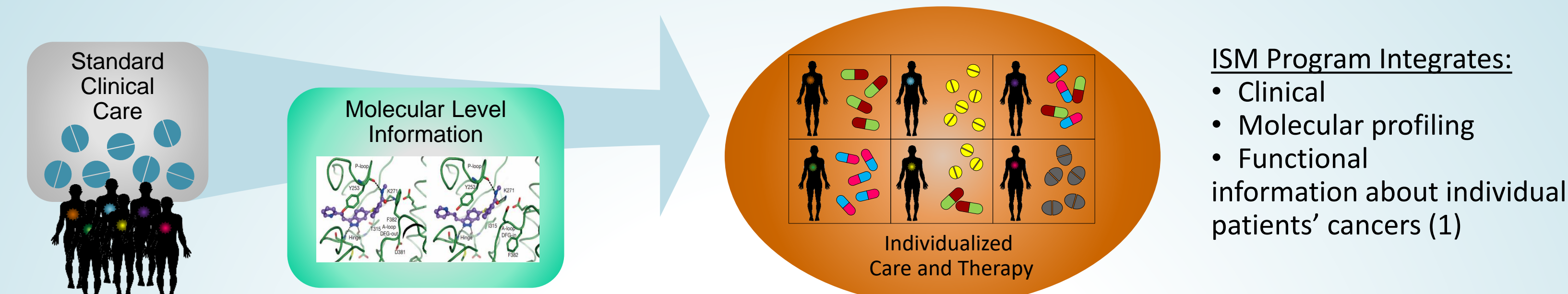


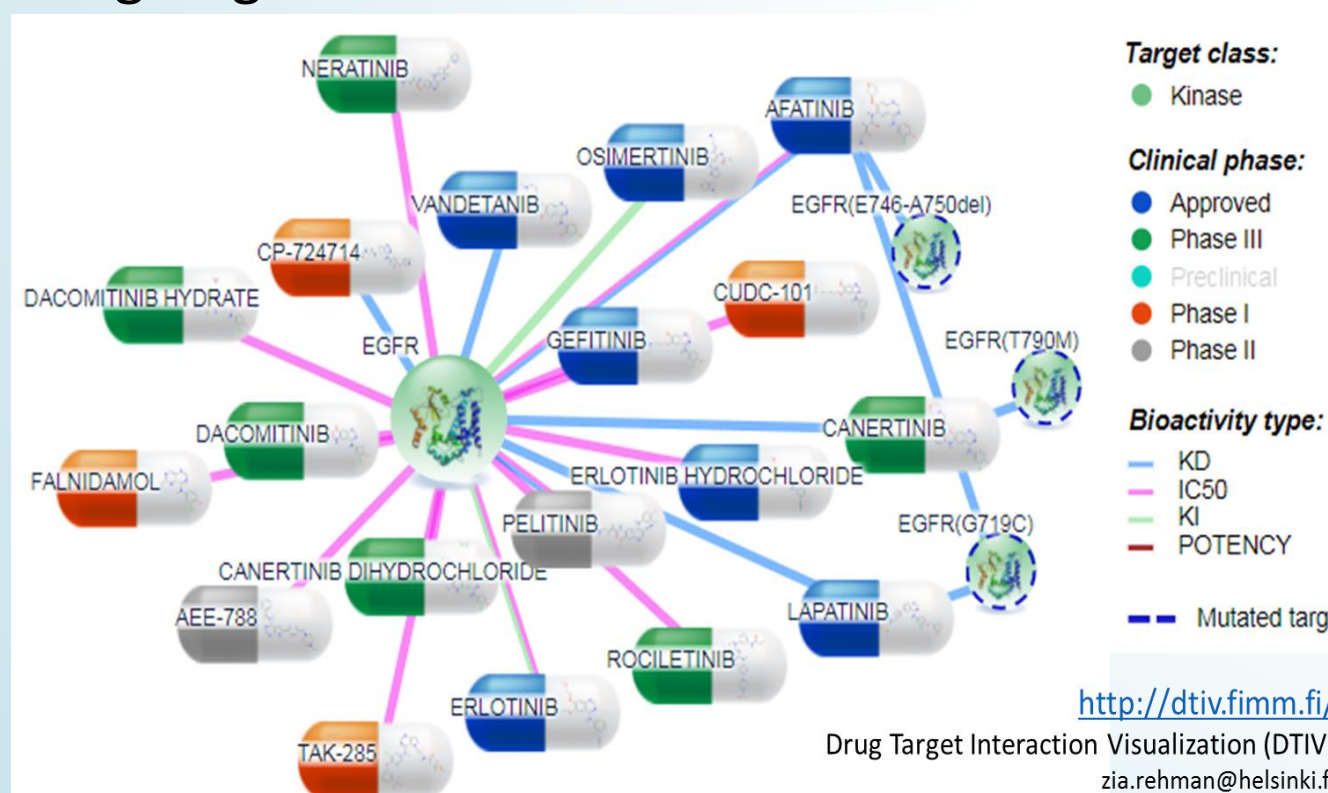
Enhancing Functional Precision Medicine by Utilizing Ex Vivo Drug Sensitivity Testing of Primary Patient Cells at High Throughput Biomedicine laboratory

