

Evaluation of Cytotoxic Effect of Two Diterpenes from *Plectranthus barbatus*

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Abstract : *Plectranthus barbatus* Andrews (Lamiaceae) is the most common species of genus *Plectranthus*. It is used for treating various ailments. In this study, two rare diterpenes 11,14-dihydroxy-8,11,13-abietatrien-7-one (1) and 12-hydroxyabieta-8(14),9(11),12-trien-7-one (2) were isolated for the first time from *P. barbatus*. Their chemical structures were verified utilizing various spectroscopic experiments. The effect of diterpenes against undifferentiated/anaplastic thyroid cancer cell line (FRO) was evaluated and they were quantitatively analysed using HPTLC method. The two diterpenes were found to be cytotoxic, however compound 1 showed significant cytotoxic effects where 95% reduction in the cell viability was observed in different time intervals. The quantity of compound 1 and compound 2 in PBCE were found to be 2.04 and 15.97 µg/mg, respectively of dried weight of the extract.

Keywords : abietatrien, cancer, diterpenes, *Plectranthus barbatus*

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