High-resolution respirometry of cancer cells: normoxia and hypoxia

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Mitochondrial bioenergetic adaptations of breast cancer cells to aglycemia and hypoxia

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Metabolic reprogramming in breast cancer cells increase oxidative phosphorylation and decrease the apparent affinity of oxygen after 4 days of glucose deprivation

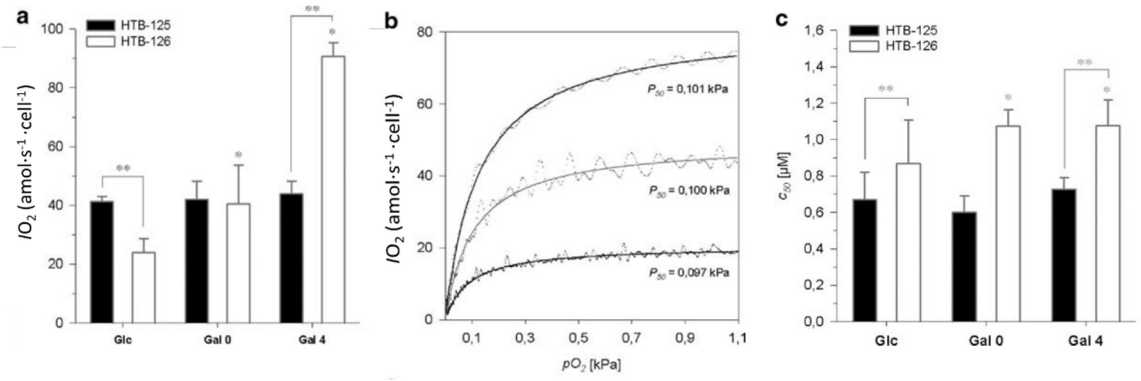

Figure 1. Cell respiration in glucose/glucose-deprived medium. (a) ROUTINE respiration in different mediums for HTB-125 (control) and HTB-126 (breast cancer) cells. **(b)** Cell specific respiration flow as a function of p_{O2} in glucose (lower lines), after glucose removal (middle line) and galactose medium (upper line). **(c)** Influence of the media culture in cell c_{50}. Values are means ± SD, n>5 and ***p*-value<0.05.

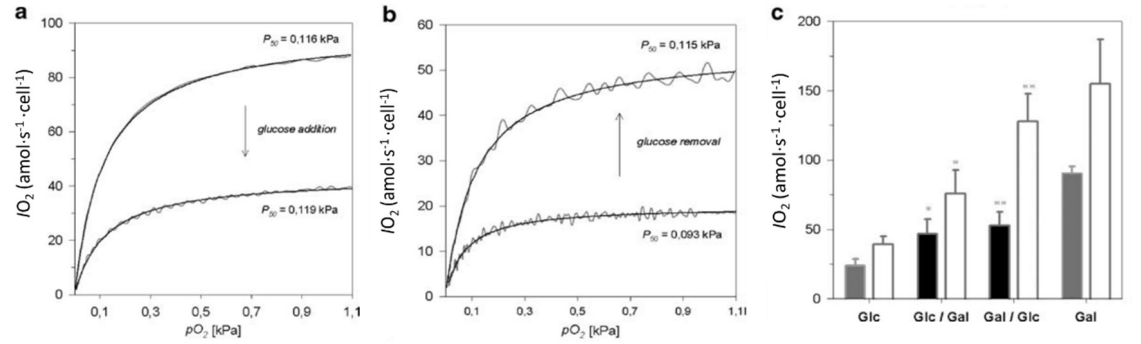

Figure 2. Crabtree effect in breast cancer. (a) Effect of glucose addition **(b)** or removal on ROUTINE respiration with their corresponding p50 values. (c) comparison of cancer cells respiration in different media. ROUTINE respiration (full bars) and ETS capacity (empty bars). Values are means ± SD, n>5 and ***p*-value<0.05.

Reference: Smolková K, Bellance N, Scandurra F, Génot E, Gnaiger E, Plecitá-Hlavatá L, Ježek P, Rossignol R (2010) Mitochondrial bioenergetic adaptations of breast cancer cells to aglycemia and hypoxia. J Bio energ Biomembr 42:55-67.

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