



**Fig. S21.** Correlation between gene average gravitation score and average co-expression coefficient (avePCC) across 9 cancer types. A gene average Pearson Correlation Coefficient (AvePCC) was calculated using between gene  $i$  and gene  $j$  ( $j$  belongs to the set of gene  $i$ 's interacting partners in PIN) when we only used the absolute value of PCC. The p-value was calculated using F-statistics. BRCA: breast invasive carcinoma, COAD: colon adenocarcinoma, GBM: glioblastoma multiforme, HNSC: head and neck squamous cell carcinoma, KIRC: kidney renal clear cell carcinoma, LUAD: lung adenocarcinoma, LUSC: lung squamous cell carcinoma, OV: ovarian serous cystadenocarcinoma, and UCEC: uterine corpus endometrial carcinoma.