

Training Course
on



Genome Sequencing: Methods & Applications

March 12-17, 2018



ICAR-National Bureau of Fish Genetic Resources
Canal Ring Road, P.O. Dilkusha, Lucknow-226002

Background information

Genomic technologies are making paradigm shift in the strategies of biological research, from addressing single genes to genome wide variations. The technological advancements happening in the field of sequencing and computational power are primarily driving the extent of decoding of genome of variety of organisms. Recent generation of sequencers capable of real time sequencing and delivering thousands of bases in single reads enable *de novo* genome assemblies faster than before. The knowledge and insights into the molecular mechanisms of biological functions, adaptations and evolutionary relationships obtained from genetic research are perceived to play significant role in human health, food and nutritional security, productivity enhancement and disease management of crops and animals including fisheries. Though, the focus of most genome research is on the nuclear genome, however, mitochondrial genomes are also extensively studied.

The training program "Genome Sequencing: Methods and Applications" will be organised at ICAR-National Bureau of Fish Genetic Resources (NBFGR), Lucknow, U.P. during 12th-17th March, 2018. The institute is equipped with *in-house* genomic research expertise, infrastructure and laboratory such as, third generation sequencing platform (PacBio RSII), ABI sequencer and HPCs for high throughput bioinformatics analysis. ICAR-NBFGR has been working on genomic resource development, genetic diversity, bioprospecting of genes and have successfully completed *de novo* genome assembly of important fish as *Hilsa*, *Rohu*, Indian *catfish* and an oomycete pathogen.

Course Objectives

The programme aims to develop trained manpower in the field of genomics. The course will also expose participants to recent advances/platforms in sequencing technology. It is designed to be accessible for early stage researchers or senior researchers, who have only basic knowledge in the field of genomics.

Course Overview and key topics

The course will have a mix of classroom lectures, demonstrations as well as hands on experience. Topics will include:

- Functional and Structural Genomics
- Application of Genomics
- Whole Genome Sequencing including mitogenomes
- Transcriptome sequencing
- Microbial genomics
- Bioinformatic analysis

Resource persons

The training resource persons will include subject-matter specialists as internal faculty from NBFGR as well as external expert faculty from other reputed ICAR/CSIR and other organizations.

Who can apply?

The candidate should possess masters in any branch of life science. Faculty members holding permanent or temporary positions and post-doctoral or doctoral researchers from research and academic institutions from the fields of basic sciences, fisheries, microbiology and other life sciences, are eligible. Preference will be given to the candidates working on genomics or likely to use the techniques of genomics etc.

Intake capacity: The maximum number of participants will be fifteen.

Registration Fee

The registration fee will be ₹12,000 which includes course kit, working lunch and tea. The participants will have to bear expenses for their travel, accommodation and food. For members of Aquatic Biodiversity Conservation Society (ABCS) and universities/institutes in research collaboration with ICAR-NBFGR, the applicable fee is ₹10,000

How to apply?

Complete registration form in the prescribed format (scanned copy) should reach to the Course Director, on or before 20 February, 2018 by email (fishgenomics2018@gmail.com), through proper channel. Teachers and scientists posted in North Eastern states, Jammu & Kashmir, Andaman & Nicobar and Lakshadweep Islands can send their application so as to reach on or before 22 February, 2018.

Dates to remember

Submission of Registration form	:	20 February, 2018
Candidate's selection communication	:	24 February, 2018
Confirmation by candidate and registration fee submission:		28 February, 2018

Course Director

Dr. Vindhya Mohindra,

Principal Scientist and Head Fish Conservation Division
ICAR-National Bureau of Fish Genetic Resources,
Canal Ring Road, P.O. Dilkusha Lucknow- 226 002, UP, India
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Course Coordinator

Dr. Rajeev K. Singh,

Principal Scientist
Fish Conservation Division
ICAR-National Bureau of Fish Genetic Resources,
Canal Ring Road, P.O. Dilkusha Lucknow- 226 002, UP, India

