

## Biotransformation Pathways & Metabolite Prediction — Hands-on

Build a working understanding of biotransformation pathways and metabolite prediction in drug discovery. You will review Phase I/II reactions, enzyme systems, soft spots and reactive metabolite risks, then apply simple in silico tools and cheminformatics workflows to map likely pathways, summarize metabolic liabilities and support medicinal chemistry decisions.

# Biotransformation Pathways & Metabolite Prediction

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### Session Index

[Session 1 — Biotransformation Concepts & Enzyme Systems](#) [Session 2 — Metabolic Pathways & Metabolite Prediction](#) [Session 3 — Reactive Metabolites, Soft Spots & Tuning](#) [Session 4 — Mini Capstone: Series Biotransformation Map](#)

### Session 1

**Fee: Rs 8800** [Apply Now](#)

## Biotransformation Concepts & Enzyme Systems

Biotransformation in drug discovery & development

[ADME and clearance linkage](#) [safety and efficacy impact](#) [exposure and metabolite balance](#)

Phase I & Phase II reactions (high level view)

[oxidation, reduction, hydrolysis](#) [conjugation \(UGT, SULT, GST\)](#) [qualitative patterns, not equations](#)

Enzyme systems and tissue context (concepts)

**CYP families overview** **extrahepatic metabolism ideas**  
**species and tissue differences (high level)**

### **Session 2**

**Fee: Rs 11800** Apply Now

## **Metabolic Pathways & Metabolite Prediction**

Common metabolic transformations & pathways

**aromatic & aliphatic oxidations** **dealkylation and**  
**deamination** **hydrolysis and conjugates**

In silico metabolite prediction (practical view)

**likely sites of metabolism** **proposed metabolite**  
**structures** **ranking and plausibility checks**

Visualizing and annotating metabolic pathways

**reaction-style schemes** **parent-metabolite trees**  
**series-level comparison views**

### **Session 3**

**Fee: Rs 14800** Apply Now

## **Reactive Metabolites, Soft Spots & Tuning**

Soft spots and metabolic stability concepts

**liability-bearing motifs** **rapid clearance patterns**  
**balancing clearance and exposure**

Reactive metabolites & safety considerations (high level)

**bioactivation motifs (conceptual)** **covalent binding**  
**ideas** **structural risk flags**

Qualitative tuning strategies for metabolism

**blocking soft spots** **shifting metabolic routes** **series-**

**level design suggestions**

**Session 4**

**Fee: Rs 18800** Apply Now

**Mini Capstone: Series Biotransformation Map**

Predict likely metabolites for a small series

**Theory + Practical**

Assemble a qualitative biotransformation map

**parent-metabolite schemes** **soft spot & liability flags**

**series comparison snapshot**

Deliverables: pathway figure & short metabolism note

**image or slide of pathways** **table of key metabolites**

**PDF/HTML narrative summary**