Electronic Supplementary Material (ESI) for Metallomics.
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Supplementary Information

Fig. S1 Determination of mitochondrial respiratory capacity in liver homogenates. (**A**) Oxygraph-2k. Mitochondrial respiratory capacity was performed by high-resolution respirometry (OROBOROS, Austria). (**B**) O2k representative traces. The blue line represents oxygen concentration [µM], the red and green lines show oxygen flux [pmol/(s·mg tissue)] of two replica. Mitochondrial respiration was performed in liver tissue homogenate at a final concentration of 1 mg/ml in MiR05 respiration medium. After adding the homogenate into the O2k chambers, a substrate-uncoupler-inhibitor titration (SUIT) protocol was applied. (**C**) Coupling/pathway control diagram which illustrates the SUIT protocol used for analysis of mitochondrial respiration. LEAK respiration (*L*) was measured in the presence of the NADH-linked substrates pyruvate (P), glutamate (G) and malate (M): state N_L; OXPHOS capacity (*P*) was obtained in the presence of saturating ADP (D) concentration: state N_P and after addition of succinate state NS_P; NS- and succinate (S-) electron transfer system capacity (ETS, *E*) was measured using stepwise uncoupler (U) titration of CCCP: state NS_E; S-ETS capacity was obtained after inhibition of Complex I by rotenone (Rot): state S_E. Residual oxygen consumption (ROX) was obtained after inhibition of Complex III by antimycin A (Ama). For abbreviations see Fig. 3.

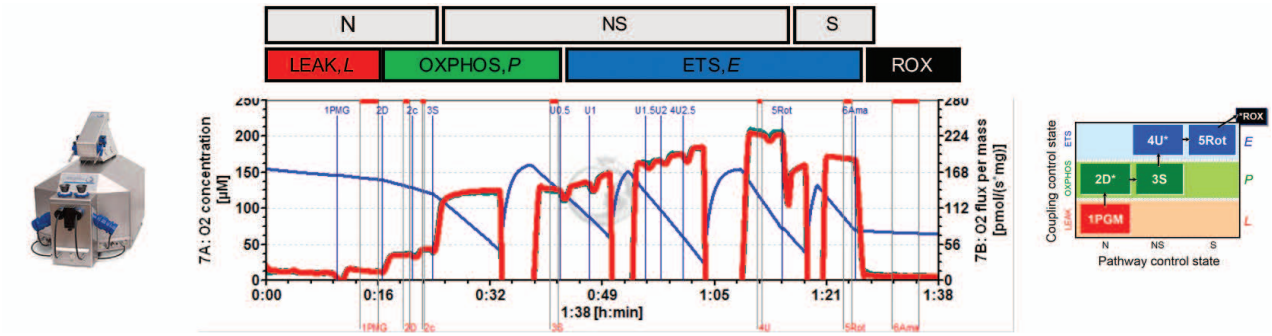

Fig. S2 Effects of iron diet on strain specific activity of mitochondrial and cytosolic superoxide dismutase (SOD). Mitochondrial (**A**) and cytosolic (**B**) aconitase activity were assessed in liver tissues as described in the Experimental section. Graphs show box blots with min and max. FVB Controls (*black*, *n*=6), FVB High Iron diet (*grey*, *n*=6); C57BL/6N Controls (*black*, *n*=6), C57BL/6N High Iron diet (*grey*, *n*=6). One-Way ANOVA test was performed. BL6: C57BL/6N.