

Table 1 Primer sequences

Primer	Sequence (5'→3')
CPOX-F	TCTACGCCATCCAAGGGACT
CPOX-R	GGAGAAGACTAAGGCACGGG
SLC35F5-F	GGTGACAGCTCTGTGAGTCC
SLC35F5-R	GAGACCTTCACGGTTTCGGT
GAPDH-F	ATGGGCAGCCGTTAGGAAAG
GAPDH-R	AGGAAAAGCATCACCCGGAG

Table 2 Minimum binding energy of molecular docking between biomarkers and potential drugs for subtype C1 patients.

	CPOX	SLC35F5
Mazindol	-13.1	-9.3
Acidinium	-8.8	-9.3
Moclobemide	-10	-7.7
Nilutamide	-12.4	-9.2
Venlafaxine	-9.6	-7.7

Table 3 Minimum binding energy of molecular docking between biomarkers and potential drugs for subtype C2 patients.

	CPOX	SLC35F5
FK-866	-12.6	-10
Celecoxib	-12.5	-10.1
Triacin-c	-8.1	-6
Nicardipine	-11.8	-9.7
Pyrazinamide	-7	-5.4

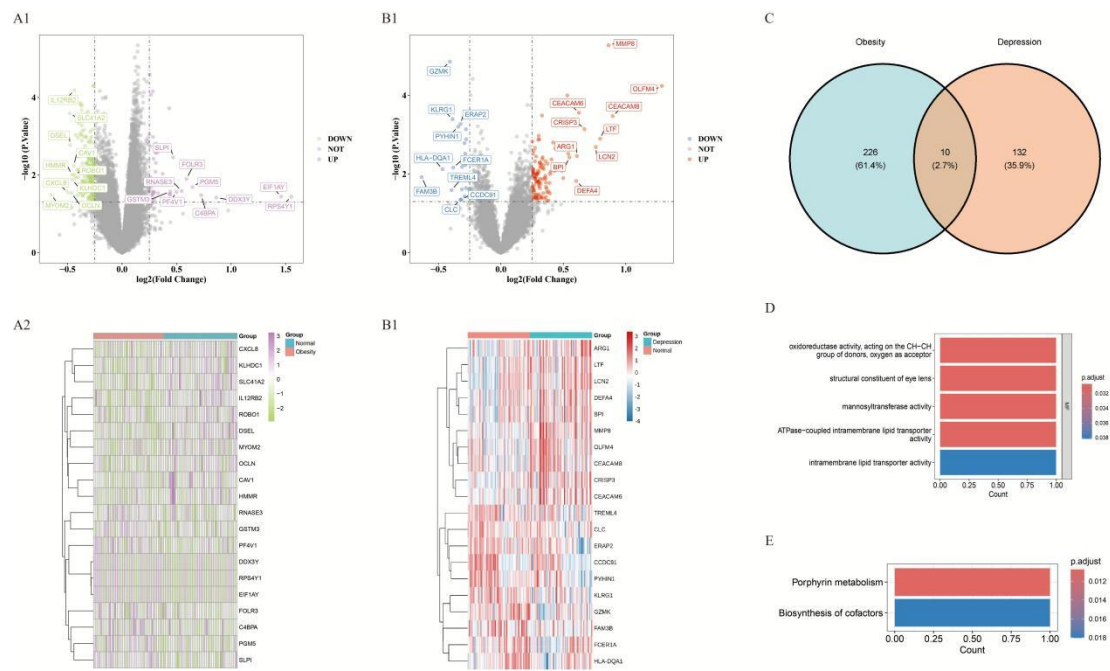


FIGURE 1 Differential Expression and Biomarker Identification in Obesity.

