Melatonin: The watchdog of villous trophoblast homeostasis against hypoxia/reoxygenation-induced oxidative stress and apoptosis

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Highlights

- Melatonin protects human villous trophoblast against hypoxia/reoxygenation-induced damage.
- Melatonin inhibits oxidative stress and mitochondrial-dependent apoptosis in trophoblast cells.
- Melatonin may be potentially used to prevent pregnancy complications involving villous trophoblast alterations.

Abstract

Human placenta produces melatonin and expresses its receptors. We propose that melatonin, an antioxidant, protects the human placenta against hypoxia/reoxygenation (H/R)-induced damage. Primary term villous cytotrophoblasts were cultured under...