

Glucose homeostasis in relation to neutrophil mobilization in smokers with COPD

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Data supplement

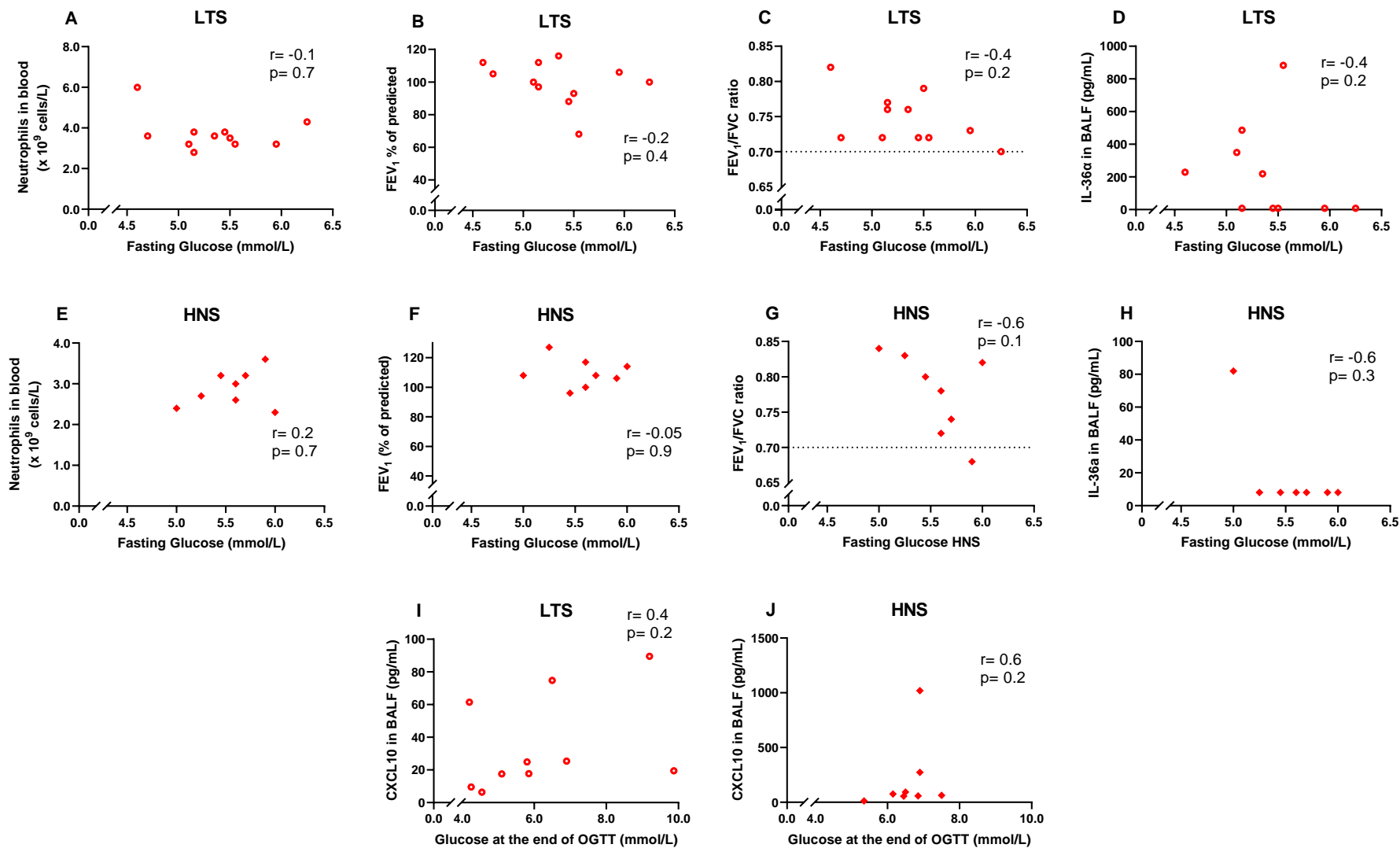


Figure S1 – Data supplement.

Correlation of fasting glucose with:

- **(A)** neutrophil concentration in blood (n=11), **(B)** FEV₁ (% of predicted) (n=11), **(C)** FEV₁/FVC ratio (n=11) and **(D)** IL-36 α in BALF (n=10) of LTS.
- **(E)** neutrophil concentration in blood (n=8), **(F)** FEV₁ (% of predicted) (n=8), **(G)** FEV₁/FVC ratio (n=8) and **(H)** IL-36 α in BALF (n=8) of HNS.

Correlation of blood glucose concentration at the end of OGTT (120 min) with CXCL10 in BALF of **(I)** LTS (n=10) and **(J)** HNS (n=8).

