**Smokers with COPD Show a Shift in Energy and Nitrogen Metabolism at Rest and During Exercise**

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Online Data Supplement

Figure E1: Correlation between acylcarnitine C2 and total acylcarnitines separately for smokers with and without COPD and the 4 time points (1: before, 2: after 5 min, 3: at the end of exercise, 4: after 20 min rest). Data of the first exercise challenge.

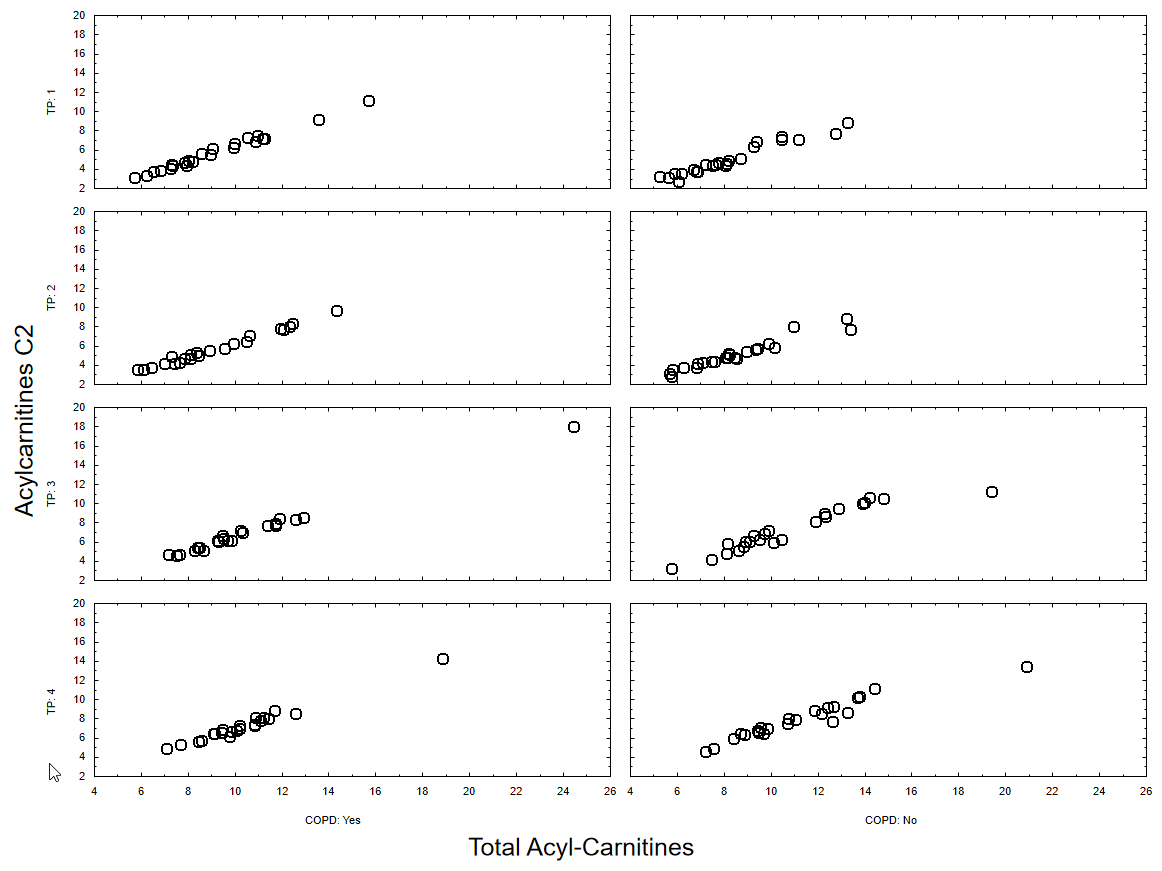


Figure E2: Correlation between lactate and pyruvate separately for smokers with and without COPD and the 4 time points (1: before, 2: after 5 min, 3: at the end of exercise, 4: after 20 min rest). Data of the first exercise challenge.