OVERVIEW: INDIVIDUALIZED SYSTEM MEDICINE (ISM) PROGRAM (1)

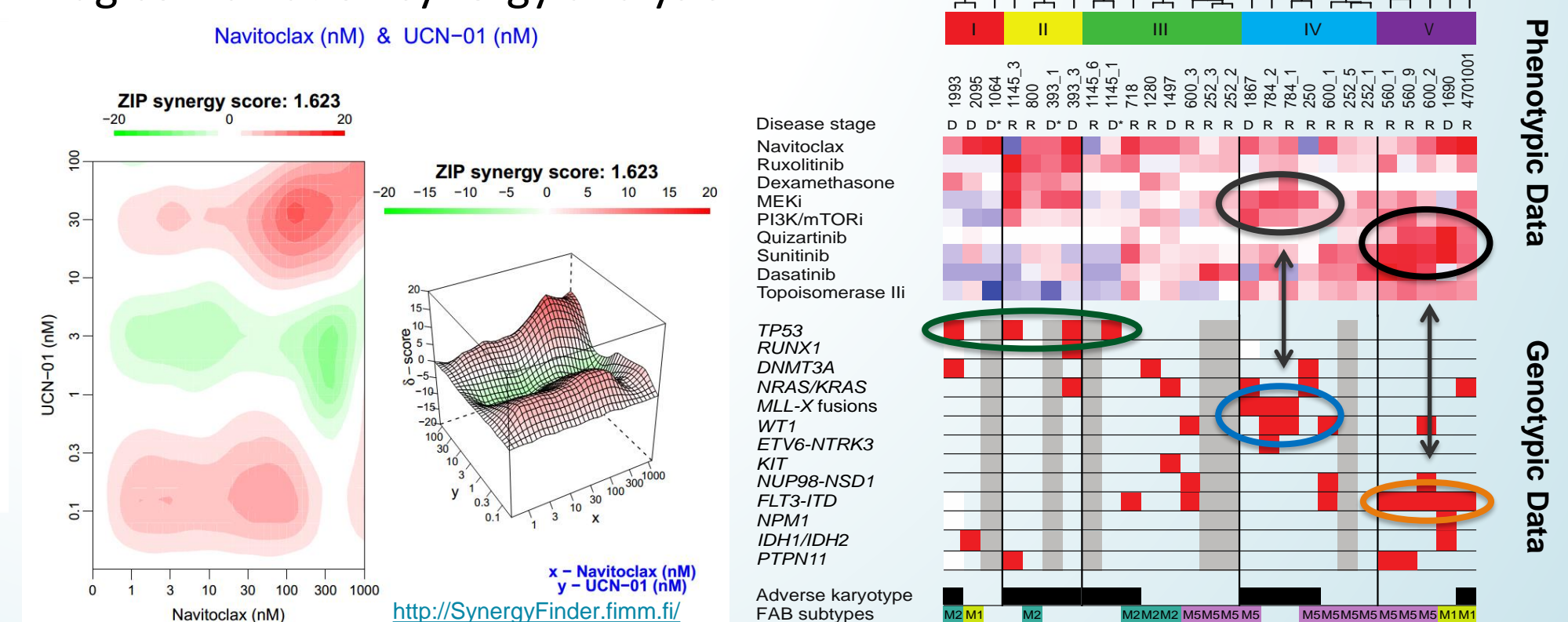


- Outcomes of Drug Sensitivity and Resistance testing DSRT:**
- Identify effective therapies for the individual patient in only four days
 - Position and de-risk drug candidates and investigational drugs
 - Reposition existing drugs for new indications
 - Identify new predictive therapeutic biomarkers
 - Several collaborations with pharmaceutical companies

