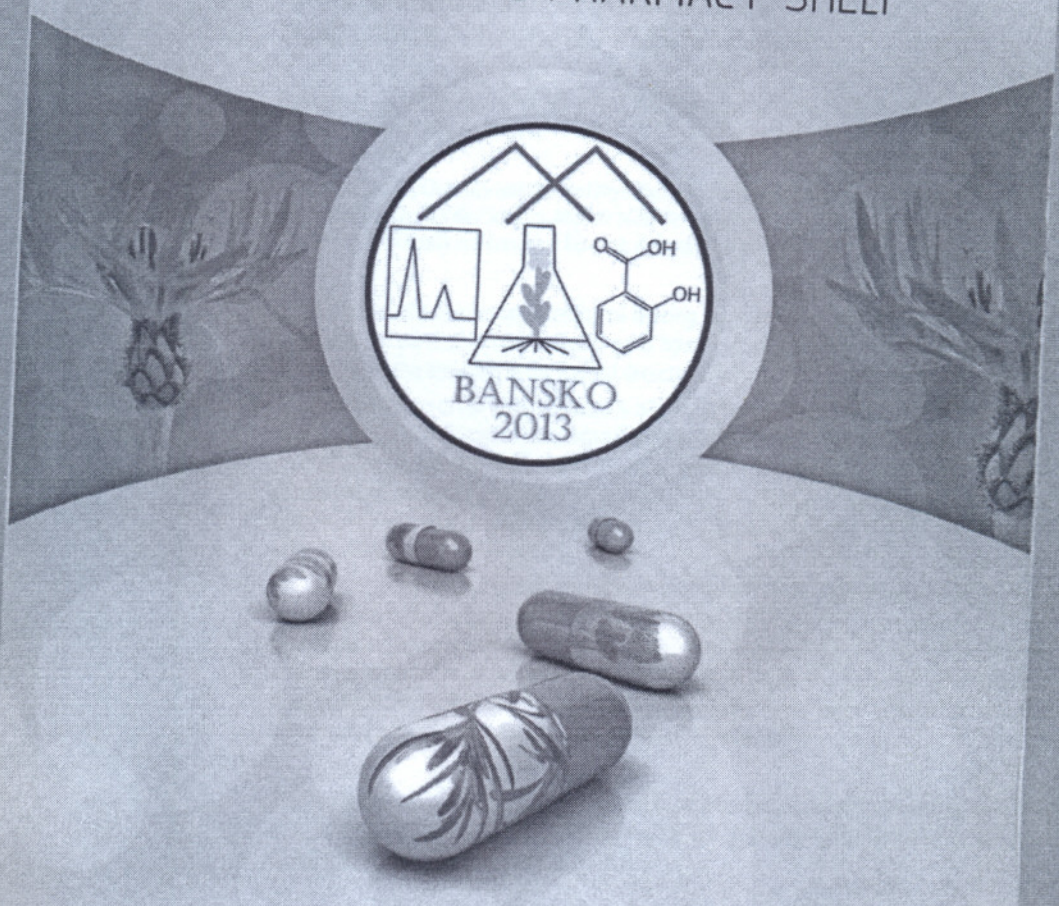
INTERNATIONAL CONFERENCE ON NATURAL PRODUCTS UTILIZATION: FROM PLANTS TO PHARMACY SHELF



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Bansko, BULGARIA

'S TO DISCOVERING

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acid bacteria populations in natural biosystems
um perforatum) with desired metabolic activities,
nponents during in situ cultivation in milk.

tes were obtained from different parts (flower,
um perforatum herbs and were selected based on
specific odour. Single bacterial colonies were iso-
selective media (MRS and M17). Differentiating
e, oxidase and indole) to prove their affiliation to
cterial colonies were obtained after a large-scale
cid were studied. Based on their ability to produce
hetero fermentative.

f lactic acid flora in plant natural habitats varies
n time of milk, on produced lactic acid concentra-
selection for preparation of novel fermented dairy
h benefits.

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COUMARINS AND FLAVONOIDS IN *ARTEMISIA ALBA* TURRA – A COMPARATIVE STUDY OF FIELD CULTIVATED AND TISSUE CULTURE PRODUCED PLANT MATERIAL

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Artemisia alba Turra is an essential oil bearing plant widely distributed in Southern and South-Eastern parts of Europe. Its aerial parts have been utilized in traditional medicine as a stomach digestive and tonic in the form of decoction.

The aerial parts of the field cultivated *A. alba* Turra were extracted exhaustively with methanol. Coumarin and flavonoid containing fractions were obtained by column chromatography on Sephadex LH 20. Further CC and PTLC resulted in isolation of 7 flavonoids (quercetin-3,4'-dimethylether, centaureidin, axillarin, quercertin 3-methyl ether, kaempferol, quercetin and luteolin) and 3 coumarins (scopoletin, umbeliferone and fraxidin-8-0-glucoside). Their structures were elucidated by NMR, MS and UV.

In vitro shoot cultures of the species were initiated by surface sterilization of the *ex situ* derived plant material. The isolated compounds were used as references for evaluation of the biosynthetic capacity of the plant in different culture media with variation of plant growth regulators supplementation. Shoot cultures were treated with indole-3-butiric acid and benzyl adenine. Qualitative similarity of the metabolite profiles of the *ex situ* and *in vitro* derived material was shown by TLC using UV and NP spray reagent for visualization.

Acknowledgments: The authors are grateful for the financial support provided by the Swiss National Science Foundation in the Framework in the Bulgarian-Swiss Research Programme (BSRP, grant No. IZEBZ0_142989; D02-1153).

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NEW PSEUDOGUAIANES FROM *INULA ASCHERSONIANA* JANKA VAR. *ASCHERSONIANA*

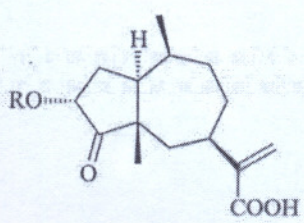
Antoaneta Trendafilova[1], Milka Todorova[1], Victoria Genova[1], Pavleta Shestakova[1], Dimitar Dimitrov[2], Milka Jadranin[3], Slobodan Milosavljevic[4]

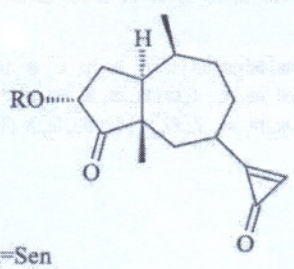
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Genus *Inula* (Asteraceae) comprises 90 species native to Europe, Asia and Africa. Some of them *I. helenium, I. britanica, I. viscosa* are well known as herbs used in traditional medicines of many countries. *I. aschersoniana* is an endemic for the Balkan Peninsula species. Previous studies on this species revealed the isolation of parthenolide, costunolide diepoxide, 8-hydroxy-11,13-dihydroeremanthin, and inusoniolide.

The aerial parts of wild growing taxon afforded 4 new compounds with pseudoguaiane carbon skeleton in addition to the known sesquiterpene lactones inusoniolide and 8-deoxicumambrin B. Their structures were determined by spectral methods.

TLC comparison of extracts from 3 populations from Rhodope Mountains showed significant qualitative similarity. On the other hand, the only common component with the earlier investigated taxa is inusoniolide. The observed difference in the composition could be of taxonomical interest concerning distinction of varietetes of this species.





R=Sen
R=Ang