

## DNA chips market growing at 50 percent

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Agilent Technologies and Affymetrix are the two leading names in India in the DNA chips space besides Ocimum Biosolutions, which recently acquired the microarray division from MWG Biotech to offer Catalog OciChip arrays, Custom OciChip arrays and microarray services to the Indian scientific community. There are few companies that are involved in offering services.

Chris Tan, regional sales manager (Genomics), Asia Pacific, Agilent Technologies, said, "Agilent Technologies and Affymetrix are key vendors dominating the market. Spotted arrays from universities are in the Indian scene as well. Genotypic and TCGA are the service providers. Ocimum Biosolutions is one Indian company at the moment that is into the business of the DNA chips."

On the market scenario, Dr KR Kumaraswamy, vice president, life science, Spinco Biotech that represents Affymetrix in India, said, "The present market for DNA chips in India is about \$1 million and growing at a rate of 50 percent. We are selling about 1000 DNA chips per year at an average price of \$400 per chip."

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DNA microarrays—a fusion of computer science, bioengineering, and genetics, are small plates spotted with hundreds to thousands of specific DNA sequences from plant, animal, or human tissues. DNA arrays can tell researchers about the activity and sequence of many genes in a test sample with a single, short procedure. DNA microarrays, also known as biochips, are tools of increasing importance for academia and industry for basic research and for increasing the understanding the influences of a multitude of factors on disease processes. DNA microarrays can be used to detect RNAs that may or may not be translated into active proteins. Scientists refer to this kind of analysis as "expression analysis" or expression profiling. Since there can be tens of thousands of distinct reporters on an array, each microarray experiment can accomplish the equivalent number of genetic tests in parallel.

The use of microarrays for gene expression profiling was first published in 1995 and the first complete eukaryotic genome on a microarray was published in 1997.

Sharing similar views, Chris Tan of Agilent Technologies, said, "More than 2000 arrays are currently being consumed in India. It is growing at a rate of 50 percent or even more rapidly. At present, the market size for DNA arrays in the country is approximately 4000â€“5000. We at Agilent Technologies have sold over 500 arrays in the last one year in India at a price range of \$200-500 depending on the type of arrays."

Anuradha Acharya, founder and CEO, Ocimum Biosolutions, said, "At present we are offering the chips in the range of \$100-400. Last year, the DNA chips were available at \$1000 per chip. But I feel there is potential if we bring down the price. About 500-1000 chips are sold every year. There are standard chips, which are available at a lower price. However, for some of the disease-specific arrays, the price will be on higher side. We are working on this with key institutes, which purchase in numbers."

She further said, "A lot of research has been taking place in genomics and proteomics areas. That has increased the use of DNA chips in India. The market for DNA chips has been increasing in the last couple of years. It is because of the support the institutes are getting from the government as grants or funds. The DBT too increased the budget for R&D activities. So we expect there will be an increase in the sale of DNA chips in the near future."

Narayan Kulkarni with inputs from Rolly Dureha

### **Analytica-Anacon 2006 draws creamy visitors**

India and China are likely to share about 20-25 percent of the global analytical instruments market in 2007. The Indian market is valued at \$750 million and India has maintained a 11 percent growth, equal to the growth of the analytical market in China. If the Indian players have a focused strategy for the next five to six years, the country could record better growth in the field, said S Thyagarajan, vice president, Indian Analytical Instruments Association (IAIA).

He was speaking at the inaugural of the third edition of the three-day bi-annual Analytica-Anacon 2006, an international trade fair and conference of analytical instrumentation, biotechnology, laboratory technology and services, which was held in Bangalore from November 16-18, 2006.

"The world market for the laboratory, analytical and life science instrumentation for the year 2006 is estimated to be around as \$32,810 million with a compounded annual growth rate of 5.9 percent. By 2010, it is expected to generate revenues of \$41,105million and register a growth rate of 6 percent," he informed.

Prof. P Balaram, director, IISc, Bangalore, who participated as chief guest, said that almost all research in chemistry, biology and agriculture was not possible without the use of sophisticated tools for chemical analysis and chemical separation. "Analytical instrumentation has pervaded R&D activities in almost all spheres, whether it is environmental analysis, forensic science or basic research in chemistry and biology. Indian manufacturers of analytical instruments have a special responsibility to develop a close relationship with their customers and ensure that they share a vision of growth and advance," Prof. Balaram urged. "Bangalore has enough capabilities in research and science and is an ideal destination to locate an applications laboratory," he added.

"India's expenditure on science and technology is about 0.8 percent of the GDP. And we hope that over the next few years, it will be driven up by 1.5 percent," Prof. Balaram said.

Stressing on the importance of Analytica-Anacon, Dr G Ramakrishnan, president, IAIA said it the only trade show that is dedicated to analytical instruments in line with Pittcon in the US and Analytica in Munich. "IAIA fosters a very good co-operation among its members and the analytical exhibitions and symposia have been well represented, thus the Association catalyzes the parties concerned with the quest for information through its activities," he said.

Susanne Groedl, project manager, Analytica Munich, said Asia is a huge and rapidly growing market for analysis equipment and laboratory technologies, having a market share of about 28 percent. Globally, the total market volume was \$8 billion in 2005 and is estimated to touch \$11 billion in 2011, the annual growth rate worldwide being approximately five percent. "India is an upcoming market for analytical instruments and the Indian market is expected to grow by 15-20 percent in the next few years," she said. "The Indian market for analysis and diagnostic products and laboratory equipment grew from \$331 million in 2003 to \$976 million in 2004," she added.

Analytica-Anacon 2006, a combined project by the Indian Analytical Instruments Association (IAIA) and International Exhibition And Fair Service of Messe Munchem GmbH, served as a platform for market leaders around the world to meet and discuss the latest developments and establish business contacts.

The event saw the participation of over 120 exhibitors from 11 countries. Primarily focusing on chemistry application instruments, Analytica-Anacon showcased a range of products and services that the industry has to offer, making it an ideal exhibition platform for decision-makers and buyers from laboratories in medicine, pharmaceuticals, nutrition, biotechnology, electrical engineering and metal processing. It also featured various conferences which focused on recent advances in chromatography, mass spectrometry and elemental and molecular spectroscopy.

Analytica-Anacon 2006 presented the latest equipment and solutions for improving laboratory efficiency, cutting costs and increasing analysis. The exhibits included innovations, particularly in the areas of laboratory automation and laboratory robotics.

Namratha Jagtap