

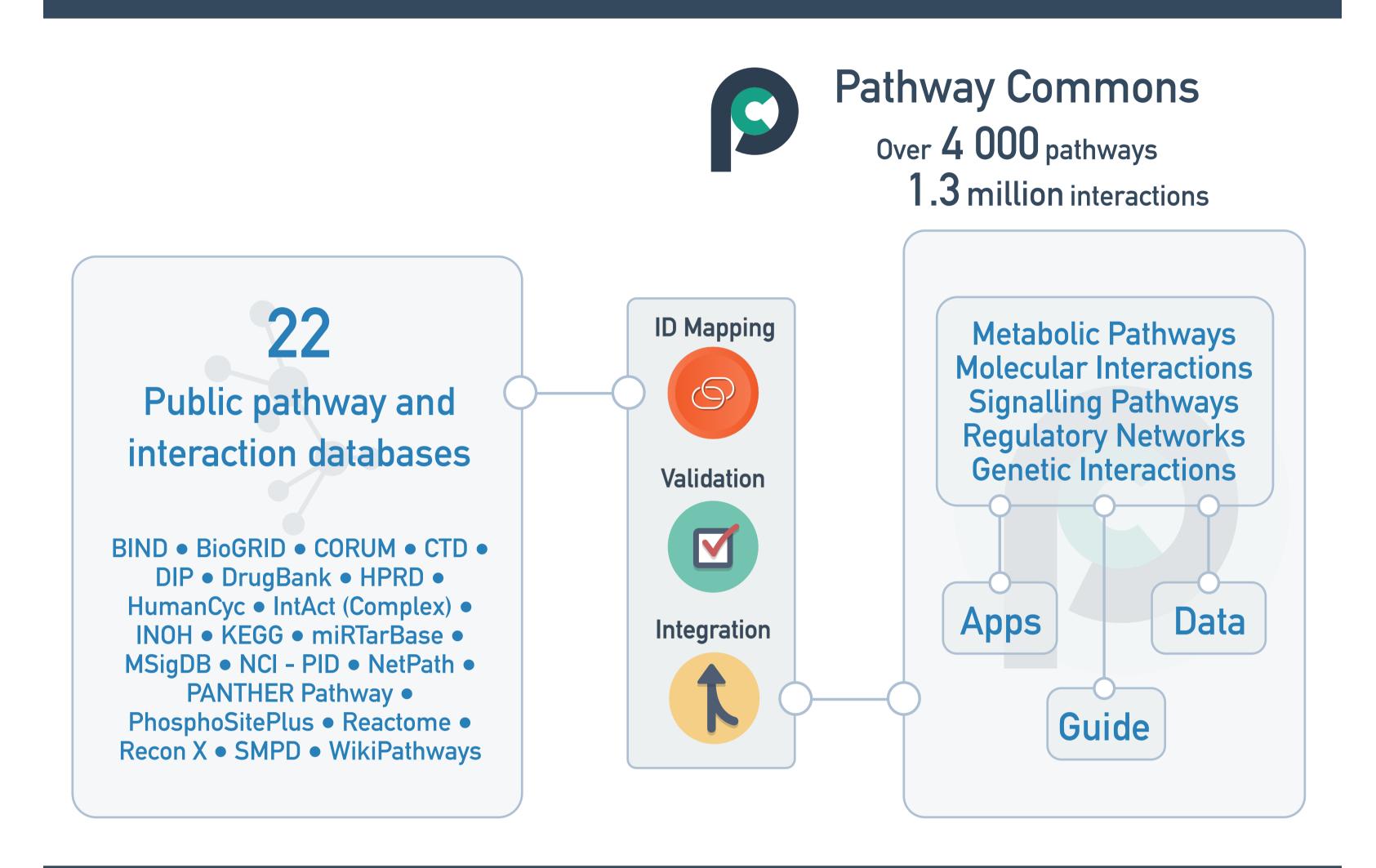
Access and Discover Pathways from Pathway Commons

