

Average 2-Year Fold Change (Old / Young)

> 1.25

1.20 - 1.25

1.15 - 1.20

1.10 - 1.15

1.05 - 1.10

0.95 - 1.050.90 - 0.95

0.85 - 0.90

0.80 - 0.85

0.75 - 0.80

< 0.75

B) Females Age-decreased Genes Cortex(M)(B6C3HF Eye(M)(B6) positive regulation of immune response [47] activation of immune response [31] positive regulation of immune effector process [14] regulation of lymphocyte mediated immunity [25] \blacksquare immune response-regulating signaling pathway [21] Immunoglobulin regulation of adaptive immunity [20] positive regulation of defense response [19] positive regulation of immune system process [77] regulation of response to stimulus [98] regulation of endocytosis [18] regulation of cellular component movement [42] positive regulation of T cell differentiation [14] regulation of lymphocyte differentiation [21] regulation of myeloid leukocyte differentiation [13] V positive regulation of lymphocyte activation [30] positive regulation of cell activation [34] cytokine-mediated signaling pathway [22] signal initiation by diffusible mediator [22] G-protein signaling with cAMP second messenger [16] cyclic-nucleotide-mediated signaling [18] regulation of tumor necrosis factor production [13] positive regulation of cytokine production [21] regulation of locomotion [42] regulation of body fluid levels [33] regulation of adenylate cyclase activity [18] regulation of cAMP metabolic process [22] regulation of nucleotide metabolic process [24] ▼ cyclic nucleotide metabolic process [29] glycoprotein metabolic process [42] glycosaminoglycan metabolic process [12] B cell activation [39] lymphocyte proliferation [37] leukocyte proliferation [38] extracellular matrix organization [51] lackcell-matrix adhesion [32] blood coagulation [30] acute inflammatory response [31] response to wounding [112] taxis [36] defense response [124] adaptive immune response [41] innate immune response [46] B cell mediated immunity [33] detection of stimulus [18] exogenous antigen processing and presentation [19] Processing and presentation of peptide antigen [22] blood vessel morphogenesis [106] vasculogenesis [22] TNF superfamily cytokine production [13] fibroblast growth factor receptor signaling pathway [13]

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C) Males Age-increased Genes Cortex(M)(B6C3HF Cortex(M)(B6C3F1 Heart(M)(B6C3F1) Eye(M)(B6) central nervous system neuron axonogenesis [9] neuron projection morphogenesis [50] negative regulation of axonogenesis [8] lackregulation of neuron projection development [14] cell morphogenesis with neuron differentiation [53] regulation of cell morphogenesis differentiation [14] central nervous system neuron differentiation [14] generation of neurons [90] negative regulation of cell development [14] cell part morphogenesis [54] cell morphogenesis [83] maternal placenta development [4] cell aging [12] oocyte development [8] gamete generation [57] chromatin remodeling [9] chromatin modification [68] neurofilament cytoskeleton organization [8] cell projection organization [82] microspike assembly [7] cell junction assembly [9] endomembrane system organization [8] cell-cell adhesion mediated by integrin [4] protein polyubiquitination [9] regulation of protein modification process [36] ubiquitin-dependent protein catabolic process [31] glycosphingolipid biosynthetic process [3] 9-cis-retinoic acid biosynthetic process [3] regulation of protein metabolic process [64] negative regulation of macromolecule metabolism [83] regulation of macromolecule biosynthetic process [365] V ▼ positive regulation of actin filament polymerization [5] ▼ positive regulation of protein complex assembly [7] positive regulation of cell-cell adhesion [5] V ▲ regulation of Rho protein signal transduction [26] reg small GTPase mediated signal transduct [58] Ras protein signal transduction [40] T cell receptor signaling pathway [9] immune response-activating receptor signaling [11] activation of immune response [18] ▼ membrane organization [68] ▼ amino acid import [5] acidic amino acid transport [8] L-glutamate import [5] cytoskeleton-dependent intracellular transport [10] Golgi vesicle transport [15] ▲ V associative learning [9] learning or memory [22] response to UV [12] response to acid [8]

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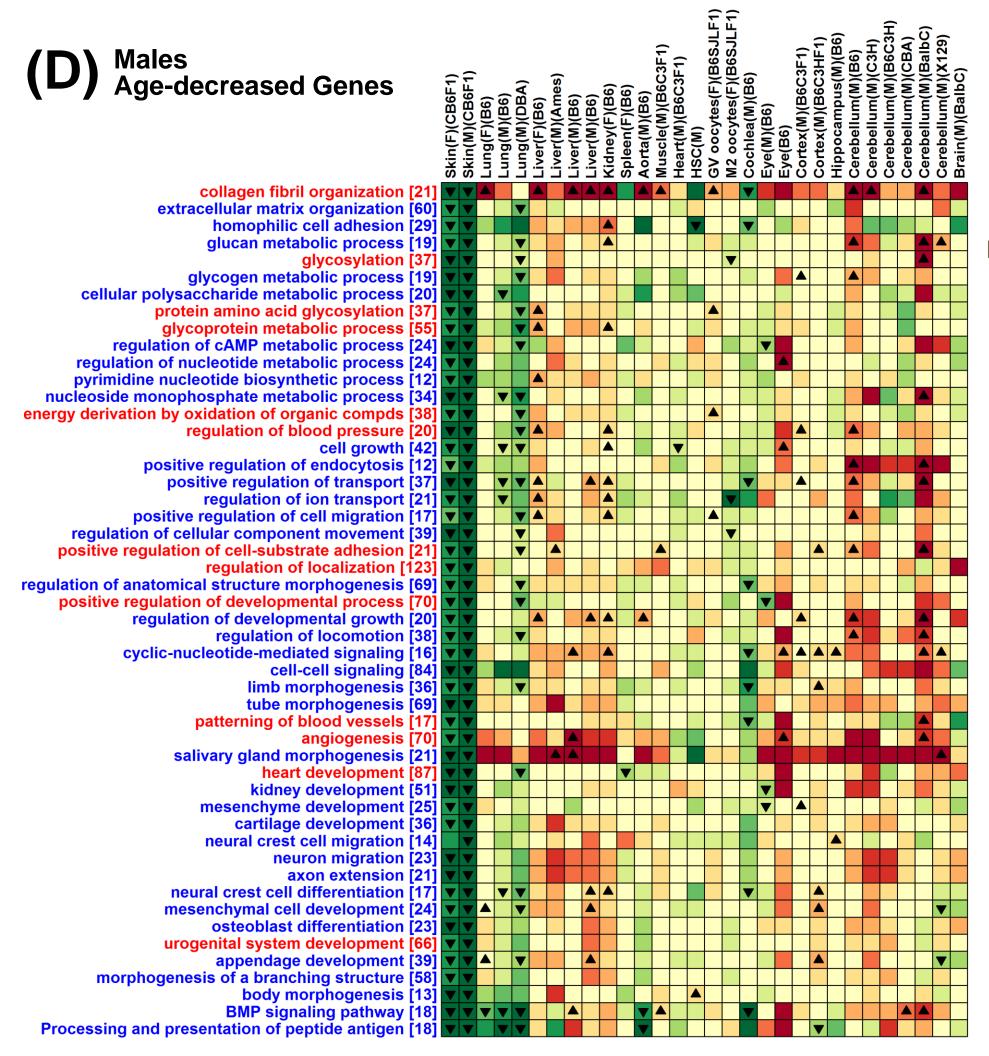
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