

TRAINING COURSE  
on



# 'Bioinformatics for Beginners: Tools, Databases and Applications'

July 07-16, 2026

LEARN. ANALYZE. DISCOVER.  
EMPOWERING BIOINFORMATICS SKILLS



DNA Sequencing & Genomics



Comparative Genomics & Phylogenetics



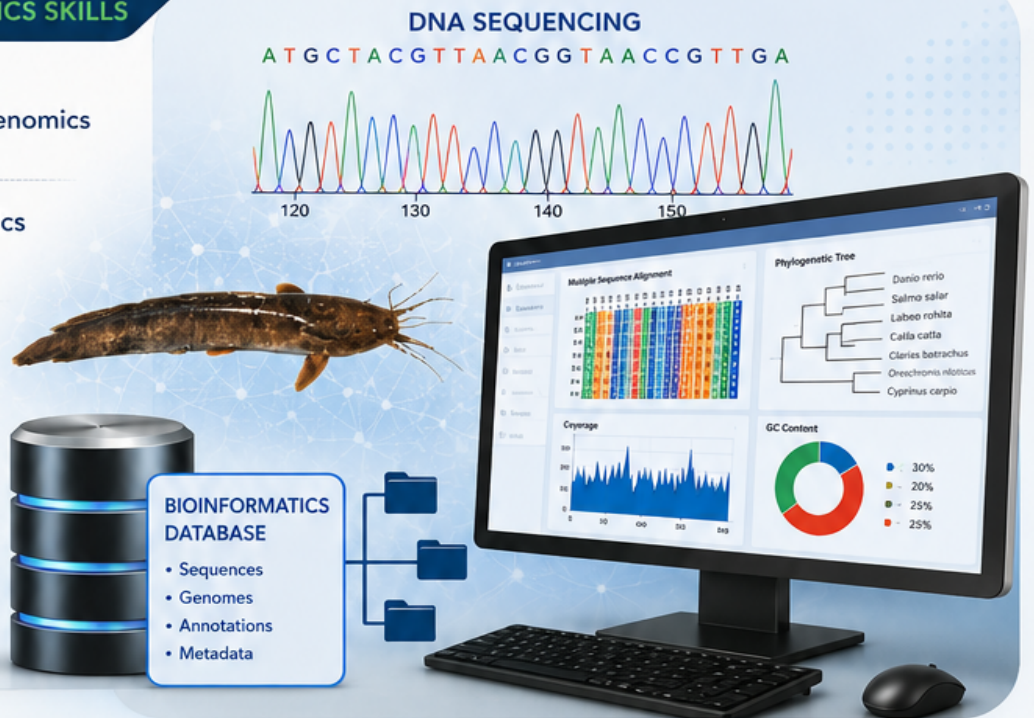
Data Analysis & Visualization



Databases & Data Management



Workflows & Bioinformatics Tools



COURSE CONVENER

Dr. Kajal Chakraborty  
Director, ICAR-NBFGR



COURSE DIRECTOR

Dr. Murali S., Scientist  
GCR Division, ICAR-NBFGR



COURSE COORDINATORS

Dr. Ravindra Kumar, Principal Scientist & Head  
Dr. Tanwy Dasmandal, Scientist  
GCR Division, ICAR-NBFGR

TOOLS & TECHNOLOGIES



MEGA Tools



Primer3  
(PCR Primer Design)



ubuntu®  
The Power of Open Source



ICAR – National Bureau of Fish Genetic Resources, Lucknow

## Dear Colleagues,

Bioinformatics is an interdisciplinary field involving molecular biology, genetics, computer science, mathematics and statistics. Rapid advancements in genomic and sequencing technologies, coupled with increased computational power, have transformed biological research. This field has not only helped in genome annotation, gene discovery and evolutionary studies, but is also essential for understanding various biological processes, like growth response, thermal acclimation, abiotic and biotic stress responses, and to understand the development and function of different cell types that make up complex tissues.

### Course Objectives:

The proposed training is planned to develop a trained workforce in the area of genomics and bioinformatics through hands-on experience and practical insights into sequence alignment, NGS data handling and analysis.

