



O2k Publications Blood cells

http://wiki.oroboros.at/index.php/O2k-Publications: Blood_cells



High-Resolution Respirometry of platelets



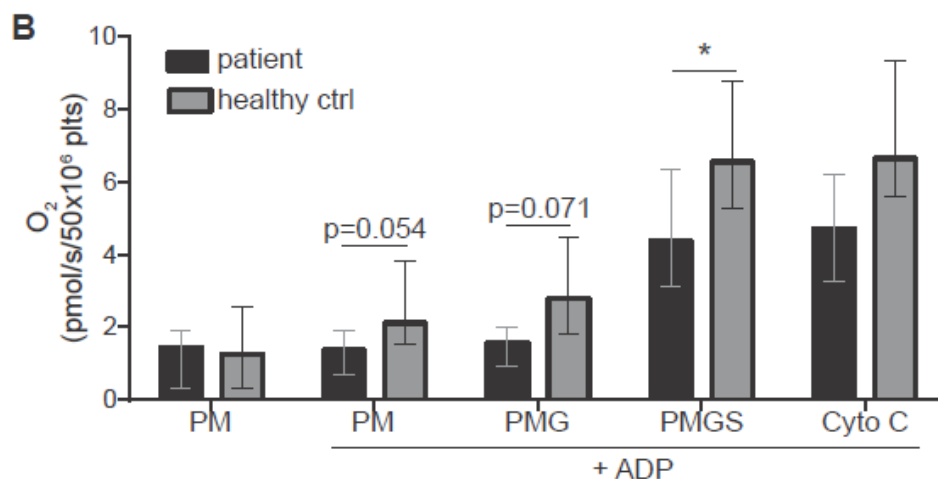
Impaired mitochondrial activity explains platelet dysfunction in thrombocytopenic cancer patients undergoing chemotherapy

Constance C. F. M. J. Baaten, Floor C.J.I. Moenen, Yvonne M. C. Henskens, Frauke Swieringa, Rick J. H. Wetzels, René van Oerle, Harry F. G. Heijnen, Hugo ten Cate, Graham P. Holloway, Erik A. M. Beckers, Johan W. M. Heemskerk, and Paola E. J. van der Meijden

http://wiki.oroboros.at/index.php/Baaten_2018_Haematologica

"With saturating amounts of complex I-II substrates of the oxidative phosphorylation (OXPHOS) chain, *i.e.* pyruvate, malate, ADP, glutamate and succinate, the maximal ADP-supported respiration of mitochondria was significantly lower in platelets from patients than from controls."

"(...) we noticed a marked reduction of the platelet mitochondrial membrane potential and the mitochondrial oxidative phosphorylation."



B) High resolution respirometry to measure mitochondrial respiration in washed platelets from additionally included patients (n=7) and controls (n=9). Depicted is oxygen consumption due to sequential addition of saturating amounts of pyruvate (P), malate (M), ADP, glutamate (G), succinate (S) and cytochrome C (Cyto C).

Reference: Baaten CCFMJ, Moenen FCJI, Henskens YMC, Swieringa F, Wetzels RJH, van Oerle R, Heijnen HFG, Ten Cate H, Holloway GP, Beckers EAM, Heemskerk JWM, van der Meijden PEJ (2018) Impaired mitochondrial activity explains platelet dysfunction in thrombocytopenic cancer patients undergoing chemotherapy. *Haematologica* [Epub ahead of print]