

## Increased T<sub>3</sub>-induced ROS production in lymphocytes from patients with diabetes determined by flow cytometry

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*Aim:* To examine mitochondrial membrane potential (MMP) and reactive oxygen species (ROS) production in lymphocytes in patients with diabetes mellitus type 2 (T2DM). Furthermore, to examine the thyroid hormone regulation of mmp and ROS production in the two mentioned groups.

*Methods:* Lymphocytes from 10 controls and 10 persons with well regulated T2DM were examined. T<sub>3</sub>-stimulated and unstimulated MMP and ROS were examined by flow cytometry after staining with MitoTracker Green (MTG) and carboxy-H<sub>2</sub>DCFDA, respectively.

*Results:* MMP was significantly increased in T2DM patients and T<sub>3</sub> stimulation significantly increased MMP in controls as well as in T2DM patients. Unstimulated ROS production was significantly increased in lymphocytes from T2DM and T<sub>3</sub> significantly stimulated ROS production in controls and in T2DM patients.

*Conclusion:* Unstimulated ROS production and MMP were higher in lymphocytes from diabetic patients. T<sub>3</sub> stimulated MMP and ROS production from T2DM and controls.