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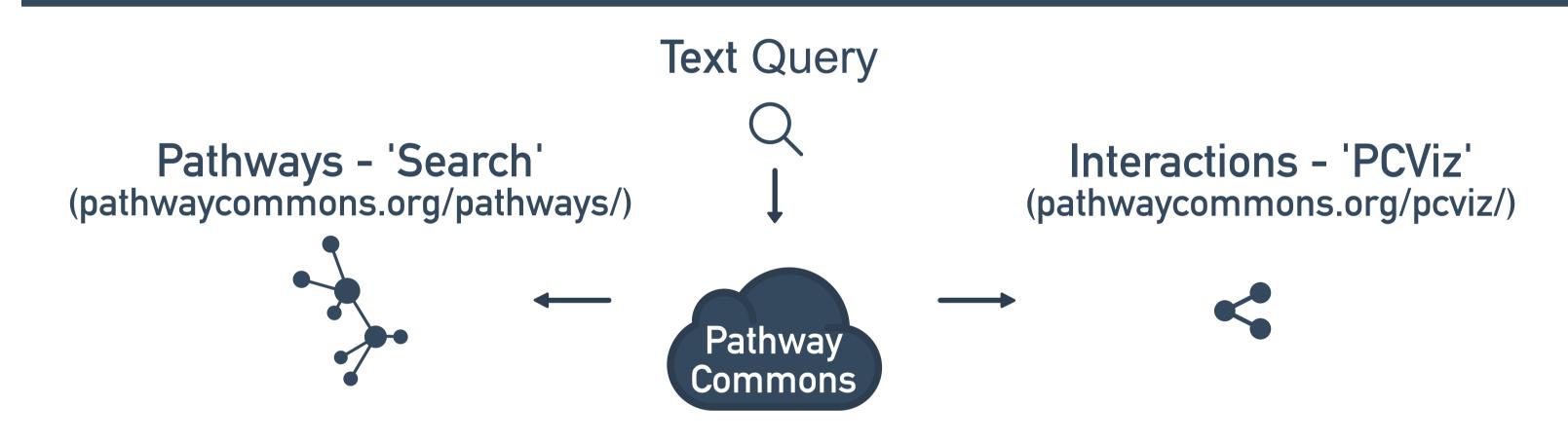
¹Oregon Health & Sciences University, ²University of Toronto, ³Dana-Farber Cancer Institute, ⁴Harvard Medical School

pathwaycommons.org

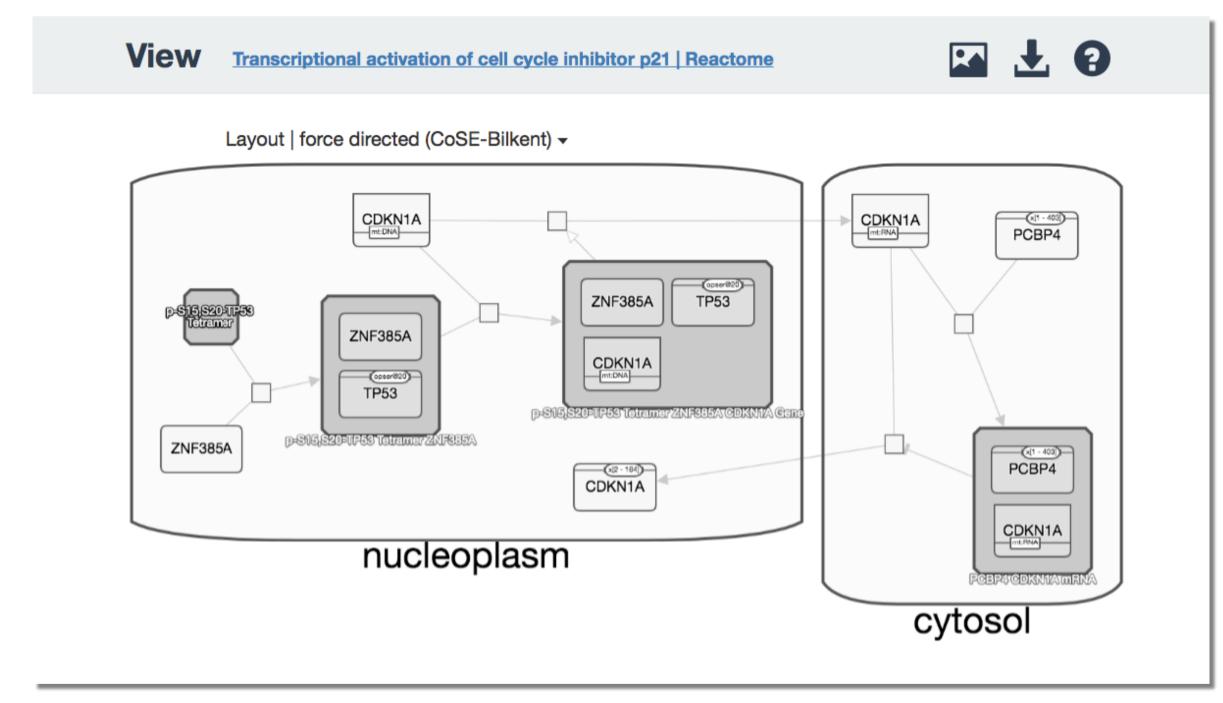
What is Pathway Commons?