Registration Form

Training Course on Genome Sequencing: Methods and Applications

ICAR- National Bureau of Fish Genetic Resources, Lucknow

March 12-17, 2018

Name (Dr. /Mr./ Miss/ Mrs.): _____

Designation: _____

Institutional affiliation: _____

Institution address: _____

Date of birth: _____

Educational qualification: _____

Highest degree awarded: _____

Year: _____ Organization _____

Total professional experience : _____

Current area of work: _____

Brief statement (up to 200 words) giving reasons for interest in the course. Please indicate how it will help in research programme of the organization (Please attach sheet) _____

E-Mail: _____ Fax: _____

Phone: (O) _____ (R) _____ (M) _____

Accommodation required : _____ (Yes) _____ (No)

(Signature of Candidate)

Forwarding from Head of Institution/ Competent controlling authority

1. The training will be useful, as this organization has ongoing programme / is in the process of initiating the programme (strike off whichever not applicable) related to the subject.

2. Candidature of Prof./Dr./Mr./Ms. ----- working as -----, is forwarded for inclusion in the training programme.

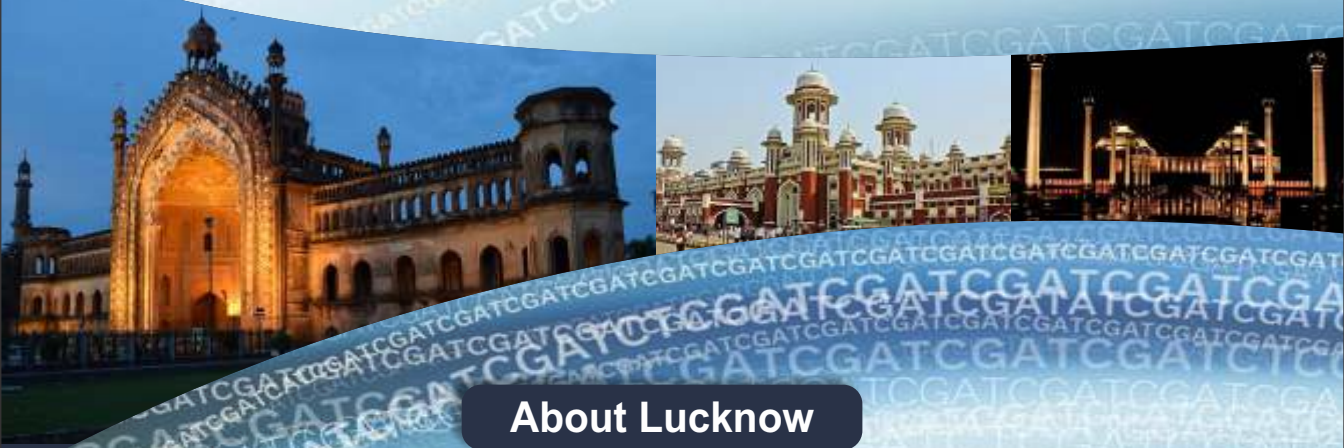
(Signature and seal of Competent controlling authority)

Name:

Designation:

Address:

Date:



About Lucknow

Lucknow, the capital of Uttar Pradesh, lies in the middle of the Heritage Arc. This bustling city, famed for its Nawabi era finesse and amazing food, is a unique mix of the ancient and the modern. It is a home to extraordinary monuments depicting a fascinating blend of ancient, colonial and oriental architecture. It dates back to the Suryavanshi dynasty which extends along the banks of the River Gomti. Lucknow was the epicentre of the 1857 War of Independence, and much before that, it was the seat of a line of nawabs who gave the city its unique identity. Literature, cuisine, performing arts, tehzeeb and magnificent monuments put Lucknow a cut above the rest – and the world acknowledges it. Chikan embroidery and zardozi have made Lucknow a brand in global fashion. The climate in the month of March will be moderate with temperature ranging from 24-28°C. The sprawling campus of NBFGR is located about 6 kms from the Charbagh railway station and 7 Kms from the Chaudhary Charan Singh (Amausi) airport, both of which are well connected with the prepaid transport (auto/taxi) facility.



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