### Course content:

- Information exploration and retrieval from biological databases
- Linux commands and syntax
- Sequence data formats and conversion
- BLAST command usage
- Sequence alignment and phylogenetic analysis
- Basics of R programming
- NGS data pre-processing and quality check RNA-Seq/ Transcriptome analysis
- Genome annotation

### About ICAR-NBFGR:

ICAR-National Bureau of Fish Genetic Resources (NBFGR) was established in 1983 under the aegis of the Indian Council of Agricultural Research (ICAR) for providing research inputs for sustainable management and conservation of fish germplasm resources. It has emerged as a Center of Excellence in cataloging and conserving aquatic bio-resources of the country. It has developed modern facilities, multidimensional strategies, and technological capabilities to achieve its mandate related to genomics, conservation, health, database development, gene banking, and evaluation of endangered as well as exotic fish species.

### Training Course on 'Bioinformatics for Beginners: Tools, Databases and Applications'

ICAR-NBFGR is one of the leading institute in the field of genomics, transcriptomics research and their bioinformatic applications in the fisheries sector and have sequenced whole genome of many fish species. The institute is leading an ICAR-CRP on Genomics and is also one of the domain partners in Network Project for Agricultural Bioinformatics and Computational Biology, an ICAR Scheme project implemented through ICAR-IASRI, New Delhi. The institute is also part of DBT funded Project- 'NNP (Agri-Genomic Repository Analytical System) of ICAR-IASRI, New Delhi'. One of the objectives of this project is to organize training programmes on bioinformatics to develop trained manpower in the area, particularly NGS data analysis. Therefore, a Hands-on Training Course on 'Bioinformatics for Beginners: Tools, Databases and Applications' has been scheduled at ICAR-NBFGR, Lucknow.

### Eligibility:

Academicians/researchers/scholars/students in genetics/ biotechnology/ environmental sciences/zoology/ life sciences. Participants need access to good internet connection and a laptop/computer system with mic and speaker and RAM of minimum 8 Gb.

**Intake capacity:** 20 participants (selection on First come first serve basis)

**Mode of training:** Virtual (through Zoom/Google meet) ; **Time:** (2:30 to 5:00)

**Registration Fee:** Rs. 3000/- (Rupees Three thousand only)

**Support:** DBT funded project titled 'NNP (Agri-Genomic Repository Analytical System) of ICAR-Indian Agricultural Statistics Research Institute, New Delhi

**Certificate:** Candidates will be provided with completion certificate, after completion of the course through email

**Application:** Interested persons can apply on the attached prescribed format (Registration Form) and send to Dr. Murali S, Course Director, GCR Division, ICAR-NBFGR. email: murali4543@gmail.com (Mob: 7893359601). Selected candidates will be informed through E-mail.

REGISTRATION FORM

**Hands-on Training Course on 'Bioinformatics for Beginners:  
Tools, Databases and Applications'**

July 07-16, 2026

ICAR-National Bureau of Fish Genetic Resources, Lucknow

Name (Dr./Mr./Miss/Mrs.) :.....  
Designation :.....  
Date of Birth :.....  
Educational Qualification :.....  
Professional Experience :.....  
Present area of work :.....  
Mailing Address :.....  
.....

E-Mail ..... Fax:.....

Phone: (O) ..... (R) ..... (M) .. ..

Training fee may be paid either

- Online through ICAR-NBFGR website (<https://www.nbfgr.res.in:801/>)

OR

- Through NEFT/IMPS to ICAR-NBFGR account having following details:

Name of beneficiary: ICAR Unit NBFGR, Lucknow

Name of Bank and Branch address: Axis Bank Ltd., Aashiyana, Lucknow

Account No.: 918020045053793

IFS Code: UTIB0001878

Branch code: 001878

MICR code: 226211010

Amount..... (In Words).....

Transaction No..... Date.....

Issuing Bank.....

Any other information:.....

Place:

Date:

(Signature of candidate)

**Please send:**

- Duly filled REGISTRATION FORM by email to:

The Course Director, ICAR-NBFGR at "[murali4543@gmail.com](mailto:murali4543@gmail.com)"