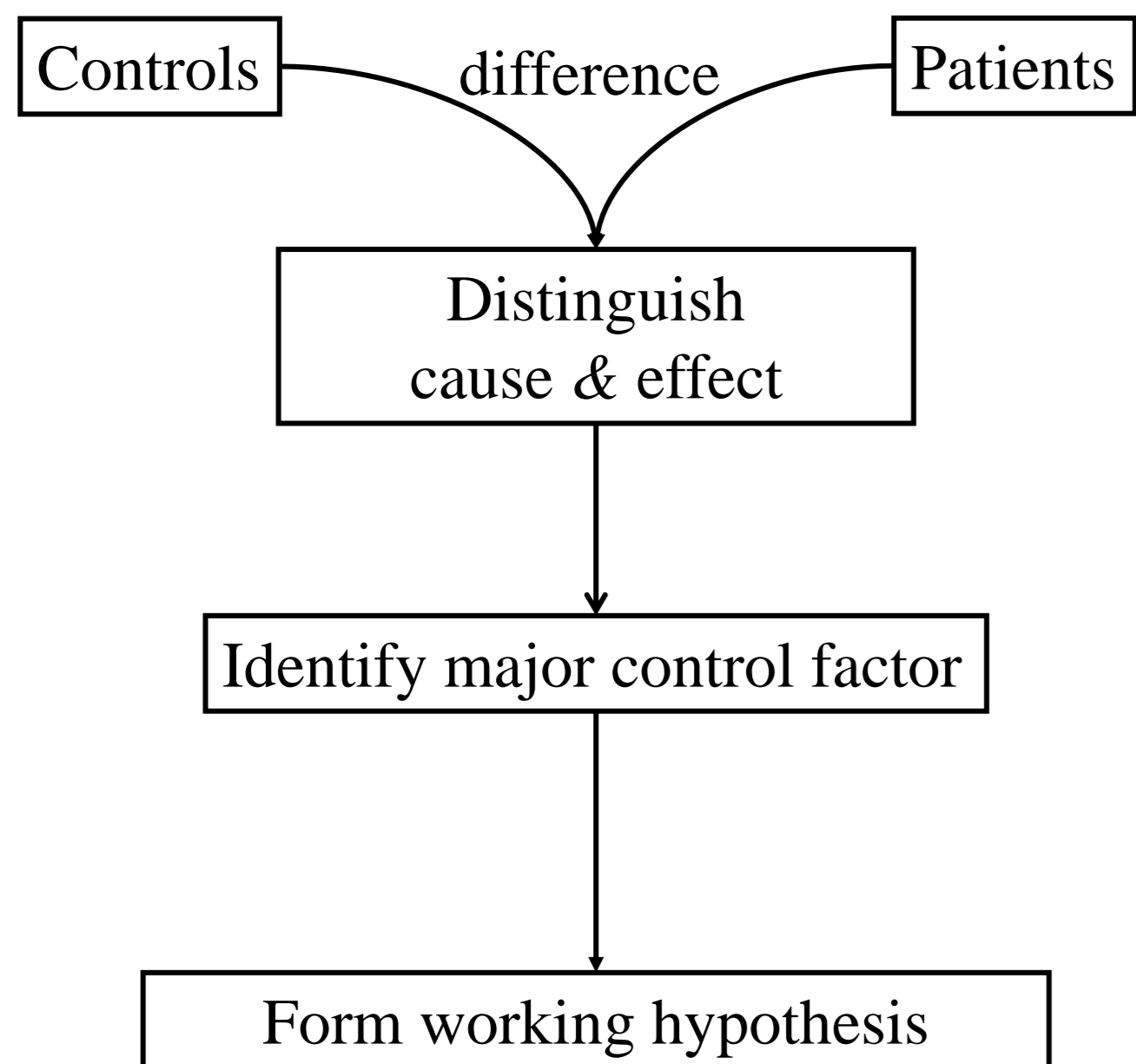
