

GeneScape™: Chemogenomic Profiling to Translate Screening Data into Actionable Infectious Disease Countermeasure Decisions

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CHALLENGE

Screening generates large datasets, but mechanisms and targets remain unclear

CONSEQUENCE

High-value data remains underutilized, delaying countermeasure development

SOLUTION

GeneScape links drug response profiles to targets, pathways, and liabilities

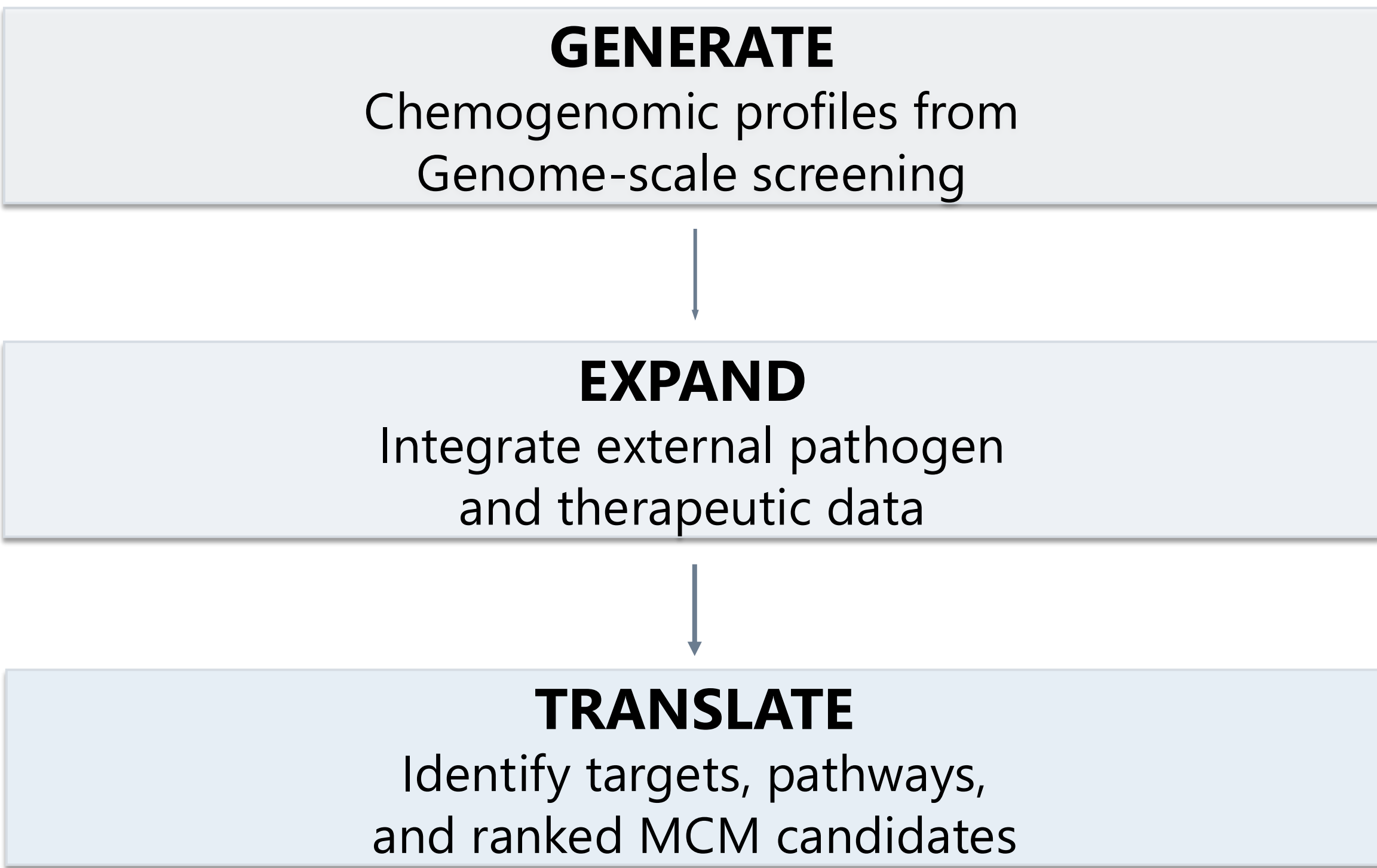
IMPACT

Enables rapid, defensible **prioritization** of medical countermeasures for biodefense