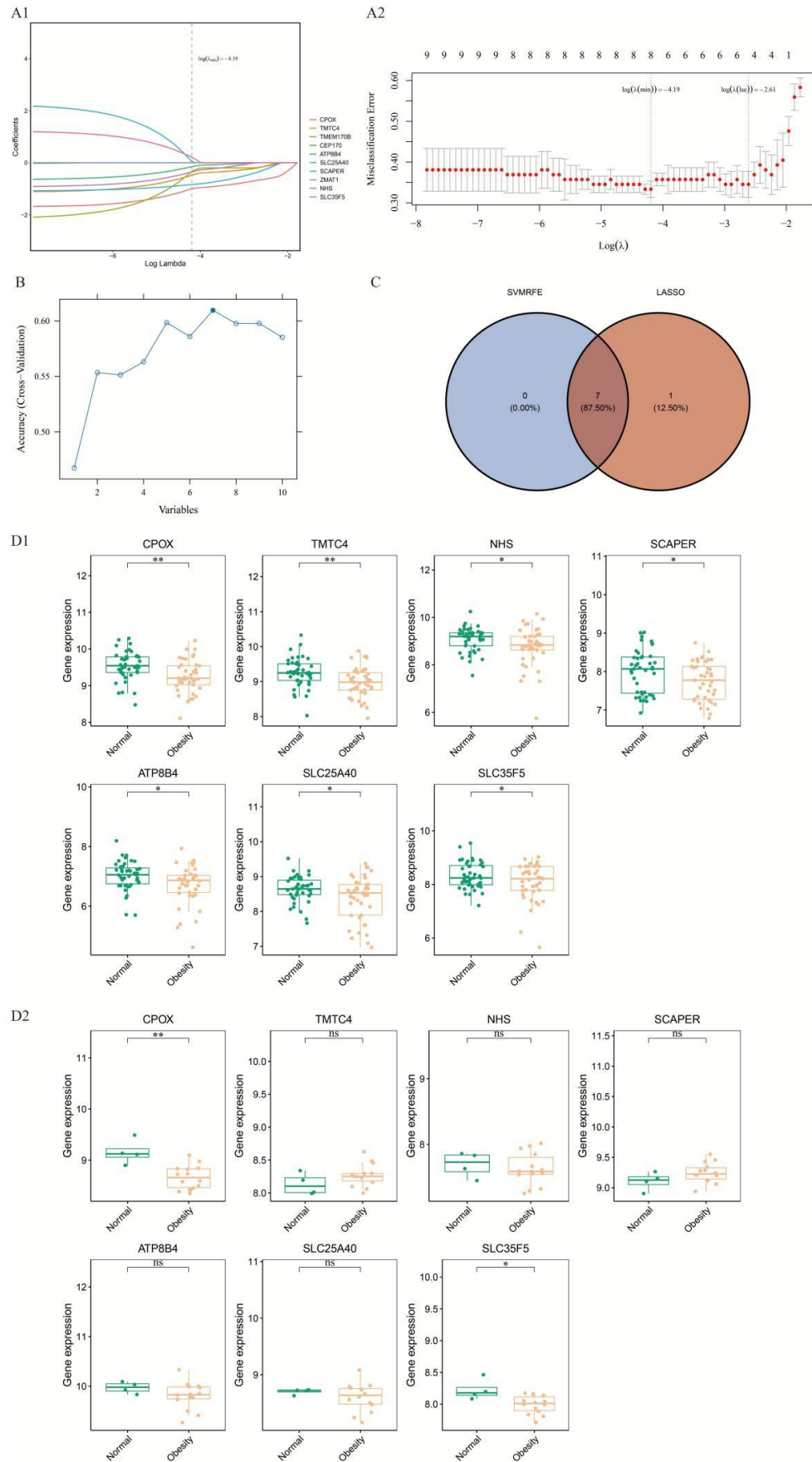


FIGURE 2 Biomarker Identification Using Machine Learning in Obesity.

