PP51. PYTOCHEMICAL AND BIOLOGYCAL EVALUATION STUDY OF ARTEMISIA VACHANICA KRASCH. EX POLJAKOV

P. SUKHROBOV^{1,2}, J. LI¹, S. NUMONOV^{1,3}, H. A. AISA^{1*}

¹Key Laboratory of Plant Resources and Chemistry in Arid Regions, Xinjiang Technical Institute of Physics and Chemistry, Chinese Academy of Sciences, Urumqi,830011, P. R. China

²University of the Chinese Academy of Sciences, Beijing, 100049, Yuquan Road 19AChina

³Research Institution "Chinese-Tajik Innovation Center for Natural Products", Dushanbe, 734063, Tajikistan

*Corresponding Author. E-mail: haji@ms.xjb.ac.cn

The genus of *Artemisia* (Asteraceae) is a large and diverse plants containing 478 species. *A. vachanica* is distributed in Tajikistan, Afghanistan, Pakistan and West Himalaya [1]. *A. vachanica* is found to be a novel plant source of artemisinin [2]. Thedried aerial parts of *A. vachanica* (5 kg) were minced and extracted with 95% ethanol (3 × 30 L, 10 d each time). Crude extract (1 kg) was suspended in water and partitioned with petroleum ether, dichloromethane, ethyl acetate and n-Butanol. The dichloromethane fraction (159.2 g) was separated through silica gel, and further purified by varying chromatography techniques and semi-preparative HPLC. The structures of isolated compounds were elucidated based on spectroscopic data ID, 2DNMR, HRMS, and a comparison with reported data. Five known compounds were isolated and identified from the *A. vachanica* as xanthoxylin [3], anemarrehenoside B [4], β -sitosterol, stigmasterol [5], eupatrin [6] and 8-epiisovangustin. All of them were isolated from *A. Vachanica* for the first time, and anemarrehenoside B was isolated from *Artemisia* genus for the first time.

Acknowledgement: This work was supported by the National Key R&D Program of China (No. 2020YFE0205600) and CAS-TWAS President's Fellowship Programme for PhD students.

REFERENCES

- [1] "Artemisia L. | Plants of the World Online | Kew Science." 30001021-2 (accessed Jul. 12, 2023).
- [2] Numonov S, Sharopov F, Salimov A, Sukhrobov P, Atolikshoeva S, Safarzoda R, Habasi M, Aisa HA. Medicines. 2019; 6: 23.
- [3] Hartmann G, Nienhaus F. Phytopathol. 1974; 81: 97.
- [4] Liang HJ, Lyu JN, Feng QM, Zhang LX, Liu QY, Dai LP, Wang ZM. Chin. J. Exp.Tradit. Med. Formulae. 2022; 28: 139.
- [5] Gomaa AAR, Samy MN, Abdel-Baky RM, Desoukey SY, Kamel SM. Chem. Nat.Compd. 2022; 58: 368.
- [6] Zeng X, Fang Z, Wu Y, Zhang H. China J. Chin. Mater. Medica. 1996; 21: 167.