

Mitochondrial respiration in peripheral blood mononuclear cells correlates with depressive sub-symptoms and severity of major depression

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High-resolution respirometry of cryopreserved lymphocytes as a diagnostic tool for major depression (MD)

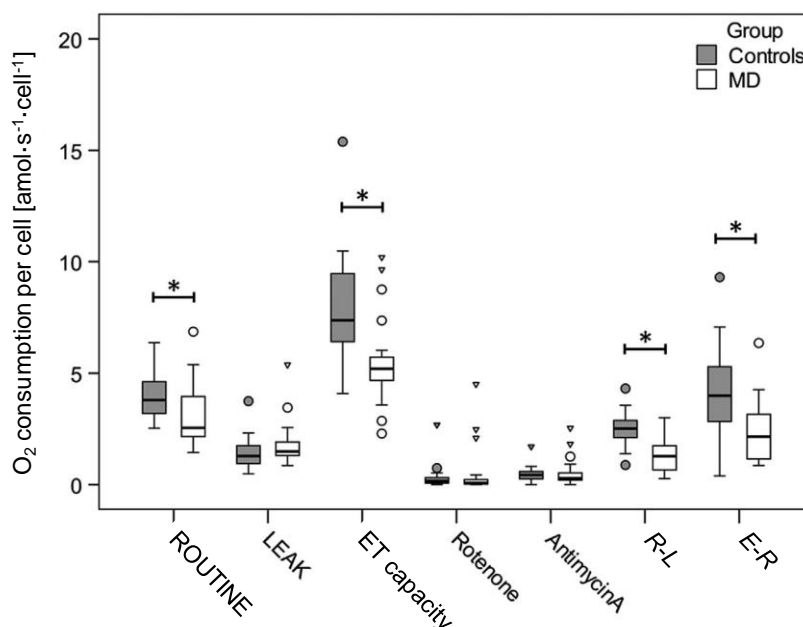


Figure 1. Boxplots of group-wise comparison of respiration in PBMCs from MD patients ($N = 19$) and control subjects ($N = 19$) characterized by mitochondrial oxygen flux (I_{O_2}) per cell. Circles and triangles represent statistical outliers of the respective groups. Asterisk (*) indicates significant group differences on an alpha level of 0.05 (one-tailed Mann-Whitney U test or Student's independent t-test). MD, major depression; PBMCs, peripheral blood mononuclear cells; SRC, spare respiratory capacity.

The significant decrease of ET-capacity and excess E-R capacity factor indicates that cells of acutely depressed patients have a reduced capacity of mitochondrial respiration that contribute to the pathophysiology and/or aetiology of depressive symptoms

Reference: Karabatsiakos A, Böck C, Salinas-Manrique J, Kolassa S, Calzia E, Dietrich DE, Kolassa IT (2014) Mitochondrial respiration in peripheral blood mononuclear cells correlates with depressive subsymptoms and severity of major depression. *Transl Psychiatry* 4:e397.