Drug target identification:

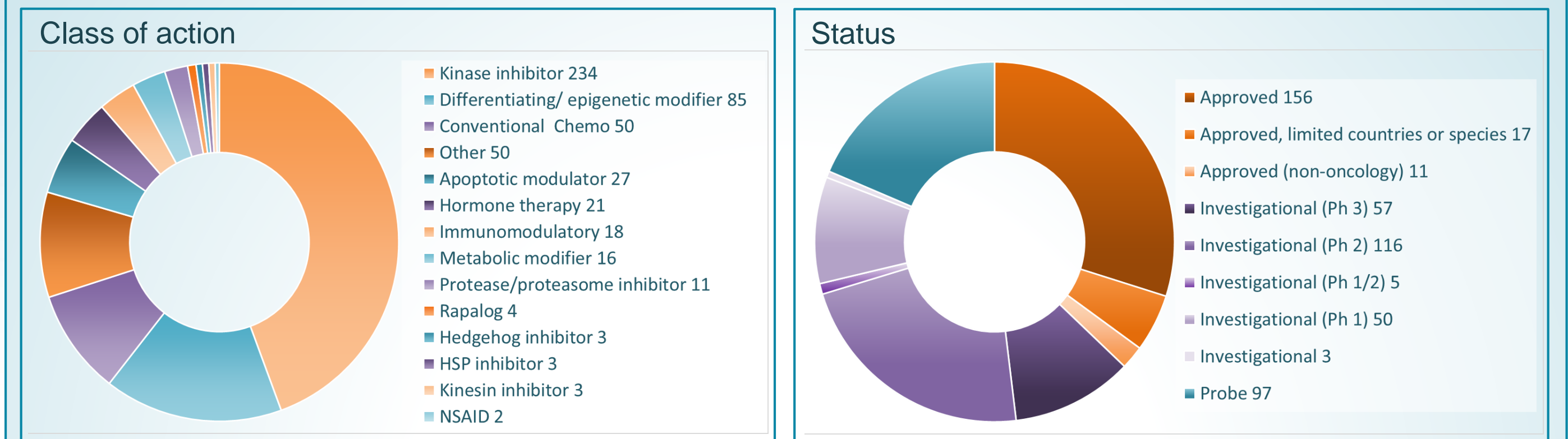


Drug combination synergy analysis:

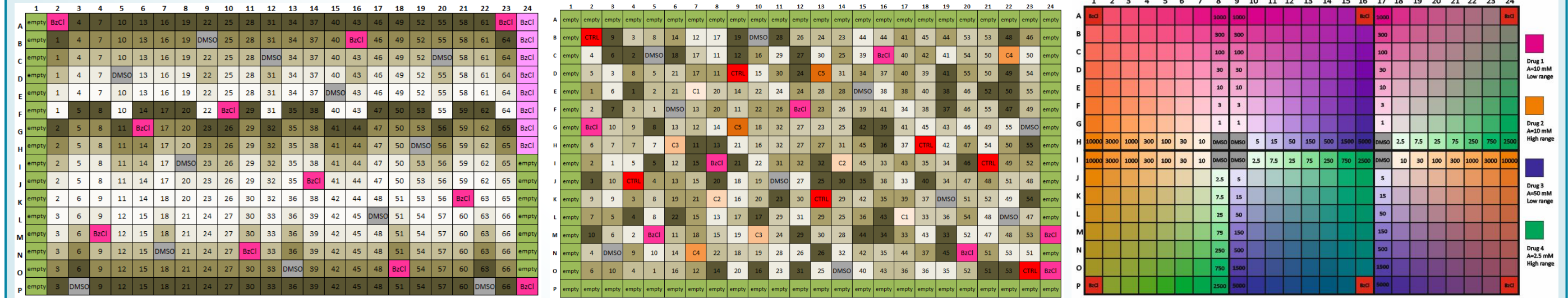


FIMM ONCOLOGY COLLECTION AT HTB (2)

- Currently 527 cancer related compounds
- To date we have produced over 30 000 DSRT plates
- Custom drug sets and combinations can be tailored from the same source plates



