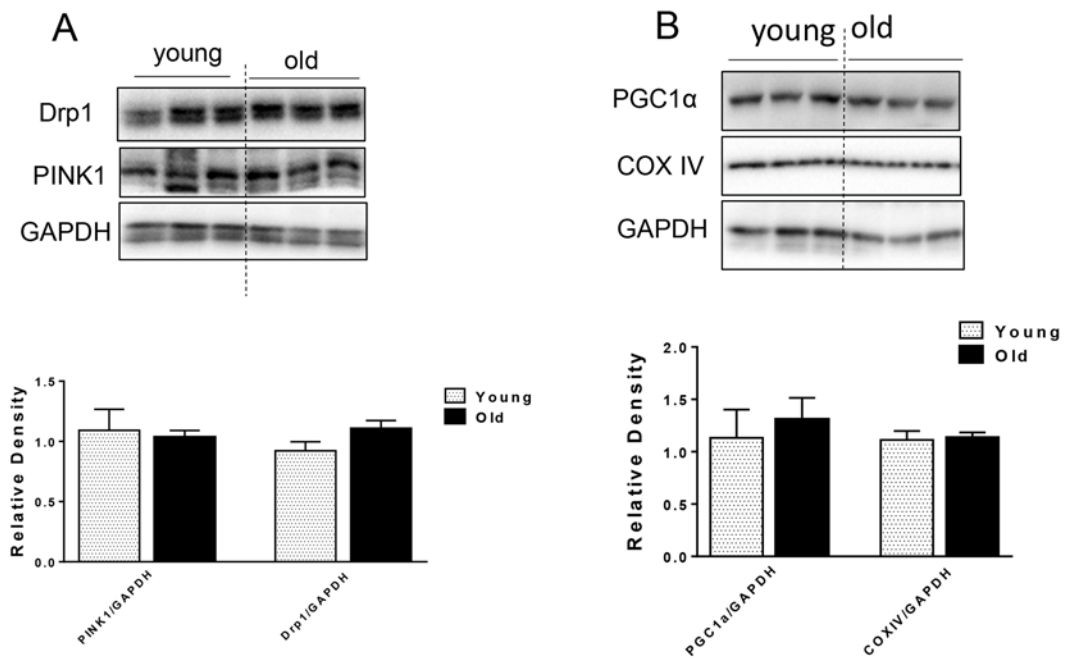
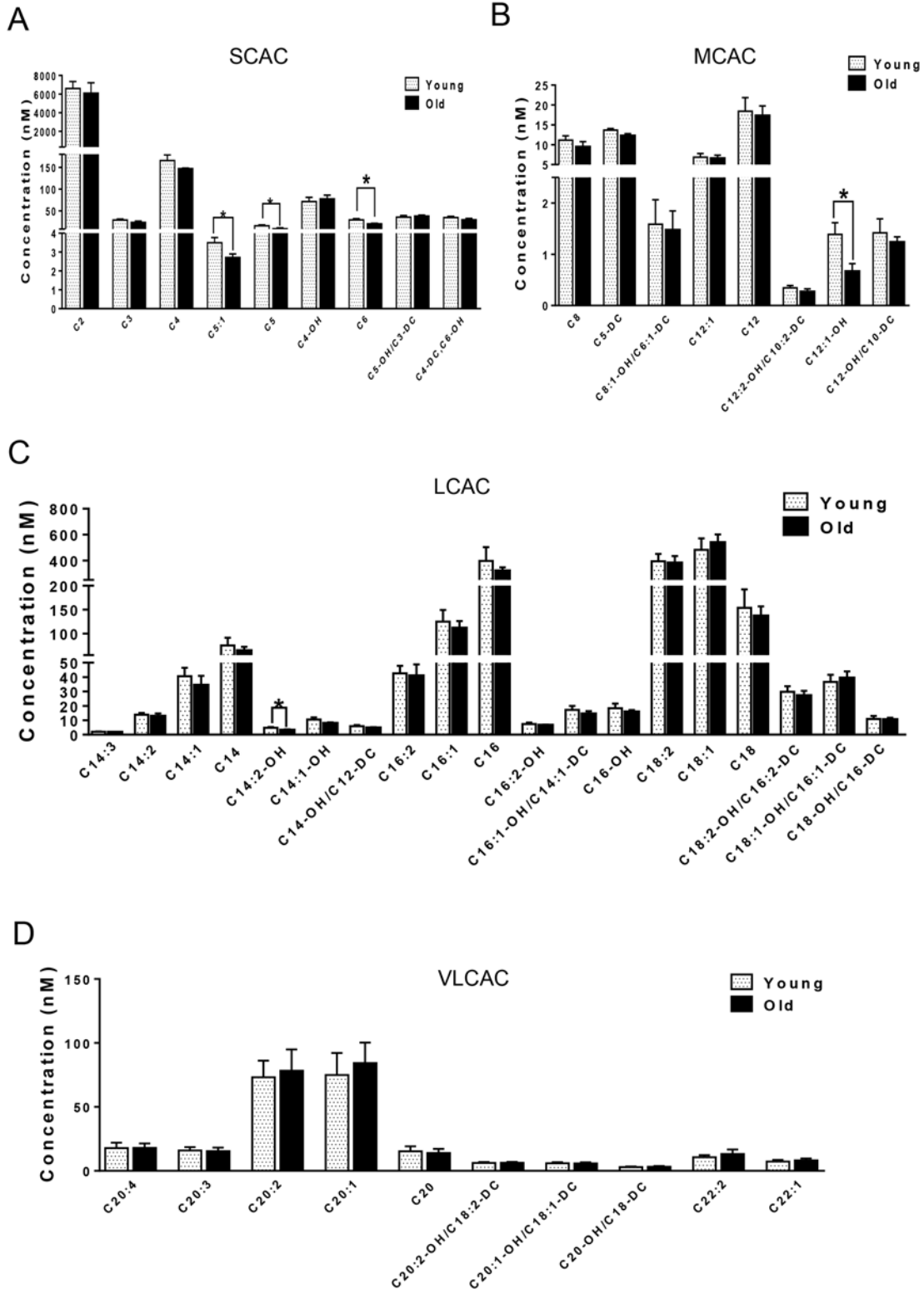


