**Appendix - Supplementary material**

**Differences in cerebral oxygenation during exercise in patients with idiopathic pulmonary fibrosis with and without exertional hypoxemia: Does exercise intensity matter?**

Konstantina Dipla\*1, Afroditi K. Boutou\*2, Aikaterini Markopoulou2, Stavros Papadopoulos1, Stella Kritikou1, Georgia Pitsiou3, Ioannis Stanopoulos3, Ioannis Kioumis3, Andreas Zafeiridis1

1 Exercise Physiology & Biochemistry Laboratory, Dept. of Sport Sciences at Serres, Aristotle University of Thessaloniki, Greece; 2 Department of Respiratory Medicine, G. Papanikolaou Hospital, Thessaloniki, Greece; 3 Department of Respiratory Failure, Aristotle University of Thessaloniki, Greece

\*KD and AKB contributed equally

**Correspondence**: Konstantina Dipla, Exercise Physiology & Biochemistry Laboratory, Dept. of Sport Sciences at Serres, Aristotle University of Thessaloniki, TEFAA, Ippokratous 22, Ag. Ioannis, Serres, 621 22, Greece, E-mail: kdipla@phed-sr.auth.gr.

Short title: Cerebral oxygenation and dyspnea in IPF with exertional desaturation

Supplemental figures

Figure 1S. Correlations between the average response in pre-frontal oxygenated hemoglobin (O2Hb) during the maximal cardiopulmonary (CPET) test with (A) dyspnea at exercise termination, (B) exercise duration during CPET, and C) Diffusion Capacity for carbon monoxide (DLCO), (D) 6-Minute Walk Test Distance. rho: Spearman, r: Pearson correlation



Figure 2S. Correlations between the average response in pre-frontal deoxygenated hemoglobin (HHb) during the maximal cardiopulmonary (CPET) test with (A) dyspnea at exercise termination, (B) Diffusion Capacity for carbon monoxide (DLCO), (C) 6-Minute Walk Test Distance. rho: Spearman correlation, r: Pearson correlation



Figure 3S. Correlations between the average response in pre-frontal hemoglobin difference (Hbdifference) during the maximal cardiopulmonary (CPET) test with (A) dyspnea at exercise termination, (B) Diffusion Capacity for carbon monoxide (DLCO), (C) 6-Minute Walk Test Distance, (D) difference in % desaturation (DSpO2=SpO2rest-SpO2nadir) during 6-Minute Walk Test.
rho: Spearman correlation, r: Pearson correlation



Figure 4S. Correlations between the average response in pre-frontal oxygenated hemoglobin (O2Hb) at 25% of maximal oxygen uptake (VO2peak) with (A) exercise duration in the maximal cardiopulmonary (CPET) test and (B) dyspnea at exercise termination
r: Pearson correlation, rho: Spearman correlation

