

Aquaculture Microbiome: Health & Performance Analytics

— Hands-on

Design and run end-to-end aquaculture microbiome analytics for ponds, raceways and RAS facilities. Learn sampling & metadata standards, amplicon and shotgun pipelines, pathogen and AMR surveillance, bloom/event diagnostics, and translate results into health, growth and FCR insights. Includes practical scorecards, intervention tracking (probiotics, biofloc, water exchanges), and geospatial/temporal dashboards for farm decision-making.

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Session 1

Fee: Rs 8800 [Apply Now](#)

Sampling, Water Quality & Metadata

Pond/RAS sampling & matrices

[water/soil/biofilms/gills](#) [grab vs composite, depth replicates & timelines](#)

Water quality & operational data

[DO, pH, NH₃/NO₂/NO₃](#) [alkalinity, hardness, ORP](#)

feed/FCR, biomass, mortality

Metadata & standards

MIxS/ENVO & farm logs batch & event markers SOPs
& chain-of-custody

Session 2

Fee: Rs 11800 Apply Now

Amplicon/Shotgun Pipelines for Aquaculture

Amplicons for ponds & RAS

16S/ITS/18S markers DADA2/UNOISE; LULU
IDTAXA/naive Bayes/BLAST LCA

Shotgun profiling & MAGs (overview)

kraken2/MetaPhlAn/HUMAnN assembly, binning & QA
pathway panels (nitrifiers)

Compositional stats & QA

CLR/balances (PhILR) PERMANOVA caveats controls
& decontam

Session 3

Fee: Rs 14800 Apply Now

Pathogens, AMR & Health Scorecards

Pathogen & bloom panels

Vibrio spp., Aeromonas, Streptococcus shrimp:
AHPND/EMS, WSSV (screening) algal bloom markers
& toxins

AMR & risk indices

ARG catalogs (CARD/ResFinder) mobile
elements/plasmids risk scoring & thresholds

Health/performance scorecards

diversity & dysbiosis indices growth/FCR association
models alerts & actionables

Session 4

Fee: Rs 18800 Apply Now

Interventions, Dashboards & Reproducible Reporting

Intervention tracking

probiotics/prebiotics/biofloc water exchange &
disinfection before/after & controls

Dashboards & geo-temporal views

QGIS/leaflet farm maps trendlines & alerts multi-
pond comparisons

Reporting & deliverables

Quarto notebooks/SOPs tables/figures + env files
stakeholder summaries