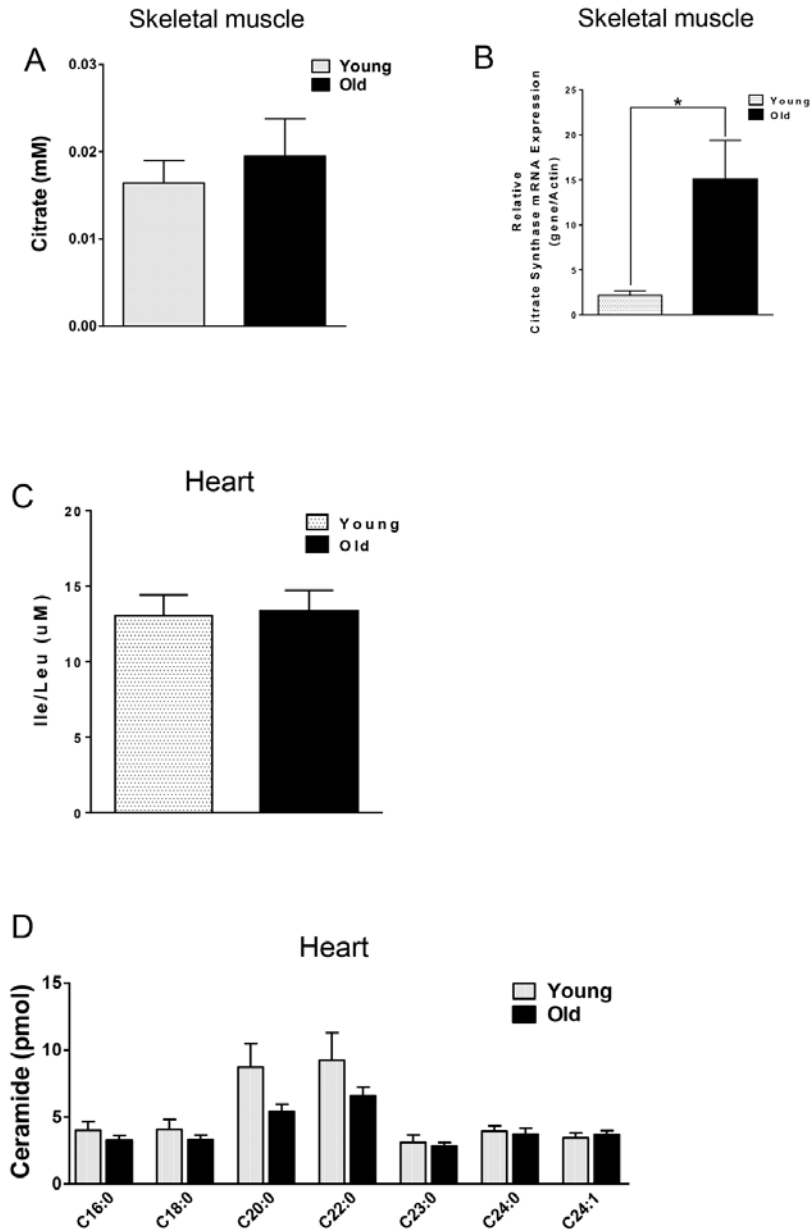
SUPPLEMENTARY MATERIALS



Supplementary Figure S1. The protein level of mitochondrial quality control markers in young and old heart. (A) Immunoblot and densitometric analysis of PINK1 and Drp1. **(B)** Immunoblot and densitometric analysis of PGC1 α and COXIV. Values are means \pm SEM for 6 young and 5 old mice in each group.



Supplementary Figure S2. Metabolomic analysis of acylcarnitines from skeletal muscle of young and old mice. (A-D) Metabolomic profiles of SCACs, MCACs, LCACs, VLCACs levels in cardiac muscle from young and old mice. Values are means±SEM for 6 young and 5 old mice in each group. *P < 0.05.



Supplementary Figure S3. Differential changes of metabolites in skeletal and cardiac muscle from young and old mice. (A) Citrate concentration in the young and old heart. (B) Increased mRNA expression of citrate synthase (CS) in old skeletal muscle. (C) Branched chain amino acid (BCAA) in the young and old heart. (D) Ceramide in young and old skeletal heart. Values are means±SEM for 6 young and 5 old mice in each group. *P < 0.05. **P < 0.01.