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PGC-1 α regulates the cell cycle through ATP and ROS in CH1 cells

Key words: PGC-1 α , Mitochondria, OXPHOS, Cell cycle, CyclinD1, CyclinB1

Research Summary

This paper mainly focused on the function of PGC-1 α on mitochondria and cell cycle, using a cell line over-expressing PGC-1 α , we found the following facts:

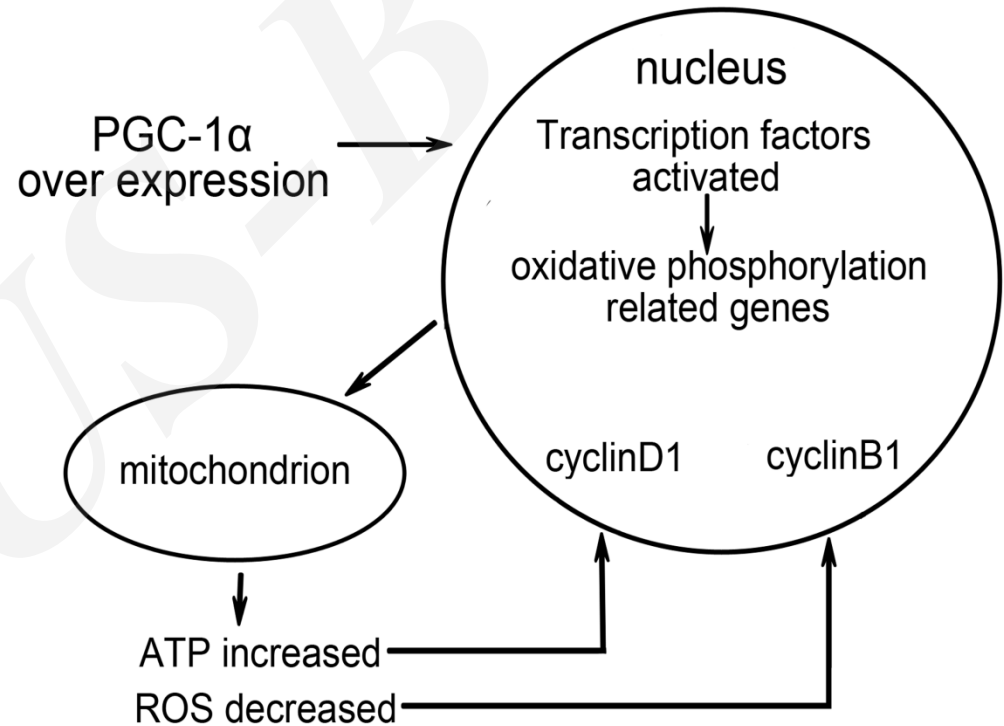
- Over-expression of PGC-1 α stimulated extra ATP and reduced ROS production.**
- CyclinB1/D1 were upregulated in PGC-1 α cells.**
- PGC-1 α cells proliferated faster than control cells.**
- Manipulation of ATP and ROS levels regulated expressions of cyclins.**

Innovation points

- **CyclinD1 was downregulated after inhibition of ATP**

- **CyclinB1 was downregulated after elevation of ROS**

- **Link the function of PGC-1 α on cell cycle with mitochondrial OXPHOS**



PGC-1 α regulate cell cycle through mitochondrial pathway