SUPPLEMENTAL FIGURES

The Impact of SRT2104 on Skeletal Muscle Mitochondrial Function, Redox Biology, and Loss of Muscle Mass in Hindlimb Unloaded Rats

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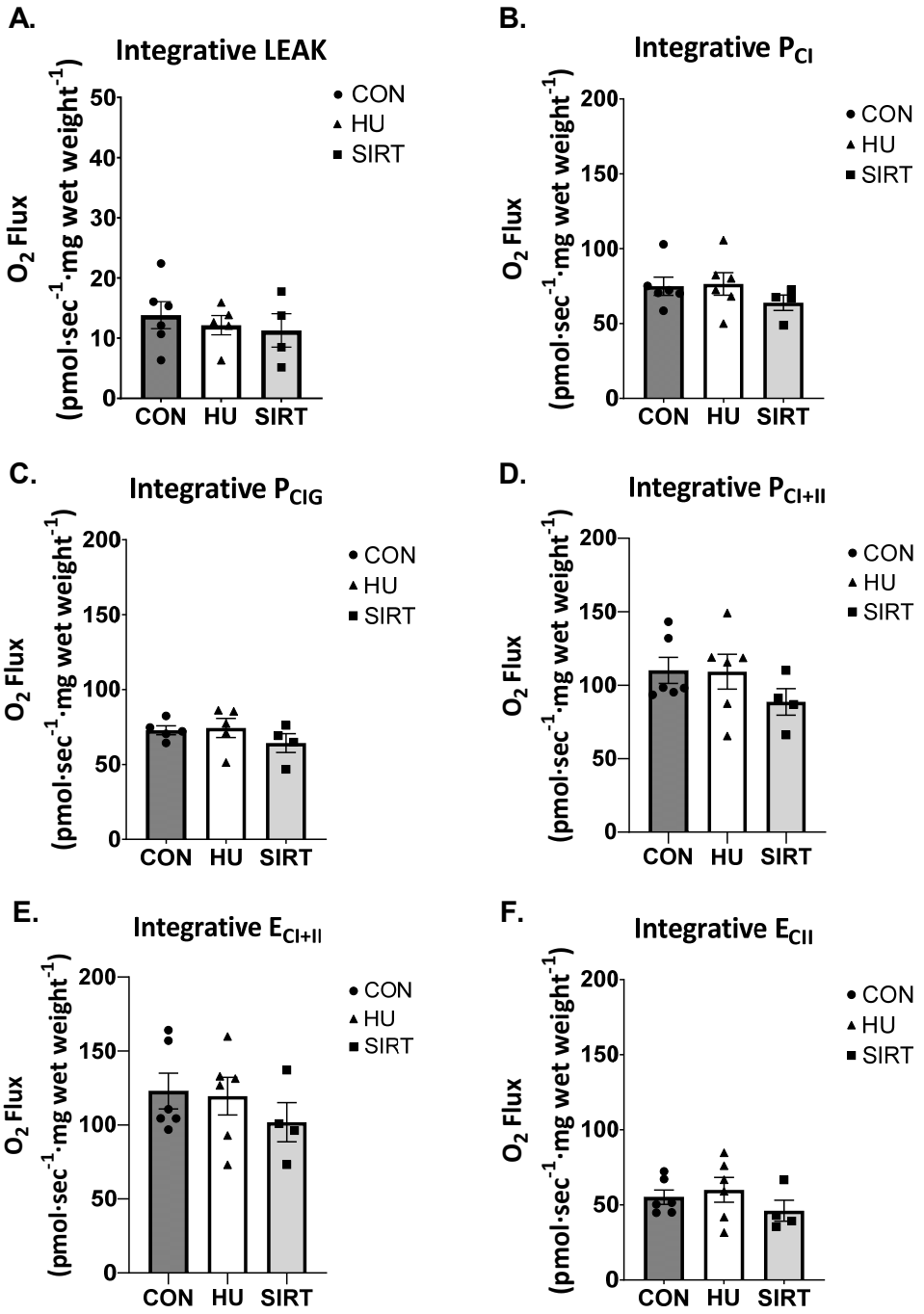
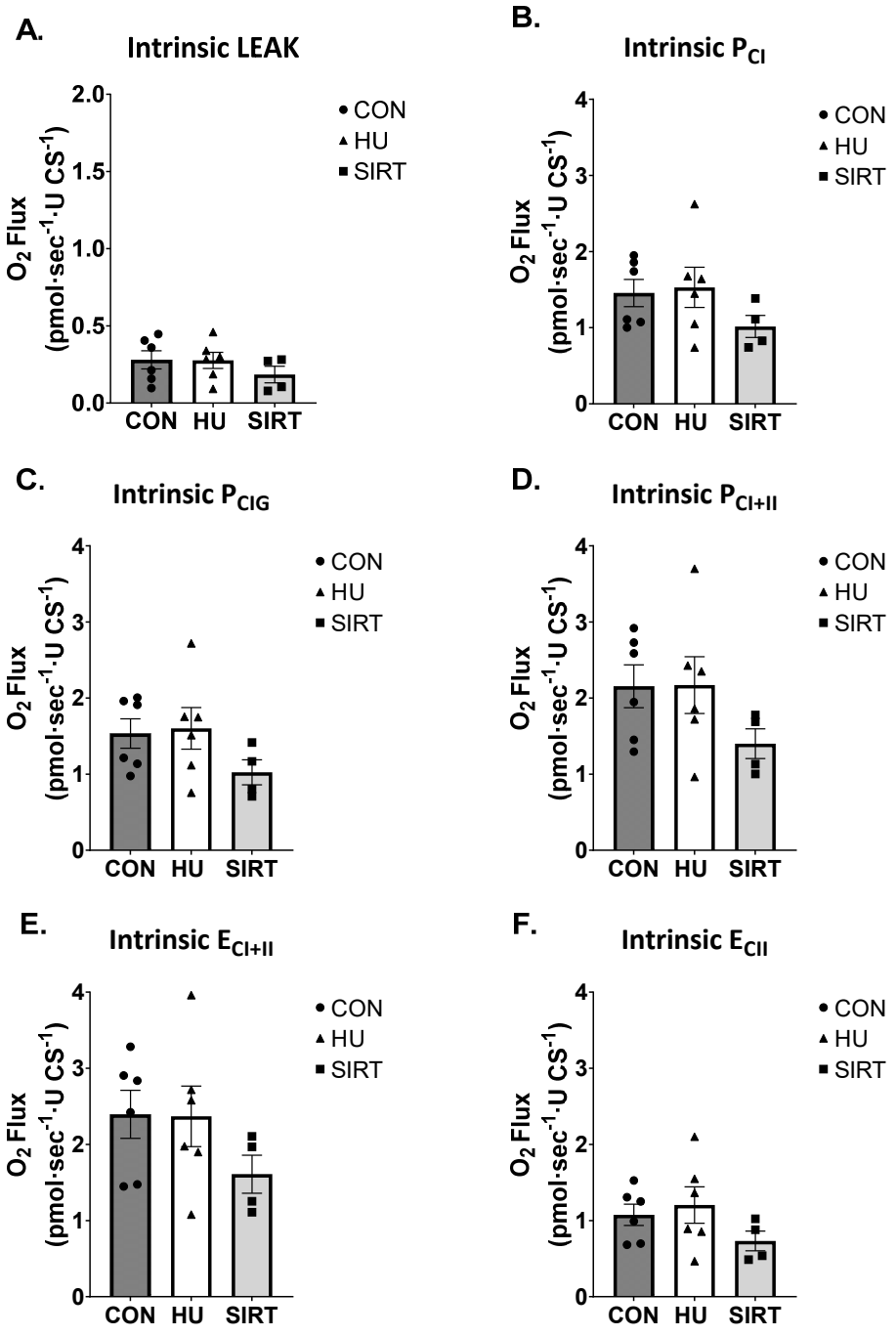
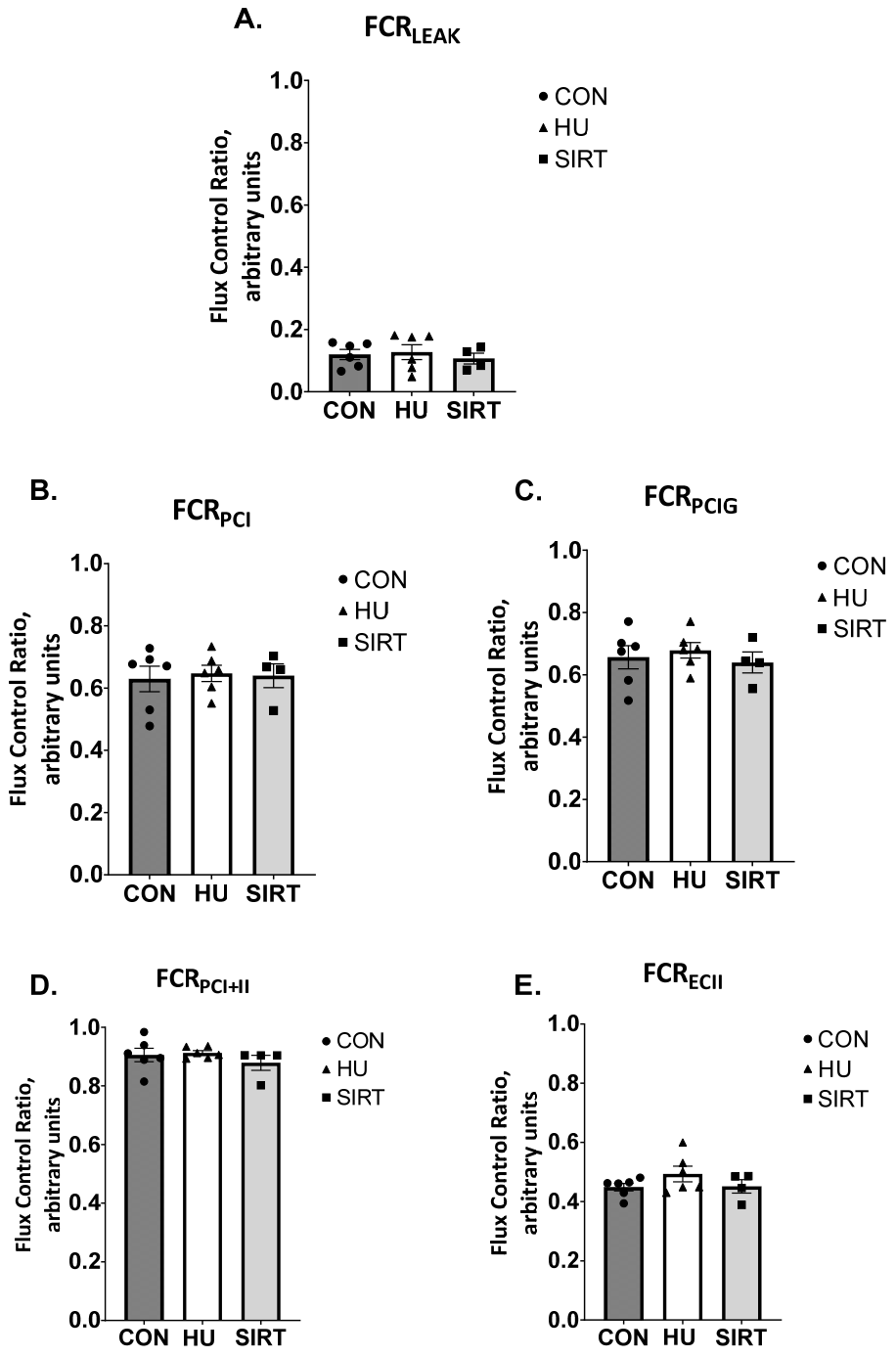


