whole body D. melanogaster - North American B CATEGORIZE GENES BY REGULATORY SPECIFICITY Data input: log10 Parent1 Expression level) 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? no yes tissue-specific? Developmentally regulated: many tissues Const. active Tissue specific (> 0.61 tau = median tau of all genes)imaginal wing disc D. melanogaster - North American no log10 Parent1 Expression level) Group 2: Group 1: Group 3: Tissue-specific Constitutively active Developmentallyregulated MANY tissues Filter only genes pan-Drosophilid & older Const. active Developmentally Wing disc specific regulated: many tissues whole body D. melanogaster - N. American x African imaginal wing disc D. melanogaster - North American x African % cis contribution to expression divergence % cis contribution to expression divergence Developmentally-regulated: Developmentally-regulated: Const. active Tiss. specific Const. active Wing disc specific many tissues many tissues

