

**Table S2 GO term enrichment for biological process in the Australian cline for genes that overlap windows in the top 2.5% tail of Fst.**

2.5 % Tail Biological Process		
GO term	q-value	description
GO:0006355	2.24E-07	regulation of transcription, DNA-dependent
GO:0007611	1.26E-06	learning or memory
GO:0006468	1.26E-06	protein amino acid phosphorylation
GO:0008543	3.05E-06	fibroblast growth factor receptor signaling pathway
GO:0007476	3.11E-06	imaginal disc-derived wing morphogenesis
GO:0008284	3.49E-06	positive regulation of cell proliferation
GO:0007424	5.44E-06	open tracheal system development
GO:0008355	1.11E-05	olfactory learning
GO:0007156	1.56E-05	homophilic cell adhesion
GO:0007435	1.87E-05	salivary gland morphogenesis
GO:0007155	1.87E-05	cell adhesion
GO:0007275	1.87E-05	multicellular organismal development
GO:0007507	1.87E-05	heart development
GO:0046331	1.87E-05	lateral inhibition
GO:0007280	4.39E-05	pole cell migration
GO:0007513	4.39E-05	pericardial cell differentiation
GO:0007427	4.39E-05	epithelial cell migration, open tracheal system
GO:0008406	4.76E-05	gonad development
GO:0048190	4.98E-05	wing disc dorsal/ventral pattern formation
GO:0007411	5.20E-05	axon guidance
GO:0048477	7.54E-05	oogenesis
GO:0007623	1.42E-04	circadian rhythm
GO:0048749	1.42E-04	compound eye development
GO:0008104	1.70E-04	protein localization
GO:0007391	2.08E-04	dorsal closure
GO:0007419	2.14E-04	ventral cord development
GO:0007398	3.20E-04	ectoderm development
GO:0045475	3.20E-04	locomotor rhythm
GO:0001751	3.20E-04	compound eye photoreceptor cell differentiation
GO:0001738	3.82E-04	morphogenesis of a polarized epithelium
GO:0008345	3.82E-04	larval locomotory behavior
GO:0007509	4.07E-04	mesoderm migration
GO:0007498	4.07E-04	mesoderm development
GO:0035225	4.07E-04	determination of genital disc primordium
GO:0008354	4.07E-04	germ cell migration
GO:0007617	4.07E-04	mating behavior
GO:0006811	4.92E-04	ion transport
GO:0007219	4.92E-04	Notch signaling pathway

GO:0007428	5.97E-04	primary branching, open tracheal system
GO:0007274	6.14E-04	neuromuscular synaptic transmission
GO:0008356	6.14E-04	asymmetric cell division
GO:0051225	6.14E-04	spindle assembly
GO:0045433	7.31E-04	male courtship behavior, veined wing generated song production
GO:0045187	7.31E-04	regulation of circadian sleep/wake cycle, sleep
GO:0010552	7.31E-04	positive regulation of gene-specific transcription from RNA polymerase II promoter
GO:0016477	8.59E-04	cell migration
GO:0008285	8.59E-04	negative regulation of cell proliferation
GO:0007480	8.59E-04	imaginal disc-derived leg morphogenesis
GO:0007165	8.59E-04	signal transduction
GO:0002121	8.89E-04	inter-male aggressive behavior
GO:0042127	1.20E-03	regulation of cell proliferation
GO:0048675	1.20E-03	axon extension
GO:0008407	1.20E-03	bristle morphogenesis
GO:0007622	1.20E-03	rhythmic behavior
GO:0016079	1.20E-03	synaptic vesicle exocytosis
GO:0008344	1.24E-03	adult locomotory behavior
GO:0001709	1.24E-03	cell fate determination
GO:0008347	1.24E-03	glial cell migration
GO:0007494	1.64E-03	midgut development
GO:0002009	1.64E-03	morphogenesis of an epithelium
GO:0035023	1.64E-03	regulation of Rho protein signal transduction
GO:0045449	1.71E-03	regulation of transcription
GO:0007268	1.77E-03	synaptic transmission
GO:0016360	1.77E-03	sensory organ precursor cell fate determination
GO:0007390	1.77E-03	germ-band shortening
GO:0007475	1.77E-03	apposition of dorsal and ventral imaginal disc-derived wing surfaces
GO:0000902	1.77E-03	cell morphogenesis
GO:0055085	1.77E-03	transmembrane transport
GO:0008049	2.57E-03	male courtship behavior
GO:0007431	2.57E-03	salivary gland development
GO:0030707	2.66E-03	ovarian follicle cell development
GO:0008340	3.61E-03	determination of adult lifespan
GO:0042052	3.61E-03	rhabdomere development
GO:0007314	3.61E-03	oocyte anterior/posterior axis specification
GO:0007298	3.68E-03	border follicle cell migration
GO:0007306	4.11E-03	eggshell chorion assembly
GO:0051017	4.11E-03	actin filament bundle formation
GO:0001745	4.11E-03	compound eye morphogenesis
GO:0008587	4.11E-03	imaginal disc-derived wing margin morphogenesis
GO:0016055	4.73E-03	Wnt receptor signaling pathway
GO:0030162	4.75E-03	regulation of proteolysis