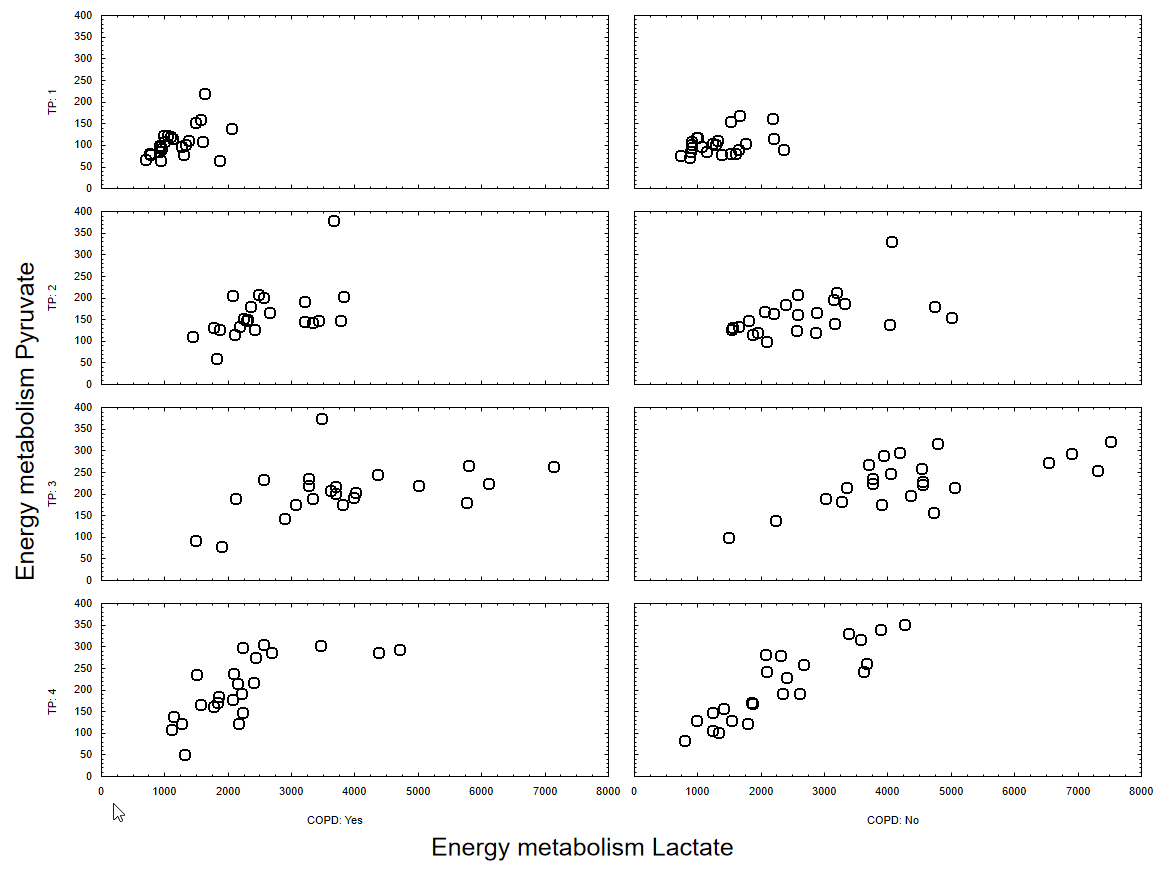


Figure E3: Correlation between GLN and ALA separately for smokers with and without COPD and the 4 time points (1: before, 2: after 5 min, 3: at the end of exercise, 4: after 20 min rest). Data of the first exercise challenge.