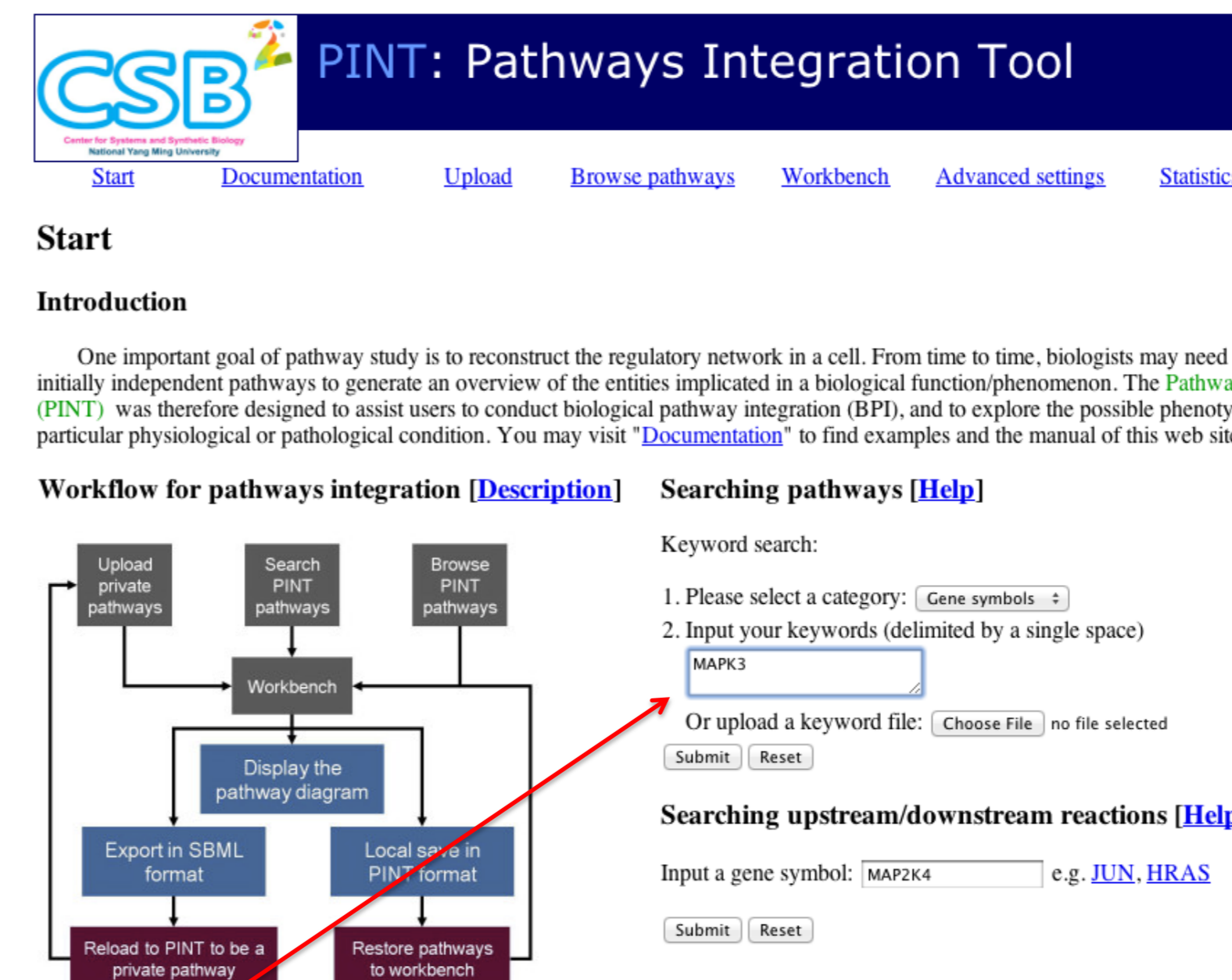
