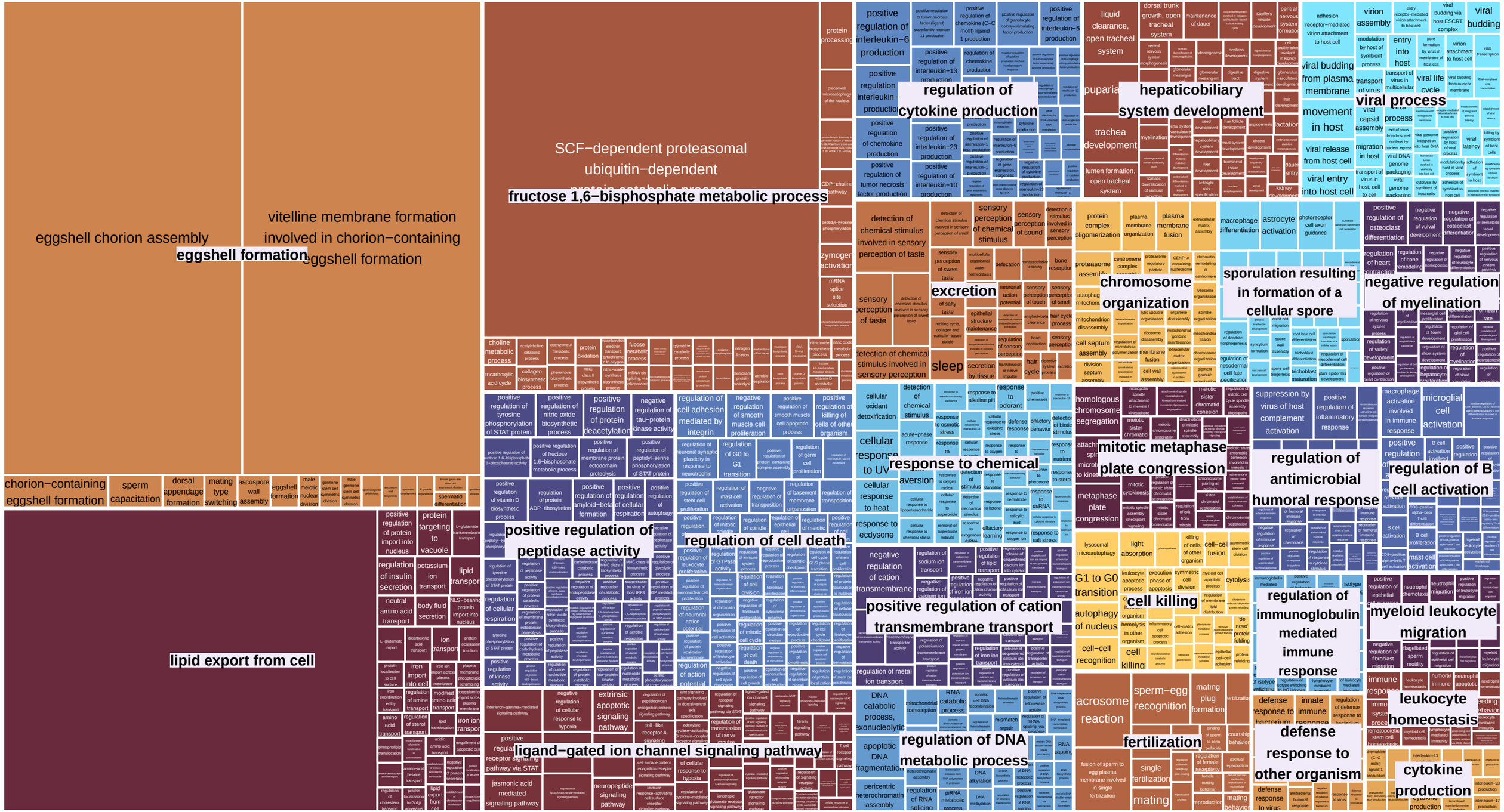
Genes gained in Arachnida BP TreeMap


eggshell chorion assembly
vitelline membrane formation involved in chorion−containing eggshell formation
eggshell formation
chorion−containing eggshell formation
sperm capacitation
dorsal appendage formation
mating type switching
ascospore wall assembly
eggshell formation
male meiotic nuclear division
germline stem cell symmetric division
male germline stem cell symmetric division
spermatogonia cell division
ascospore wall biogenesis
spermatid development
F-pseudopodium organization
female germ-line stem cell asymmetric division
spermatid differentiation
cytokinesis
SCF−dependent proteasomal ubiquitin−dependent protein catabolic process
fructose 1,6−bisphosphate metabolic process
protein processing
piecemeal microautophagy of the nucleus
CDP−choline pathway
peptidyl−tyrosine phosphorylation
zymogen activation
mRNA splice site selection
phosphatidylethanolamine biosynthetic process
choline metabolic process
acetylcholine catabolic process
coenzyme A metabolic process
protein oxidation
mitochondrial electron transport, cytochrome c to oxygen
fucose metabolic process
glycoside catabolic process
nitrogen fixation
nitric oxide biosynthetic process
nitric oxide metabolic process
tricarboxylic acid cycle
collagen biosynthetic process
pheromone biosynthetic process
MHC class II biosynthetic process
nitric−oxide synthase biosynthetic process
mRNA cis splicing, via spliceosome
vitamin D metabolic process
positive regulation of tyrosine phosphorylation of STAT protein
positive regulation of nitric oxide biosynthetic process
positive regulation of protein deacetylation
negative regulation of tau−protein kinase activity
regulation of cell adhesion mediated by integrin
negative regulation of smooth muscle cell proliferation
positive regulation of smooth muscle cell apoptotic process
positive regulation of killing of cells of other organism
positive regulation of fructose 1,6−bisphosphate metabolic process
positive regulation of membrane protein ectodomain proteolysis
positive regulation of peptidyl−serine phosphorylation of STAT protein
regulation of neuronal synaptic plasticity in response to neurotrophin
regulation of G0 to G1 transition
positive regulation of protein−containing complex assembly
regulation of germ cell proliferation
regulation of microtubule−based movement
positive regulation of vitamin D biosynthetic process
regulation of protein ADP−ribosylation
positive regulation of amyloid−beta formation
positive regulation of cellular respiration
positive regulation of autophagy
positive regulation of stem cell proliferation
regulation of mast cell activation
negative regulation of transposition
regulation of basement membrane organization
regulation of transposition
positive regulation of peptidyl−serine phosphorylation
positive regulation of protein import into nucleus
protein targeting to vacuole
L−glutamate transmembrane transport
regulation of insulin secretion
potassium ion transport
lipid transport
neutral amino acid transport
body fluid secretion
NLS−bearing protein import into nucleus
lipid export from cell
L−glutamate import
dicarboxylic acid transport
ion transport
protein localization to cilium
protein localization to cell surface
iron import into cell
iron ion import across plasma membrane
phospholipid scrambling
iron coordination entry transport
regulation of amine transport
modified amino acid transport
potassium ion import across plasma membrane
amino acid transport
regulation of sterol transport
lipid translocation
iron ion transport
phospholipid translocation
acidic amino acid transport
engulfment of apoptotic cell
gamma−aminobutyric acid transport
amino−acid betaine transport
negative regulation of protein secretion
protein localization to vacuole
regulation of cholesterol transport
protein localization to Golgi apparatus
lipid export from cell
positive regulation of protein secretion
chaperone mediated autophagy
positive regulation of cell death
positive regulation of peptidase activity