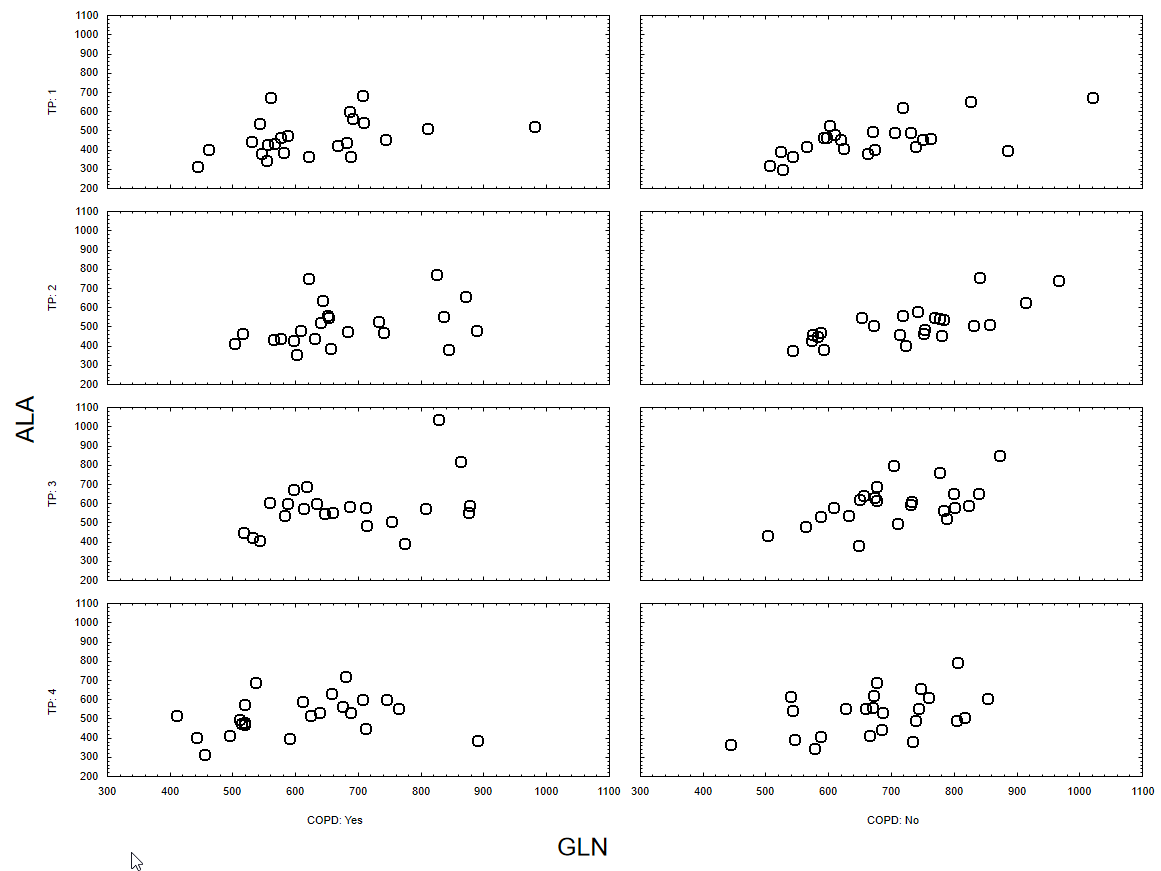


Figure E4: Correlation between GLN and BCAA separately for smokers with and without COPD and the 4 time points (1: before, 2: after 5 min, 3: at the end of exercise, 4: after 20 min rest). Data of the first exercise challenge.

