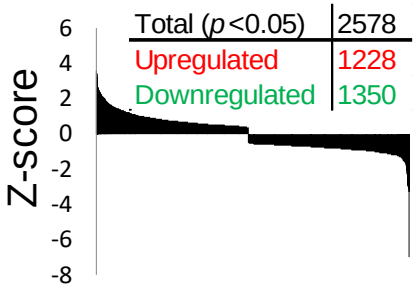
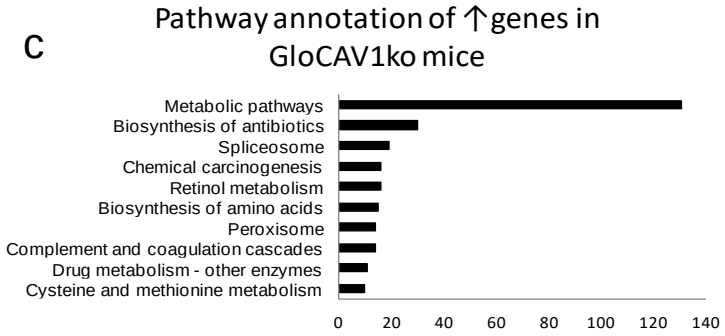
a

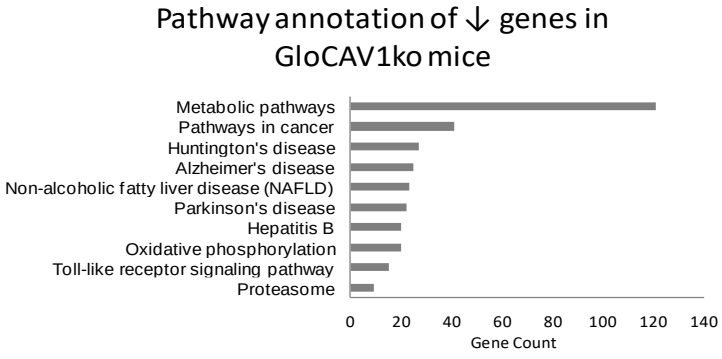


b

Gene ID	Z-score	Gene ID	Z-score
Hspa8	3.6	*Tpmt*	-7.0
Egr1	3.6	*Dct*	-3.3
Wdr92	3.6	*Csad*	-3.1
Hspd1	3.5	*Rpa3*	-3.0
Glud1	3.2	*Kcnk5*	-3.0
Acnat2	3.1	*Hes6*	-2.9
Cyp2b9	3.0	*Tpmt*	-2.9
Eef2	3.0	*Pcsk9*	-2.6
Ces1b	2.9	*Csad*	-2.4
Lyz2	2.8	*Pdilt*	-2.4
Gys2	2.7	*Cav1*	-2.4
Ugt1a10	2.7	*Dct*	-2.3
Eif4a2	2.7	*Ciart*	-2.3
Igfbp2	2.6	*Cyp4a12b*	-2.3
Ugt1a9	2.6	*Tpmt*	-2.1
Eef2	2.6	*Ddit4*	-2.0
Gys2	2.6	*Sepw1*	-1.9
H2-Ab1	2.6	*Cryl1*	-1.9
Parp16	2.5	*Whamm*	-1.9
Hp	2.5	*Sort1*	-1.9

c





d

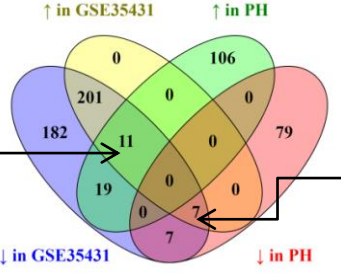
Biological Process	Count	Count	Biological Process
lipid metabolic process	58	26	autophagy
metabolic process	54	66	protein transport
oxidation-reduction process	70	50	cellular response to DNA damage stimulus
lipid homeostasis	11	159	transport
cholesterol metabolic process	16	61	apoptotic process

Cellular Component	Count	Count	Cellular Component
extracellular exosome	294	551	cytoplasm
cytoplasm	510	184	cytosol
cytosol	183	491	nucleus
endoplasmic reticulum	143	176	mitochondrion
mitochondrion	161	59	mitochondrial inner membrane

Molecular Function	Count	Count	Molecular Function
nucleotide binding	171	333	protein binding
oxidoreductase activity	69	19	beta-catenin binding
poly(A) RNA binding	106	170	nucleotide binding
protein binding	309	12	protein complex scaffold
hydrolase activity	133	103	RNA polymerase II core promoter sequence-specific DNA binding

e

Upregulated:
Pcyt2, *Cps1*, *Pla2g12b*, *Srxn1*, *Nudt9*, *Oat*, *Mlycd*, *Decr2*, *Pigp*, *Stard10*, *Cyb5r3*



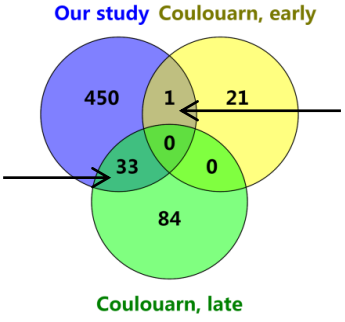
Downregulated:
Dsel, *Kcnk5*, *Gba*, *Impad1*, *Inpp5a*, *Ndst1*, *Slc46a1*

a

Gene	p-Value	Z-score
Cdkn2b	4.8E-07	4.2
Ltbp1	0.0004	2.3
Tgfbr1	1.30E-08	2.6
Smad7	1.5E-07	2.5
Acvr1	0.000026	2.0
Tgfb1	0.0004	1.6
Thbs1	0.0000044	1.0
Bmpr2	0.0003	1.1
Nbl1	0.0009	0.8
Tgif1	0.0001	0.6
Smad5	0.0085	0.4
Tgfbr2	0.0007	0.7
Bmpr1a	0.0001	0.6
Cul1	0.0016	0.4
Bambi	0.0366	0.2
Smad4	0.0014	0.3
Smad6	0.0007	0.3
Rhoa	0.0246	0.2

b

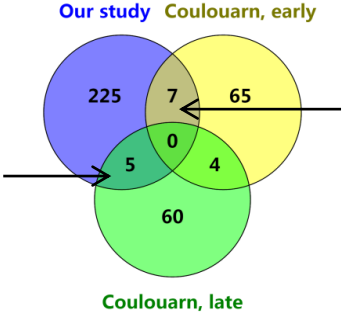
downregulated:
Idh1, Slc35c1, Grhpr, Hmbs, Slc25a13, Dhrs1, Sepx1, Naprt1, Pcyt2, Dgat2, Asns, Slc35d2, Kctd3, Lpin2, Slc26a1, Hmgcs1, Dhcr7, Entpd5, Abcc3, Dhcr24, Gss, Sc4mol, Sqle, Uap1l1, Chka, Scp2, Hpgd, Slc40a1, Gpd1, Psat1, Aldob, Gpt2, Aldh1a1



downregulated:
Aldh3a2

c

upregulated:
Rdh10, Gsto1, Slc6a8, Sult1e1, Lpgat1



upregulated:
Slc25a37, Slc23a2, Clic4,Slc20a1,Qcnt2, Slc29a1, Coq10b