EX VIVO DRUG SENSITIVITY TESTING OF PRIMARY CELLS FOR PRECISION CANCER MEDICINE

ABSTRACT:
To bridge the gap between the clinic and academia, we have set up an Individualized Systems Medicine program. Central to this program is the Drug Sensitivity and Resistance Testing (DSRT) where we functionally profile the ex vivo responses of primary cancer cells to a comprehensive clinical oncology and signal transduction inhibitor drug collection of 528 compounds.

RESULTS:
Our platform allows to explore druggability, functional heterogeneity and mechanisms of drug response and resistance of cancer cells. The drug profiling has been used to identify novel clinically relevant activities of existing and investigational drugs. This information is further utilized to establish hypotheses on drug combinations selectively targeting individual cancers and their predictive biomarkers, and to guide the treatment of individual patients.

REFERENCES:
1. Pemovska et al, Cancer Discov, 2013

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316 patient samples have been tested for DSRT between August 2014 and December 2017.

2476 plate sets (13353 plates) were prepared in the same period.

35 publications in peer-reviewed journals.

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