

# 3<sup>rd</sup> Symposium of Young Researchers on Pharmacognosy



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## BOOK OF ABSTRACTS



**3rd Symposium of Young Researchers on Pharmacognosy**

# **BOOK OF ABSTRACTS**

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## Phytochemical investigation of *Juncus articulatus* and *J. kraussii*

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Among the secondary metabolites accumulated by species of the family Juncaceae, phenanthrenes have remarkable biological activity and structural diversity. The aim of our work is the phytochemical and pharmacological investigation of Juncaceae species. So far, the isolation of the special metabolites of *J. articulatus* was finished and started preparative work with an African species *J. kraussii*.

To obtain pure compounds from *J. articulatus*, preparative TLC and HPLC were used as final purification steps. Methanol extract of *J. kraussii* was obtained from South Africa. After evaporation, the extract was dissolved in 50% aqueous methanol, and solvent-solvent partitions were performed with *n*-hexane, chloroform, and ethyl acetate. Phenanthrenes are enriched in the chloroform phase; therefore, a rough separation was performed by column chromatography and then almost all fractions were purified by Sephadex LH-20 gel chromatography. Structure elucidation of the isolated compounds is carried out by NMR and MS spectroscopy as well as by comparison of spectroscopic data with literature values.

To date, twelve phenanthrenes, among them five new compounds were identified from *J. articulatus*. Moreover, two flavonoids, and three other compounds were also isolated from the plant. All compounds were determined for the first time from *J. articulatus*. Pharmacological investigations of the isolated compounds are in progress.

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