### **Thermo Electron's mass spectrometer wins R&D 100 Award**

One of Thermo Electron Corporation's flagship mass spectrometer, the Finnigan LTQ FT, has been selected by R&D Magazine as one of the top 100 innovative new products of the year. It helps the researchers involved with the study of proteomics.

"This hybrid mass spectrometer, which also received the 2003 PITTCON Editor's Silver Award, enables the scientists to analyze complex mixtures more thoroughly and more rapidly than ever before. It allows analytical chemists and biologists to obtain higher quality data, giving them greater structural information. Its analytical capabilities contribute to the more efficient identification, characterization, and detection of proteins and their post-translational modifications (PTMs) with improved confidence and precision. At the same time, the instrument provides routine and user-friendly operation," said the official release.

The R&D 100 Awards were established in 1963 to identify the 100 most technologically significant new products in the marketplace in that year. Over the years, the R&D 100 Awards have recognized winning products with such household names as Polacolor film (1963), the flashcube (1965), the automated teller machine (1973), the fax machine (1975), the liquid crystal display (1980), the printer (1986), the Kodak Photo CD (1991), the Nicoderm anti-smoking patch (1992), Taxol anticancer drug (1993), lab on a chip (1996), and HDTV (1998).

### **GE Healthcare announces collaboration with GSK**

GE Healthcare, announced an informatics collaboration agreement with GlaxoSmithKline (GSK) to enable GSK to integrate data from diverse internal and external sources in its drug discovery R&D process. GSK will be able to use geneticXchange's discoveryHub data and information integration software from GE Healthcare within its R&D areas of Genetics, Discovery and its Centres of Excellence for Drug Discovery and Pre-Clinical Development. This will help GSK to maximize its use of biological, chemical and clinical data generated from its own drug discovery research, and integrate it seamlessly with other third party and public databases. Under the terms of the agreement, GE Healthcare and geneticXchange will work in collaboration with GSK in the design, development and support of the next generation of discoveryHub technology."

Effective informatics enable drug researchers to address one of the most difficult challenges in life sciences: transforming data into knowledge," said Nick Giannasi, Head of Informatics Solutions at GE Healthcare. "discoveryHub will support GSK in the efficient use of the available biological and clinical data in its drug discovery research. Connecting data sources regardless of location and complexity, discoveryHub provides scientists with access to the data they need in order to make informed decisions quickly," he added.

### **Cambrex, QBM Cell Science sign distribution agreement**

Cambrex Corporation has signed an exclusive distribution agreement between its subsidiary Cambrex Bio Science Walkersville, Inc. and QBM Cell Science. Cambrex Bio Science Walkersville is a supplier of human cell systems, with over 100 different cell and media systems for life science research. QBM Cell Science is a provider of primary neurons for the research market, including neuronal cells from mouse and rat cortex and striatum, and from the rat hippocampus. Under the agreement, Cambrex will exclusively distribute QBM neuron products through its existing global distribution infrastructure.

"We are very excited about the agreement and the expanded research possibilities that it affords neuroscientists," commented Dave Eansor, president, Cambrex Bioproducts. "These products are complementary to our Clonetics® and Poietics® normal human cell systems. We believe our e-commerce capabilities and distribution channels meet QBM's requirements while addressing the need for quality neuronal cell systems by researchers worldwide." Anthony Krantis, president QBM Cell Sciences said, "Cambrex's worldwide reach and expertise in primary cell distribution will greatly increase the availability of our cells to the research community."

## Eppendorf & Science prize for neurobiology 2004 goes to Miriam Goodman

The "Eppendorf & Science Prize for Neurobiology," an international prize of \$25,000, has been awarded to Miriam B. Goodman, Stanford University School of Medicine, California, USA, for her work on "Using *C. elegans* to Deconstruct and Reconstitute a Sensory Mechanotransduction Channel." The prize was presented recently in San Diego, California.

Dr. Goodman is presently working as an Assistant Professor of Molecular and Cellular Physiology at Stanford University with focus on delineating the molecular events that give rise to the sense of touch. Research in Dr. Goodman's laboratory, which combines techniques in genetics, in vivo electrophysiology and heterologous expression, is directed toward the discovery of the molecular events responsible for this process.

