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Título	Growth Inhibitory Effects of Dipotassium Glycyrrhizinate in Glioblastoma Cell Lines by Targeting MicroRNAs Through the NF-κB Signaling Pathway
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Resumo	It has been shown that nuclear factor kappa-B (NF-κB) is constitutively activated in glioblastoma (GBM), suggesting that the pathway could be a therapeutic target. Glycyrrhetic acid (GA), a compound isolated from licorice (Glycyrrhiza glabra), has been shown to decrease cell viability and increases apoptosis in human cancer cell lines by NF-κB signaling pathway suppression. Dipotassium glycyrrhizinate (DPG), a dipotassium salt of GA, has anti-inflammatory properties without toxicity. The current study examined the effectiveness of DPG as an anti-tumor in U87MG and T98G GBM cell lines. Additionally, we assessed DPG as a candidate for combinational therapy in GBM with temozolomide (TMZ). Our results demonstrated that the viability of U87MG and T98G cells significantly decreased in a time- and dose-dependent manner after DPG treatment, and the apoptotic ratio of DPG-treated groups was significantly higher than that of control groups. In addition, DPG in combination with TMZ revealed synergistic effects. Furthermore, the expression of NF-κB-luciferase-reporter in transfected GBM cell lines was remarkably reduced after DPG exposure by up-regulating miR16 and miR146a, which down-regulate its target genes, IRAK2 and TRAF6. A reduced neuro-sphere formation was also observed after DPG in both GBM cells. In conclusion, DPG presented anti-tumoral effect on GBM cell lines through a decrease on proliferation and an increase on apoptosis. In addition, our data also suggest that DPG anti-tumoral effect is related to NF-κB suppression, where IRAK2- and TRAF6-mediating miR16 and miR146a, respectively, might be a potential therapeutic target of DPG.
Fomento	