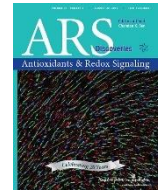


Selective Disruption of Respiratory Supercomplexes as a New Strategy to Suppress Her2^{high} Breast Cancer

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High-resolution respirometry of breast cancer cells

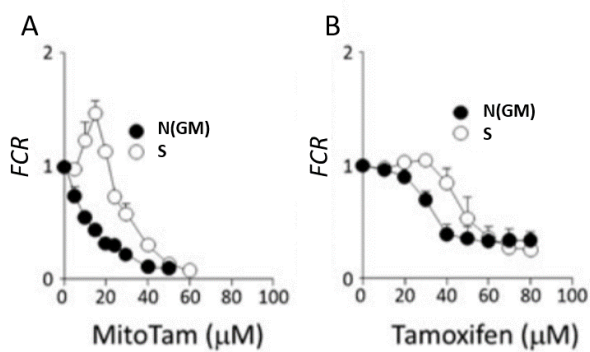


Figure 1. Flux control ratios in MCF7 cell lines were evaluated in the presence of NADH-linked substrates (glutamate and malate) or succinate with the titration of increasing concentrations of (A) MitoTam or (B) tamoxifen.

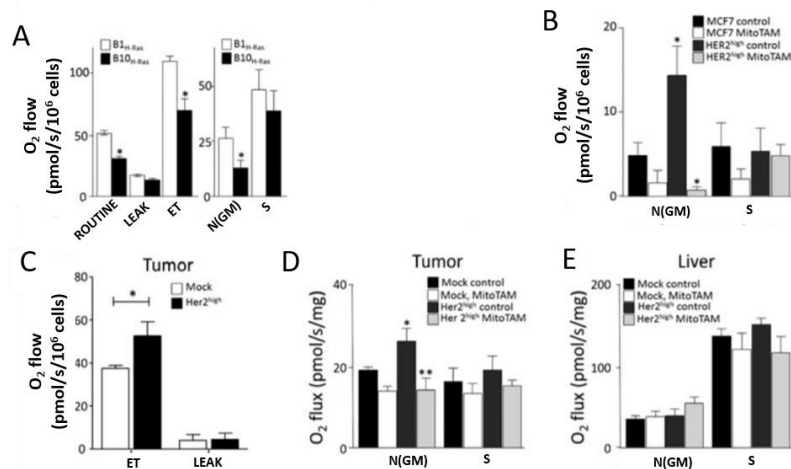


Figure 2. Respiration is elevated in Her2^{high} cells and tumors and it is efficiently suppressed by MitoTam. (A) ROUTINE, LEAK and ET-capacities were evaluated in B1H-Ras and B10H-Ras cells were evaluated for NADH-linked N(GM) and succinate-linked (S) respiration. (B) MCF7 and MCF7 Her2^{high} cells were treated with 2.5 μM MitoTam for 1 h and evaluated for NADH-linked N(GM) and succinate-linked (S) respiration. (C) MCF7 mock and MCF7 Her2^{high} tumors were evaluated for ET-capacity and LEAK respiration. Also, NADH-linked N(GM) and succinate-linked (S) respiration were evaluated for control and MitoTam-treated mice in (D) Tumor and (E) Liver. * and ** corresponds with statistically significant differences ($p < 0.05$).

MitoTam suppresses respiration via CI both in cultured cells *in vitro* and in breast carcinomas *in vivo*, resulting in ROS generation and cell death.

Reference: Rohlenova K, Sachaphibulkij K, Stursa J, Bezawork-Geleta A, Blecha J, Endaya B, Werner L, Cerny J, Zobalova R, Goodwin J, Spacek T, Alisadeh E, Yan B, Nguyen M, Vondrusova M, Sobol M, Jezek P, Hozak P, Truksa J, Rohlena J, Dong L, Neuzil J (2016) Selective disruption of respiratory supercomplexes as a new strategy to suppress Her2^{high} breast cancer. *Antioxid Redox Signal* 26:84-103.

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