regulation of tyrosine phosphorylation of STAT protein
regulation of peptidase activity
positive regulation of protein catabolic process
regulation of cellular respiration
regulation of membrane protein ectodomain proteolysis
tyrosine phosphorylation of STAT protein
positive regulation of peptidase activity
positive regulation of kinase activity
carbohydrate catabolic process
regulation of MHC class II biosynthetic process
negative regulation of endopeptidase activity
positive regulation of catabolic process
suppression by virus of host IRF3 activity
positive regulation of GTP metabolic process
positive regulation of nitric−oxide synthase biosynthetic process
positive regulation of peptidase activity
regulation of purine nucleotide metabolic process
regulation of protein catabolic process
regulation of tau−protein kinase activity
regulation of nucleotide metabolic process
regulation of nucleotide metabolic process
positive regulation of phosphorylation
positive regulation of leukocyte proliferation
regulation of GTPase activity
regulation of immune system process
regulation of reproductive process
regulation of spindle checkpoint
regulation of cell cycle G1/S phase transition
regulation of stem cell proliferation
regulation of mononuclear cell proliferation
regulation of cell division
regulation of fibroblast proliferation
regulation of neuronal action potential
regulation of cell activation
regulation of mitotic cell cycle
regulation of cell death
regulation of action potential
negative regulation of cell cycle checkpoint
positive regulation of cell growth
regulation of cell cycle checkpoint
regulation of stem cell proliferation
interferon−gamma−mediated signaling pathway
negative regulation of cellular response to hypoxia
extrinsic apoptotic signaling pathway
regulation of peptidoglycan recognition protein signaling pathway
Wnt signaling pathway involved in dorsal/ventral axis specification
regulation of receptor signaling pathway via STAT
ligand−gated ion channel signaling pathway
toll−like receptor 4 signaling
adenylate cyclase−activating 2−protein−coupled receptor signaling
regulation of transmission of nerve impulse
positive regulation of receptor signaling pathway via STAT
jasmonic acid mediated signaling pathway
neuropeptide signaling pathway
cell surface pattern recognition receptor signaling pathway
immune response−activating cell surface receptor signaling pathway
regulation of cellular response to hypoxia
regulation of phosphatidylinositol 3−kinase signaling
cytokine−mediated signaling pathway
positive regulation of signaling receptor activity
regulation of signaling receptor activity
ionotropic glutamate receptor signaling pathway
glutamate receptor signaling pathway
cellular response to extracellular stimulus
positive regulation of tumor necrosis factor (ligand) superfamily member 11 production
positive regulation of chemokine (C−C motif) ligand 1 production
positive regulation of granulocyte colony−stimulating factor production
positive regulation of interleukin−5 production
positive regulation of interleukin−6 production
positive regulation of chemokine production
positive regulation of interleukin−13 production
regulation of cytokine production
positive regulation of chemokine production
positive regulation of interleukin−23 production
positive regulation of interleukin−1 production
positive regulation of interleukin−10 production
regulation of interleukin−6 production
regulation of interleukin−1 production
regulation of interleukin−23 production
regulation of interleukin−27 production
regulation of interleukin−5 production
regulation of interleukin−12 production
regulation of macrophage chemoattractant, protein−specific, ccl2 production
regulation of macrophage stimulating factor production
liquid clearance, open tracheal system
dorsal trunk growth, open tracheal system
maintenance of dauer
central nervous system morphogenesis
cuticle development involved in collagen and cuticulin−based cuticle molting cycle
Kupffer's vesicle development
central nervous system formation
adhesion receptor−mediated virion attachment to host cell