She grew up in Lexington, Massachusetts, and Bethesda, Maryland, writing scientific software in research labs at the National Institutes of Health (NIH) as a high school student. She earned a Bachelor's degree in Biochemistry from Brown University in 1986. As a graduate student in neurobiology at the University of Chicago, she analyzed voltage-dependent ion channels that tune vertebrate hair cells. After being awarded her Ph.D. in 1995, she pursued postdoctoral work in *C. elegans* neurophysiology and genetics at the University of Oregon and Columbia University.

The Prize, which is sponsored by Eppendorf, is open to all young scientists who have made outstanding contributions to neurobiological research using methods of molecular and cell biology and have obtained their PhD or MD within the past 10 years. This year's winner was selected from a pool of approximately 40 applicants by a distinguished committee of scientists chaired by the editor-in-chief of Science magazine, Dr Donald Kennedy.

## Waters announces expanded feature set in empower software

It's not a new trend, just one that continues to gather momentum. And that is the effort by major analytical instrument suppliers to provide their customers with chromatography data management software that controls and acquires data from various brands of chromatographic instrumentation. Extending a trend that began in the late 80's with the support of the Agilent® 5890 Gas Chromatograph, Waters multi-vendor instrument control capabilities for its Empower™ chromatography data software now include support for the Agilent 1100 Series Photodiode Array Detector.

Managing data in a busy analytical laboratory is an ever-increasing challenge. This daunting task is compounded when labs use a mix of liquid chromatographs, gas chromatographs, photodiode array and mass spectrometry detectors from different suppliers, and whose scientists prefer to standardize on Waters software to run them.

Waters Empower Chromatography Software, sold with Waters® brand UPLC and HPLC instrumentation, is a software tool that is more than meets the eye - it acquires data and controls the operation of and processes data from not only Waters brand instrumentation, but Agilent 1100 Series Photodiode Array Detectors, 1100 Series Liquid Chromatographs, and Agilent 5890 and 6890-series Gas Chromatographs.

"There are quite a few CDS products, but they can't match the feature set of Empower including support for Agilent instrument control and data management," says Pat Martell, Director - Informatics Product Marketing at Waters Corporation.

An early convert to this approach of laboratory data management is Johnson & Johnson. "Since Waters added the full control functionality for Agilent's 1100 LCs and 6890 GCs to its Millennium®/Empower product, we can again use all our chromatography instrumentation with a software package which is state-of-the-art for both productivity and compliance", says Pascal Maes, Global Analytical Development, Pharmaceutical R&D, Johnson & Johnson, Beerse, Belgium.

## Praj launches new technology to produce fuel ethanol

With increasing importance of fuel ethanol as petrol additive for reduction of transport fuel emissions, Praj Industries has launched a new technology for production of ethanol from sweet sorghum after an extensive R&D at laboratory and industrial levels. It launched the technology in Chennai recently. Praj has been conducting research into viable alternate feedstock for ethanol production at its R&D and Engineering Center in Pune.

"Fuel ethanol has been accepted globally as one of the ways of reducing environmental pollution. We are glad to be at the forefront of this movement. Today, Praj has customers all over the world. We will continue to take the company forward through innovation and knowledge that lead to Future Perfect technologies," said Pramod Chaudhari, chairman, Praj Industries Ltd.

" Innovation has been the cornerstone of Praj. Our R&D facilities called Matrix " The Innovation Center was expanded in 2002 to focus on more productive processes and energy crops for fuel ethanol production. The findings we share with our customers are a result of this body of work. We are very proud that the Government of Tamil Nadu is encouraging sweet sorghum to ethanol production program," he said.

After cultivating sweet sorghum based on various seeds in different regions of India, Praj has successfully identified appropriate varieties of seeds and cultivation practices which will lead to maximum ethanol yields in different environments. Praj will shortly commence coordination of regular supply of these seed varieties to ensure higher yields. "We have achieved sweet sorghum (stalk) yields as high as 20 tons/acre in just 3.5 months having sugar content in excess of 10.5 percent," said Pramod Chaudhari.