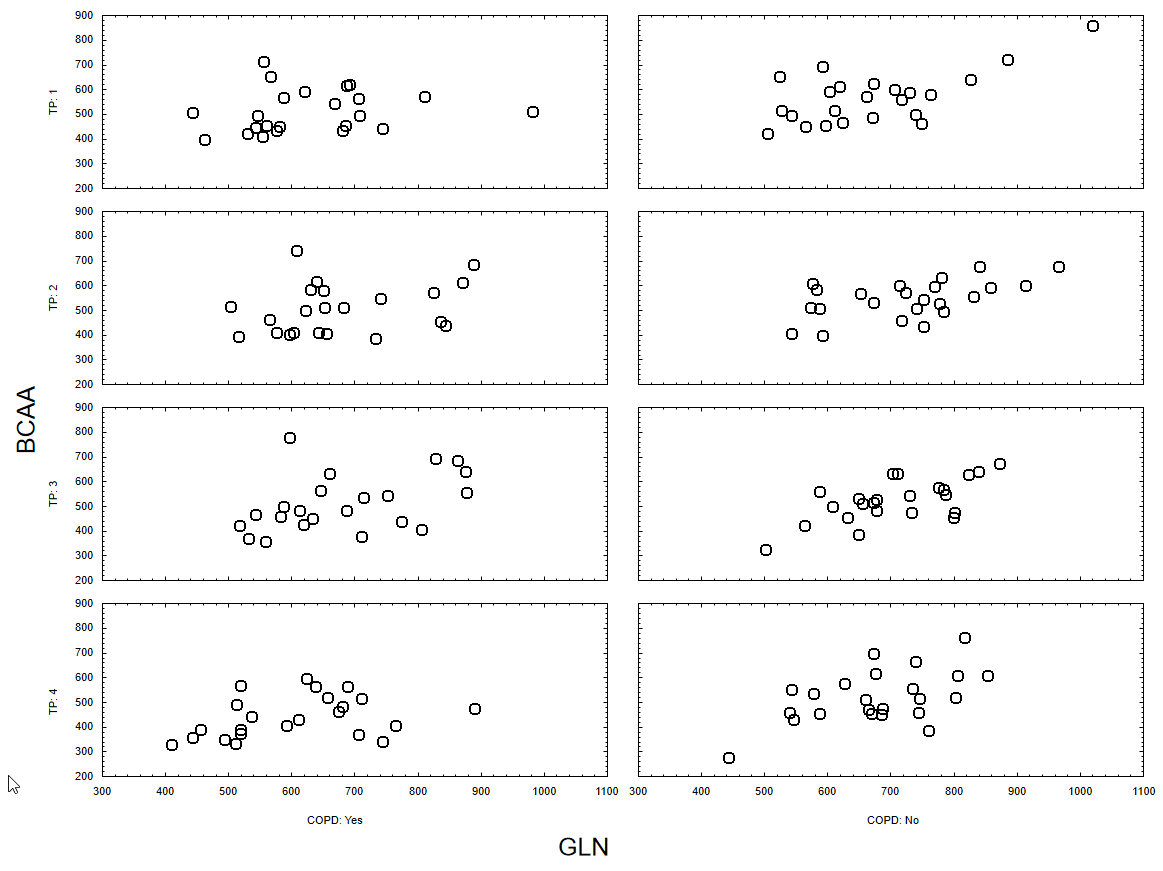


Figure E5: Correlation between GLN and ASP separately for smokers with and without COPD and the 4 time points (1: before, 2: after 5 min, 3: at the end of exercise, 4: after 20 min rest). Data of the first exercise challenge.

