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.

An Example Data Analysis

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.

Upstream Kinase Analysis

Pathway Analysis

Cluster Analysis

Network Modeling

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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