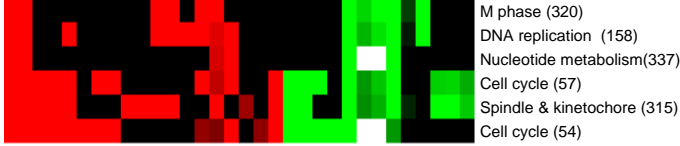


Figure 3

a Process: Cell cycle

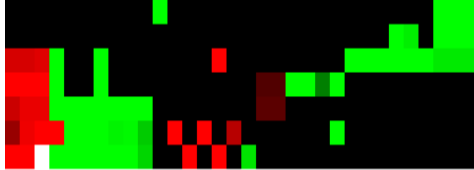
- Cancer and cell line (LiC)
- Macrophages (SP)
- B. petrusis stimulated immune cells (SP)
- Gram- bacteria stimulated immune cells (SP)
- Grade 3 (BC)
- Hepatocellular carcinoma (LiC)
- Leukemia (LiC)
- Neuroblastoma (LiC)
- Pancreatic ductal adenocarcinoma (LiC)
- Bone marrow (L)
- B cells (L)
- Centrioblasts (VT)
- GC B like DLBCL (VT)
- T cells (VT)
- Small cell lung cancer (LuC)
- Liver cancer cell line (LiC)
- Invasive liver tumor (LiC)
- Monocytes (SP)
- Live bacteria stimulated immune cells (SP)
- Chronic lymphocytic leukemia (BL)
- Leukemia (BL)
- Acute myelogenous leukemia (L)
- Normal tissue (VT)
- Non-tumor liver tissue (LiC)
- Hepatitis infected liver (LiC)
- Liver tissue (LiC)
- Normal lung tissue (LuC)
- Fibroblasts (FE)
- Follicular lymphoma (BL)
- B cells (BL)
- Lymphocytes (BL)
- Hematologic cancer (BL*)



M phase (320)
 DNA replication (158)
 Nucleotide metabolism(337)
 Cell cycle (57)
 Spindle & kinetochore (315)
 Cell cycle (54)

b Process: Growth

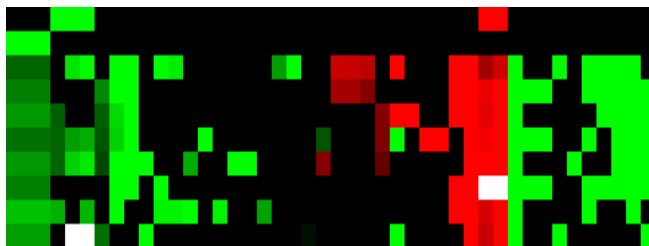
- Primary blood mononuclear cells (SP*)
- Stimulated immune cells (SP*)
- Macrophages (SP)
- Chronic lymphocytic leukemia (BL)
- Leukemia (BL)
- Unstimulated immune cells (SP)
- B cells (BL)
- Lymphoma (BL)
- Hematologic cancer (BL*)
- B. petrusis stimulated immune cells (SP)
- Diffuse large B cell lymphoma - DLBCL (VT)
- Gram- bacteria stimulated immune cells (SP)
- Activated B like DLBCL (BL)
- Large cell lung cancer (LuC)
- Cell line (BL)
- Macrophages (SP*)
- Monocytes (SP)
- Metastatic melanoma (NC)
- CNS tumor (NT)
- CNS tumor (NT)
- Lung carcinoma (LuC)
- Lymphocytes (L)
- B cells (L)
- Cancer and cell line (LiC)
- Bone marrow (L)
- Primary blood mononuclear cells (L)
- Melanoma cell line (NC)
- Acute leukemia (L*)
- Hematologic cancer (L*)
- Monocytes (L*)



