



Science Academies' Refresher Course on 'Genetics and Molecular Biology'

Date: 16–29 January 2017

Sponsored by
Indian Academy of Sciences, Bengaluru
Indian National Science Academy, New Delhi
The National Academy of Sciences, India, Allahabad

in collaboration with



**Department of Microbiology & Cell Biology, Division of Biological Sciences
Indian Institute of Science, Bengaluru**

Applications are invited from faculty (preferably less than 45 years of age) teaching undergraduate and/or postgraduate courses in colleges/universities. The number of seats available is 10 for local and 20 for outstation participants. The applicants have to enclose CV with a brief statement on why he/she is interested in this course. The application has to be duly forwarded by the Head of the Department/Chairman/Principal with a commitment that the candidate if selected, will be provided leave/OD for the duration of the course. The selected candidates will be provided with round-trip bus/train (III AC) fare by the shortest route and local hospitality during the course.

Applications should be submitted ONLINE by clicking the following link:

<http://web-japps.ias.ac.in:8080/Refreshcourse/RGNB.jsp>

Course Director: Prof. Umesh Varshney, Chairman, Division of Biological Sciences, Department of Microbiology and Cell Biology, Indian Institute of Science, Bengaluru.

Coordinators: (1) Prof. Saumitra Das, Department of Microbiology and Cell Biology, Indian Institute of Science, Bengaluru. (2) Prof. H. A. Ranganath, Visiting Professor, Division of Biological Sciences, Indian Institute of Science, Bengaluru.

(A) Lectures: Evolution of genetics: an overview; Introduction of model genetic systems; Genetics of haploid systems; Nucleic acid and chromatin structure; Nucleic acid transactions – replication, transcription, translation; Genetic recombination and DNA repair; Biology of RNA – splicing, editing, microRNAs, ribozyme; Genetics of cell division; Genes in development and differentiation; Epigenetics and gene regulation; Restriction enzymes and recombinant DNA technology; Genetics of behaviour; Evolution and genetics; Bioinformatics – structural, functional and comparative genomics; Metagenomics; Genome editing; Big-data biology; Synthetic genomes.

(B) Practicals: Demonstration of model genetic systems; *E. coli* – transformation, transduction, plasmid preparation; Restriction digestion; PCR; Cloning of PCR products; Genetic experiments with *Drosophila*.

Proposed resource persons: Faculty members from the Indian Institute of Science and other institutions in Bengaluru.

Last date for receipt of application: **10 December 2016**.

Contact address: Dr T. D. Mahabaleswara, Coordinator (RC/LW), Indian Academy of Sciences, C.V. Raman Avenue, Sadashivanagar, Bengaluru 560 080 (e-mail: sep@ias.ac.in).