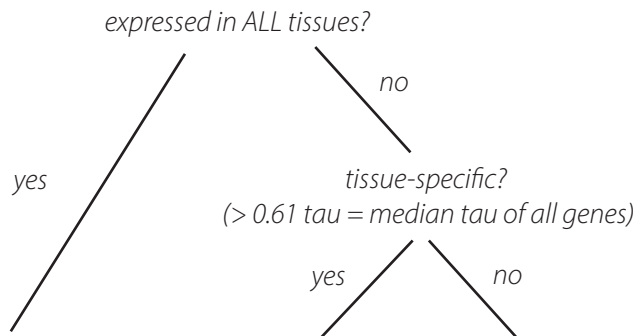# A   CATEGORIZE GENES BY REGULATORY SPECIFICITY

Data input:
1) expression level of all genes in many tissues
2) calculated tau (tissue specificity index)
3) phylogenetic ages of all genes

expressed in ALL tissues?

yes

no

tissue-specific?
(> 0.61 tau = median tau of all genes)

yes

no

Group 1:
Constitutively active
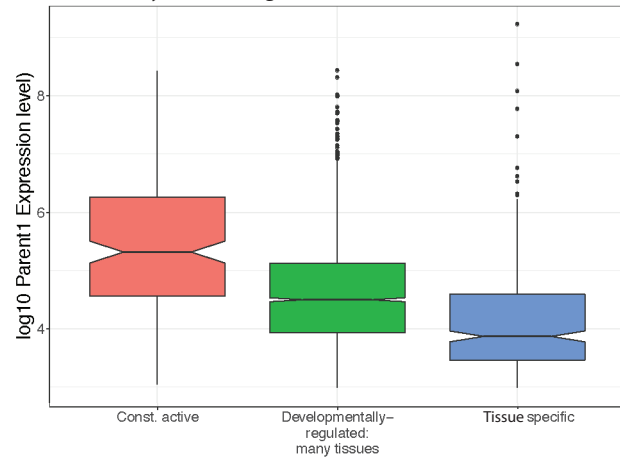
Group 2:
Tissue-specific

Group 3:
Developmentally-regulated
MANY tissues
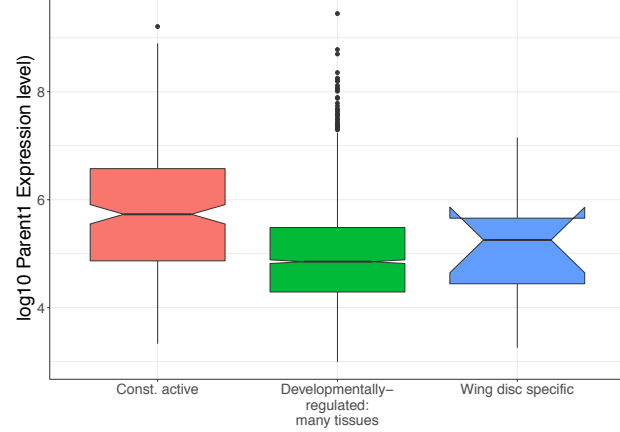
Filter only genes pan-Drosophilid & older

B

whole body *D. melanogaster* - North American

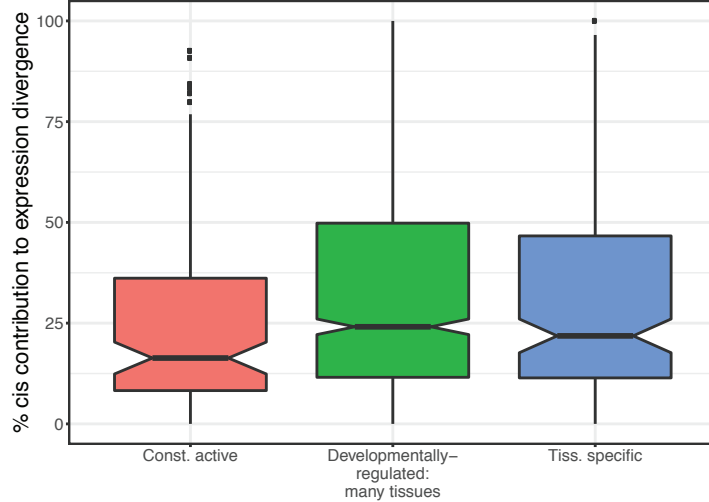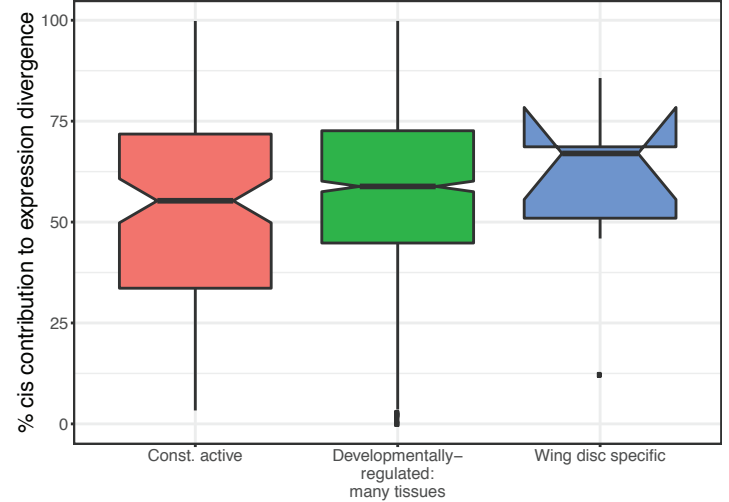imaginal wing disc *D. melanogaster* - North American

C

whole body *D. melanogaster* - N. American x African

imaginal wing disc *D. melanogaster* - North American x African

D

Divergence time between comparisons: shortest –> longest