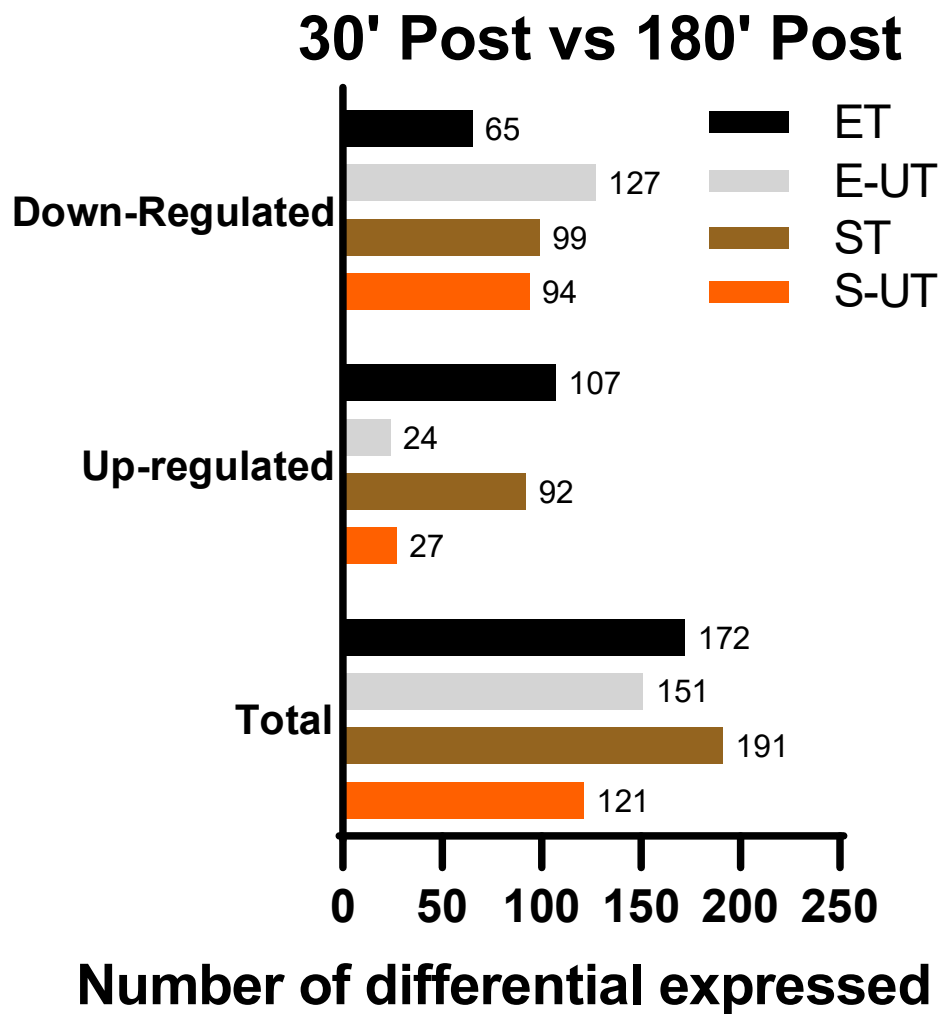
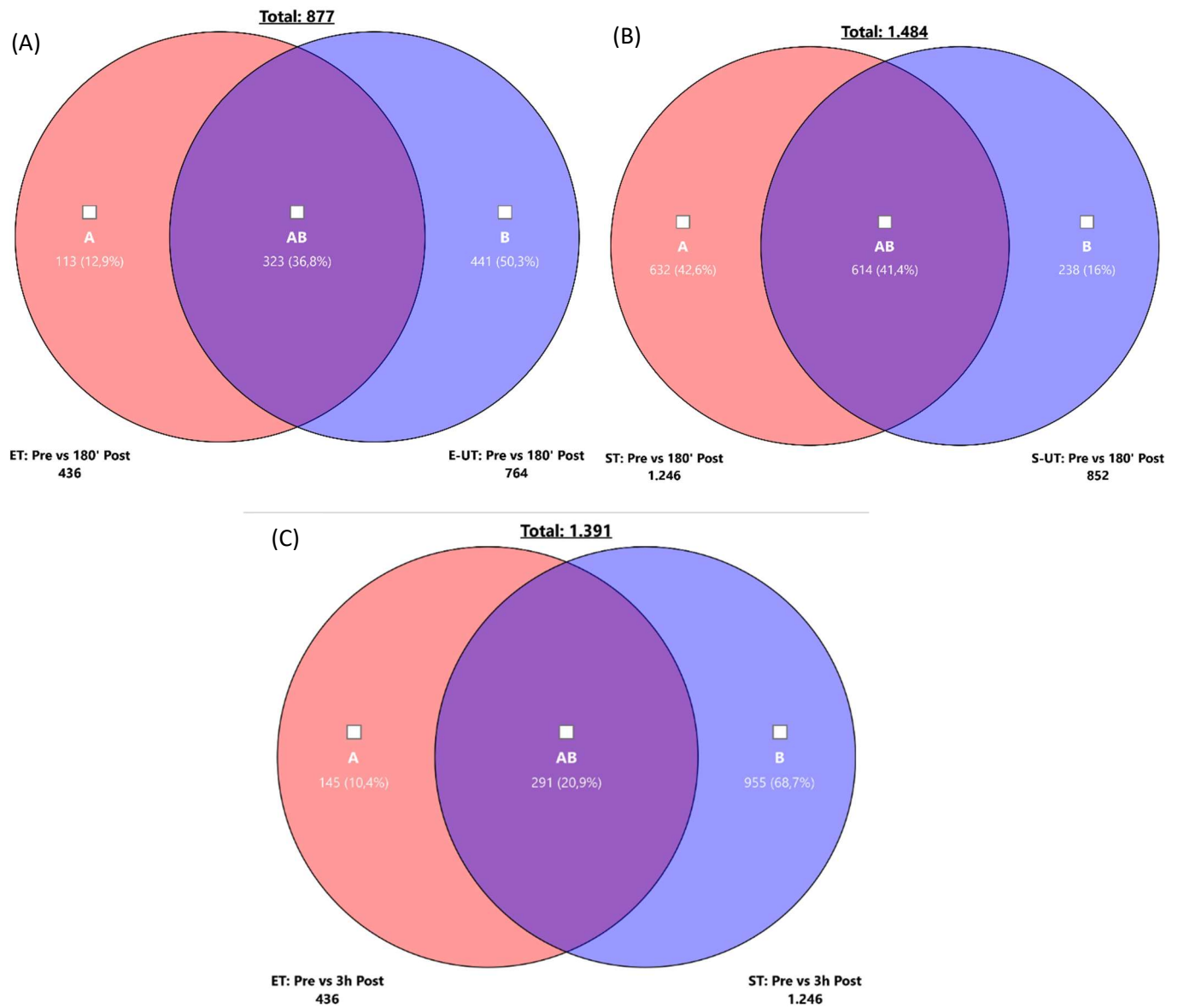


**Table S1. Number of genes differentially expressed between 30' Post and 3h Post in the respective training groups.**

Comparison	Group	# per group	Up	Down	Total
30' Post vs 180' Post	ET	8	107	65	172
30' Post vs 180' Post	E-UT	8	24	127	151
30' Post vs 180' Post	ST	8	92	99	191
30' Post vs 180' Post	S-UT	8	27	94	121



**Figure S1: Number of differentially expressed genes in response to the exercise test (endurance or strength) 30' Post vs 180' Post.** The total number of differentially expressed genes in skeletal muscle of endurance or strength trained (ET and ST) and untrained (E-UT and S-UT) participants is lower compared to Pre vs 30' Post or to Pre vs. 180' Post. While ST, S-UT and E-UT showed more down-regulation, ET was the only group where more up- than downregulation was observed.



**Figure S2: Venn diagrams of (A) ET vs E-UT, (B) ST vs S-UT and (C) ET vs ST regarding differentially expressed genes Pre vs 180' Post.** The highest overlap (41.4%) as well as highest total number of differentially expressed genes (1,484 genes) was observed ST vs S-UT (B). The lowest total number was seen ET vs E-UT (877 genes, (A)), while the overlap percentage of ET and ST was only 20.9% (C).