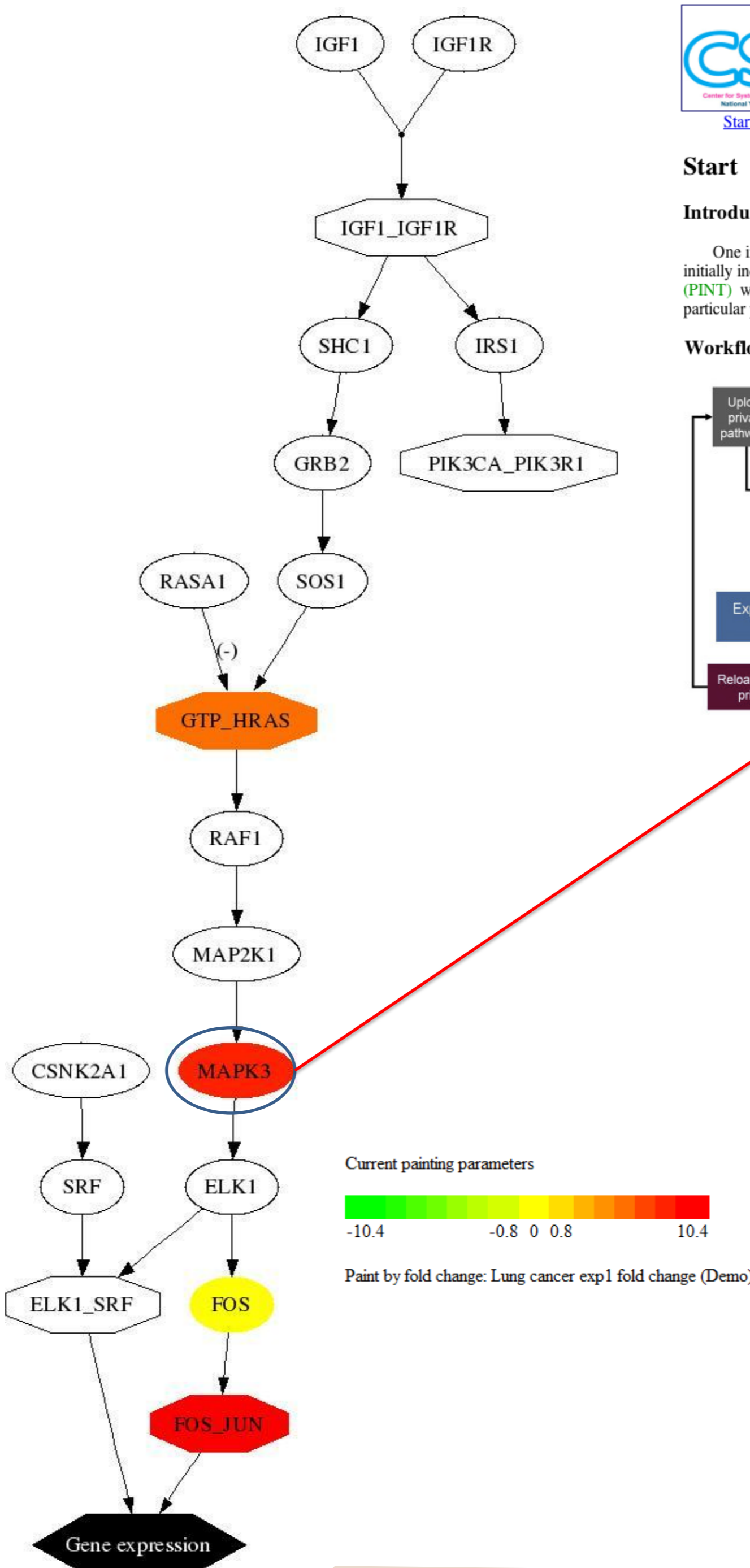


