

## عنوان مقاله:

Melatonin upregulates ErbB1 and ErbB4, two primary implantation receptors, in pre-implantation mouse embryos

## محل انتشار:

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## خلاصه مقاله:

**Objective(s):** To evaluated the effects of melatonin on early embryo competence and the expression rate of the primary implantation receptors (ErbB1 and ErbB4). **Materials and Methods:** Two-cell mouse embryos were cultured in 3 groups: simple media, melatonin-treated ( $10^{-9}$  M melatonin) and Luzindole-treated ( $10^{-9}$  M luzindole). Then, the rate of ErbB1 and ErbB4 gene and protein expression, the level of intracellular ROS, antioxidant capacity, and also the number of cells were evaluated and compared with the fourth group in vivo developed blastocysts (control group). **Results:** We concluded that melatonin significantly up-regulated the ErbB1 and ErbB4 gene and protein expression, decreased intracellular ROS, increased the total antioxidant capacity, and also elevated the cell numbers in the melatonin-treated group compared with the other groups ( $P \leq 0.05$ ). **Conclusion:** The use of melatonin may be a helpful factor in improving the embryo quality and enhancing the expression of ErbB1 and ErbB4, two important implantation-related genes and proteins.

## کلمات کلیدی:

Antioxidant, ErbB1, ErbB4, Melatonin, Pre-implantation embryo, Reactive Oxygen Species

## لینک ثابت مقاله در پایگاه سیویلیکا:

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