Growth suppressors (173)
 Apoptosis (340)
 Cytokines & Growth Factors (433)
 Growth inhibitors (488)
 Anti-apoptosis (537)
 Anti-apoptotic evasion (312)
 Programmed cell death (300)

c Process: Signaling

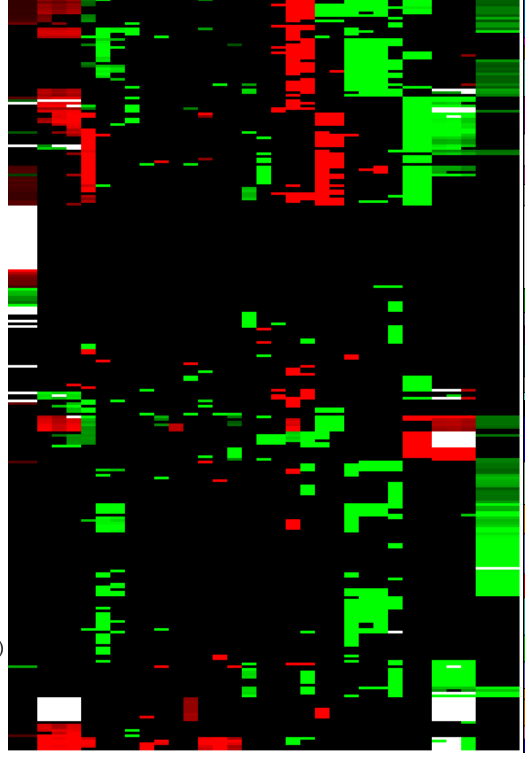
- Hematologic cancer (L*)
- Monocytes (L*)
- Acute leukemia (L*)
- Liver cancer cell line (LiC)
- Non small cell lung cancer (LuC*)
- Lung cancer (LuC*)
- Cancer (VT)
- Breast cancer (LiC)
- ATRT - CNS and other origin (NT)
- Bone marrow (L)
- Primary blood mononuclear cells (L)
- Leukemia cell line (NC)
- Epithelial cell line (NC)
- Squamous cell lung cancer (LuC)
- Primary blood mononuclear cells (VT)
- Hematologic cancer (VT)
- Lung carcinoma (LuC)
- Live bacteria stimulated immune cells (SP)
- Unstimulated immune cells (SP)
- Fibroblasts (FE)
- Cell line (NC)
- Monocytes (SP*)
- Primary blood mononuclear cells (SP*)
- Stimulated immune cells (SP*)
- Breast cancer (BC)
- Diffuse large B cell lymphoma - DLBCL (BL)
- GC B like DLBCL (BL)
- Stage T2 (LuC)
- After doxorubicin chemotherapy (BC)
- Activated B like DLBCL (BL)
- Liver tissue (LiC)
- Hepatitis infected liver (LiC)
- Liver tissue (LiC)
- Cancer and cell line (LiC)
- Acute lymphocytic leukemia (L)
- Lymphocytes (L)
- Stage T1 (LuC)
- Fast doubling (20-40) cell lines (NC)
- B cells (L)
- Macrophages (SP)
- Hepatocellular carcinoma (LiC)
- Adenocarcinoma (LiC)
- Lymphoma (BL)



cAMP signaling (575)
 cGMP signaling (65)
 Secreted signaling (92)
 GPCR (375)
 Signaling (117)
 Signaling (176)
 Signaling (129)
 GPCR (146)
 RTK signaling (259)
 Signaling (94)

d Condition: Immune response

- Macrophages (SP*)
- Monocytes (SP)
- Stimulated immune cells (SP*)
- Stimulated immune cells (SP*)
- Monocytes (SP*)
- Cell line (BL)
- Bone marrow (L)
- Primary blood mononuclear cells (L)
- Unstimulated immune cells (SP)
- Normal lymphocytes (BL)
- Primary blood mononuclear cells (BL)
- LPS stimulated immune cells (SP)
- Simulated B cells (BL)
- Live bacteria stimulated immune cells (SP)
- Ionomycin PMA stimulated immune cells (SP)
- T cells (BL)
- Follicular lymphoma (BL)
- Acute myelogenous leukemia (L)
- GC B like DLBCL (BL)
- Diffuse large B cell lymphoma - DLBCL (BL)
- B. petrusis stimulated immune cells (SP)
- Gram- bacteria stimulated immune cells (SP)
- B cells (L)
- Lymphocytes (L)
- Acute lymphocytic leukemia (L)
- Lymphoma (BL)
- Chronic lymphocytic leukemia (BL)
- Leukemia (BL)
- B cells (BL*)
- Lymphocytes (BL*)
- Hematologic cancer (BL*)
- Monocytes (L*)
- Acute leukemia (L*)

