

Supporting Information

Glucagon-like peptide-1 analog liraglutide leads to multiple metabolic alterations in diet-induced obese mice

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This PDF file includes:
Supplementary Figures 1-6

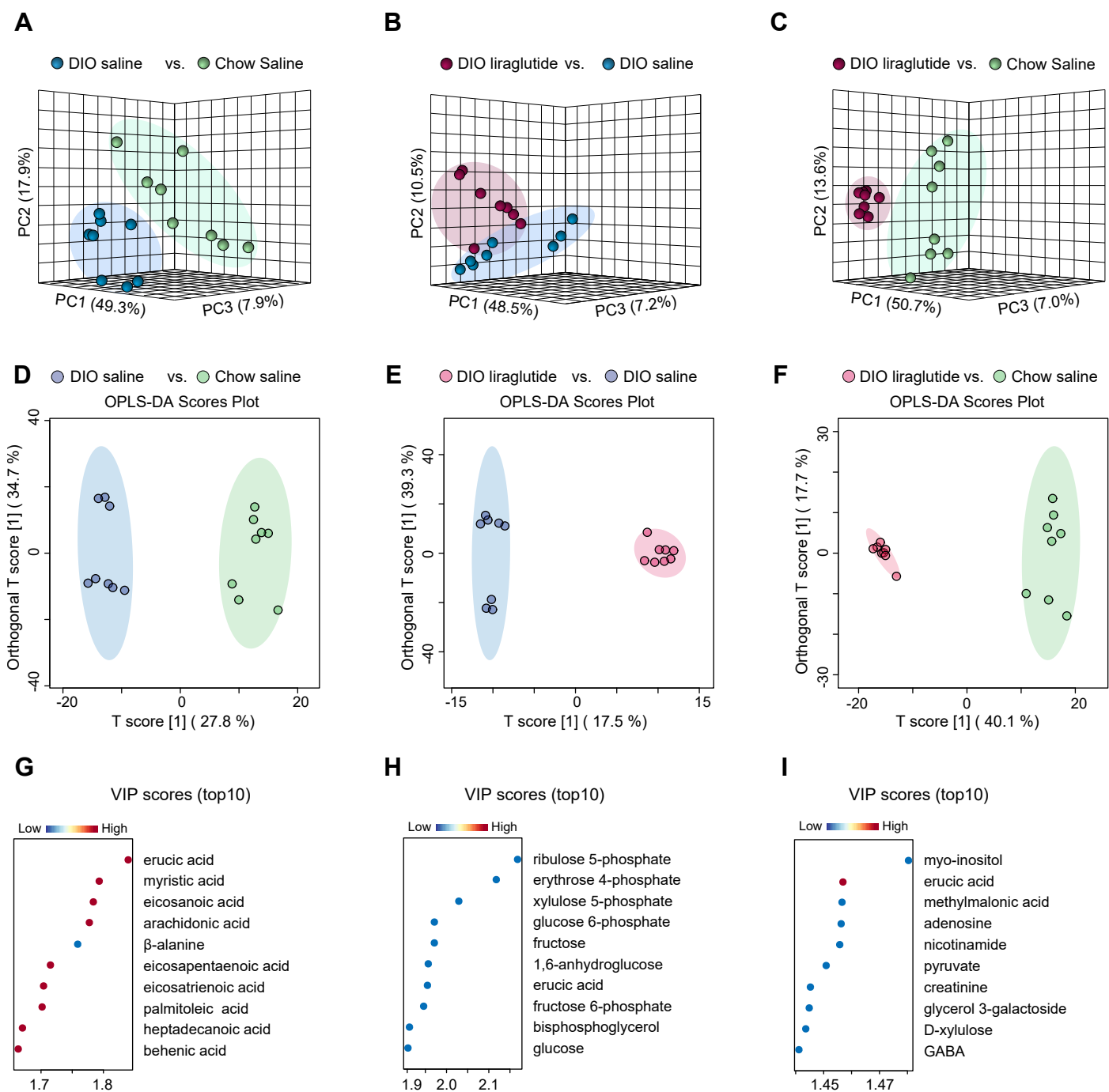


Figure S1. Comparative metabolite analysis between the groups

A–C, Principal component analysis (PCA) plots for (*A*) DIO saline vs. Chow saline, (*B*) DIO liraglutide vs. DIO saline, and (*C*) DIO liraglutide vs. Chow saline. *D–F*, Orthogonal partial least squares discriminant analysis (OPLS-DA) scores plots for (*D*) DIO saline vs. Chow saline, (*E*) DIO liraglutide vs. DIO saline, and (*F*) DIO liraglutide vs. Chow saline. *G–I*, Variable influence on projection (VIP) scores plots (top 10) for (*G*) DIO saline vs. Chow saline, (*H*) DIO liraglutide vs. DIO saline, and (*I*) DIO liraglutide vs. Chow saline. In *G–I*, colors show the number of tissue-specific metabolites up- or down-regulated in the volcano plot in Figure 2D.