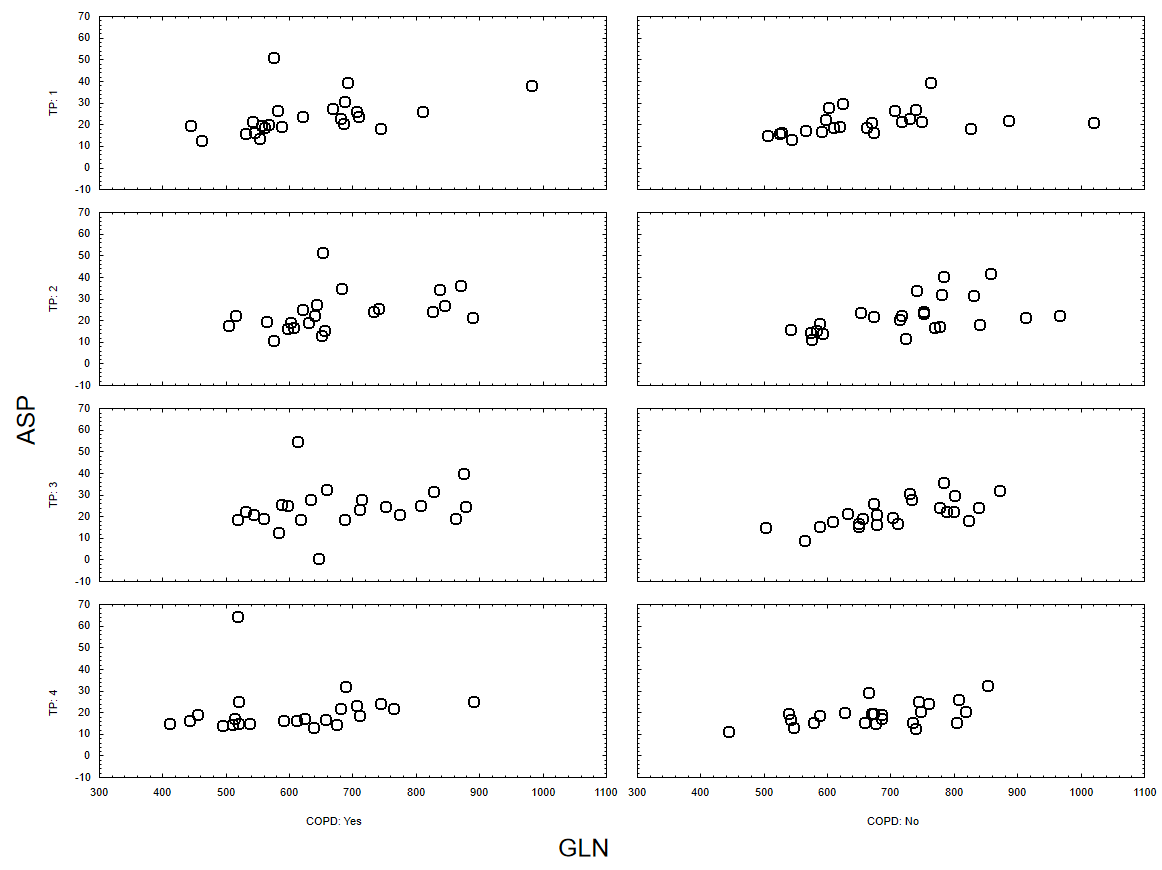
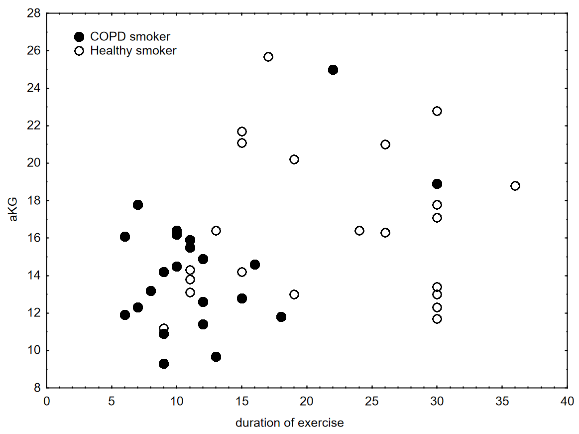
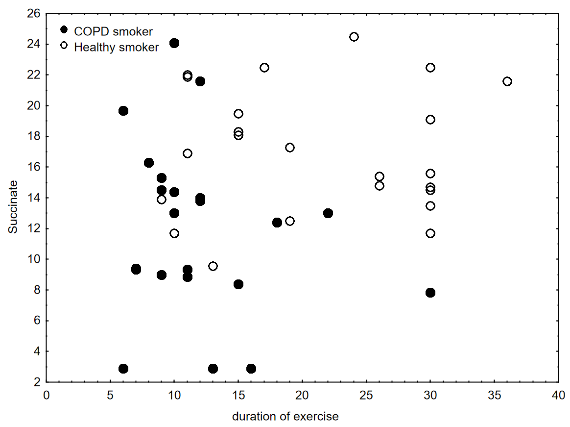
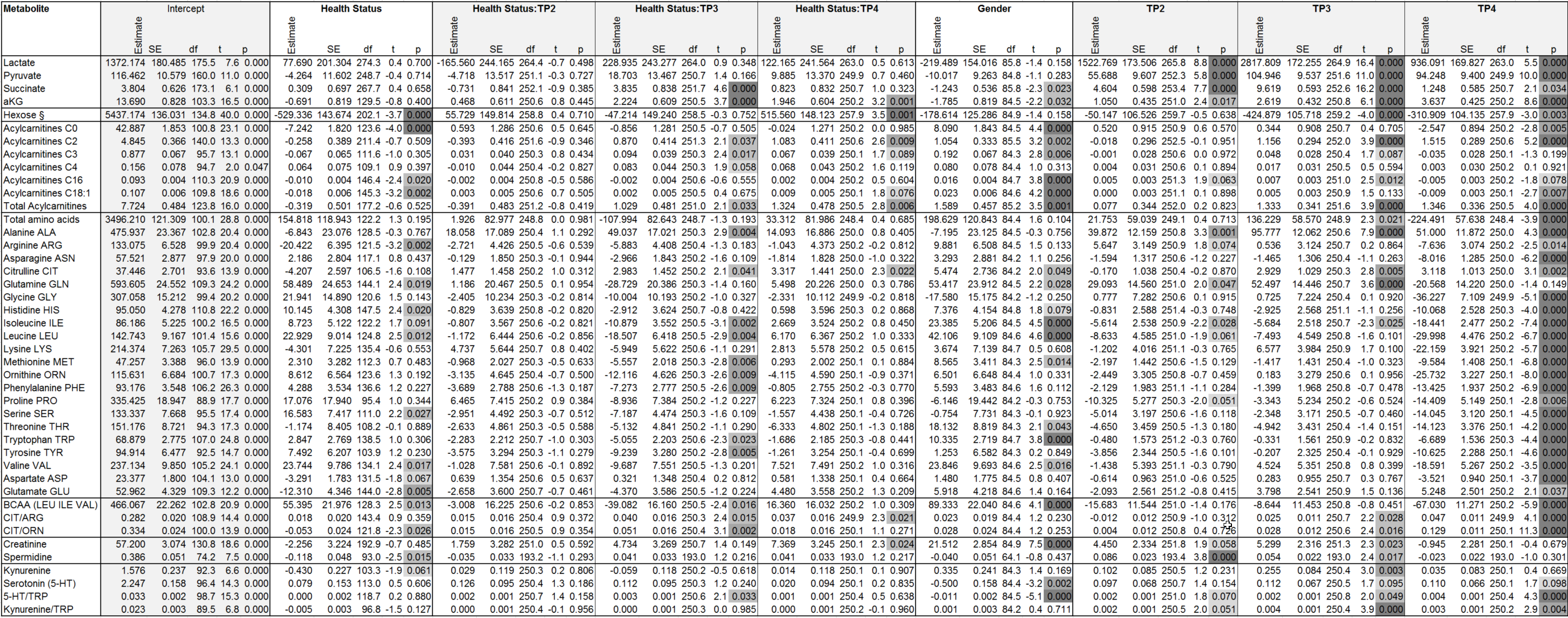


Figure E6: Correlation between duration of exercise (min) and the levels of a-KG and succinate (µM)



Table E1: List of parameter estimates and statistics from the mixed model analysis.

Health status is in reference to healthy smokers as baseline, and TP2,3,4 are in reference to TP1 as baseline.