PINT: Pathways INtegration Tool

The difference between two states may reveal the process of state transition

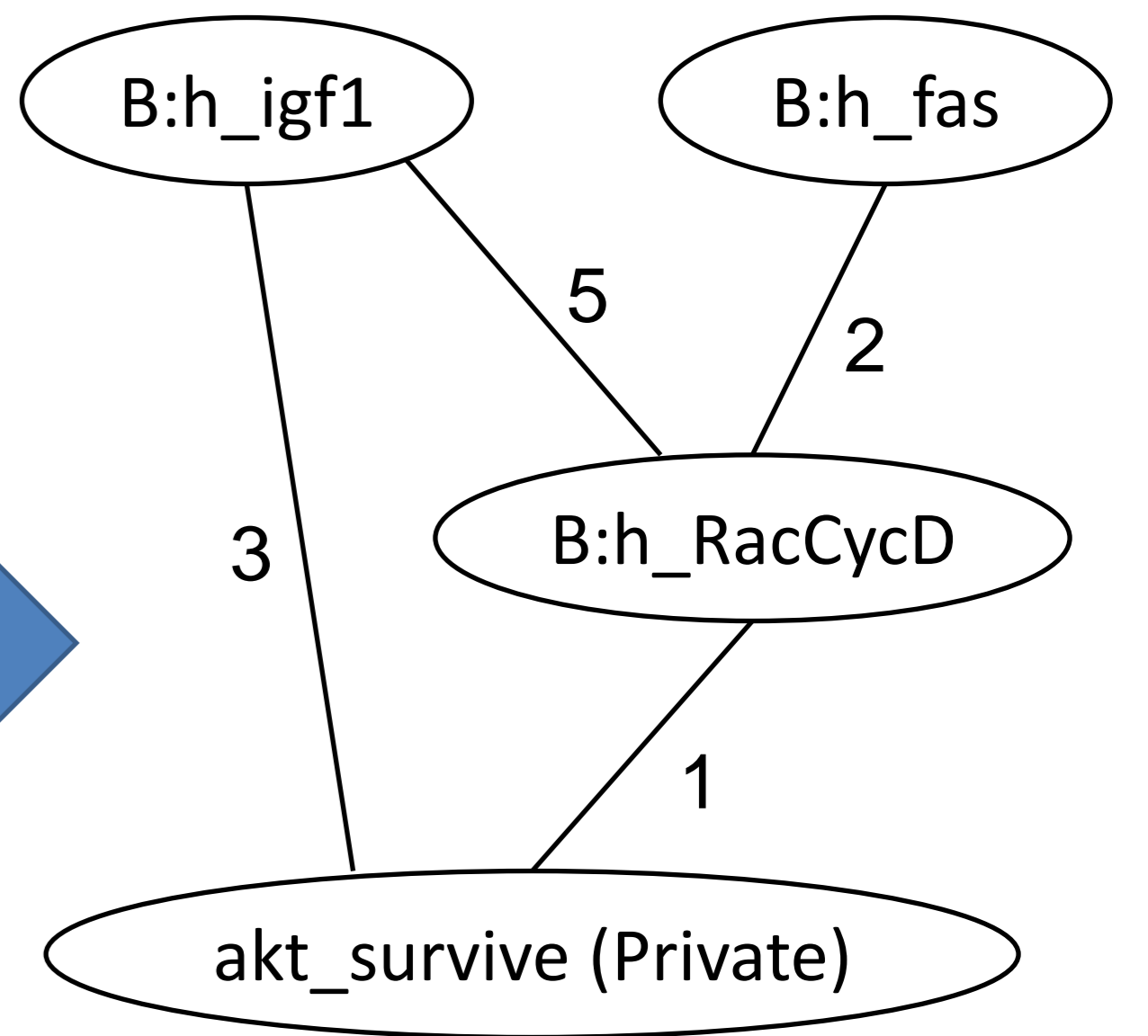


Painting is a way to illustrate the control steps in a pathway