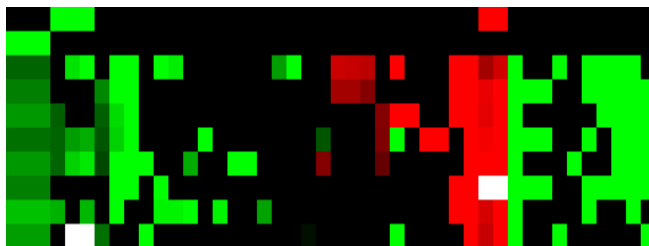


Immune & inflammation
 Tissue genes
 Serine proteases
 Signaling & tissues
 Apoptosis
 Cell cycle
 Transcriptional regulation
 Cell line genes
 Protein biosynthesis & degradation
 Ox. phos. & degradation
 Ox. phos & cell cycle
 CNS & synapse genes
 ECM & signaling
 Cell cycle & chromatin
 MMPs
 Immune signaling & Ag
 Immune response
 Signaling & CNS genes
 Signaling
 Development & growth regulation
 Ion channels & signaling
 ECM, adhesion & signaling
 Chemokines & signaling
 Muscle genes
 Hematologic cancer
 Hematologic cancer
 Growth regulation
 Immune

- BC - Breast cancer
- BL - B lymphoma
- FE - Fibroblast sarcoma
- LiC - Liver cancer
- LuC - Lung cancer
- NC - Neuroblastoma
- NT - Non-tumor tissue
- SP - Stimulated immune cells
- SP* - Stimulated immune cells
- VT - Various tumors

e Process: Signaling

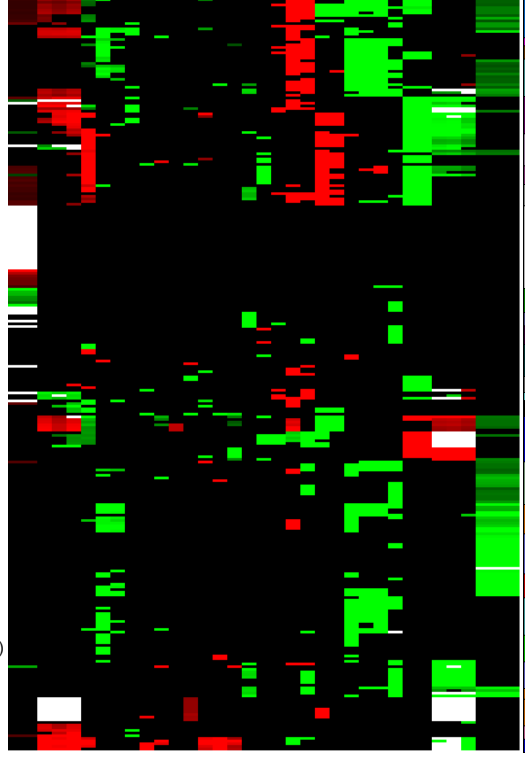
- Hematologic cancer (L*)
- Acute leukemia (L*)
- Liver cancer cell line (LiC)
- Non small cell lung cancer (LuC*)
- Lung cancer (LuC*)
- Cancer (VT)
- Breast cancer (LiC)
- ATRT - CNS and other origin (NT)
- Bone marrow (L)
- Primary blood mononuclear cells (L)
- Leukemia cell line (NC)
- Epithelial cell line (NC)
- Squamous cell lung cancer (LuC)
- Primary blood mononuclear cells (VT)
- Hematologic cancer (VT)
- Lung carcinoma (LuC)
- Live bacteria stimulated immune cells (SP)
- Unstimulated immune cells (SP)
- Fibroblasts (FE)
- Cell line (NC)
- Monocytes (SP*)
- Primary blood mononuclear cells (SP*)
- Stimulated immune cells (SP*)
- Breast cancer (BC)
- Diffuse large B cell lymphoma - DLBCL (BL)
- GC B like DLBCL (BL)
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- After doxorubicin chemotherapy (BC)
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- Liver tissue (LiC)
- Cancer and cell line (LiC)
- Acute lymphocytic leukemia (L)
- Lymphocytes (L)
- Stage T1 (LuC)
- Fast doubling (20-40) cell lines (NC)
- B cells (L)
- Macrophages (SP)
- Hepatocellular carcinoma (LiC)
- Adenocarcinoma (LiC)
- Lymphoma (BL)