WHAT GENESCAPE ENABLES

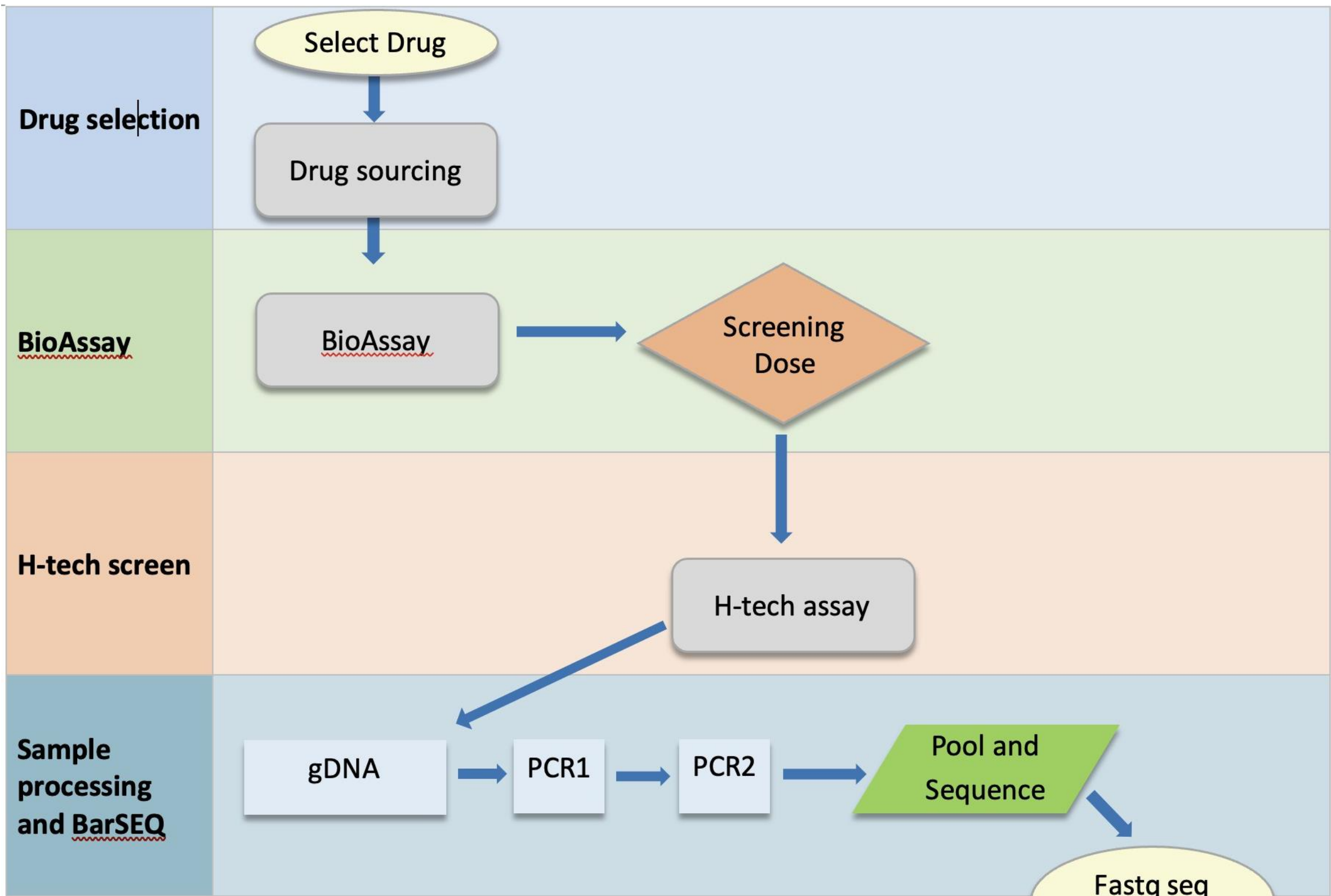
- Systematic ranking of repurposable drugs and combinations
- Translation of screening data into actionable MCM decisions
- Identification of targets, pathways, and potential liabilities
- Prioritization of candidates for rapid follow-on testing
- Integration of internal profiling with external pathogen data

