

**Session on :**  
**Big-data Biotechnology: Challenges and  
Opportunities for India**

**Chair :**  
**T. Madhan Mohan**  
Department of Biotechnology,  
Ministry of Science & Technology, New Delhi

**Speakers :**

- 1- Dr. Binay Panda, Bangalore
- 2- Dr. A.K. Mishra, New Delhi
- 3- Dr. Dinesh Gupta, New Delhi
- 4- Dr. M. Michael Gromiha, Chennai

Session on: **Big-data Biotechnology: Challenges and Opportunities for India**

## **Biotechnology Bigdata: New Openings For Bioinformatics**



**Chair :**

**T Madhan Mohan, Ph.D.**

Department of Biotechnology,

Ministry of Science & Technology, New Delhi

([madhan@dbt.nic.in](mailto:madhan@dbt.nic.in))

*T. Madhan Mohan is an Adviser for the National Bioinformatics Network of DBT who received his Doctorate Degree from the Indian Institute of Technology, Delhi in the area of Biomedical Engineering and received Bioinformatics training at the International Centre for Genetic Engineering and Biotechnology (ICGEB), Trieste, Italy. Dr. Madhan Mohan has been instrumental in establishment of distributed bioinformatics network across the country. Towards this S.K. Mitra Birth Centenary National Award (2011), ISCA's prestigious award has been conferred with Gold Medal to him by the Hon'ble Prime Minister of India Dr. Manmohan Singh during the 98th Indian Science Congress held on 3rd January 2011 for his key role played in the development of Science and Technology -Specifically in the areas of Biotechnology and Bioinformatics. He is not only an institution builder in this area but has also shaped the way this area of Science & Technology should develop in the future.*

### **ABSTRACT**

Deluge of information in Biotechnology has opened up a great opportunities and challenges particularly for the Bioinformaticians and industries those are engaged in drug discovery and development. The term Big Data (BD) has no hard definition as there are many aspects to this from the volume to the velocity of the data generated. Overall collectively we have huge data. This includes large datasets from number of research problems that are typically more than ten terabytes and ranging to several petabytes. Yet genomics provides only one of many mountains of BD in biotech. Considering various bottlenecks in drug discovery and development one could see a new data driven research and technology (DDRT) which looks highly promising to ease the pain. During the course of my talk, I shall speak on various means of data available to the Biotech BD and opportunities that offers to researchers to fetch biological insights.

