

Figure S1 Quality control of metabolomics between the control group and OEB treatment group. The superposition of positive (A) and negative (B) total ions current graph; C, the biological repeatability assessment between samples in the observation groups; D, Score plots of principal components analysis for quality control and samples

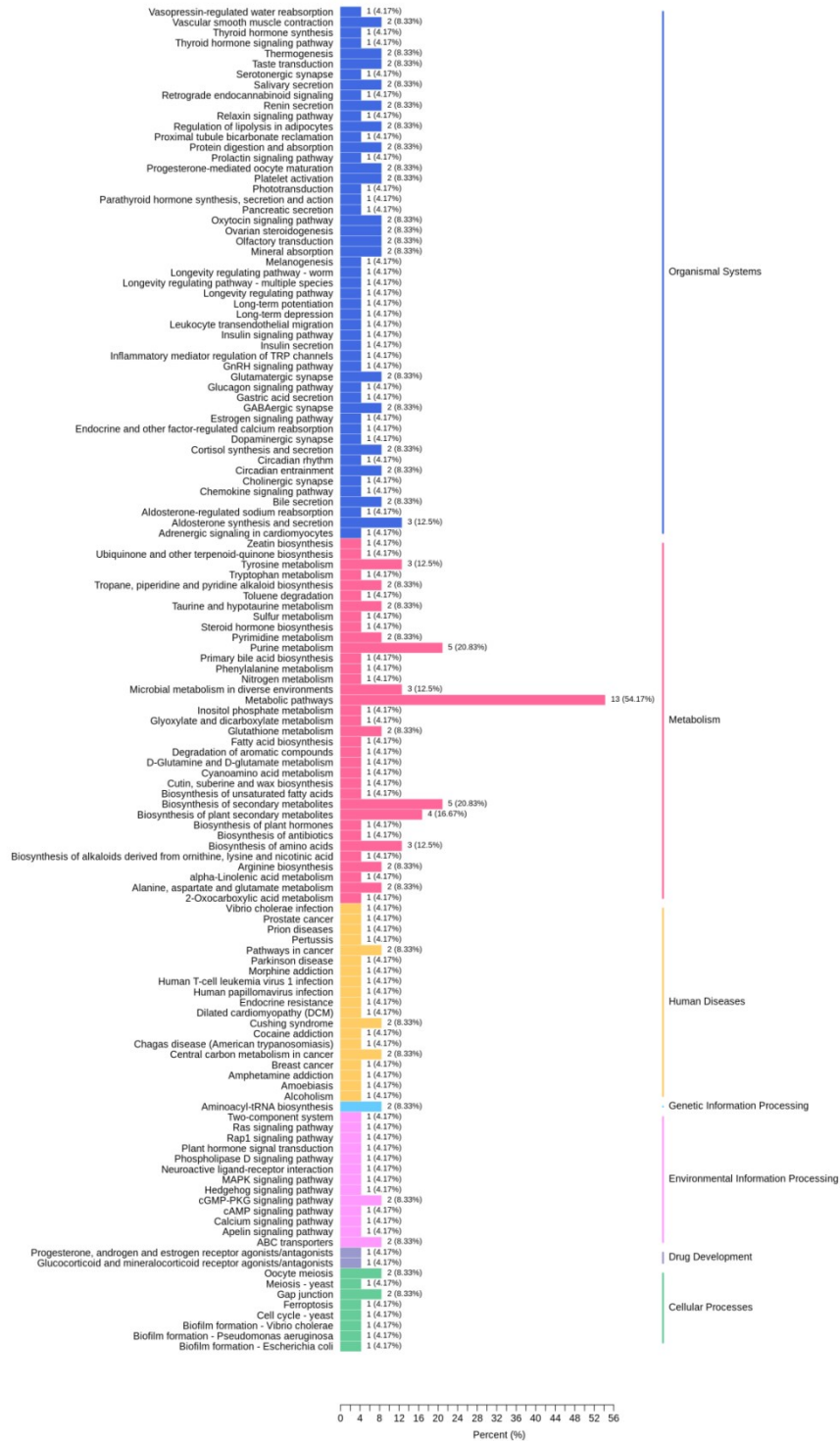


Figure S2 Classification chart of KEGG pathways annotated with differential metabolites. The ordinate is the name of the KEGG metabolic pathway. The abscissa is the number of annotated metabolites under the pathway, and the ratio of the number to the total number of annotated metabolites