HOW GENESCAPE WORKS

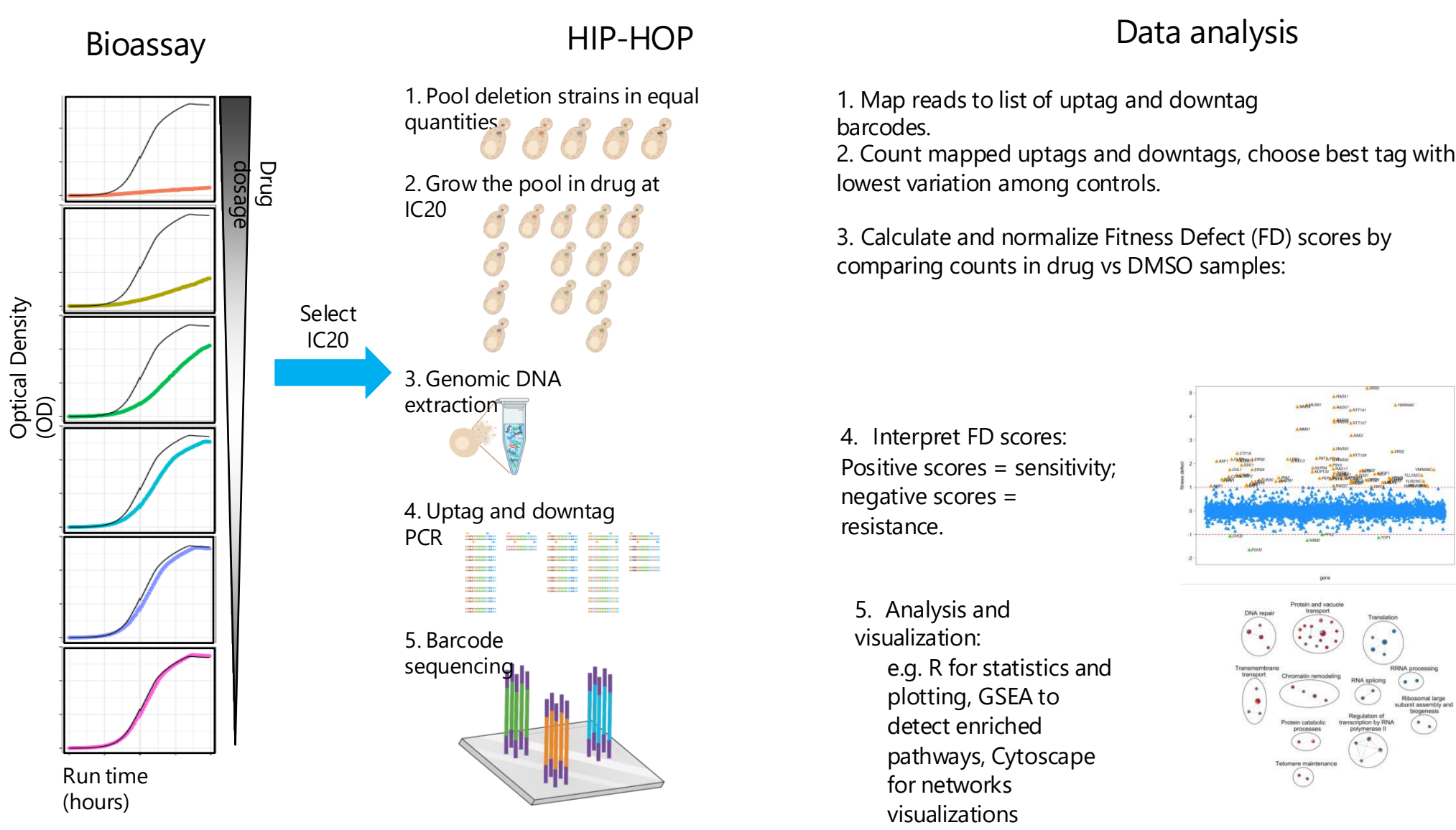


→ Actionable MCM Decisions

TECHNICAL FRAMEWORK



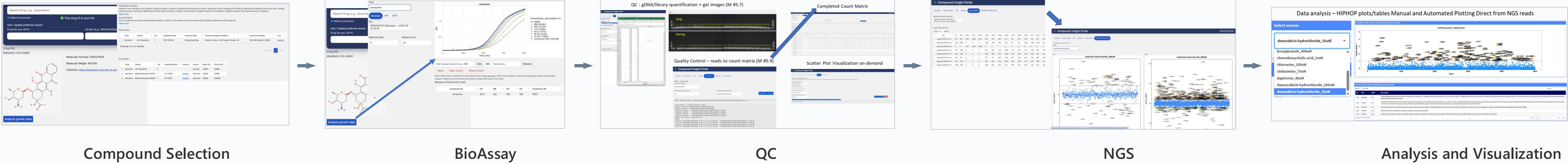
Integrated workflow from compound selection to decision-ready output



Bar-seq enables genome-scale chemogenomic profiling

GENESCAPE PLATFORM

A deployable system for translating screening data into actionable decisions