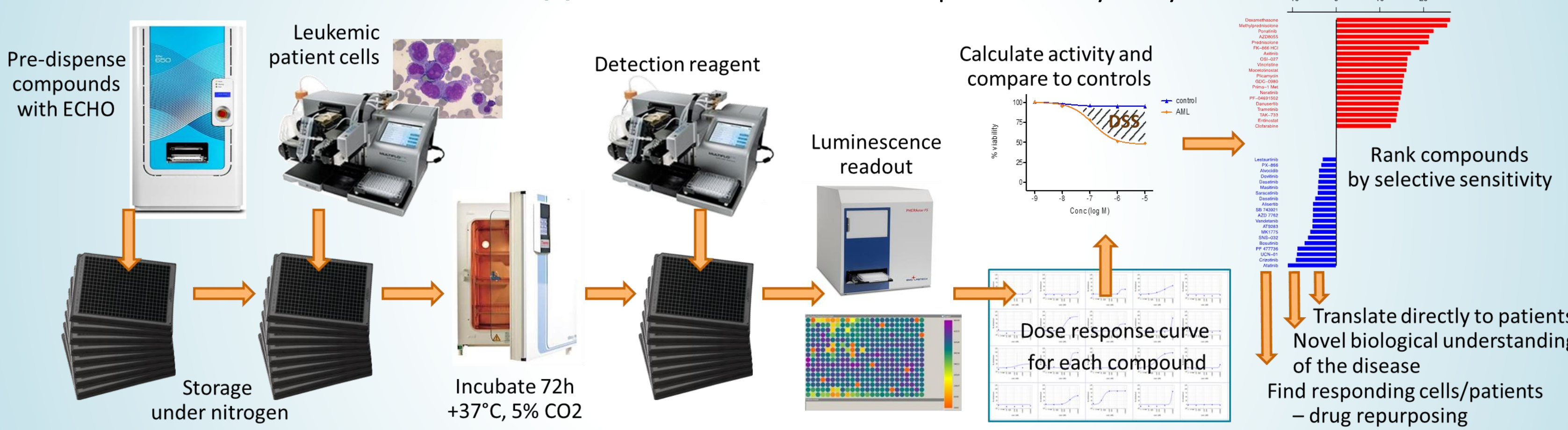
- DSRT sets:**
- 5 point dosing on 8 plates (66 compounds/plate)
 - Concentration ranges individually adjusted by activity
 - Scattered controls
 - Edge effect minimizing layout
- Combination plates:**
- 8 point dose response matrix
 - 6 pairs of compounds on one plate



HTB laboratory is one of EU Openscreen partner sites:

- European infrastructure for chemical biology and early drug discovery
 - Access to 100 000 commercial and growing number of crowd-sourced academic compounds
 - 21 Screening and 10 Chemistry Partner Sites
 - Open access EU-OS bioactivity database
 - 10 member countries: CZ, DE, DK, ES, FI, LV, NO, PT, PL, SE
- www.eu-openscreen.eu

