Community Detection and Phi Co-occurrence

None of the communities gene – HPO pairs appeared in the original notable phi-coefficient analysis. In this analysis I combine the HPO terms in interesting communities to be single super-HPO nodes and then re-calculate phi for each super-HPO terms and the genes also found in its community.

The HPO terms in the pairs below represent the super-HPO term for their community, despite having the name of a single term they carry the meaning and value of all HPO terms in their community. Using the threshold of phi > 0.30 for showing signs of correlation, community 8 (dealing with polydactyl) is the only one to show with suggesting a correlation.

Community: 6

TMEM39B : 0.15049870640330867

HP:0002803 DNAH7 : 0.15049870640330867

HP:0002803 MYLK4 : 0.15049870640330867

HP:0002803 MYH2 : 0.15049870640330867

Community: 8

HP:0009556 BGN : **0.31613179478426595**

Community: 9

HP:0002671 SAE1 : 0.22344496439434378

HP:0002671 TBCB : 0.22344496439434378

HP:0002671 PLK3 : 0.22344496439434378

HP:0002671 UHRF1BP1L : 0.22344496439434378

Community: 10

HP:0030127 ERCC3 : 0.2885605676771093

HP:0030127 UVRAG : 0.2885605676771093