virion assembly
viral budding via host ESCRT complex
viral budding
modulation by host of symbiont process
entry into host
pore formation by virus in membrane of host cell
virion attachment to host cell
viral transcription
viral budding from plasma membrane
transport of virus
transport of virus in multicellular host
viral life cycle
viral budding from nuclear membrane
DNA−templated viral transcription
viral process
movement in host
viral capsid assembly
viral process
viral release from host cell
viral entry into host cell
migration in host
viral DNA genome packaging
transport of virus in host, cell to cell
viral genome packaging
cytolysis by symbiont of host cells
adhesion of symbiont to host cell
modulation by host of viral process
adhesion of symbiont to host
pupariation
hepaticobiliary system development
trachea development
lumen formation, open tracheal system
myelination
renal system vasculature development
seed development
hepaticobiliary system development
hair follicle development
angiogenesis
lactation
renal system development
chaeta development
liver development
biomineral tissue development
left/right axis specification
tracheal morphogenesis
gonad development
kidney development
regulation of cytokine production
detection of chemical stimulus involved in sensory perception of taste
sensory perception of chemical stimulus
sensory perception of sound
detection of chemical stimulus involved in sensory perception
sensory perception of sweet taste
multicellular organismal water homeostasis
defecation
neuroassociative learning
bone resorption
excretion
sensory perception of salty taste
neuronal action potential
sensory perception of touch
sensory perception of smell
epithelial structure maintenance
amyloid−beta clearance
hair cycle process
molting cycle, collagen and cuticulin−based cuticle
regulation of sensory perception
heart contraction
sensory perception
detection of chemical stimulus involved in sensory perception
sleep
secretion by tissue
transmission of nerve impulse
hair cycle
digestive system process
secretion
protein complex oligomerization
plasma membrane organization
plasma membrane fusion
extracellular matrix assembly
macrophage differentiation
astrocyte activation
photoreceptor cell axon guidance
substrate adhesion−dependent cell spreading
positive regulation of osteoclast differentiation
negative regulation of vulval development
negative regulation of osteoclast differentiation
negative regulation of remodeling of larval development
proteasome assembly
centromere complex assembly
proteasome regulatory particle
CENP−A−containing nucleosome
chromatin remodeling at centromere
chromosome organization
sporulation resulting in formation of a cellular spore
regulation of heart contraction
regulation of bone remodeling
negative regulation of hemopoesis
negative regulation of leukocyte differentiation
positive regulation of nervous system process
negative regulation of myelination
mitochondrion disassembly
heterochromatin organization
lytic vacuole organization
organelle disassembly
lysosome organization
spindle organization
mesangial cell proliferation
mesangial cell differentiation
regulation of myelination
cell septum assembly
regulation of microtubule polymerization
ribosome disassembly
mitochondria disassembly
mitochondria fission
regulation of dendrite morphogenesis
synkyrin formation
spore wall assembly
root hair cell differentiation
regulation of glial cell proliferation
regulation of nervous system process
regulation of flower development
regulation of shoot system development
regulation of myelination
regulation of vulval development
regulation of hepatocyte proliferation
regulation of blood vessel
regulation of neurogenesis
division septum assembly
microtubule cytoskeleton organization involved in mitosis
membrane fusion
cell wall assembly
mitochondrial cytochrome c oxidase biogenesis
extracellular matrix organization
chromosome organization
regulation of mesodermal cell differentiation
cell fate specification
trichoblast differentiation
trichoblast maturation
