

**Supplementary Table 1.** The 20 enriched gene sets in the response group

Gene set	Size	ES
SERVITJA_LIVER_HNF1A_TARGETS_DN	155	0.652094
LEE_LIVER_CANCER_MYC_DN	53	0.6912013
LEE_LIVER_CANCER_MYC_E2F1_DN	58	0.6914661
CHEN_HOXA5_TARGETS_9HR_UP	189	0.5448325
HSIAO_LIVER_SPECIFIC_GENES	222	0.5297005
OHGUCHI_LIVER_HNF4A_TARGETS_DN	161	0.5399128
LEE_LIVER_CANCER_MYC_TGFA_DN	60	0.6198549
LEE_LIVER_CANCER_CIPROFIBRATE_DN	51	0.6462658
LEE_LIVER_CANCER_E2F1_DN	53	0.6051292
LEE_LIVER_CANCER_ACOX1_DN	57	0.5938811
PHONG_TNF_TARGETS_UP	52	0.6035572
PICCALUGA_ANGIOIMMUNOBLASTIC_LYMPHOMA_DN	124	0.5092265
LEE_LIVER_CANCER_DENA_DN	60	0.5846722
BURTON_ADIPOGENESIS_PEAK_AT_2HR	44	0.6121447
CHIANG_LIVER_CANCER_SUBCLASS_PROLIFERATION_DN	161	0.4936594
PIONTEK_PKD1_TARGETS_UP	34	0.6577163
REACTOME_CIRCADIAN_CLOCK	66	0.5614204
UZONYI_RESPONSE_TO_LEUKOTRIENE_AND_THROMBIN	32	0.6644559
CHEN_LVAD_SUPPORT_OF_FAILING_HEART_UP	89	0.5318784
GUO_TARGETS_OF_IRS1_AND_IRS2	92	0.5235757

All false discovery rate (FDR) q-values <0.001.  
ES, enrichment score.