cAMP signaling (575)
 cGMP signaling (65)
 Secreted signaling (92)
 GPCR (375)
 Signaling (117)
 Signaling (176)
 Signaling (129)
 GPCR (146)
 RTK signaling (259)
 Signaling (94)

d Condition: Immune response

- Macrophages (SP*)
- Monocytes (SP)
- Stimulated immune cells (SP*)
- Stimulated immune cells (SP*)
- Monocytes (SP*)
- Cell line (BL)
- Bone marrow (L)
- Primary blood mononuclear cells (L)
- Unstimulated immune cells (SP)
- Normal lymphocytes (BL)
- Primary blood mononuclear cells (BL)
- LPS stimulated immune cells (SP)
- Simulated B cells (BL)
- Live bacteria stimulated immune cells (SP)
- Ionomycin PMA stimulated immune cells (SP)
- T cells (BL)
- Follicular lymphoma (BL)
- Acute myelogenous leukemia (L)
- GC B like DLBCL (BL)
- Diffuse large B cell lymphoma - DLBCL (BL)
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- Gram- bacteria stimulated immune cells (SP)
- B cells (L)
- Lymphocytes (L)
- Acute lymphocytic leukemia (L)
- Lymphoma (BL)
- Chronic lymphocytic leukemia (BL)
- Leukemia (BL)
- B cells (BL*)
- Lymphocytes (BL*)
- Hematologic cancer (BL*)
- Monocytes (L*)
- Acute leukemia (L*)

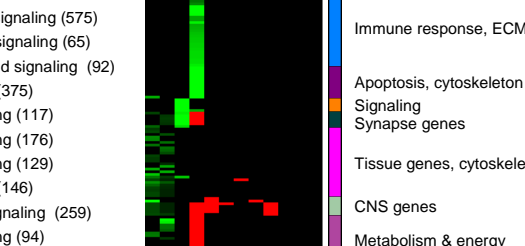


Immune & inflammation
 Tissue genes
 Serine proteases
 Signaling & tissues
 Apoptosis
 Cell cycle
 Transcriptional regulation
 Cell line genes
 Protein biosynthesis & degradation
 Ox. phos. & degradation
 Ox. phos & cell cycle
 CNS & synapse genes
 ECM & signaling
 Cell cycle & chromatin
 MMPs
 Immune signaling & Ag
 Immune response
 Signaling & CNS genes
 Signaling
 Development & growth regulation
 Ion channels & signaling
 ECM, adhesion & signaling
 Chemokines & signaling
 Muscle genes
 Hematologic cancer
 Hematologic cancer
 Growth regulation
 Immune

- BC - Breast cancer
- BL - B lymphoma
- FE - Fibroblast sarcoma
- LiC - Liver cancer
- LuC - Lung cancer
- NC - Neuroblastoma
- NT - Non-tumor tissue
- SP - Stimulated immune cells
- SP* - Stimulated immune cells
- VT - Various tumors

d Condition: CNS

- CNS tumor (NT*)
- CNS tumor (NT*)
- ATRT - CNS and other origin (NT)
- Lung carcinoma (LuC)
- CNS tumor (VT)
- CNS tumor (VT)
- Malignant glioblastoma (VT)
- Malignant glioblastoma (VT)
- Medulloblastoma (NT)
- Normal CNS tissue (NT)
- Vincristine chemotherapy (NT)
- Medulloblastoma (NT)
- Non-classic malignant glioblastoma (G)



Protein biosynthesis, folding & degradation
 Cell lines, tissues, & ECM
 ECM, adhesion & cytoskeleton
 Immune & growth
 Immune response, ECM & signaling
 Apoptosis, cytoskeleton & Ag presentation
 Signaling
 Synapse genes
 Tissue genes, cytoskeleton & growth
 CNS genes
 Metabolism & energy

>0.4
 0
 >0.4