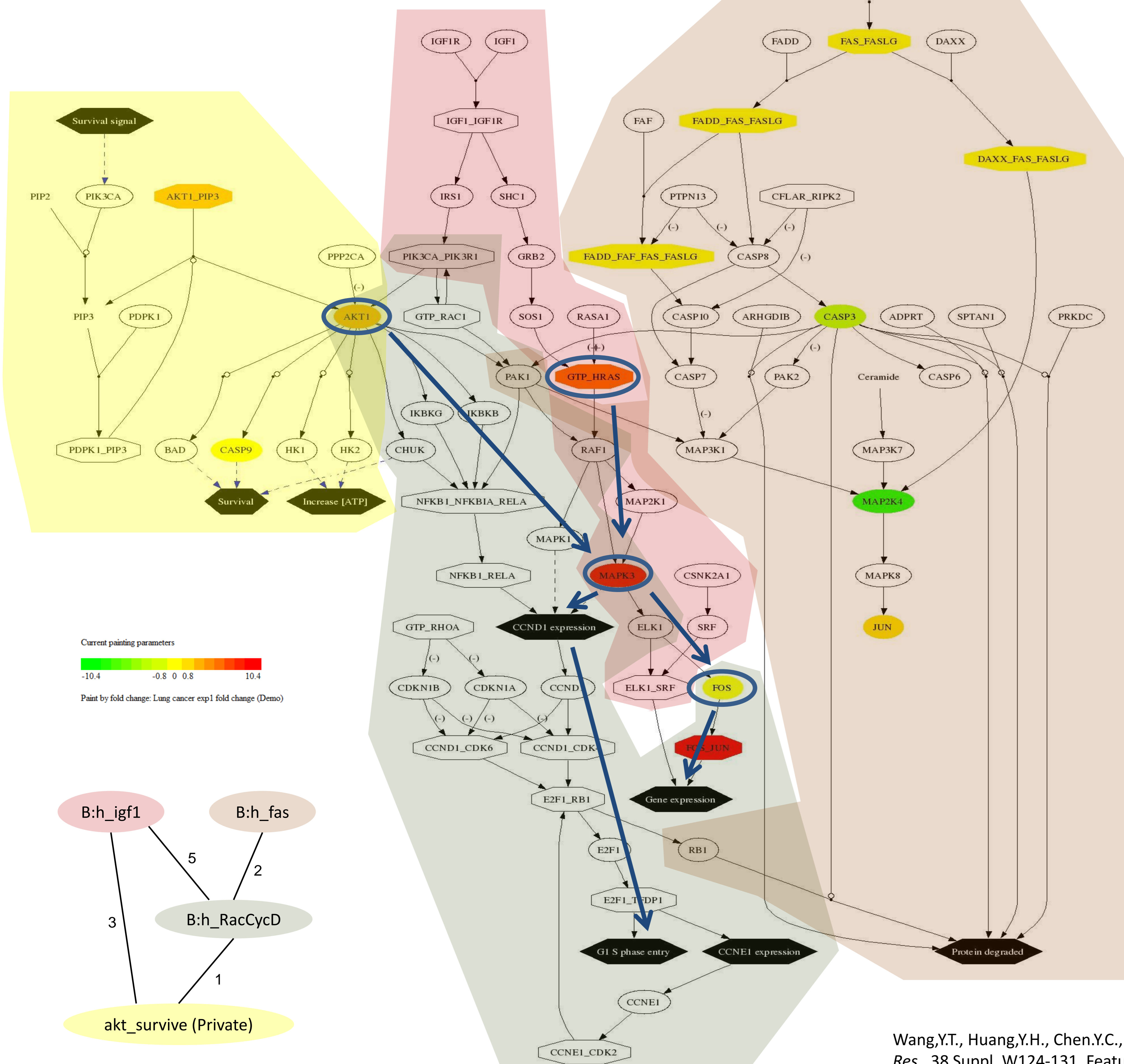
* <http://csb2.ym.edu.tw/pint/>

Using MAPK3 as a query, the relation of all related pathways can be shown on the basis of shared components