Supplementary Figure S1. Effect of the Sirtuin-1 Agonist SRT2104 on integrative (relative to tissue wet weight) mitochondrial capacities as measured by high-resolution respirometry in the soleus muscle of hindlimb unloaded rats. (A) Integrative proton LEAK, (B, C) oxidative phosphorylation supported by complex I (P_{CI} and P_{CIG}), (D) maximal coupled oxidative phosphorylation (P_{CI+II}), (E) maximal noncoupled electron transfer (E_{CI+II}), and (F) electron transfer supported by complex II only (E_{CII}) capacities in the gastrocnemius muscle of ambulatory control rats (CON; $n = 6$), rats hindlimb unloaded for 10 days (HU; $n = 6$), and rats hindlimb unloaded for 10 days while treated with SRT2104 (SIRT; $n = 4$). Values are means ± SEM.



Supplementary Figure S2. Effect of the Sirtuin-1 Agonist SRT2104 on intrinsic (relative to CS activity) mitochondrial capacities as measured by high-resolution respirometry in the soleus muscle of hindlimb unloaded rats. (A) Intrinsic proton LEAK, (B, C) oxidative phosphorylation supported by complex I (P_{CI} and P_{CIG}), (D) maximal coupled oxidative phosphorylation (P_{CI+II}), (E) maximal noncoupled electron transfer (E_{CI+II}), and (F) electron transfer supported by complex II only (E_{CII}) capacities in the gastrocnemius muscle of ambulatory control rats (CON; $n = 6$), rats hindlimb unloaded for 10 days (HU; $n = 6$), and hindlimb unloaded for 10 days while treated with SRT2104 (SIRT; $n = 4$). Values are means ± SEM.



Supplementary Figure S3. Effect of the Sirtuin-1 Agonist SRT2104 on mitochondrial flux control ratios in the soleus muscle of hindlimb unloaded rats. (A) The ratio of LEAK to maximal electron transfer (flux control ratio; FCR_{LEAK}), (B) FCR for oxidative phosphorylation supported by complex I (FCR_{PCI}), (C) FCR when glutamate was added as an additional complex I substrate (FCR_{PCIG}), (D) FCR for maximal coupled oxidative phosphorylation (FCR_{PCI+II}) and (E) FCR for noncoupled electron transfer supported by complex II only (FCR_{ECII}) of ambulatory control rats (CON; $n = 6$), rats hindlimb unloaded for 10 days (HU; $n = 6$), and rats hindlimb unloaded for 10 days while treated with SRT2104 (SIRT; $n = 4$). Values are means ± SEM.