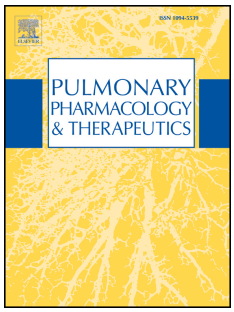

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Protective Role of Glucocorticosteroid prior to Endotoxin Exposure in Cultured Neonatal Type II Alveolar Epithelial Cells

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Abstract

Background: Dexamethasone (DEX) is widely used for antenatal lung maturation and has been investigated to prevent premature lung injury by inhibiting postnatal inflammation. Its pharmacological mechanisms in the treatment of bacterial infection-induced injury of neonatal lung parenchymal cells remain to be clarified. We hypothesized that DEX pretreatment may attenuate endotoxin-induced growth suppression and regulate cytokine mRNA expression in cultured neonatal type II alveolar epithelial cells (AEC-II).

Methods: AEC-II of newborn piglets were freshly isolated and cultured. After pretreatment of 0.01, 0.1, 1.0 and 10 μmol/LDEX (E0.01, E0.1, E1.0 and E10 group, respectively) for 24 hours, the cells were cultured with 1 μg/ml lipopolysaccharides (LPS) for 7 days with medium replacement every 24 hours. Messenger RNA