Influence of biological sex and exercise on murine cardiac metabolism

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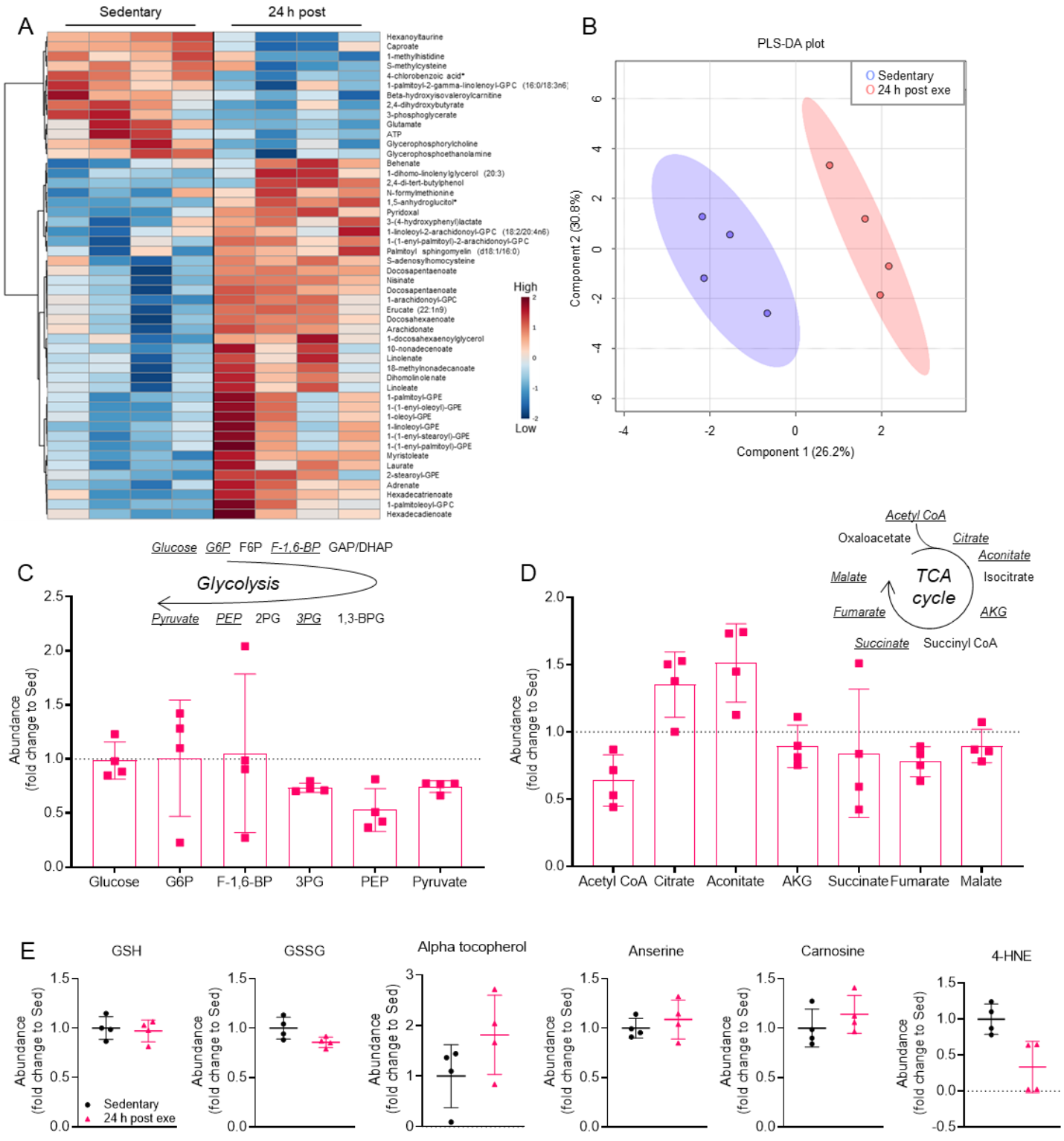
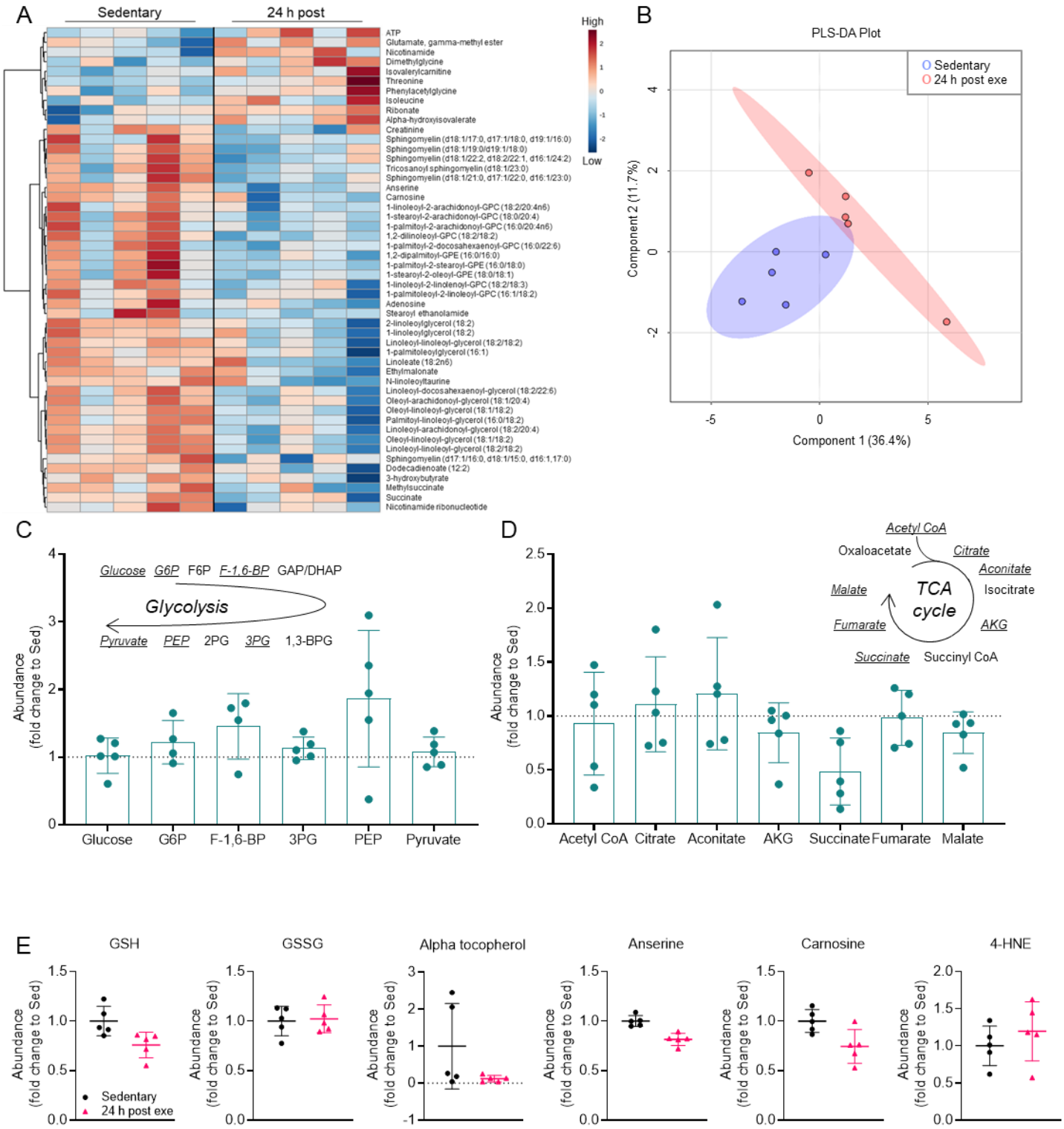


