

The German Cancer Research Center Investigates the Role of miRNAs in Carcinogenesis Using febit's Geniom RT Analyzer

LEXINGTON, Mass. (USA), and HEIDELBERG, Germany, Oct. 20, 2008 – The German Cancer Research Center, also known as DKFZ, in Heidelberg (Germany) chose febit's newly introduced Geniom[®] RT Analyzer to investigate the association of microRNAs (miRNAs) and cancer.

miRNAs are small pieces of RNA with a maximum length of 23 nucleotides, which have become an important focus of life-science research in the past couple of years. Since they do not encode any proteins, they remained largely unappreciated for many decades. Recently, however, scientists began to realize their crucial role in the regulation of intracellular events such as differentiation or apoptosis of cells. The number of miRNA being discovered is growing by the day.

DKFZ scientists therefore searched for a technology that would allow them to keep pace with the rapidly evolving miRNA databases, continually incorporating the latest information into their research on the role of miRNAs in carcinogenesis. The newly developed Geniom RT Analyzer ideally meets this requirement: it exploits freely configurable biochips produced on demand at febit for microarray analysis of miRNA profiles in biological samples.

"Our positive experience with the flexibility of febit's Geniom contributed to our decision to use the new Geniom RT Analyzer," said Joerg Hoheisel, director of the DKFZ Functional Genome Analysis Division. "Preliminary tests indicate an excellent quality of microarray analysis. In addition, my team is enthusiastic about the straight-forward operation and outstanding efficiency of the instrument."

In addition to flexibility, the Geniom RT Analyzer offers a high degree of automation and numerous user-friendly features: all steps in the workflow, including sample addition, hybridization, staining, washing, shaking and detection, are performed in one single instrument requiring a minimum of operator time. The efficient operation results with minimal error rates and offer consistent experimental parameters providing highly reproducible results. Data read out by the Geniom Wizard software may then be analyzed with standard software solutions.

In addition to miRNA analysis, the Geniom RT Analyzer offers a variety of other highperformance applications. For example, a patented biochip protocol enables the fragmentation and sorting of large genomes in smaller well-defined fractions. Without this essential fractionation step, the complexity of the genomic DNA would preclude any effective analysis. These may then serve as samples in mutation analysis and high-throughput sequencing with next-generation sequencers.





febit's new Geniom RT Analyzer combines extraordinary flexibility with a high degree of automation for microarray analysis. (Photo: febit)

About febit

febit enables scientists to read, write and understand the code of life: DNA. With its unique Geniom technology and services, febit is the only company that puts the control of simplified genomic research in the hand of the user. The seamless integration of DNA synthesis and analysis and the superior support in experiment design and bioinformatics helps to understand data and turn it into results. febit's team of experienced scientists is dedicated to support customers to solve the challenge of understanding biological processes. Geniom is a technological and service platform successfully implemented in basic and applied research by renowned institutions and companies. Geniom exploits cutting-edge microarray technology for analysis and synthesis of genes and genomes, providing superior time- and cost-efficiency combined with an unsurpassed spectrum of applications.

For more information about febit and its products please visit **www.febit.com**

About the DKFZ, Division of Functional Genome Analysis

Research at the division of Functional Genome Analysis at the DKFZ (German Cancer Research Center) aims at the development and immediate application of new technologies for the production and processing of molecular information at a global cellular level. The overall objectives are an analysis, assessment and description of the realisation of cellular function from genetic information as well as the understanding of the regulation of the relevant processes. Many projects are pursued in national and international collaborations and programmes.

For more information on Functional Genome Analysis at the DKFZ, please visit www.dkfz.de/funct_genome/

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