

LC-ESI-MS/MS and cytotoxic activity of three Pistacia species

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Abstract

LC-ESI-MS/MS was used for a comprehensive characterisation of ethanol extract from the leaves of three Pistacia species. After optimisation of the method and the use of the negative ionisation mode, a total of 42 different compounds were identified, of which 22 were tentatively characterised in *P. chinensis* Bunge, 33 in *P. khinjuk* stocks and 25 in *P. lentiscus* L. leaves. Flavonoids, phenolic acids, and their derivatives were the most abundant identified compounds. LC-ESI-MS/MS revealed identification of 15, 18 and 6 not previously detected compounds in *P. chinensis* Bunge, *P. khinjuk* Stocks and *P. lentiscus* L., respectively. The three extracts were also tested for their cytotoxic activities against human PC3 prostate cancer, A549 lung cancer, MCF7 breast cancer and HepG2 liver cancer. Generally, all the extracts have a moderate cytotoxic activity against lung, breast and prostate cancer, with different IC50. However, only *P. lentiscus* L. showed moderate activity against liver cancer.

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