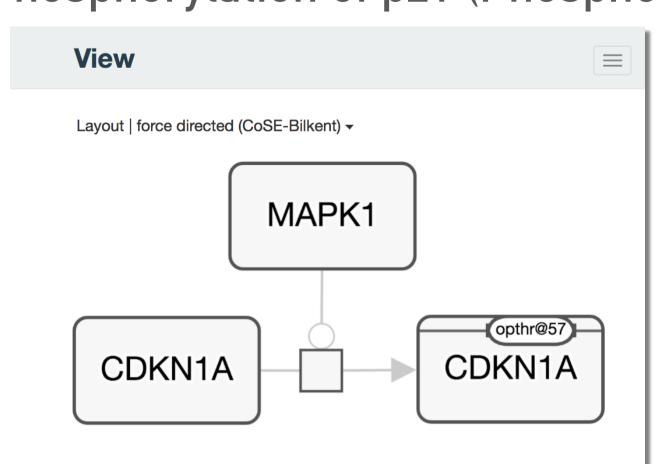
Search pathways and interactions with apps



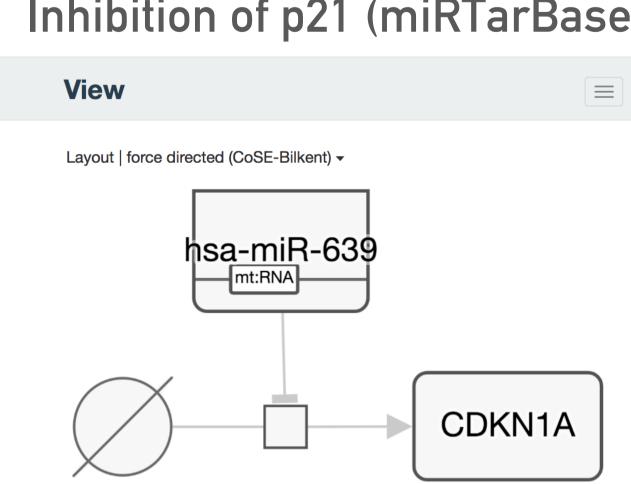
Transcriptional activation of cell cycle inhibitor p21 (Reactome)



Phosphorylation of p21 (PhosphoSite)



