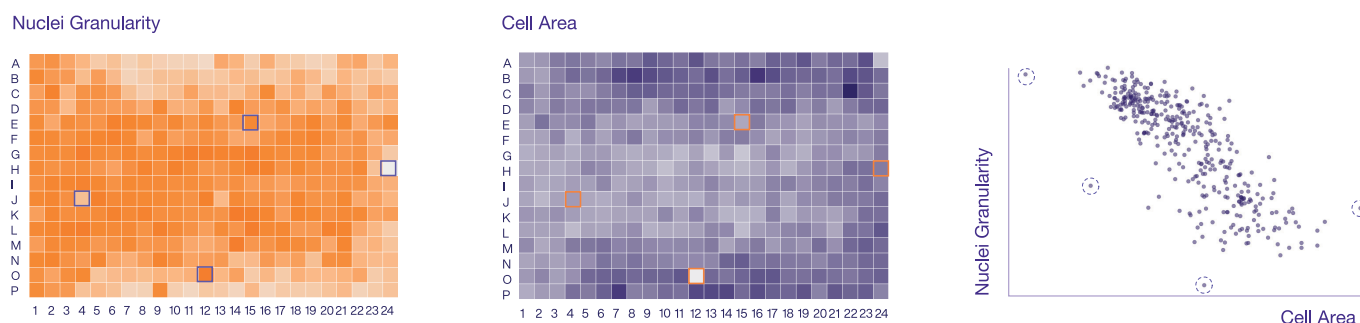


Case Studies

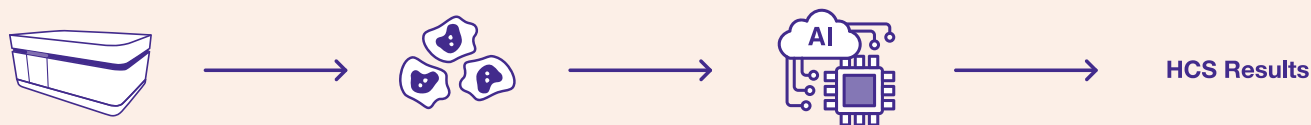
Explore how PhenAID has Transformed Our Partners Drug Discovery

Visualization Fit for Your Needs

Our platform gives you the ability to easily visualize your results. Data can be filtered to only show the most important information. Filter by concentration, location, compound and easily detect trends and outliers. Identify the image that corresponds with the desired results by visualizing the connection between the results and the compound. High performance and detailed views give you control over the data and allow you to see the HCS plate as it is.



Analysis Pipeline

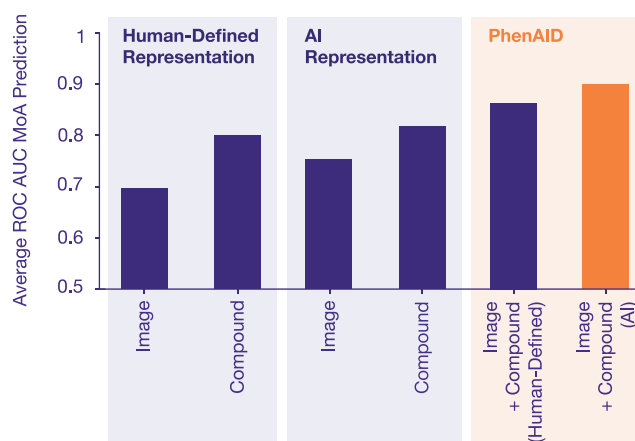


Improve Mode of Action Predictability Through Multimodal Approach

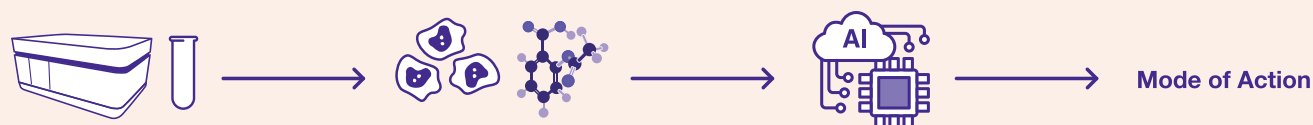
At Ardigen, we combine structural and visual representation of cell painting images to deliver more reliable predictions. This approach has been shown to significantly improve the models' results for a multitude of virtual screening tasks, such as:

- Mode of action prediction;
- Target identification;
- Hit identification;
- Molecular properties prediction.

