

History of Science Seminar on the Indian Heritage: A Genomic View- A Report

The two-day history of science seminar on The Indian Heritage: A Genomic View was organised during 8-10 October, 2015 at Indian Institute of Chemical Technology, Hyderabad along with the meeting of the Indian National Commission for History of Science. The theme of the seminar was planned and coordinated by Professors Partha P Majumder, FNA (National Institute of Biomedical Genomics) and D Balasubramanian, FNA (Chairman, Research Council for history of science). During the inaugural session Professor Majumder provided a perspective of the symposium while professor Balasubramanian described the results of genome research as a new dimension for studies of history of science and presented a brief account of India's rich biodiversity and its relevance to cultural & heritage significance. The symposium was also addressed by Professors S Chandrasekhar, Director IICT and C Mohan Rao, Director, CCMB. Professor Raghavendra Gadagkar, President INSA and Chairman, Indian National Commission for history of science, who was due to speak on genomic history of peacock could not attend the seminar due to some unavoidable situations.

In the seminar, the following papers were presented:

Iconic Flora of Heritage Significance in India – Professor H Y Mohan Ram, INSA Srinivasa Ramanujan Professor, Delhi.

Iconic Fauna of Heritage Significance in India – Professor Raman Sukumar, Centre for Ecological Sciences, Indian Institute of Science, Bangaluru.

The Genome of *Oriza sativa indica* – Professor Akhilesh Tyagi, National Institute of Plant Genome Research, New Delhi.

Genome of the Holy basil (*Ocimum sanctum*)— Dr Ajit Kumar Shasany, CSIR-Central Institute of Medicinal and Aromatic Plants, Lucknow.

The Genome and Genetic Distinctiveness of the Indian Mango (*Mangifera indica*)—Professor N K Singh, National Research Centre on Plant Biotechnology, New Delhi.

Genome and Evolution of the Sacred Lotus — Professor Ray Ming, School of Integrative Biology, Department of Plant Biology, University of Illinois at Urbana-Champaign, USA (Professor Ming was absent; Professor Majumder presented a summary of the talk)

Evolution of Population Structure of Indian Elephants – Dr T N C Vidya, Jawaharlal Nehru Centre for Advanced Scientific Research, Bangaluru.

Gene flow and Evolutionary History of Tigers in Central India — Dr Sandeep Sharma, Smithsonian Conservation Biology Institute, National Zoological Park, Washington, DC 20013-7012, USA.

Genetic Structure of Wild Populations of the Indian rhinoceros (*Rhinoceros unicornis*) — Professor Samuel Zschokke, Department of Environmental Sciences, Section of Conservation Biology, University of Basel, St. Johannis-Vorstadt 10, CH-4056 Basel, Switzerland.

Peopling and Genomic Structure of Ethnic India — Dr Analabha Basu, National Institute of Biomedical Genomics, Kalyani, India.

Indian subcontinent is known for its varieties of flora and fauna (plant and animal life starting from largest to tiniest occurring in a geographical region, particular habitat, and

usefulness). So are its types of human life depending largely on tropical and varied geo-climatic conditions through the centuries. Some plants and animals are even worshipped, central to cultural practices, and recognized as iconic, & taken lot of care for their nurturing and well-being. Genome studies or decoding of genome sequence of a specimen or a group of specimens add a new dimension and complementary knowledge to the studies of history of science, for it throws light on the origin, domestication, function and even

changes that have taken place at different phases. It was emphasized that genome duplication (whole, segmental or tandem) at any level might play a significant role which will help not only to assess the heritage of science but will also find ways by enhancing quality and quantity of life processes in future.

The Commission at its meeting suggested that the papers of the seminar may be published in the *Indian Journal of History of Science* as a thematic issue.