



Swiss Institute of  
Bioinformatics

BIOLOGY-INFORMED INTEGRATION AND VISUALIZATION OF  
MULTIOMICS DATA

# Integration of multi-omics data

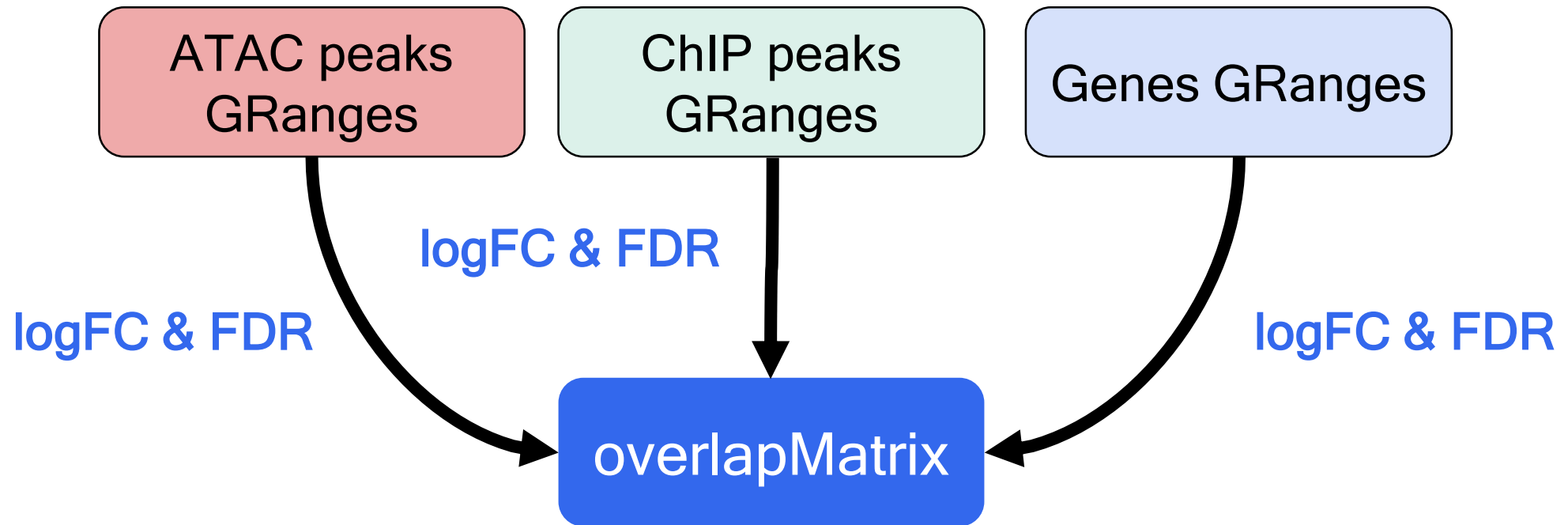
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# Learning outcomes

Interpreting integration of chromatin accessibility, histone modifications and gene expression

# Pipeline for overlapMatrix



Keeping all regions from ATAC-seq

# Regulatory regions from multi-omics data

Category	ATAC	H3K4me1	H3K27ac	H3K4me3	H3K27me3	RNA	Dist. to TSS
Gained Enhancers	↑	↑	↑	none	-	↑	>2500 bp
Lost Enhancers	↓	↓	↓	none	-	↓	>2500 bp
Active Promoters	↑	-	↑	↑	-	↑	<2500 bp
Repressed Promoters	↓	-	↓	↓	↑	↓	<2500 bp

# Exercise 6