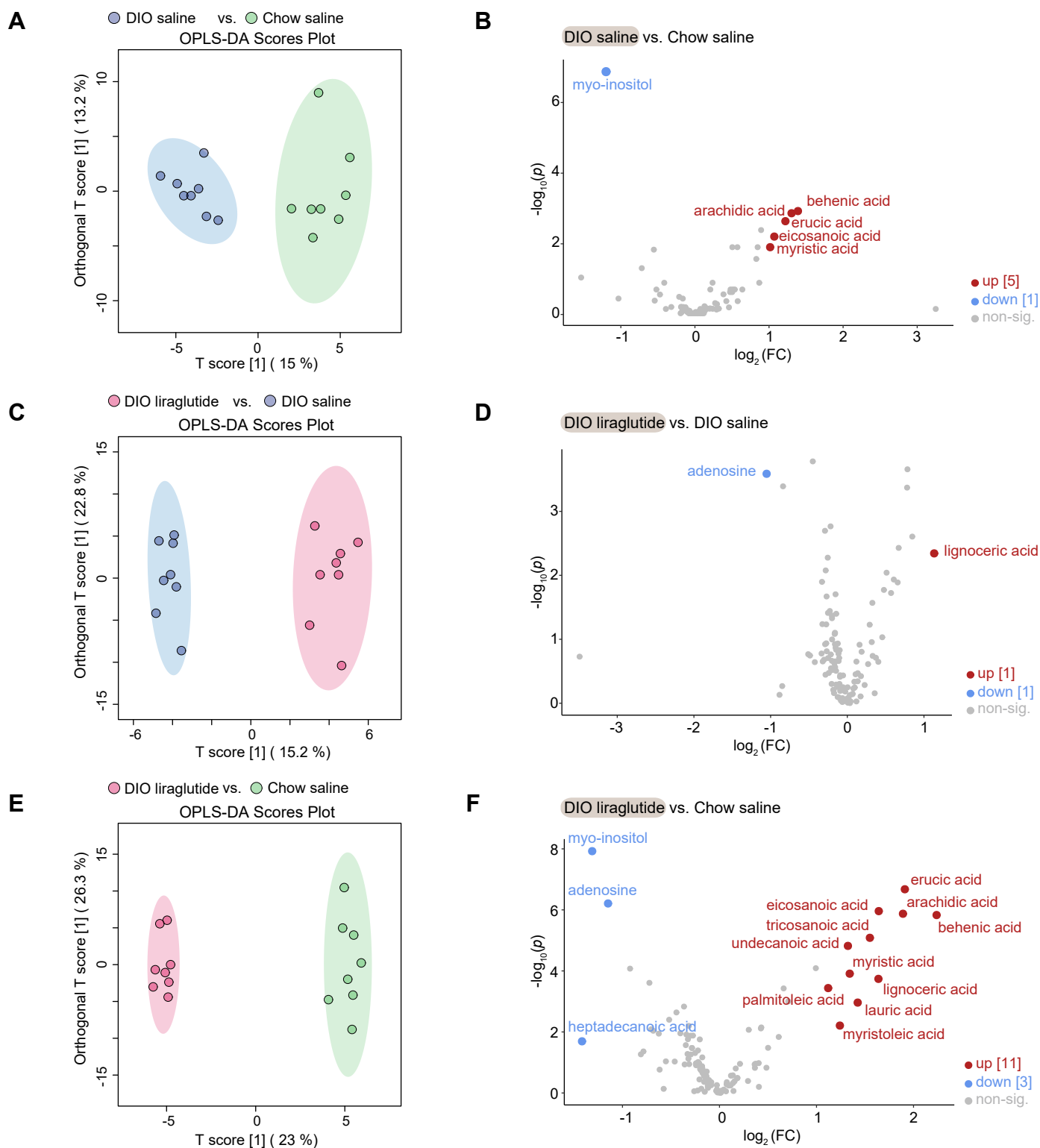


Figure S2. OPLS-DA and volcano plots for the hypothalamus

A, C, E, OPLS-DA scores plots for (**A**) DIO saline vs. Chow saline, (**C**) DIO liraglutide vs. DIO saline, and (**E**) DIO liraglutide vs. Chow saline. **B, D, F**, Volcano plots for (**B**) DIO saline vs. Chow saline, (**D**) DIO liraglutide vs. DIO saline, and (**F**) DIO liraglutide vs. Chow saline. In **B, D, F**, non-significant metabolites are shown in grey.

