A: proteome-wide ERC calculations 664 reprod. proteins* whole proteome 208 226 known SP network proteins Sfps female SP **CG9997** compare to random **SPR** ~11,100 CG17575 compare to random sets of 7 sets of 664 322 CG1652 CG1656 proteins sperm seminase p = 0.000154p < 0.0001mean corr: 0.3115 mean corr: 0.0326

mean corr: 0.0019

B: ERC calculations after controlling for reproductive protein evolution

208 226 **Sfps** female SP **CG9997 SPR** CG17575 compare to random sets of 7 CG1652 CG1656 322 seminase sperm mean corr: 0.2806 p = 0.001002

*Numbers in the colored circles sum to 756 proteins, but only 664 had adequate numbers of orthologs to be included in the analysis.

mean corr: 0.0047

C: identify new candidates by screening against Sfps and female sets