Supplemental Fig.1. Changes in the murine cardiac metabolome in female mice 24 h following exercise. Female mice were subjected to one bout of high-intensity exercise and hearts were freeze-clamped 24 h after the exercise bout for unbiased metabolomic analyses: (A) heatmap of the top 50 most changed metabolites in hearts from exercised versus sedentary female mice; bolded metabolites indicate FDR < 0.10 following one-way ANOVA;

(B) PLS-DA plot; relative abundances of (**C**) glycolytic and (**D**) TCA cycle intermediates shown as fold change relative to sedentary mice; and € abundances of antioxidants and oxidation products. *n* = 4 female mice per group. 1,3-BPG = 1,3-bisphosphoglycerate; 3PG = 3-phosphoglycerate; 4-HNE = 4-hydroxynonenal; AKG = α-ketoglutarate; ANOVA = analysis of variance; FDR = false discovery rate; G6P = glucose 6-phosphate; GSH = reduced glutathione; GSSG = oxidized glutathione; PEP = phosphoenolpyruvate; PLS-DA = partial least-squares discriminant analysis; TCA = tricarboxylic acid;



Supplemental Fig. 2. Changes in the murine cardiac metabolome in male mice 24 h following exercise. Male mice were subjected to one bout of high-intensity exercise and hearts were freeze-clamped 24 h after the exercise bout for unbiased metabolomic analyses: (A) heatmap of the top 50 most changed metabolites in hearts from exercised versus sedentary male mice; (B) PLS-DA plot; relative abundances of (C) glycolytic and (D) TCA cycle intermediates shown as fold change relative to sedentary mice; and (E) abundances of antioxidants and oxidation

products. *n* = 5 male mice per group. 1,3-BPG = 1,3-bisphosphoglycerate; 3PG = 3-phosphoglycerate; 4-HNE = 4-hydroxynonenal; G6P = glucose 6-phosphate; AKG = α-ketoglutarate; GSH = reduced glutathione; GSSG = oxidized glutathione; PEP = phosphoenolpyruvate; PLS-DA = partial least-squares discriminant analysis; TCA = tricarboxylic acid.