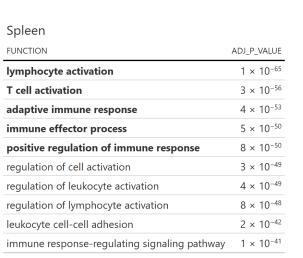
## Main functions from overrepresentation analysis plotted by tissue



# Α

#### Heart **FUNCTION** ADJ\_P\_VALUE $3 \times 10^{-27}$ muscle cell development $1 \times 10^{-26}$ muscle structure development $2 \times 10^{-24}$ myofibril assembly $2 \times 10^{-24}$ striated muscle cell development muscle tissue development $3 \times 10^{-24}$ $3 \times 10^{-24}$ cardiac muscle tissue development $3 \times 10^{-24}$ muscle system process

striated muscle tissue development

muscle cell differentiation

heart contraction

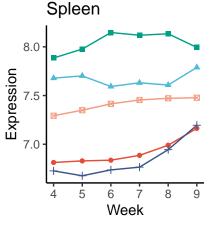
### C

### Muscle - Skeletal

FUNCTION	ADJ_P_VALUE
muscle structure development	$7 \times 10^{-29}$
muscle system process	$8 \times 10^{-27}$
muscle organ development	$5 \times 10^{-25}$
muscle cell development	$1 \times 10^{-21}$
muscle contraction	$1 \times 10^{-21}$
muscle cell differentiation	$4 \times 10^{-20}$
striated muscle cell differentiation	$4 \times 10^{-19}$
myofibril assembly	$3 \times 10^{-18}$
striated muscle cell development	$3 \times 10^{-18}$
striated muscle contraction	$1 \times 10^{-16}$

# E

Stomach	
FUNCTION	ADJ_P_VALUE
digestion	1 × 10 <sup>-4</sup>
regulation of hormone levels	$6 \times 10^{-4}$
gastric acid secretion	$2 \times 10^{-3}$
peptide hormone secretion	$2 \times 10^{-3}$
peptide transport	$2 \times 10^{-3}$
peptide secretion	$3 \times 10^{-3}$
digestive system process	$6 \times 10^{-3}$
amide transport	$6 \times 10^{-3}$
hormone transport	$6 \times 10^{-3}$
hormone secretion	6 × 10 <sup>-3</sup>
G	



# **Function**

- adaptive immune response
- immune effector process
- lymphocyte activation
- positive regulation of immune response
- T cell activation

5

Function

- heart contraction

myofibril assembly

Week

muscle cell development

muscle structure development

muscle tissue development

Heart

Expression

 $2 \times 10^{-23}$ 

 $5 \times 10^{-23}$ 

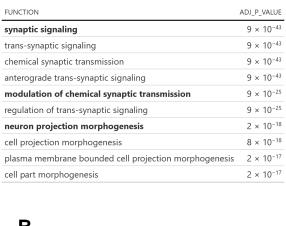
 $1 \times 10^{-22}$ 

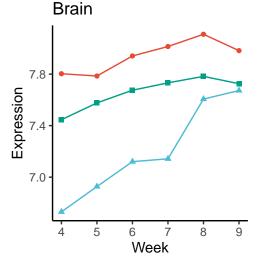
8.0

7.0

Brain	
FUNCTION	ADJ_P_VALUE
synaptic signaling	9 × 10 <sup>-43</sup>
trans-synaptic signaling	$9 \times 10^{-43}$
chemical synaptic transmission	$9 \times 10^{-43}$
anterograde trans-synaptic signaling	$9 \times 10^{-43}$
modulation of chemical synaptic transmission	$9 \times 10^{-25}$
regulation of trans-synaptic signaling	$9 \times 10^{-25}$
neuron projection morphogenesis	$2 \times 10^{-18}$
cell projection morphogenesis	$8 \times 10^{-18}$
plasma membrane bounded cell projection morphogenesis	$2 \times 10^{-17}$
cell part morphogenesis	$2 \times 10^{-17}$

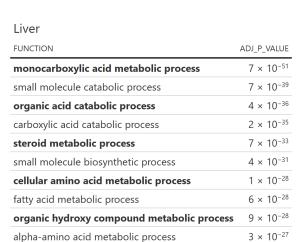


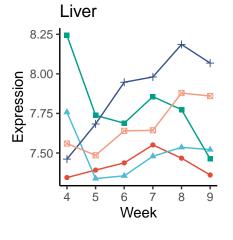




### Function

- modulation of chemical synaptic transmission
- neuron projection morphogenesis
- synaptic signaling

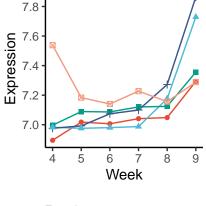




#### Function

- cellular amino acid metabolic process

# Muscle - Skeletal



### Function

Stomach

- muscle cell development
- muscle contraction
- muscle structure development muscle system process
- striated muscle cell differentiation

Testis	
FUNCTION	ADJ_P_VALUE
male gamete generation	$1 \times 10^{-35}$
spermatogenesis	$3 \times 10^{-34}$
microtubule-based movement	$2 \times 10^{-26}$
cilium organization	$2 \times 10^{-26}$
cilium assembly	$2 \times 10^{-23}$
microtubule cytoskeleton organization	$2 \times 10^{-23}$
meiotic cell cycle	$2 \times 10^{-23}$
cilium movement	$3 \times 10^{-20}$
nuclear division	$1 \times 10^{-18}$

 $2 \times 10^{-18}$ 



Н

meiotic cell cycle process

D

<del></del>	monocarboxylic acid metabolic process
-	organic acid catabolic process
+	organic hydroxy compound metabolic process
-8-	steroid metabolic process
Te	estis
8.1 - uoii	

Expressic 1.8 7.2 5 6 Week

### Function

cilium assembly

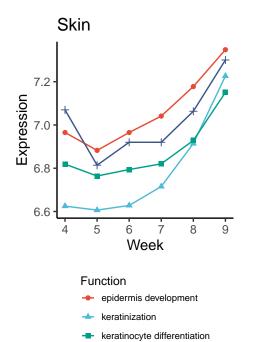
cilium organization

male gamete generation

	8.50 -	•
_	8.25 <b>-</b>	
Expression	8.00 -	
Σ̈́	7.75 -	
	7.50 -	
		4 5 6 7 8 9 Week
		Function

Function		
•	digestion	
-	peptide hormone secretion	
-	regulation of hormone levels	

Skin	
FUNCTION	ADJ_P_VALUE
epidermis development	2 × 10 <sup>-21</sup>
skin development	$9 \times 10^{-21}$
keratinization	$6 \times 10^{-17}$
keratinocyte differentiation	$2 \times 10^{-14}$
epidermal cell differentiation	$1 \times 10^{-10}$
intermediate filament cytoskeleton organization	$9 \times 10^{-10}$
intermediate filament-based process	$1 \times 10^{-9}$
intermediate filament organization	$6 \times 10^{-9}$
regulation of water loss via skin	$2 \times 10^{-8}$
establishment of skin barrier	1 × 10 <sup>-7</sup>



+ skin development