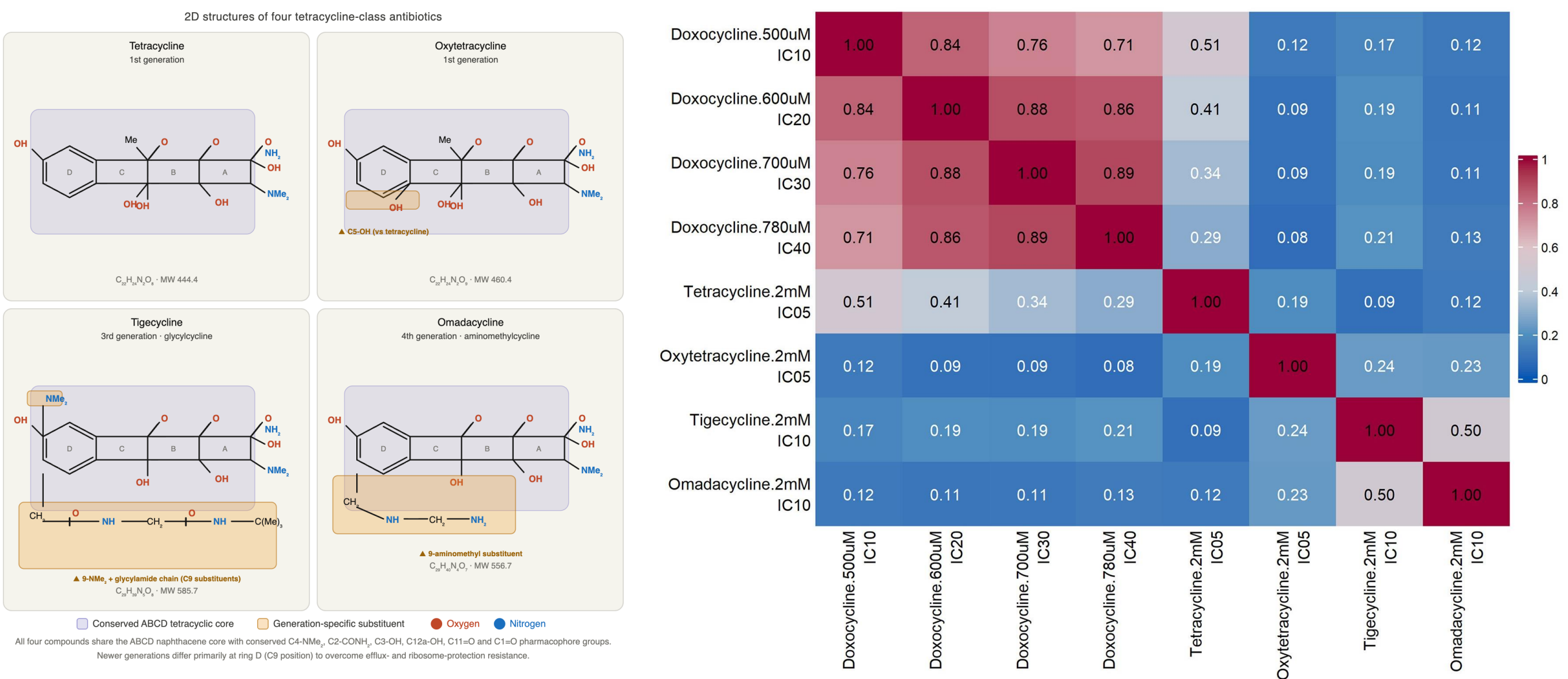
- Secure portal integrating compound selection, screening, and analysis
- Automated workflows with embedded quality control and tracking
- Integrated visualization and querying of chemogenomic datasets
- Rapid interpretation of results to support decision-making

