Glycan Microarrays and Binding Assays — Hands-on

Develop practical understanding of glycan microarrays and related binding assays for decoding glycan–protein interactions. This module covers microarray platforms, glycan immobilization and printing, assay design with lectins, antibodies or pathogens, slide scanning, and data analysis workflows for generating interpretable glycan binding signatures.

Glycan Microarrays and Binding Assays

Help Desk · WhatsApp

Session Index

Session 1

Fee: Rs 8800 Apply Now

Fundamentals of Glycan Microarrays

Concept and applications of glycan microarrays

high throughput glycan–protein interaction mapping
immune receptors, lectins and antibodies
host–pathogen and cancer glycomics

Microarray platform chemistries and formats

glass slides and surface coatings **covalent vs non covalent immobilization** **array printers and spotting technologies**

Design of glycan libraries for arrays

natural, semi synthetic and synthetic glycans **coverage of core motifs and linkages** **controls and reference spots**

Session 2

Fee: Rs 11800 Apply Now

Printing, Immobilization & QC of Glycan Slides

Preparing glycan solutions for printing

buffer and concentration choices **glycan derivatization and linkers** **stability and storage considerations**

Array printing workflows and environmental control

contact and non contact printing **spot morphology and uniformity** **blocking and post printing processing**

Slide quality control and acceptance criteria

test binding with generic lectins **signal to noise and background checks** **replicate spots and layout verification**

Session 3

Fee: Rs 14800 Apply Now

Binding Assays, Scanning & Data Analysis

Assay design for glycan binding experiments

lectins, antibodies and serum samples **pathogens, viruses and cells** **controls, replicates and titration series**

Signal detection and slide scanning workflows

fluorescent labels and channels **scanner settings and dynamic range** **image to spot intensity extraction**

Basic data processing and binding signature generation

background subtraction and normalization **log transforms and thresholding** **heatmaps and clustering of binding profiles**

Session 4

Fee: Rs 18800 Apply Now

Mini Capstone: Glycan Microarray Binding Study

Planning a small glycan microarray experiment

Theory plus Practical

From raw scanner images to processed binding matrix

spot intensity table generation **normalization across slides or batches** **identifying key glycan hits and patterns**

Deliverables: array layout, binding signatures and report

CSV or XLSX binding matrix **heatmaps and simple clustering plots** **short PDF or PPTX interpretation**