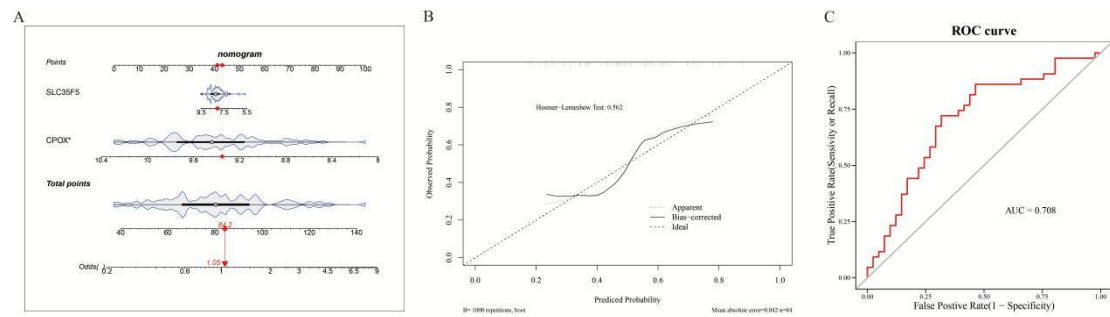


FIGURE 3 Biomarker Identification and Validation in Obesity and Comorbidities.

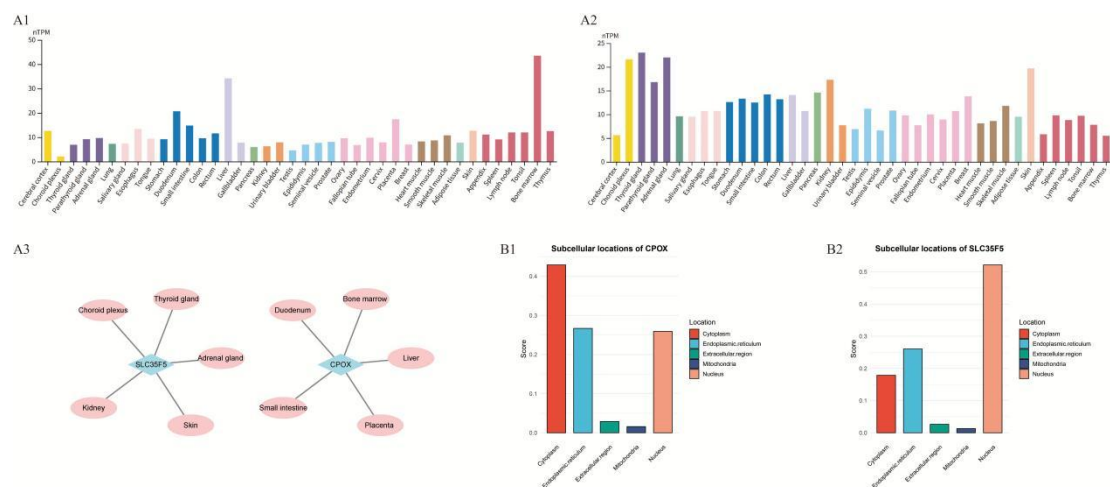


FIGURE 4 Immune Profiling and Molecular Pathway Analysis in Obesity.