Table S1 Primer sequences of target genes

Gene (symbol)	Direction	Primer Sequence	Accession number
<i>sod2</i>	Forward	GCAGGGAACCATCCACTTCG	NM_013671.3
	Reverse	CCTGCACTGGTACAGCCTTG	
<i>gpx1</i>	Forward	GTCTCTCTGAGGCACCACGA	NM_001329527.1
	Reverse	GCCATTCTGGTGTCCGAACT	
<i>cat</i>	Forward	CTGGAGTCTTCGTCCCGAGT	NM_009804.2
	Reverse	CATTCATGTGCCGGTGACCA	
<i>β-actin</i>	Forward	GCTGACAGGATGCAGAAGGA	NM_007393.5
	Reverse	GTGGACAGTGAGGCCAGGAT	

Table S2 42 significantly differential metabolites

Compounds	Class	VIP	Fold Change	Log ₂ FC	Type
(5-L-Glutamyl)-L-Amino Acid	Amino acid metabolomics	1.63	2.12	1.08	up
L-Asparagine Anhydrous	Amino acid metabolomics	1.38	2.83	1.50	up
L-Glutamine	Amino acid metabolomics	1.41	3.14	1.65	up
Γ-Glutamate-Cysteine	Amino acid metabolomics	1.43	2.14	1.10	up
3-(4-Hydroxyphenyl)-Propionic Acid	Benzene and substituted derivatives	1.70	4.26	2.09	up
Adenine	Nucleotide metabolomics	1.38	4.94	2.30	up
DI-P-Hydroxyphenyllactic Acid	Organic acid and its derivatives	1.68	2.55	1.35	up
L-3-Phenyllactic Acid	Organic acid and its derivatives	1.71	4.26	2.09	up
Phenyllactate (Pla)	Organic acid and its derivatives	1.70	4.27	2.09	up
2'-Deoxycytidine-5'-Monophosphate	Nucleotide metabolomics	1.82	2.28	1.19	up
DI-3,4-Dihydroxymandelic Acid	Organic acid and its derivatives	1.64	2.05	1.03	up
Hydroxyphenyllactic acid	Carbohydrate metabolomics	1.68	2.56	1.36	up
N-lactoyl-phenylalanine	Organic acid and its derivatives	1.44	2.05	1.03	up
C-glycosyltryptophan	Amino acid metabolomics	1.44	3.22	1.69	up
Methionine Sulfoxide	Amino acid metabolomics	1.67	9.02	3.17	up
N-Acetyl-L-Glutamic Acid	Amino acid metabolomics	1.66	2.22	1.15	up
Guanosine 3',5'-Cyclic Monophosphate	Nucleotide metabolomics	1.83	2.75	1.46	up
Metanephrine	Hormones	1.82	3.16	1.66	up
Progesterone	Hormones	1.65	3.63	1.86	up
1,3,7-Trimethyluric Acid	Organic acid and its derivatives	1.04	2.01	1.01	up
Cyclic Amp	Nucleotide metabolomics	1.57	2.08	1.06	up
Isoxanthopterin	Pteridines and derivatives	1.92	9.72	3.28	up
2-Aminoethanesulfonic Acid	Organic acid and its derivatives	1.55	2.02	1.01	up
Oleamide	Lipids fatty acids	1.65	2.18	1.12	up
Oleate	Lipids	1.60	2.73	1.45	up
Guanidinoethyl Sulfonate	Organic acid and its derivatives	1.54	2.01	1.01	up
Asp-Phe methyl ester	Organic acid and its derivatives	1.85	3.50	1.81	up
1-(4-Methoxyphenyl)-2-propanone	Benzene and substituted derivatives	1.66	2.16	1.11	up
Methylcysteine	Amino acid metabolomics	1.68	2.89	1.53	up
10-Undecenoic acid	Fatty acyls	1.55	2.30	1.20	up
Nα-Acetyl-L-glutamine	Amino acid metabolomics	1.77	2.01	1.01	up
L-Tryptophanamide	Amino acid metabolomics	1.71	2.21	1.14	up
Methoxyindoleacetic Acid	Indole and is derivatives	1.64	0.32	-1.65	down
gamma-Muurolene	Lipids fatty acids	1.01	0.37	-1.43	down
ADP-ribose	Nucleotide metabolomics	1.51	0.42	-1.24	down
DL-Benzylsuccinic acid	Lipids fatty acids	1.17	0.42	-1.25	down
N-Acetylvaline	Organic acid and its derivatives	1.24	0.39	-1.34	down
Scyllo inositol	Alcohol	1.38	0.43	-1.23	down
Hexadecanamide	Lipids fatty acids	1.23	0.28	-1.85	down
trans-3-Indoleacrylic acid	Organic acid and its derivatives	1.34	0.34	-1.56	down
Petroselinic Acid	Lipids	1.31	0.34	-1.55	down
Jasmonic acid	Lipids fatty acids	1.33	0.34	-1.57	down