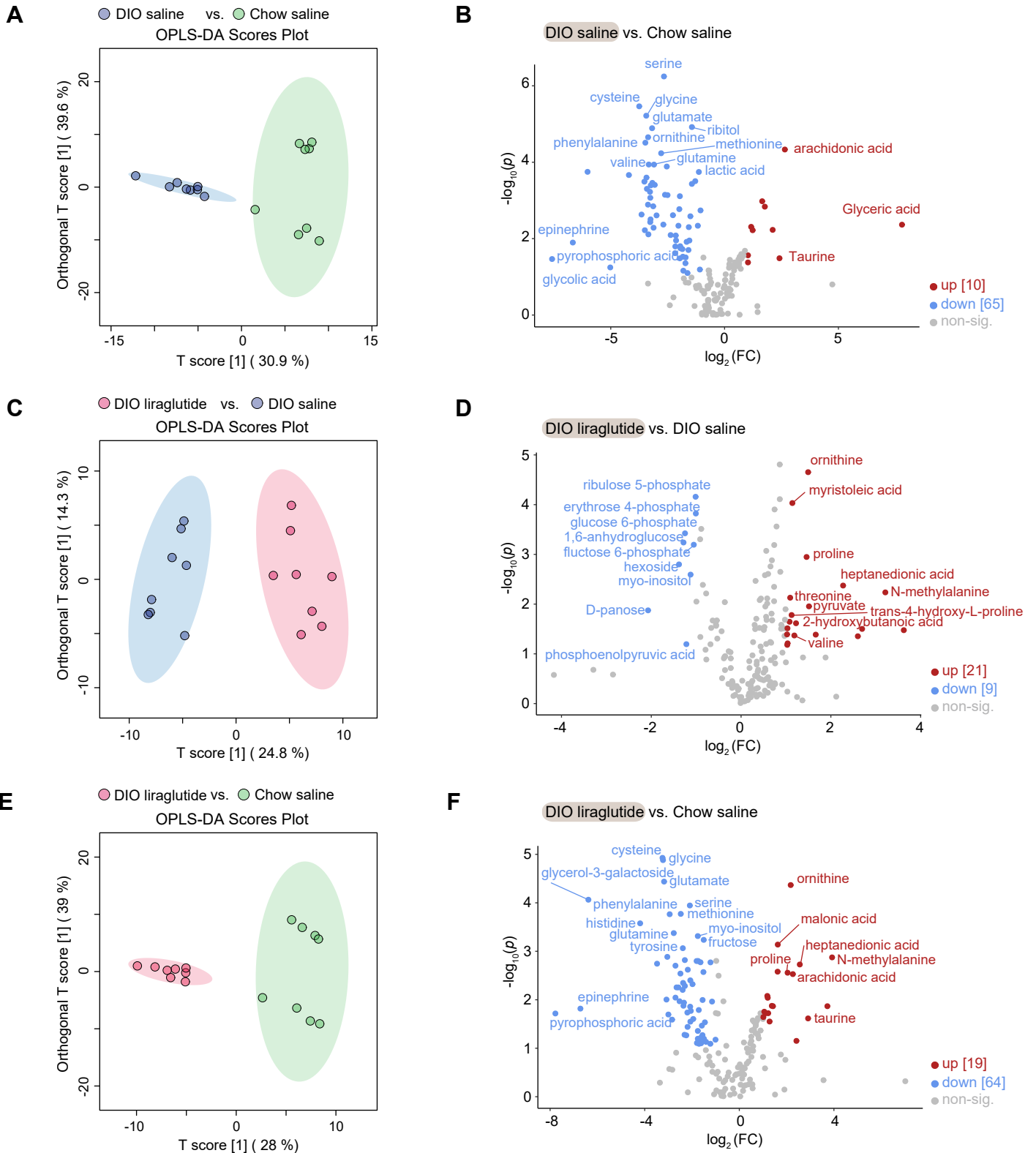


Figure S3. OPLS-DA and volcano plots for the plasma

A, C, E, OPLS-DA scores plots for **(A)** DIO saline vs. Chow saline, **(C)** DIO liraglutide vs. DIO saline, and **(E)** DIO liraglutide vs. Chow saline. **B, D, F**, Volcano plots for **(B)** DIO saline vs. Chow saline, **(D)** DIO liraglutide vs. DIO saline, and **(F)** DIO liraglutide vs. Chow saline. In **B, D, F**, non-significant metabolites are shown in gray.