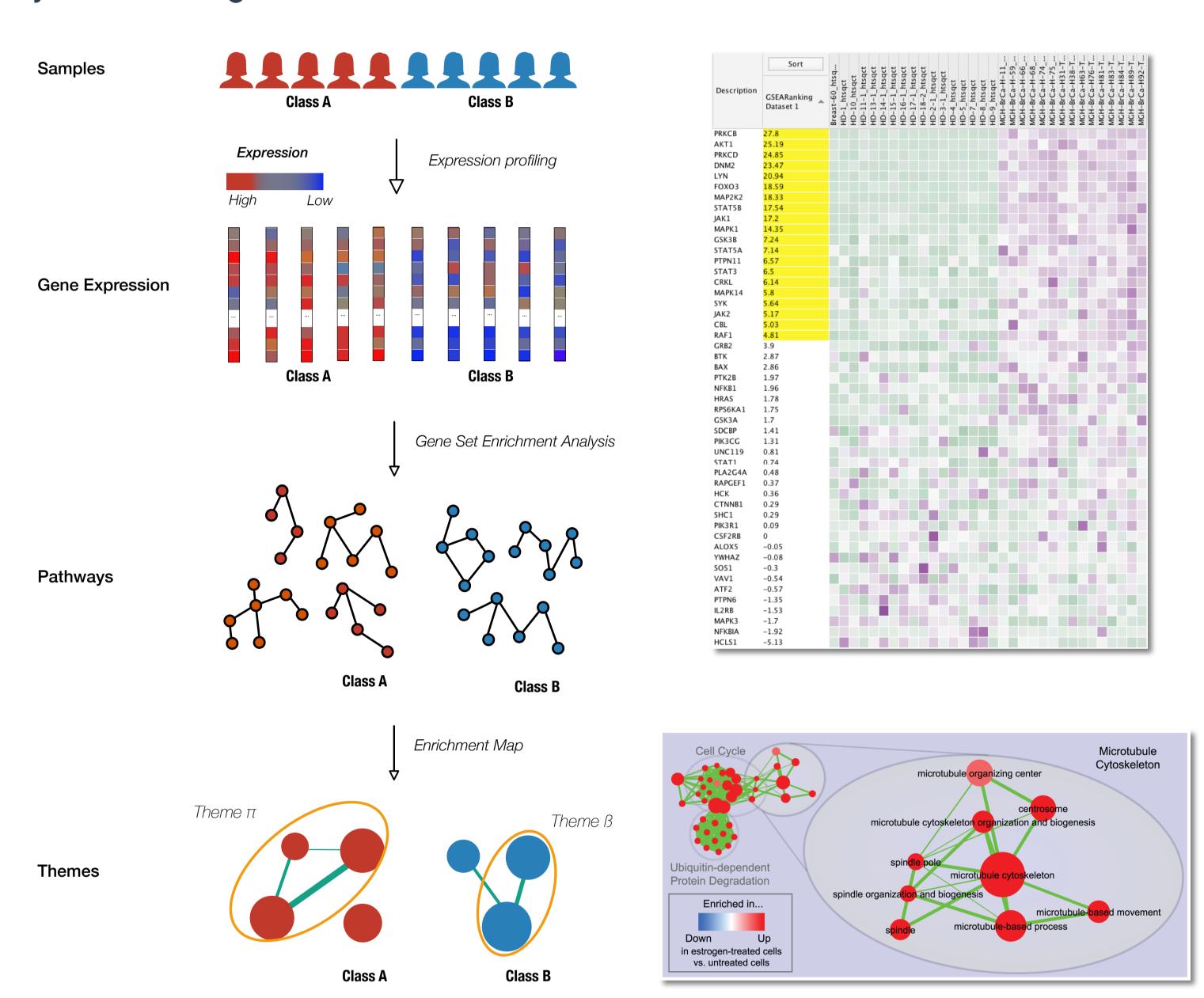
Inhibition of p21 (miRTarBase)



Access training materials for pathway analysis

Guide (pathwaycommons.org/guide/)

Pathway enrichment workflow - Perform a pair-wise comparison of gene expression data; Distill pathways altered in either condition using enrichment analysis; Use Enrichment Map to visually organize pathways by overarching themes. Available as an R Notebook.



Get pathway and interaction data

Downloads (pathwaycommons.org/downloads/)

Perform enrichment analyses with gene set database (GMT) files which list genes in each pathway; View and analyze pathways using Simple Interaction Format (SIF) files which list interacting gene pairs; Get rich, machine-readable descriptions in the Biological Pathway Exchange (BioPAX) format.

Web services (pathwaycommons.org/pc2/)

Perform a full-text Search over the entire database; Get a specific pathway or interaction in the database in a variety of output formats (BioPAX, SIF, SBGN-ML, GMT); Use <u>Traverse</u> and <u>Graph</u> services to access and navigate over pathways and interactions in the database.



Home: pathwaycommons.org/

Apps: pathwaycommons.org/pathways/ | pathwaycommons.org/pcviz/ Guide: pathwaycommons.org/guide/

Data: pathwaycommons.org/downloads/ | pathwaycommons.org/pc2/

Pathway Commons, a web resource for biological pathway data. Cerami E. et al. Nucleic Acids Research, vol 39: D685-90, 2011.