Notes: See “Material and methods” regarding the utilized assays. Correlation analyses were performed using Spearman’s rank correlation test. $p < 0.05$ was regarded as statistically significant.

Abbreviations: FEV₁, forced expiratory volume in 1 second; FVC, forced vital capacity; LTS, long-term smokers without COPD; HNS, healthy non-smokers; IL-36 α , interleukin-36 α ; BALF, cell-free bronchoalveolar lavage fluid; OGTT, oral glucose tolerance test; CXCL10, C-X-C chemokine 10.

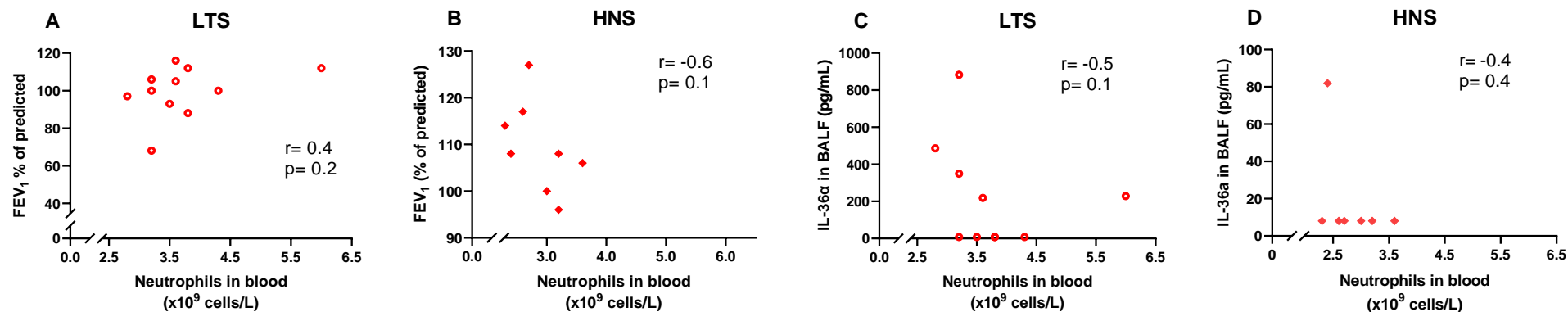


Figure S2 – Data supplement. Correlation of neutrophil concentration in blood with FEV₁ (% of predicted) in **(A)** LTS (n=11) and **(B)** HNS (n=8), as well as with IL-36α in BALF of **(C)** LTS (n=10) and **(D)** HNS (n=8).

Notes: See “Material and methods” regarding the utilized assays. Correlation analyses were performed using Spearman’s rank correlation test. $p < 0.05$ was regarded as statistically significant.

Abbreviations: FEV₁, forced expiratory volume in 1 second; LTS, long-term smokers without COPD; HNS, healthy non-smokers; IL-36α, interleukin-36α; BALF, cell-free bronchoalveolar lavage fluid.

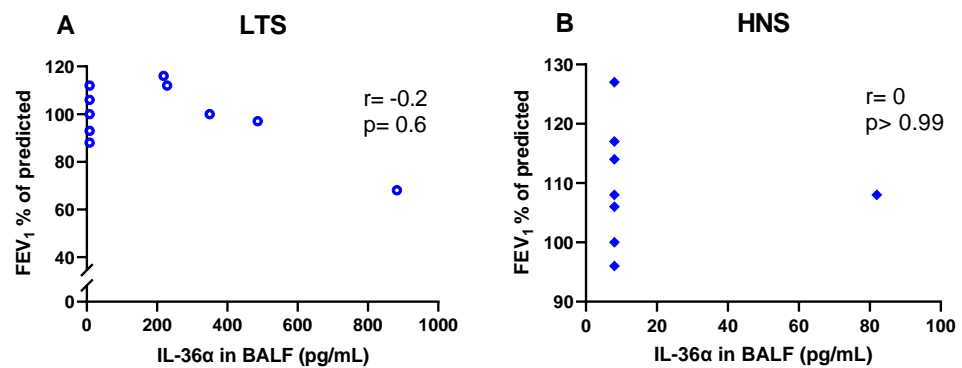


Figure S3 – Data supplement. Correlation of IL-36 α concentration in BALF with FEV₁ (% of predicted) in **(A)** LTS (n=10) and **(B)** HNS (n=8).

Notes: See “Material and methods” regarding the utilized assays. Correlation analysis was performed using Spearman’s rank correlation test. $p < 0.05$ was regarded as statistically significant.

Abbreviations: IL-36 α , interleukin-36 α ; BALF, cell-free bronchoalveolar lavage fluid; FEV₁, forced expiratory volume in 1 second; LTS, long-term smokers without COPD; HNS, healthy non-smokers.

