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## Isolation and pharmacological investigation of jacaranone derivatives from *Crepis pulchra*

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Members of the family Asteraceae are distributed worldwide and they are exceptionally rich in secondary metabolites. The rich chemistry of the family is the basis of their very widespread use as medicinal plants. Over the last few decades, different species from Asteraceae family have been studied from phytochemical and pharmacological points of view. Among them, terpenoids and flavonoids stand out because of their biological activities and potential health benefits.

The present work deals with the isolation and pharmacological investigation of compounds from *Crepis pulchra*. After multiple separation process, including TLC, vacuum liquid chromatography, preparative TLC, and HPLC, three cyclohexanones, namely jacaranone, 2,3-dihydro-3-hydroxyjacaranone methyl ester, and 2,3-dihydro-3-methoxyjacaranone methyl ester were isolated from the methanol extract prepared from the whole plant. The structures of the isolated compounds were determined by 1D and 2D NMR ($^1$H-$^1$H COSY, HSQC, and HMBC) and MS measurements, and by comparison with literature data. All compounds were isolated for the first time from the plant. The compounds were tested for their antiproliferative activity on four human tumour (MCF-7, A231, HeLa and C33a) cell lines. Among them, jacaranone proved to be the most active against all cell lines ($IC_{50}$s 6.27 μM – 14.61 μM). It can be stated that besides flavonoids and terpenoids, cyclohexanone derivatives can also contribute to the pharmacological potency of Asteraceae species.

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