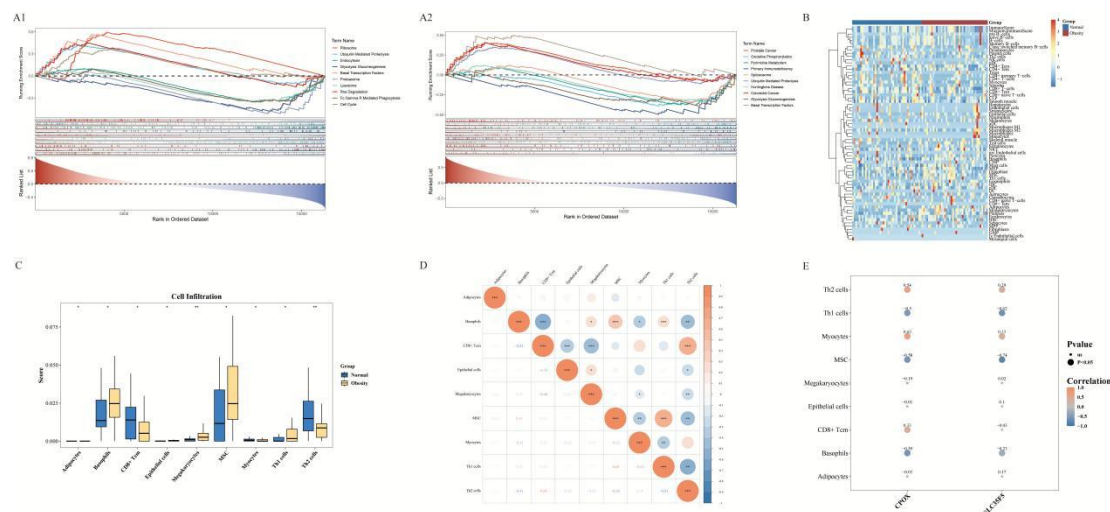


FIGURE 5 GSEA analysis of CPOX and SLC35F5 and characterization of the immune microenvironment in obesity.

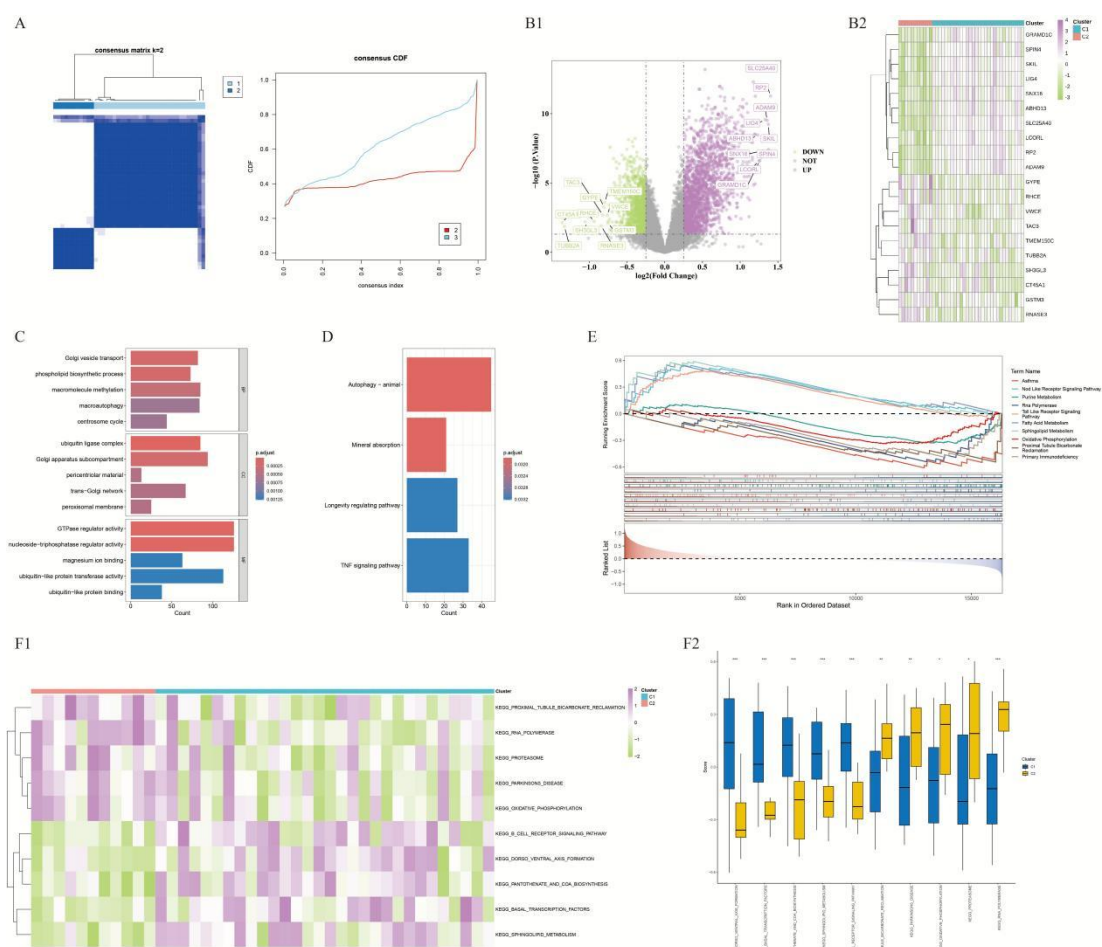


FIGURE 6 Immune and Molecular Mechanisms in Obesity and Depression.