Comparison of model performance based on modalities



Analysis Pipeline



Case Studies

Explore how PhenAID has Transformed Our Partners Drug Discovery

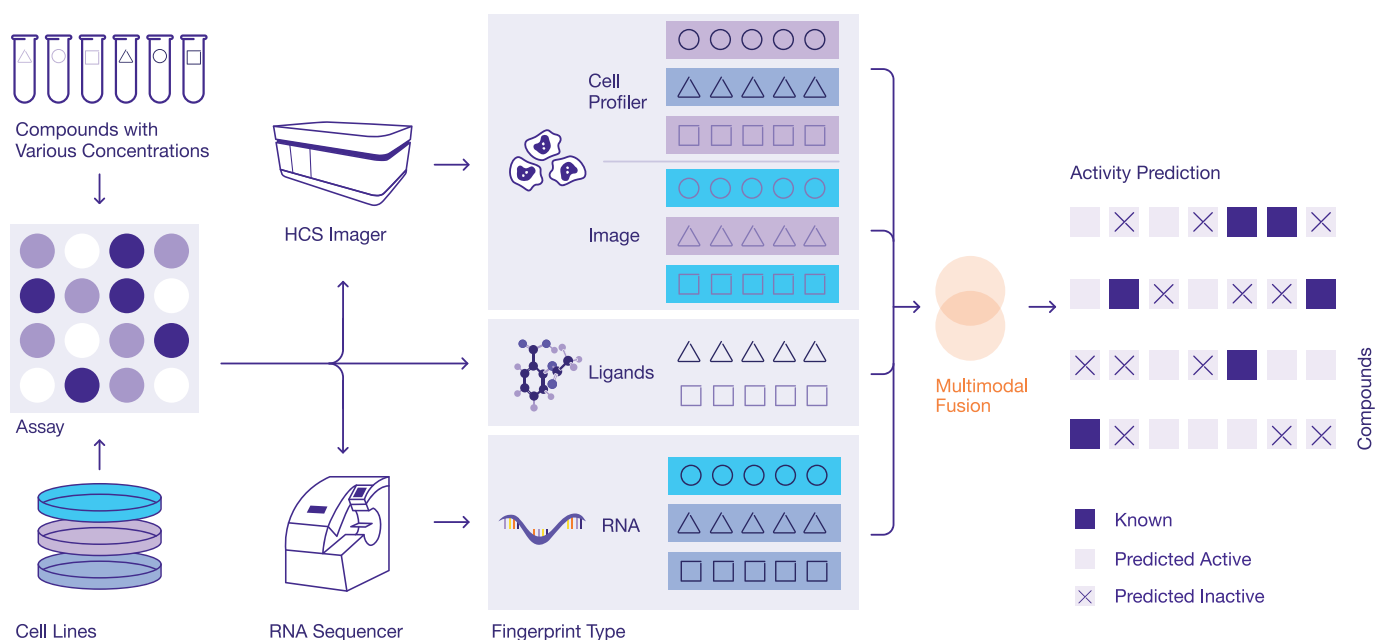
Integrating Our AI Platform with a Virtual Screening Pipeline of a Pharmaceutical Company

We developed and integrated a virtual screening module into our partners internal infrastructure. The platform is a fully automated and ready-to-use tool for chemists and biologists that predicts bioactivity without in vitro experiments, with in-built reliability assessment. We trained AI models to predict the results of various assays for a given compound based on the data collected from experiments on other compounds and assays. Additionally, the model accurately predicts bioactivity for new compound-concentration pairs. The platform operates on HCS image data and can be augmented with RNA sequences and ligands.

Our client had a extensive library of screened compounds and molecular activity data.
Our Virtual Screening Platform works with:

- Multiple cell lines
- Multiple concentrations
- ~ 1 M compounds
- 200 TB of HCS images
- Thousands of assays
- Sparse data matrices
- Cell painting assays
- The addition of RNASeq data
- Internal infrastructure

Image-Based Virtual Screening Platform was extensively validated *in vitro*.



Value Delivered

- Substantial increase in the new assay's predictive power
- Easy-to-use automatic pipelines deployed on clients' infrastructure
- Significant hit rate improvement extensively validated in vitro
- Optimized image storage and loading time
- Multiple research questions answered
- Safe and reliable storage and processing