

Table S1: NCI-60 Data pathway analysis results of genes. Ingenuity Pathway Analysis Canonical Pathways from Genes involved in Gene-Metabolite Pairs of the Leukemia Correlated Cluster and Leukemia Anti-Correlated Cluster. P-values are all calculated from right-tailed Fisher's Exact Test.

<u>Leukemia Correlated Cluster</u>			<u>Leukemia Anti-Correlated Cluster</u>		
Pathway	p-value	Overlap	Pathway	p-value	Overlap
Acute Phase Response Signaling	2.21E-04	6.5% (11/170)	eNOS Signaling	3.06E-04	5.5% (10/181)
1D-myo-inositol Hexakisphosphate Biosynthesis V (from Ins(1,3,4)P3)	9.16E-04	66.7% (2/3)	CREB Signalling in Neurons	5.08E-04	5.2% (10/193)
Hepatic Fibrosis/Hepatic Stellate Cell Activation	1.55E-04	5.5% (10/183)	dTMP De Novo Biosynthesis	9.55E-04	21.4% (3/14)
CDK5 Signaling	1.84E-04	7.1% (7/99)	Huntington's Disease Signaling	1.02E-03	4.4% (11/249)
PAK Signaling	2.06E-04	6.9% (7/101)	P2Y Purigenic Receptor Signaling Pathway	1.12E-03	5.6% (8/143)