BioSpectrum the business of Bio & Health Sciences

Bioinformatics: Big for the Big Blue

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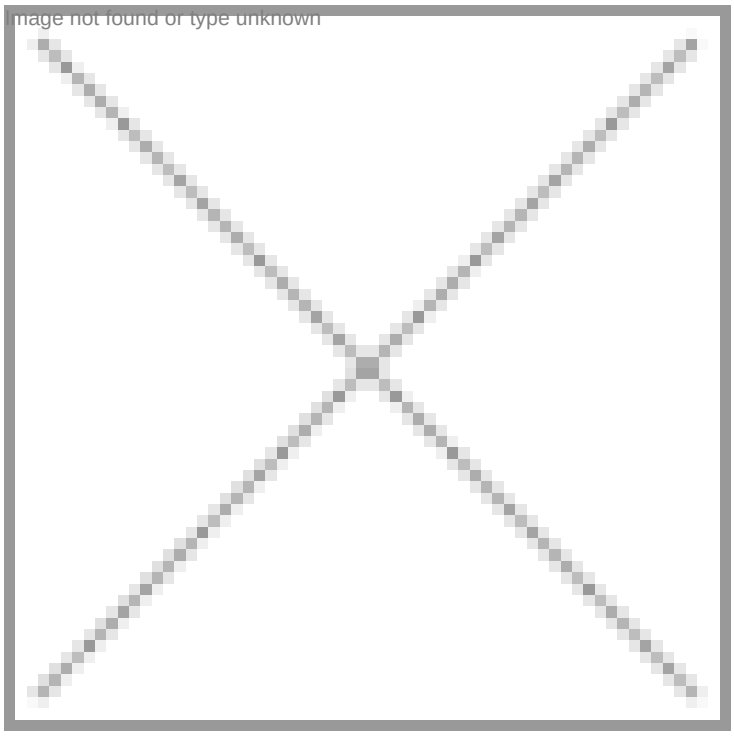

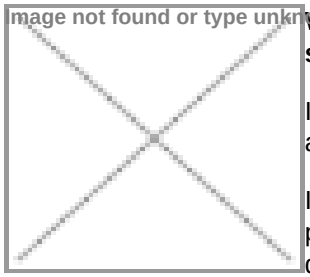

With a lot of activities taking place in biotechnology and life sciences in India how does IBM see the scope/future for the life sciences in the country?

IBM believes that India offers a strong market potential to be tapped for IBM Life Sciences offerings and hence is looking at tapping the potential of this developing market.

IBM Life Science Solutions provides the IT infrastructure that researchers in biotechnology, pharmaceutical research, genomics, proteomics and healthcare need to turn data into scientific discovery and new treatments for diseases. Combined with IBM's core strength in providing robust technology and global services, the IBM Life Sciences business unit delivers innovative, scalable infrastructure solutions that are unique to the life sciences industry.

What are the specific industry segments that IBM plans to address in India?

IBM Life Sciences plans to address pharmaceuticals, biotechnology, academia and government research in India.

Where does India stand in the global Biotech map?

The alignment of a vast pool of scientific talent, a world-class IT industry, a vigorous generic pharmaceutical sector and government initiatives in the establishment of public sector infrastructure and research labs are positioning India to emerge

as a significant participant on the global biotech map.

What are the marketing opportunities for IBM products in India?

The Indian pharmaceutical market shows positive signs. The Indian Government through the Department of Biotechnology has also been promoting the growth of this industry. The DBT and the Indian Council of Agricultural Research (ICAR) have stressed the importance of research and development for biotechnology. The Indian life sciences market has the potential which we would be looking at tapping in keeping with IBM's global focus on Life Sciences.

Who are your customers, globally?

IBM's deep computing technology, software and algorithms are helping Hospital for Sick Children, the largest pediatric center in North America identify the genetic causes of such diseases such as cystic fibrosis. The hospital hosts the worldwide Genome Database, the foremost public database for human genomic information, on an IBM supercomputer.

John Hopkins University uses IBM supercomputing, advanced visualization and imaging technologies to help find cures for diseases of the heart and brain. The technology is shortening research time and helping speed drug development.

Aventis, a world leader in life sciences, uses IBM systems for its IT infrastructure, including managing the bioengineering of new crops through Aventis' CropScience application.

Incyte Genomics Inc., a leader in providing genetic content, will embed IBM's DiscoveryLink data integration technology into its new offering, Genomic Knowledge Platform. Using DiscoveryLink, the new software platform will seamlessly integrate genomic analysis tools and diverse data sets, such as DNA sequence, gene expression, proteomics and genetic variations which are often in disparate formats, to enable faster and more comprehensive analyses than ever before possible. In that way, the combined technologies will address a critical problem in life sciences: accessing and analyzing ever-increasing amounts of biological data to uncover patterns and associations that can lead to new scientific discoveries.

Wayne State University is using an IBM supercomputer to help understand the billions of pieces of raw data that have been painstakingly collected during the decade-long effort to decode the DNA molecule â€" the genetic blueprint of life. The research is intended to pave the way for revolutionary new drugs in the fight against cancer and other life-threatening diseases.

An IBM supercomputer at the San Diego Supercomputer Center is helping researchers better understand the workings of the human nervous system and design the next generation of drugs against HIV and other diseases.

"Simply stated, our unique combination of domain expertise and traditional IT leadership helps customers bridge the gap between the computational and the science side of drug discovery

IBM is also working with Korea's Institute of Science, Technology and Information (KISTI), providing them with one of the most powerful supercomputers (IBM eServer POWER4 technology) for use in Korea's life science and high performance computing research efforts. IBM is also cooperating with KISTI to help build the nation's Technical Support Center for High Performance Computing and Life Science Support Center. IBM will provide technical expertise and resources in cooperation with its global supercomputer research support centers. This contract was worth $27 million.

How do you meet the needs of the biotech industry?

IBM aims to meet this computational challenge which requires analyzing, sorting and studying enormous amounts of information and collaborating with research centers and other scientists throughout the world. Among the IBM offerings are high-performance computing, data management, advanced storage management, consulting services, knowledge management, collaborative technology and e-business solutions. Simply stated, our unique combination of domain expertise and traditional IT leadership helps customers bridge the gap between the computational and the science side of drug discovery. It's all about running the business faster, better, and economically.

What are IBM's global initiatives in life sciences?

The formation of the specialized IBM Life Sciences Solutions business unit.

The active pursuit of strategic business partnerships with life sciences companies whose complementary skills, knowledge and resources could help build value-rich solutions for the industry.

The formation of a dedicated IBM Global Life Sciences Consulting and Solutions practice to focus IBM service capabilities, expertise and intellectual capital on helping customers and business partners to migrate their R&D units into even more efficient and competitive operations.

Two key research centers, the IBM Computational Biology Center and the IBM Deep Computing Institute, housing teams of scientists working on projects involving computational biology, chemistry and material science. Long-term projects at the IBM Computational Biology Center foster IBM collaboration with life sciences companies to bring scientific expertise directly into the development of life sciences solutions.