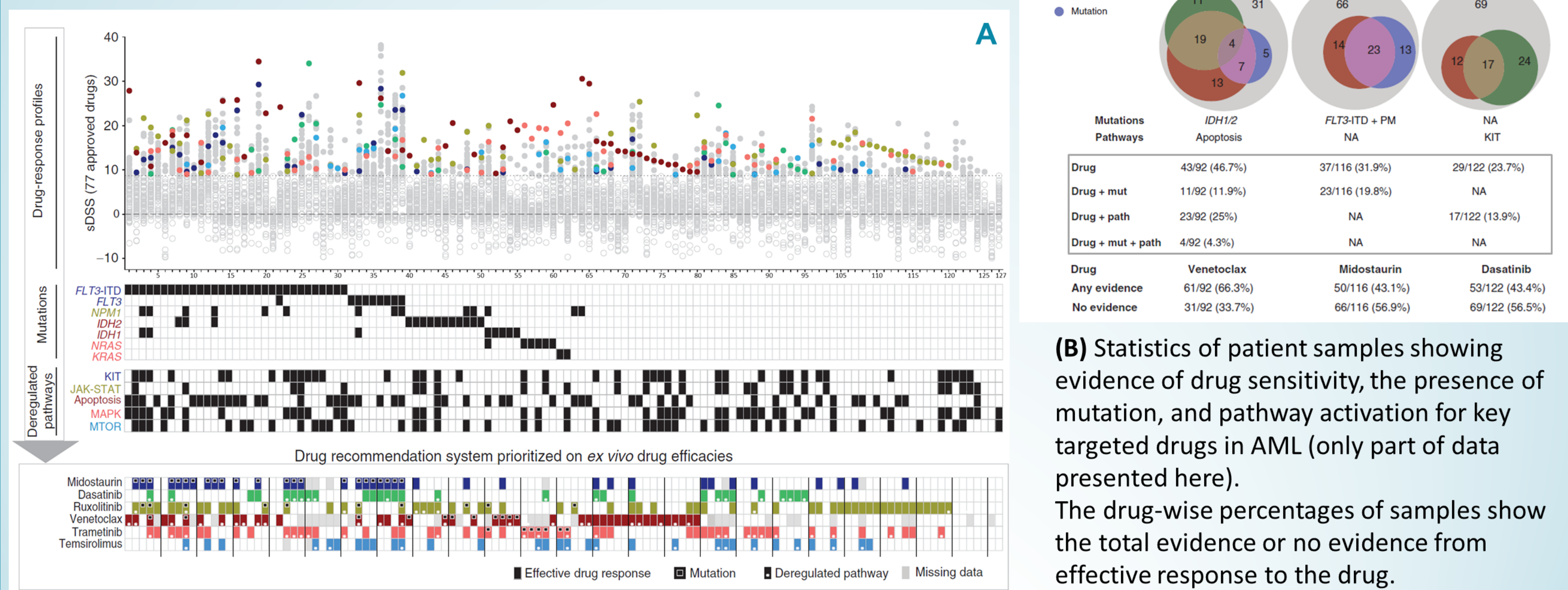
WORKFLOW OF DSRT SCREENING (2)



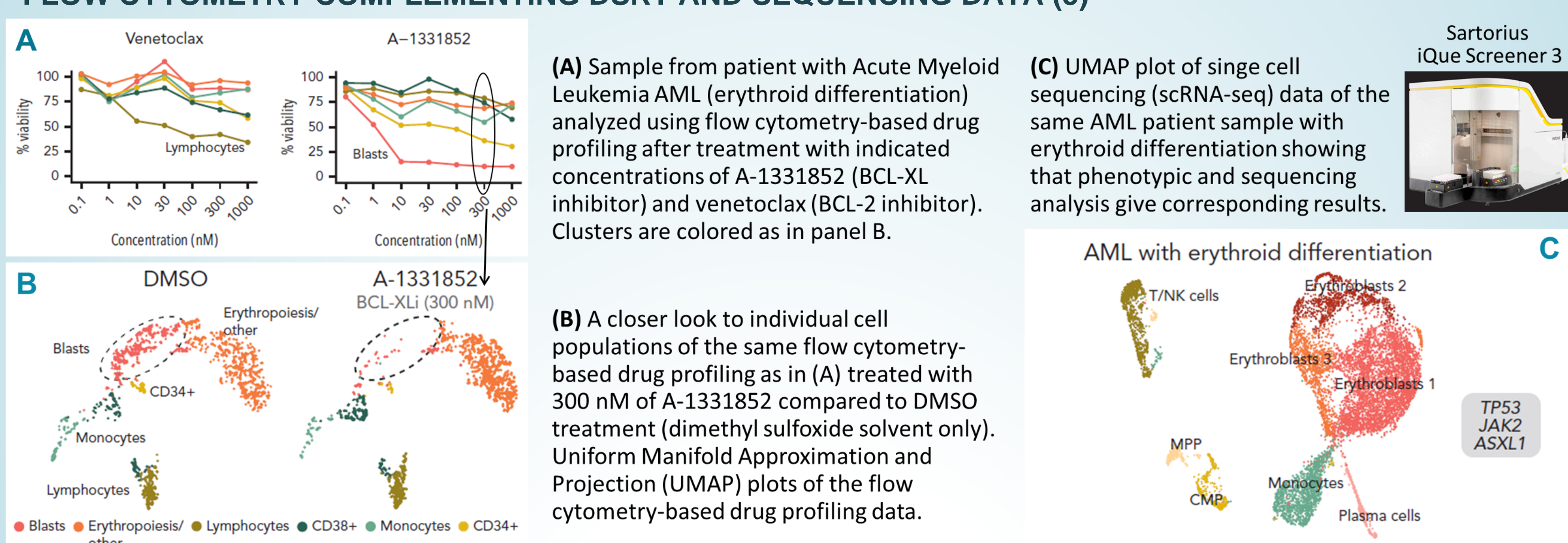
ACUTE MYELOID LEUKEMIA AML STUDY (4)

(A) One or more clinically applicable drugs were considered selectively effective in 97% of the evaluated AML cases. Timescale of 4 days is particularly relevant for aggressive, rapidly progressing cancers such as AML.

