Antrodia camphorata extract induces replicative senescence in superficial TCC;and inhibits the absolute migration capability in invasive bladder carcinoma cells

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摘要

Abstract

The Antrodia camphorata crude extract (ACCE), an extract obtained from a precious traditional Chinese folkloric herbal medicine Zhan-Ku (a camphor tree mushroom) since the 18th century, has showed rather significant inhibitory effects on the growth and proliferation of the transitional cell carcinomas (TCC) cell lines RT4, TSGH-8301, and T24. On treatment with ACCE at 100 μg/mL, the p53-independent overexpression of p21 with simultaneous down alteration of pRb was observed in RT4, which was thus speculative of proceeding through a mechanism of replicative senescence. On the contrary treatment with ACCE, at 50 μg/mL, resulting in simultaneous down-regulations of Cdc2 and Cyclin B1, with suppression of the absolute migrating capability of the two cell lines TSGH-8301 and T24, and eventually the cell deaths. We conclude that ACCE can be rather effective and beneficial in suppression of both the superficial cancer cell line RT4 and the metastatic cell lines (TSGH-8301 and T24) through different mechanisms.