Supports target deconvolution, repurposing analysis, and prioritization of candidate countermeasures

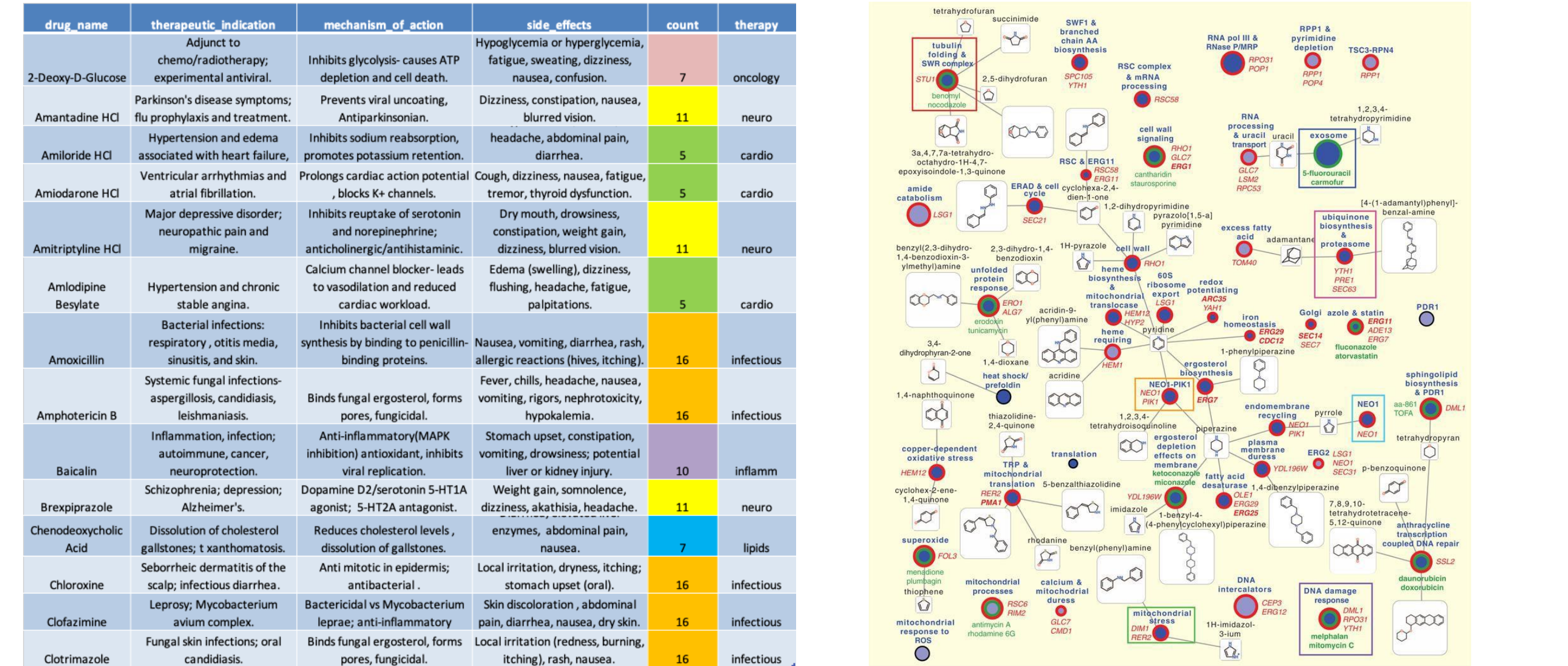


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DATA and VISUALIZATION



GeneScape profiles distinguish mechanistic differences between closely related compounds.



Broad dataset coverage supports translational relevance

Network-level signatures link compounds to biological processes

KEY TAKEAWAY

GeneScape converts chemogenomic data into mechanistic insight and ranked candidates for confident decision-making