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Coordinated autophagy modulation overcomes glioblastoma chemoresistance through disruption of mitochondrial bioenergetics

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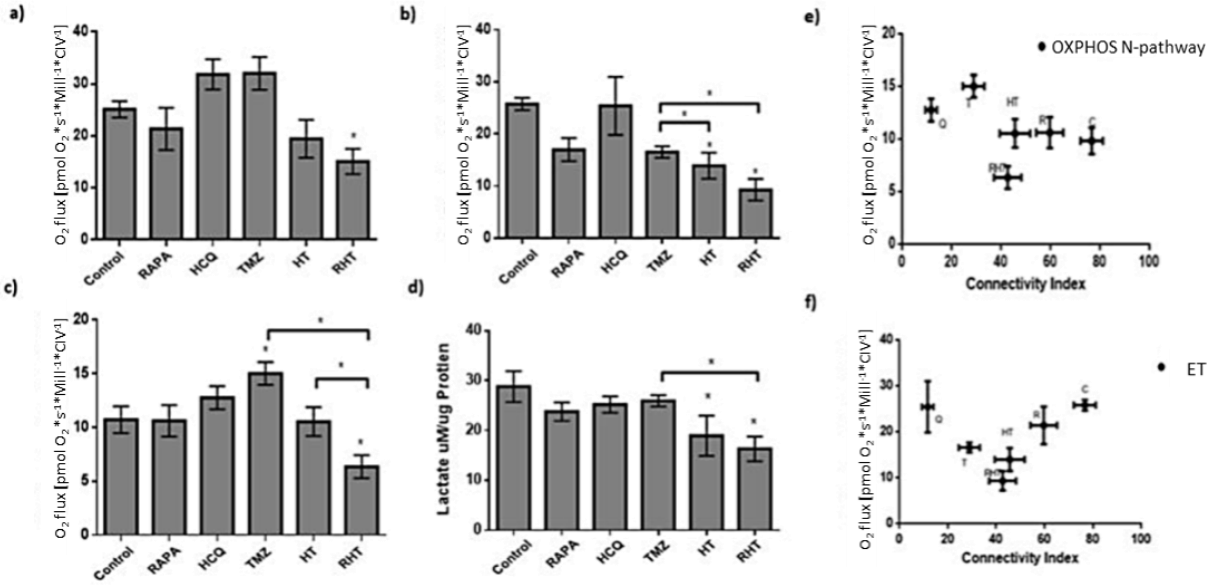
Chemotherapeutic resistance is associated with NADH electron transfer-pathway (N) capacity.



Chemotherapeutic resistance is mediated by NADH electron transfer-pathway (N) capacity. O_2 flux for (**a**) ROUTINE (*R*) (**b**) ET capacity (*E*) and (**c**) OXPHOS (*P*) through N-pathway and (**d**) concentration of lactate in growth medium, (e) correlation of O_2 flux with Connectivity Index for all groups of interest for (**e**) OXPHOS (*P*) through N-pathway and (**f**) *E* for Control, 50 nM rapamycin (Rapa), 50 µM hydroxychloroquine (HCQ), 250 µM temozolomide (TMZ), HCQ (50 µM) + TMZ (250 µM) (HT) and Rapa (50 nM) + HCQ (50 µM) + TMZ (250 µM) (RHT) treatment groups. All error bars, ±SEM. *$p < 0.05$, $N = 3$.

Reference: Kriel J, Mueller-Nedebock K, Maarman G, Mbizana S, Ojuka E, Klumperman B, Loos B (2018) Coordinated autophagy modulation overcomes glioblastoma chemoresistance through disruption of mitochondrial bioenergetics. Sci Rep 8:10348.

Figure and text slightly modified based on the recommendations achieved in the framework of the COST Action MitoEAGLE CA15203.