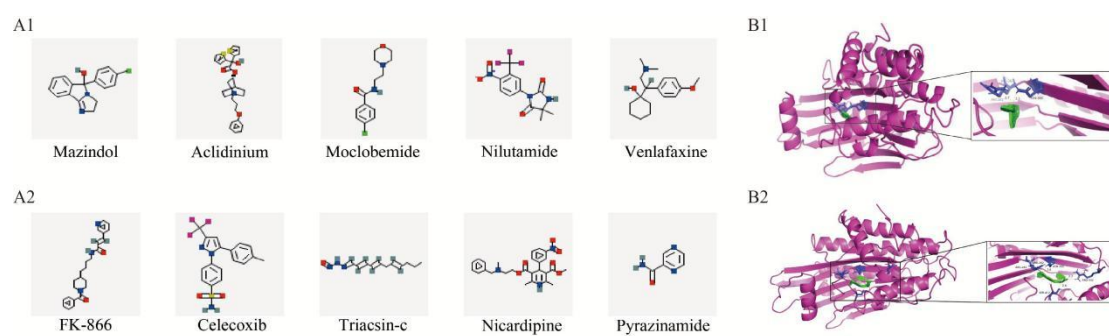


FIGURE 7 Molecular Docking and Drug Prediction for Obesity Subtypes.

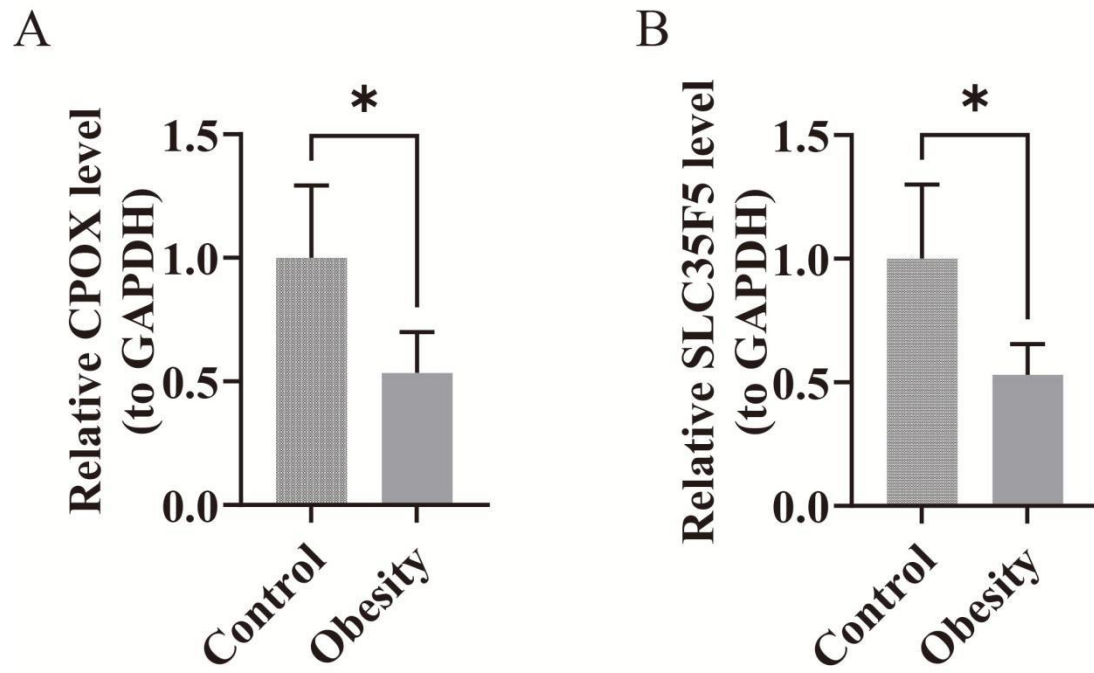


FIGURE 8 Expression and Validation of Biomarkers in Clinical Samples.