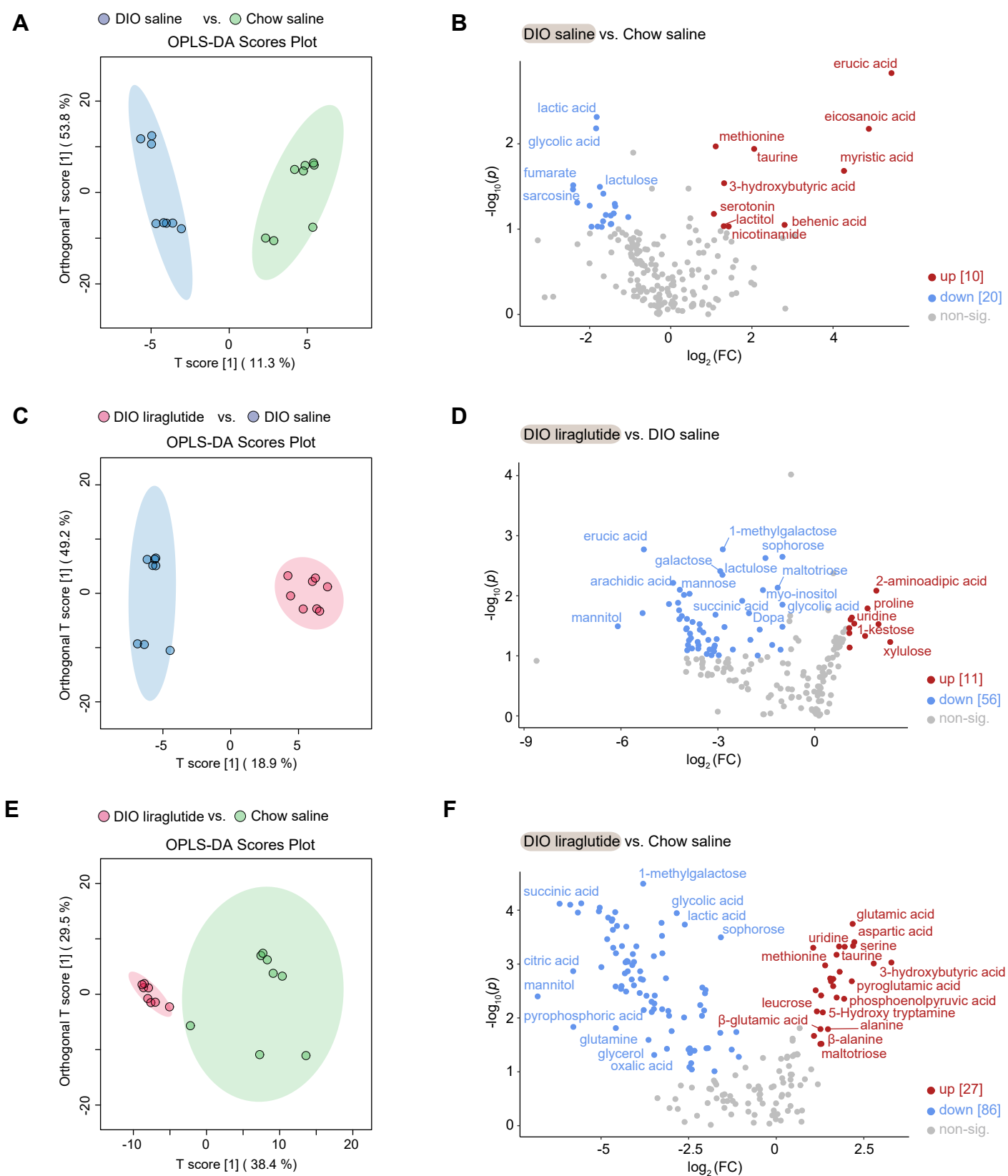


Figure S4. OPLS-DA and volcano plots for the liver

A, C, E, OPLS-DA scores plots for **(A)** DIO saline vs. Chow saline, **(C)** DIO liraglutide vs. DIO saline, and **(E)** DIO liraglutide vs. Chow saline. **B, D, F**, Volcano plots for **(B)** DIO saline vs. Chow saline, **(D)** DIO liraglutide vs. DIO saline, and **(F)** DIO liraglutide vs. Chow saline. In **B, D, F**, non-significant metabolites are shown in gray.