plant epidermis development
pigment granule maturation
homologous chromosome segregation
monopolar spindle attachment to meiosis I kinetochore
attachment of spindle microtubules to kinetochore involved in meiotic chromosome segregation
meiotic sister chromatid cohesion
regulation of mitotic cell cycle spindle assembly checkpoint
meiotic sister chromatid separation
meiotic chromosome separation
deactivation of mitotic spindle assembly checkpoint
negative regulation of mitotic spindle assembly checkpoint signaling
mitotic sister chromatid cohesion
mitotic spindle assembly checkpoint signaling
mitotic sister chromatid segregation
mitotic cytokinesis
chromosome pairing at meiosis
sister chromatid cohesion
establishment of sister chromatid cohesion
metaphase plate congregation
chromosome segregation
lysosomal microautophagy
light absorption
photosynthesis
killing of cells of other organism
cell−cell fusion
asymmetric stem cell division
G1 to G0 transition
leukocyte apoptotic process
execution phase of apoptosis
symmetric cell division
myeloid cell apoptotic process
cytolysis
autophagy of nucleus
cell killing
regulation of membrane lipid distribution
cell−cell recognition
hemolysis in other organism
inflammatory cell apoptotic process
cell−matrix adhesion
pheromone metabolic process
fibroblast proliferation
neurotransmitter catabolic process
epithelial cell−cell adhesion
protein refolding
suppression by virus of host complement activation
positive regulation of inflammatory response
microglial cell activation
regulation of B cell activation
regulation of antimicrobial humoral response
regulation of immunoglobulin mediated immune response
myeloid leukocyte migration
leukocyte homeostasis
cytokine production
defense response to other organism
acrosome reaction
sperm−egg recognition
mating plug formation
fertilization
courtship behavior
fusion of sperm to egg plasma membrane involved in single fertilization
single fertilization
mating
mating behavior
regulation of female receptivity
sexual reproduction
female mating behavior
reproduction
regulation of DNA metabolic process
positive regulation of DNA metabolic process
positive regulation of DNA biosynthetic process
positive regulation of RNA metabolic process
positive regulation of telomerase activity
regulation of mRNA splicing, via spliceosome
DNA−templated transcription, termination
RNA capping
DNA catabolic process, exonucleolytic
mitochondrial transcription
RNA catabolic process
somatic cell DNA recombination
heterochromatin assembly
mismatch repair
apoptotic DNA fragmentation
regulation of DNA metabolic process
pericentric heterochromatin assembly
regulation of RNA splicing
DNA alkylation
DNA methylation
piRNA metabolic process
cellular oxidant detoxification
detection of chemical stimulus
response to alkaline pH
response to odorant
response to chemical
response to osmotic stress
defense response
olfactory behavior
detection of biotic stimulus
acute−phase response
response to oxygen
response to nutrient
response to sterol
response to nematode
response to salicylic acid
response to copper ion
response to salt stress
response to ecdysone
response to exogenous dsRNA
olfactory learning
response to ketone
response to starvation
response to superoxide
response to hydrogen peroxide
response to arsenic−containing substance
response to cadmium ion
response to osmotic stress
response to oxygen
response to ketone
response to salicylic acid
response to copper ion
response to salt stress
response to ecdysone
response to exogenous dsRNA
response to hydrogen peroxide
response to arsenic−containing substance
response to cadmium ion
response to pheromone
response to sterol
response to nematode
response to dsRNA
response to ion
response to hypoxia
response to ion
response to cadmium ion
response to hydrogen peroxide
response to arsenic−containing substance
response to cadmium ion
response to ion
response to hypoxia
response to ion
response to cadmium ion
response to hypoxia
response to ion
response to cadmium ion
response to hypoxia
response to ion
response to cadmium