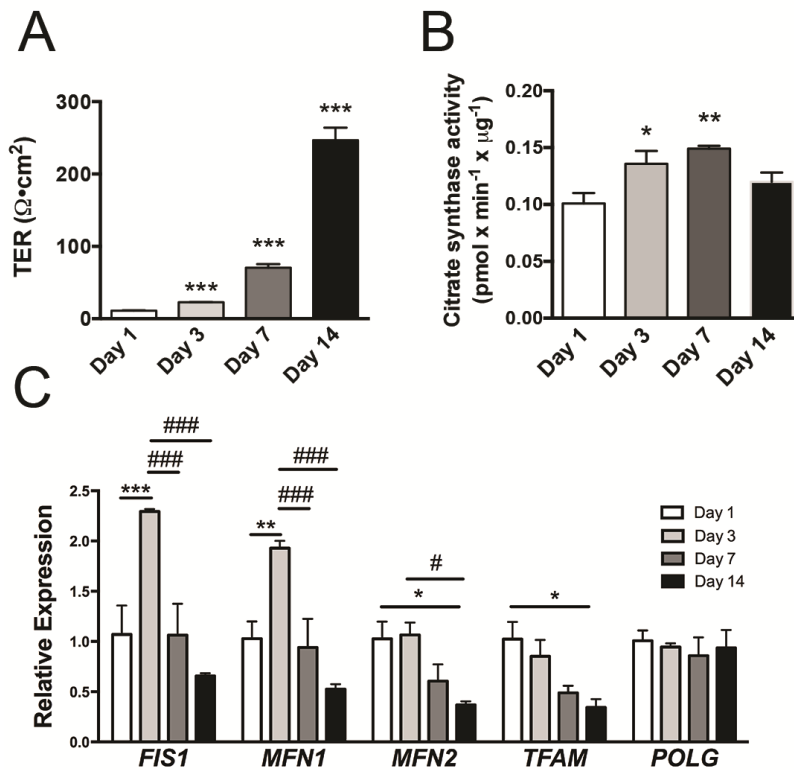
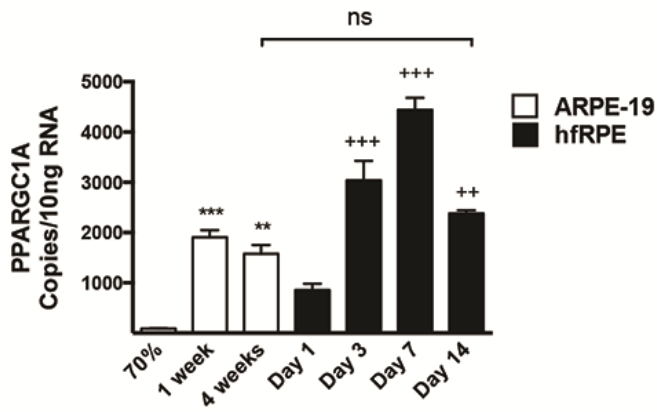


Supplemental Figure 1



Supplemental Figure 1. Changes in barrier function, mitochondrial content and mitochondrial dynamics gene expression during hfRPE maturation. (A) TER of hfRPE cultured on transwells for up to 14 days (n=36 transwells from 3 independent cell isolations). (B) Citrate synthase activity of 3 independent hfRPE cultures matured for up to 14 days (n=3 per time point). (C) Gene expression of mitochondrial dynamic genes measured by qPCR during hfRPE maturation. (D) Gene expression of antioxidant genes measured by qPCR during hfRPE maturation (* $P < 0.05$; *** $P < 0.001$ vs 1 day, ANOVA followed by Dunnett's multiple comparison test).

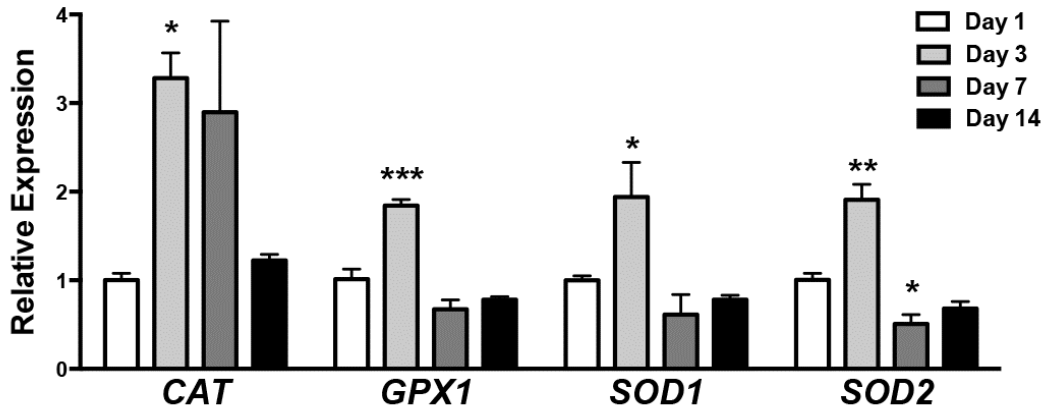
Supplemental Figure 2



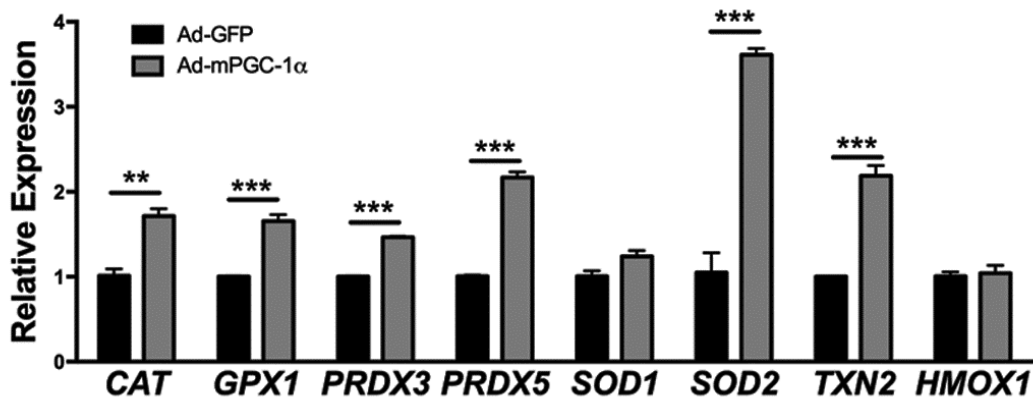
Supplemental Figure 2. Absolute quantification of *PPARGC1A* mRNA copies in ARPE-19 and hfRPE during in vitro maturation (n=3 each group; *: statistical analysis of the values obtained for ARPE-19 compared to 70%; +: statistical analysis of the values obtained for hfRPE compared to 1 day; ns: no statistical significance found between ARPE-19 and hfRPE at the end of the maturation process, 4 weeks and 14 days respectively).

Supplemental Figure 3

A



B



Supplemental Figure 3. Changes in antioxidant gene expression during hfrPE maturation and following mPGC-1 α overexpression. (A) Gene expression of antioxidant genes measured by qPCR during hfrPE maturation (n=3; * P <0.05; ** P <0.01; *** P <0.001 vs 1 day, ANOVA followed by Dunnett's multiple comparison test). (B) Effect of mPGC-1 α overexpression on antioxidant enzymes expression in hfrPE (n=3 each group; ** P <0.01, *** P <0.001).