Troglitazone is a thiazolidinedione PPARγ agonist that exhibits anti-diabetic, anticancer, anti-fibrotic, and anti-inflammatory activities. Troglitazone contains a vitamin E-like ring structure that forms hepatotoxic metabolites in vivo. Troglitazone induces apoptosis in cervical cancer cells and decreases expression and activity of telomerase in ER- breast cancer cells. In vitro, troglitazone activates AMPK, decreases membrane potential, inhibits high glucose-closed ATP-sensitive K+ channels, and decreases insulin hypersecretion. In alveolar epithelial cells, troglitazone inhibits TGF-β1-induced activation of Akt, GSK-3β and Smad2/3, decreases β-catenin signaling, and suppresses epithelial-to-mesenchymal transition (EMT). Additionally, this compound inhibits PAM-induced increases in TGF-β1 and increases MUC1 expression in airway epithelial cells.

References