Functional ex vivo testing provides informative results in a substantially higher fraction of patients as well as for more drugs compared to genomics, and in less time.



FLOW CYTOMETRY COMPLEMENTING DSRT AND SEQUENCING DATA (5)

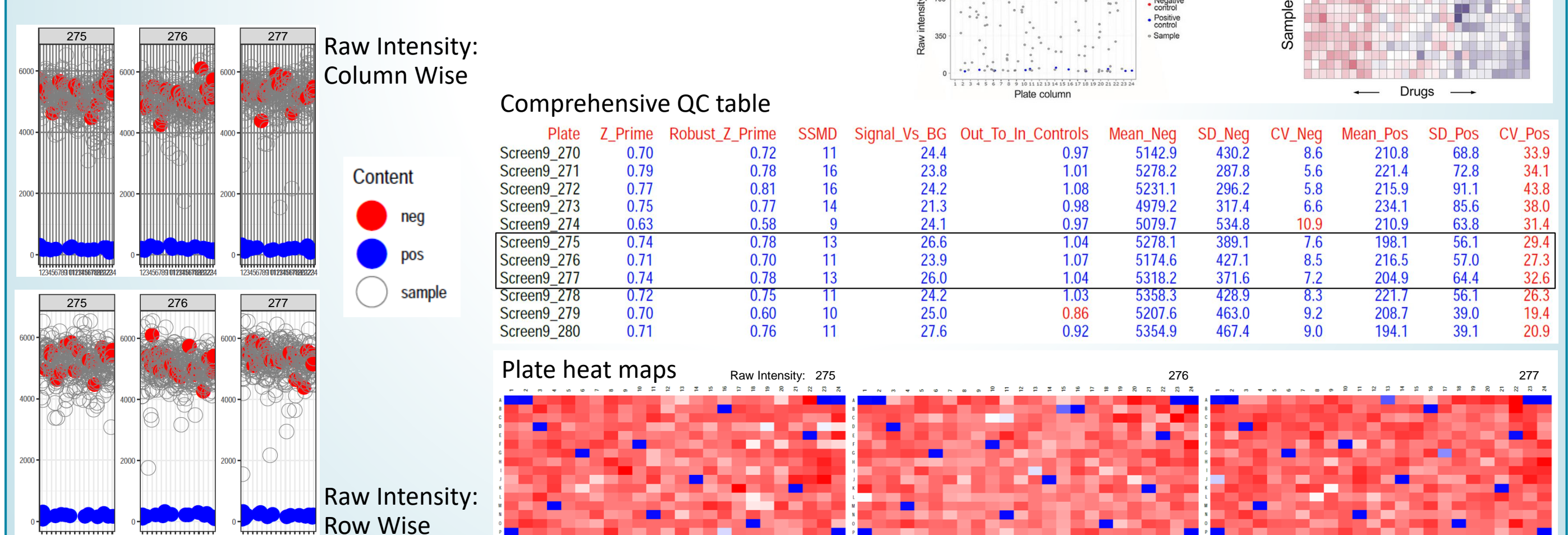


SCREENING DATA ANALYSIS AND QUALITY CONTROL WITH BREEZE (3)

Breeze streamlines the analysis and visualization of drug responses generated from cell-based drug screening experiments by implementing:

- comprehensive quality control (QC) procedures
- robust dose-response curve-fitting
- diverse response quantification metrics
- interactive visualizations

Breeze's QC process plays a crucial role in identifying and quantifying potential errors in data generated from HTS assays, which are prone to common technical issues such as spatial plate variability, striping, and edge effects.



SUMMARY AND SERVICES

DSRT ex vivo drug testing serves as a powerful approach for identifying effective therapies for the individual patients, understanding disease biology and drug sensitivity, facilitating the repositioning of known and emerging drugs for therapeutic purposes.

HTB laboratory offers expertise and easy access for high throughput screening services, and for creating assay ready compound plates with flexible designs from single compound dose response to complex combinations.

ACKNOWLEDGEMENTS:

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