**New $N$-alkylamides from Anacyclus pyrethrum**

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**INTRODUCTION**

The roots of *Anacyclus pyrethrum* (AP) DC, (Asteraceae) are frequently used in traditional medicine e.g. as aphrodisiac. Currently, thirteen $N$-alkylamides ($N$-AAs), including isobutylamides (IBAs), tyramides (4-OH PEA), $N$-methyl isobutylamides ($N$-Me IBAs) and a 2-phenylethylamide (2-PEA), with pellitorine (#3) as major $N$-AA, have been identified in AP [1,2]. Depending on the extraction method and solvent, different yields of $N$-AAs can be found, possibly resulting in alterations in biological effects. Therefore, analytical profiling of the bio-active $N$-AA in these plant preparations is *conditio sine qua non* parameter, with HPLC/ESI-MS as recommended technique for comprehensive characterisation of $N$-AAs in plant extracts [3]. For the first time, an exhaustive $N$-AA profiling of an AP extract is performed, using HPLC/UV/ESI-MS.

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**EXPERIMENTAL**

HPLC/UV/ESI-MS $N$-AAs profiling of an ethanolic extract from the dry roots of AP was performed using a prevail RPC18 (250 × 4.6 mm, 5 µm) column with an optimized linear gradient consisting of 1% acetic acid in ultrapure water and acetonitrile. MS was performed in the positive mode. Identification was based on the $m/z$ values and characteristic fragmentation ions in MS¹ and CID-MS² [3].

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**RESULTS**

Thirteen N-AAs (4.87% m/m) were detected (Fig. 1). Compound 1-7 have previously been reported in AP [1,2], while compound A has only been documented in other Asteraceae genera. The five other ones (#B-F) have never been identified in AP or other plants, and are thus totally new [4].

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**CONCLUSIONS**

Performing $N$-alkylamide profiling in *Anacyclus pyrethrum*, 13 compounds are identified of which 5 are new and not yet reported in plants.

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**REFERENCES**


