

## Supplementary Material

### CD36- and obesity-associated granulosa cells dysfunction

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**Table S1.** The differential expression genes with  $|FC| > 2$  and  $P < 0.05$  in the three comparisons: none-PCOS obesity versus none-PCOS normal weight (NPO/NPN), PCOS obesity versus none-PCOS normal weight(PO/NPN) and PCOS normal weight(PN) versus none-PCOS normal weight(PO/NPN)

Comparison groups	Gene symbol	Gene name	Fold change	P-value
NPO/NPN	BUB1	budding uninhibited by benzimidazoles 1 homolog (yeast)	2.729926	5.00E-05
	SFRP4	secreted frizzled-related protein 4	2.682557	0.000354
	CD36	CD36 molecule	2.62085	0.001716
	PLA2G7	phospholipase A2, group VII	2.42166	0.001395
PO/NPN	THBS1	thrombospondin 1	2.917672	0.005433
	TGFBI	transforming growth factor, beta-induced	2.506347	0.002349
	CCL2	chemokine (C-C motif) ligand 2	2.479746	0.003745
	LPXN	leupaxin	2.44658	0.002769
	CD36	CD36 molecule (thrombospondin receptor)	2.428831	0.001574
	CD86	CD86 molecule	2.399942	0.002565
	GPRIN3	GPRIN family member 3	2.386819	0.004576
	CD4	CD4 molecule (CD4)	2.36725	0.005702
	CLEC5A	C-type lectin domain family 5, member A	2.343325	0.000955
	HLA-DRA	major histocompatibility complex, class II, DR alpha	2.181893	0.005508
	CD79A	CD79a molecule	2.177837	0.006107
	THBD	thrombomodulin	2.170155	0.003776
	CSF1R	colony stimulating factor 1 receptor	2.115555	0.004951
	ANKRD1	ankyrin repeat domain 1	2.105617	0.00032
	EPB41L4B	erythrocyte membrane protein band 4.1 like 4B	-2.003087	0.019825
	MICA	MHC class I polypeptide-related sequence A	-2.020578	0.016559
	CHL1	cell adhesion molecule with homology to L1CAM	-2.025295	0.007285
	TSPAN8	tetraspanin 8	-2.030751	0.04824
	ACPP	acid phosphatase, prostate	-2.067292	0.006517
	PRG4	proteoglycan 4	-2.112553	0.00529
PLEKHG1	pleckstrin homology and RhoGEF domain containing G1	-2.11826	0.004839	
TMEM97	transmembrane protein 97	-2.137702	0.030442	
DUOXA2	dual oxidase maturation factor 2	-2.142965	0.018744	
EDNRA	endothelin receptor type A	-2.248854	0.008226	
NPAS2	neuronal PAS domain protein 2	-2.276683	0.037823	

	MARC2	mitochondrial amidoxime reducing component 2	-2.311985	0.014344
	NTS	neurotensin	-2.367904	0.007019
	FREM2	FRAS1 related extracellular matrix protein 2	-2.40994	0.013541
	CDRT1	CMT1A duplicated region transcript 1	-2.448111	0.029742
	AKAP5	A kinase (PRKA) anchor protein 5	-2.492932	0.03452
	ENPP5	ectonucleotide pyrophosphatase/phosphodiesterase 5	-2.515875	0.013425
	TRIM16	tripartite motif containing 16	-2.597017	0.00449
	OSBPL6	oxysterol binding protein-like 6	-3.275999	0.028031
	FGG	fibrinogen gamma chain	-5.276047	0.002297
	ANKRD1	ankyrin repeat domain 1	2.929859	0.002616
	C1orf141	chromosome 1 open reading frame 141	2.671146	0.002307
	SFRP4	secreted frizzled-related protein 4	2.635039	0.003506
	LRAT	lecithin retinol acyltransferase	2.543934	0.002976
	SEPP1	selenoprotein P, plasma, 1	2.488129	8.20E-05
	PRLR	prolactin receptor	2.398467	0.000119
	PLCXD3	phosphatidylinositol-specific phospholipase C, X domain containing 3	2.36539	0.00303
	ACAT2	acetyl-CoA acetyltransferase 2	-2.062199	0.029025
	HDC	histidine decarboxylase	-2.101394	0.013217
	DUOX2	dual oxidase 2	-2.127129	0.006076
	PNPLA3	patatin-like phospholipase domain containing 3	-2.128127	0.004281
	PLEKHG1	pleckstrin homology and RhoGEF domain containing 1	-2.143807	0.000124
PN/NPN	FADS2	fatty acid desaturase 2	-2.149555	0.002912
	GLI3	GLI family zinc finger 3	-2.187268	0.002169
	FASN	fatty acid synthase	-2.190347	0.002472
	NPAS2	neuronal PAS domain protein 2	-2.230525	0.001482
	MPHOSP H6	M-phase phosphoprotein 6	-2.23679	0.025568
	FJX1	four jointed box 1	-2.252424	0.000661
	AOX1	aldehyde oxidase 1	-2.258042	0.004039
	LCT	lactase (LCT)	-2.259957	0.002777
	SORD	sorbitol dehydrogenase	-2.338041	0.002013
	TRIM16	tripartite motif containing 16	-2.362406	0.00286
	NRCAM	neuronal cell adhesion molecule (NRCAM)	-2.475723	0.004549
	NTS	neurotensin	-2.54505	0.000324
	PRG4	proteoglycan 4	-2.587538	0.001067
	CCL20	chemokine (C-C motif) ligand 20	-2.684063	0.002636
	AKAP5	A kinase (PRKA) anchor protein 5	-2.707035	0.00736

OSBPL6	oxysterol binding protein-like 6	-2.803873	0.010598
MMP10	matrix metalloproteinase 10	-2.848742	0.005708
NKAIN1	Na <sup>+</sup> /K <sup>+</sup> transporting ATPase interacting 1	-2.896377	0.01282
CDRT1	CMT1A duplicated region transcript 1	-3.015232	0.000416
FGG	fibrinogen gamma chain	-3.921135	0.001979

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