

ICGEB

Meetings and Courses 2024

16 September
19

Training Workshop on Metagenomics-based Approach for Viral Disease Surveillance

Islamabad, PAKISTAN



Organisers:

Huma Balouch (Commission on Science and Technology for Sustainable Development in the South -COMSATS, Islamabad, Pakistan)

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Web <https://www.icgeb.org/metagenomics-based-approach-workshop-pakistan-2024/>

Metagenomics applications have long been used to generate a large amount of datasets with applications in studying the microbial ecology and diversity; environmental monitoring and bioremediation; agriculture, and drug discovery. The Workshop is aimed to develop among early career researchers an understanding of advance statistical, and algorithmic and bioinformatics tools for integrating qualitative and quantitative models for descriptive and predictive analyses with applications in Genomic surveillance; to improve skills in devising an appropriate experimental design, data Integration workflow with combination of metagenomics, and multi-omics approaches for early detection of emerging novel pathogens. Topics will include:

- Introduction to Metagenomics & its Sequencing Technologies
- Recent advancements and future trends in Viral Metagenomics
- Concept of global and integrated Viral Surveillance & the potential of Metagenomics for surveillance
- Challenges for the use of Metagenomics in surveillance
- Application of Machine learning to Metagenomics
- Viral Metagenomics Workflow – Theoretical & Hands-on (Quality Control, Taxonomic classification, Comparison of sample groups, Genome assembly from metagenomes, Trimming and filtering, binning and mapping)

Participants

- M.Sc./PhD/Postdoc or professionals across R&D institutions, industry and academia with relevant background in Biotechnology, Bioinformatics, Molecular biology, Virology, Epidemiology, and Clinical Research
- Basic knowledge of some omics data of interest; software such as R; algorithm and statistics (random variable, variance, covariance, correlation)
- Applicants will be requested to upload the following documents to complete their request to attend: CV (3 pages max), a Statement (maximum 500 words) outlining how participation in the Metagenomics training workshop would enhance their research efforts or career advancement.

Funding

- Participants are expected to bear their own travel and accommodation expenses. The registration fee for participants is 4 €.
- A limited number of grants will be available to cover partial air travel, accommodation and meals for ICGEB and COMSATS Member States nationals residing outside of Pakistan. Preference will be given to applicants from Least Developed Countries

Online application <https://isg.icgeb.org/auth/login>

Deadline 10 July 2024



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