GO:0030718	4.82E-03	germ-line stem cell maintenance
GO:0035277	5.70E-03	spiracle morphogenesis, open tracheal system
GO:0008103	5.70E-03	oocyte microtubule cytoskeleton polarization
GO:0006914	5.70E-03	autophagy
GO:0035147	5.70E-03	branch fusion, open tracheal system
GO:0007269	6.05E-03	neurotransmitter secretion
GO:0007367	6.05E-03	segment polarity determination
GO:0007619	6.05E-03	courtship behavior
GO:0008586	7.37E-03	imaginal disc-derived wing vein morphogenesis
GO:0051276	7.37E-03	chromosome organization
GO:0007616	7.37E-03	long-term memory
GO:0009408	7.37E-03	response to heat
GO:0006816	7.37E-03	calcium ion transport
GO:0019991	7.37E-03	septate junction assembly
GO:0007455	7.37E-03	eye-antennal disc morphogenesis
GO:0007552	7.37E-03	metamorphosis
GO:0045892	7.50E-03	negative regulation of transcription, DNA-dependent
GO:0006813	7.95E-03	potassium ion transport
GO:0016319	8.34E-03	mushroom body development
GO:0008293	9.71E-03	torso signaling pathway
GO:0017148	9.77E-03	negative regulation of translation
GO:0042078	9.77E-03	germ-line stem cell division
GO:0033227	1.23E-02	dsRNA transport
GO:0007426	1.31E-02	tracheal outgrowth, open tracheal system
GO:0046843	1.35E-02	dorsal appendage formation
GO:0007417	1.48E-02	central nervous system development
GO:0045893	1.51E-02	positive regulation of transcription, DNA-dependent
GO:0006897	1.51E-02	endocytosis
GO:0042067	1.67E-02	establishment of ommatidial polarity
GO:0007444	1.88E-02	imaginal disc development
GO:0007242	1.98E-02	intracellular signaling cascade
GO:0007399	2.06E-02	nervous system development
GO:0006325	2.10E-02	chromatin organization
GO:0007422	2.11E-02	peripheral nervous system development
GO:0008360	2.18E-02	regulation of cell shape
GO:0006357	2.48E-02	regulation of transcription from RNA polymerase II promoter
GO:0048666	2.70E-02	neuron development
GO:0006470	3.05E-02	protein amino acid dephosphorylation
GO:0007317	3.14E-02	regulation of pole plasm oskar mRNA localization
GO:0007224	3.14E-02	smoothened signaling pathway
GO:0008045	3.14E-02	motor axon guidance
GO:0042048	3.15E-02	olfactory behavior
GO:0001700	3.33E-02	embryonic development via the syncytial blastoderm
GO:0007423	3.49E-02	sensory organ development

GO:0007474	3.69E-02	imaginal disc-derived wing vein specification
GO:0007163	3.69E-02	establishment or maintenance of cell polarity
GO:0007349	3.69E-02	cellularization
GO:0007015	4.26E-02	actin filament organization
GO:0008595	4.39E-02	determination of anterior/posterior axis, embryo
GO:0008063	4.39E-02	Toll signaling pathway

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