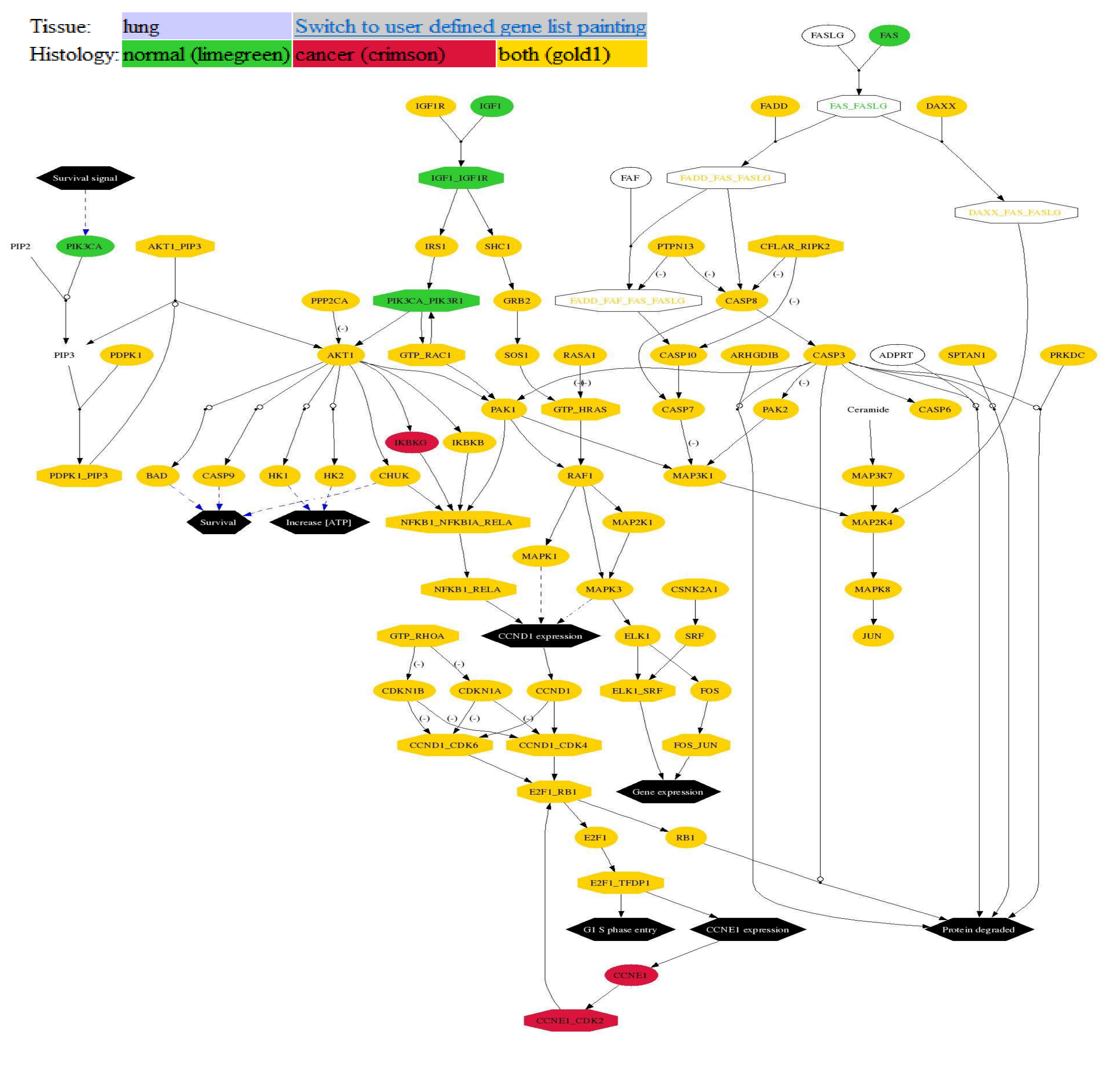


Microarray gene expression data was obtained from E-MEXP-231 from GEO

A self-drawn survival related pathway (akt_survive) may have cross talk to proliferation (B:h_igf1) and death (B:h_fas) related example pathways in PINT



EST can be used to support that related pathways are expressed in the same tissue



Supporting evidence:

1. Akt1 silencing efficiencies in lung cancer cells by sh/si/ssiRNA transfection using a reductable polyspermine carrier. *Biomaterials*. 2009 Mar;30(8):1635-47.
2. Activation of MEK1 or MEK2 isoform is sufficient to fully transform intestinal epithelial cells and induce the formation of metastatic tumors. *BMC Cancer*. 2008 Nov 17;8:337.
3. Differential gene expression in human lung adenocarcinomas and squamous cell carcinomas. *Clin Cancer Res*. 2002 Apr;8(4):1127-38.