

Data Standards, Repositories & FAIR Practices — Hands-on

Ensure your metabolomics, lipidomics and fluxomics datasets meet global FAIR, reproducible and submission-ready standards. This module teaches reporting checklists, data formatting guidelines, metadata structuring, repository submission workflows (MetaboLights, GNPS), and best practices for transparent, reusable multi-omics research.

Data Standards, Repositories & FAIR Practices (MetaboLights / GNPS)

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Session 1

Fee: Rs 8800 [Apply Now](#)

Standards, Metadata & Reporting

FAIR principles: what they mean for metabolomics

Findable **Accessible** **Interoperable** **Reusable**

Metadata standards for MS/NMR datasets

ISA-Tab structure **sample / assay / instrument**
metadata **controlled vocabularies**

MSI/MSI Level 1–4 identification reporting (concepts)

spectral match levels QC, blanks, references
reproducibility essentials

Session 2

Fee: Rs 11800 Apply Now

Repository Workflows — MetaboLights

Understanding the MetaboLights submission system

study metadata sheets sample sheets & assay tables
file structure

Preparing raw & processed data packages

raw vendor files mzML conversion (concept) NMR
spectra bundles

Submission review, public release & DOIs

pre-publication private links curator requests cite &
reference datasets properly

Session 3

Fee: Rs 14800 Apply Now

GNPS, Molecular Networking & Curation

GNPS ecosystem overview

MS/MS library matching feature tables workflow
templates

Molecular networking concepts

spectral similarity subnetwork interpretation
annotation propagation

GNPS dataset submission & curation

metadata JSON spectra packaging public/private
settings

Session 4

Fee: Rs 18800 [Apply Now](#)

Mini Capstone: FAIR Dataset Packaging

Create a repository-ready dataset bundle

Conceptual Practical

Prepare ISA-Tab, metadata, and file structure checklist

sample and assay templates **raw + processed folders**

QC & documentation

Deliverables: FAIR package blueprint

PDF/HTML blueprint **metadata summary sheet**

repository submission checklist