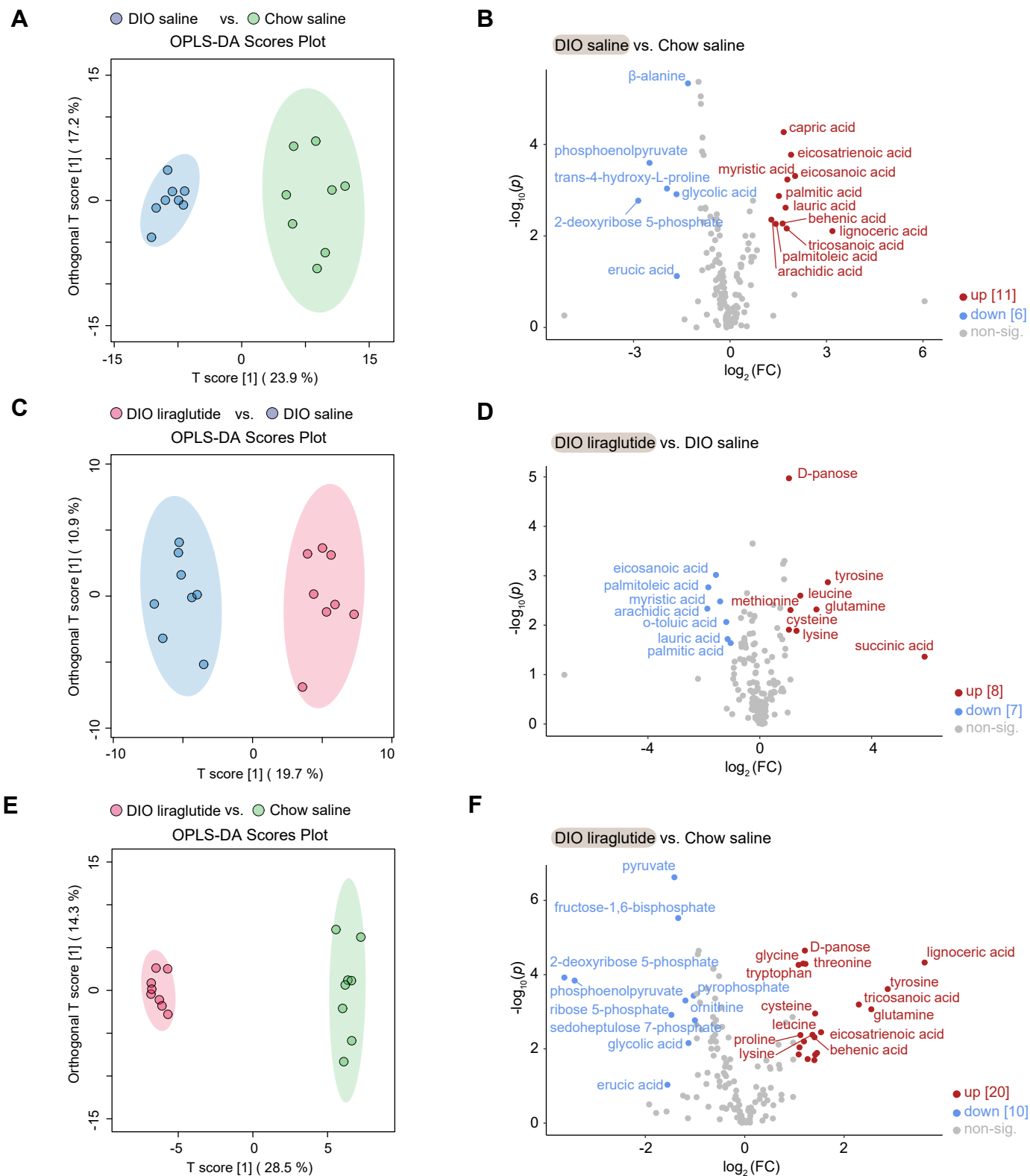


Figure S5. OPLS-DA and volcano plots for the skeletal muscle

A, C, E, OPLS-DA scores plots for (**A**) DIO saline vs. Chow saline, (**C**) DIO liraglutide vs. DIO saline, and (**E**) DIO liraglutide vs. Chow saline. **B, D, F**, Volcano plots for (**B**) DIO saline vs. Chow saline, (**D**) DIO liraglutide vs. DIO saline, and (**F**) DIO liraglutide vs. Chow saline. In **B, D, F**, non-significant metabolites are shown in grey.

