UAB Kinome Core

www.kinomecore.com

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Kinomics Background

- Kinomics is the study of kinase signaling within cellular or tissue lysates. Kinomics can help elucidate cellular signaling pathways altered by treatment (i.e. drug or condition change), or for comparison of different phenotypes (i.e. proliferative vs. non- proliferative). Our PamGene PamStation Kinomic Array platform measures the phosphorylation of 144 tyrosine or 144 serine/threonine kinase substrates that are imprinted on PamChip microarrays. Changes in individual peptide phosphorylation are imaged with FITC conjugated phosphospecific antibodies, and signal is computer quantified in BioNavigator. Lists of altered peptides are then exported and analyzed for probable upstream kinases with tools such as Kinexus Phosphonet, as well as advanced Pathway Analysis and network modeling using GeneGo MetaCore.

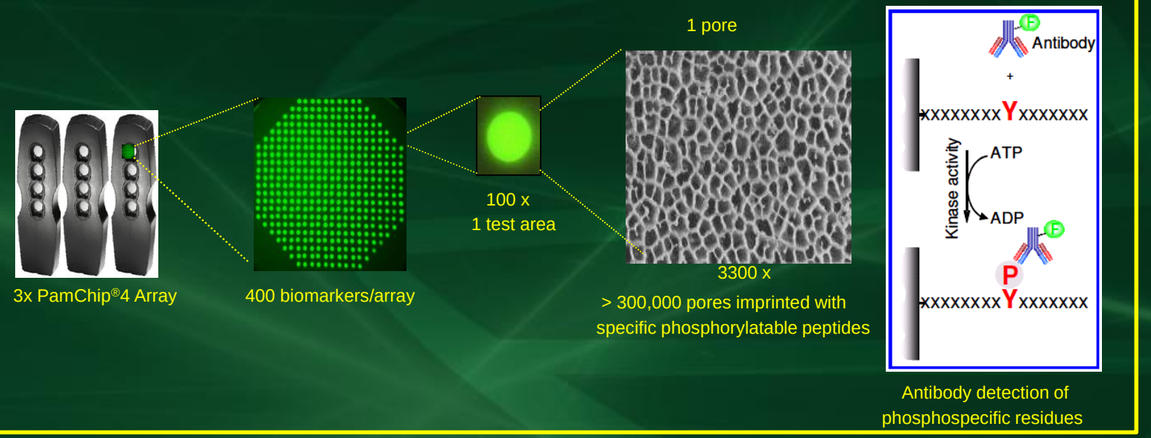
What Kinomics Can do for You

*__Identify Kinase Responses__ important post treatment (ex. drug/condition response).

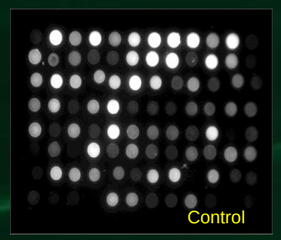
*__Identify Kinase Signature__ associated with Phenotype (ex. survival, growth, mets).

*__Identify Kinase Targets__ for Intervention and hypotheses based kinomic activity.

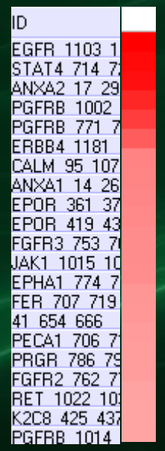
The Array Platform



An Example Data Analysis



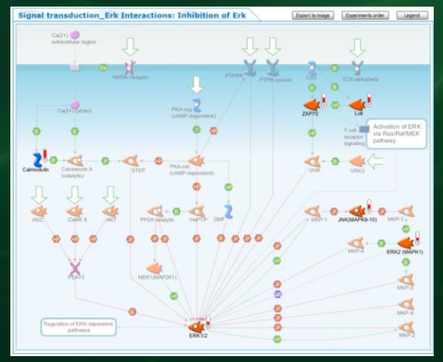
List of Inhibited Peptides



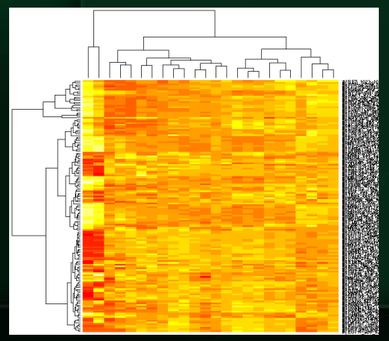
Upstream Kinase Analysis

Score %	Kinase
77.7	EGFR,JAK,
66.6	TRKA, SRC
55.5	PDGFR,LYN
44.4	FGR, FYN

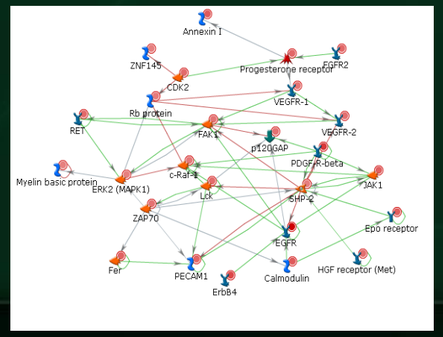
Pathway Analysis



Cluster Analysis



Network Modelling



Example Conclusions

Drug X likely inhibits EGFR.

Drug X is likely important in Erk pathway signaling.

Erk2, VEGFR, and JAK1 mediate signaling impacted by Drug X and may mediate drug resistance.

Sample types that are resistant cluster separately with a distinct kinomic signature post treatment with Drug X.

Pricing:
PTK (Tyrosine Kinome Analysis) UAB: $1200 (4 samples) External: $1350
STK (Serine/Threonine Kinome) UAB: $1700 (4 samples) External: $1900
Additional analysis is available as well. Please contact us for best experimental design optimization. Contact cwilley@uab.edu or janders7@uab.edu

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