Data Standards, Repositories & FAIR in Metabolomics — Hands-on

Learn how to make your metabolomics and lipidomics projects Findable, Accessible, Interoperable and Reusable (FAIR). This module covers data standards, repository submissions, metadata models and documentation practices so that your LC–MS/GC–MS/NMR studies are reusable by collaborators, reviewers and the wider community.

Data Standards, Repositories & FAIR in Metabolomics

Help Desk · WhatsApp

Session Index

Session 1

Fee: Rs 8800 Apply Now

Data Standards, Formats & Metadata Models

Why standards matter in metabolomics and lipidomics

reusability, comparability and longevity | **reviewer and journal expectations** | **regulatory and consortium drivers**

Core file formats and standards

raw vendor formats vs open formats (mzML) | **mzTab /**

mzTab-M, mzIdentML, nmrML (overview) feature tables and peak lists

Metadata models and ontologies

ISA-Tab / ISA-JSON concepts experimental factors, protocols and samples using ontologies for controlled vocabulary

Session 2

Fee: Rs 11800 Apply Now

Repositories & Submission Workflows

Major metabolomics and spectral repositories

MetaboLights and Metabolomics Workbench GNPS / MassIVE and related resources journal and funder deposition policies

Preparing a submission package

organising raw, processed and metadata files anonymisation and consent considerations checklists and pre submission QA

Repository portals and validation checks

step by step upload and metadata entry automated format and consistency checks public vs embargoed access modes

Session 3

Fee: Rs 14800 Apply Now

FAIR Principles & Reproducible Pipelines

Translating FAIR into practical metabolomics steps

persistent identifiers and versioning rich metadata and documentation licensing and reuse conditions

Workflow capture and reproducibility

capturing analysis steps and parameters **notebooks, scripts and pipeline definitions** **containerisation ideas (Docker/Singularity)**

Data management plans and lab practices

folder structures and naming conventions **backup, archival and access control** **lab SOPs and training for FAIR workflows**

Session 4

Fee: Rs 18800 Apply Now

Mini Capstone: Submission Package & FAIR Checklist

Building a mock submission from a teaching dataset

raw, processed and metadata bundle

FAIR and repository readiness checklist

coverage of required metadata fields **validation of file formats and links** **clarity for external re users**

Deliverables: template submission package & SOP text

folder structure and manifest files **example ISA tables or metadata sheets** **ready to edit data management SOP**