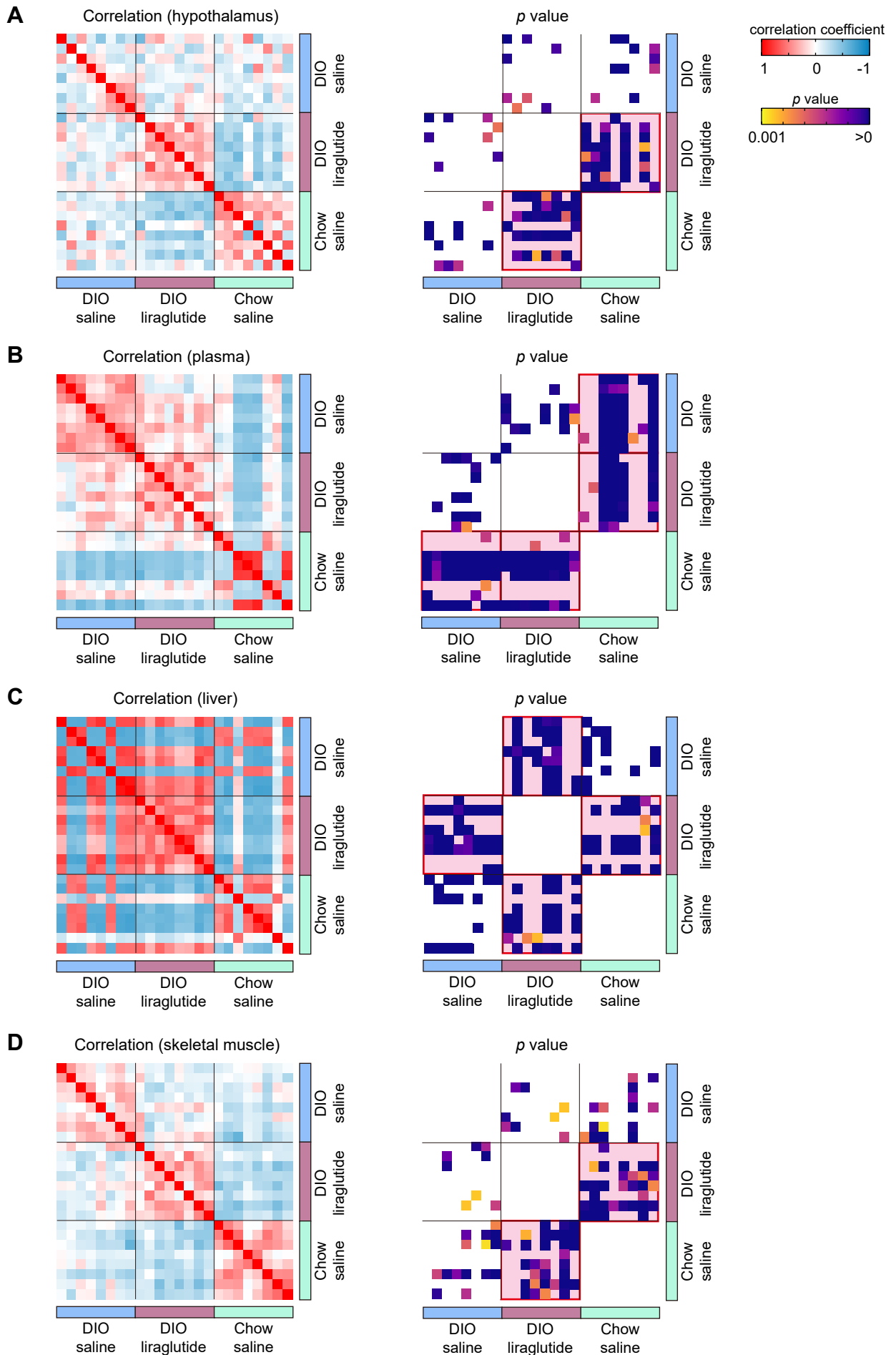


Figure S6. Tissue-specific correlations among the three groups

Correlations plots based on Pearson's correlation coefficients analysis: **A**, hypothalamus; **B**, plasma; **C**, liver; and **D**, skeletal muscle.