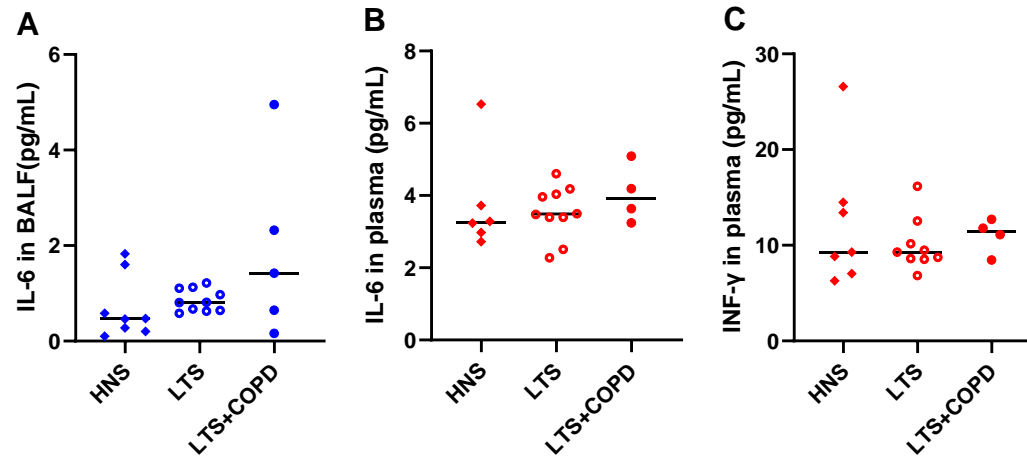


Figure S4 – Data supplement. Concentration of IL-6 protein **(A)** in BALF samples from HNS (n=8), LTS (n=10) and LTS+COPD (n=5) and **(B)** in plasma samples from HNS (n=6), LTS (n=10) and LTS+COPD (n=4).

Concentration **(C)** of INF-γ protein in plasma samples of HNS (n=7), LTS (n=9) and LTS+COPD (n=4).

Notes: Data in all graphs are presented as observed and as median values. See “Material and methods” regarding the utilized assays. In all graphs, group comparisons were restricted between the groups of LTS+COPD and HNS, and were performed using the Mann-Whitney U-test. $p < 0.05$ was regarded as statistically significant.

Abbreviations: IL-6, interleukin-6; BALF, cell-free bronchoalveolar lavage fluid; HNS, healthy non-smokers; LTS, long-term smokers without COPD; LTS+COPD, long-term smokers with COPD; INF-γ, interferon-γ.

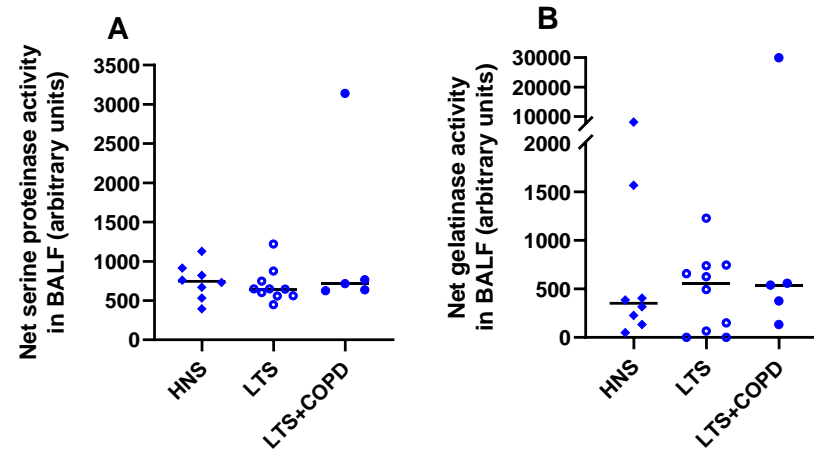


Figure S5 – Data supplement. Net activity of **(A)** serine proteinase and **(B)** gelatinase in BALF of HNS (n=8), LTS (n=10) and LTS+COPD (n=5).

Notes: Data in both graphs are presented as observed and as median values. See “Material and methods” regarding the utilized assays. In graph **B**, the group comparison between LTS+COPD and HNS was performed using the Mann-Whitney U-test. $p < 0.05$ was regarded as statistically significant. A subset of this data has been published previously, although in a different scientific context.¹

Abbreviations: BALF, cell-free bronchoalveolar lavage fluid; HNS, healthy non-smokers; LTS, long-term smokers without COPD; LTS+COPD, long-term smokers with COPD.

References

1. Padra M, Andersson A, Levanen B, et al. Increased MUC1 plus a larger quantity and complex size for MUC5AC in the peripheral airway lumen of long-term tobacco smokers. *Clin Sci (Lond)*. 2020;134(10):1107-1125.