

NEW FINDINGS OF DOCTORAL DISSERTATION

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Dissertation title: Study on botanical properties, chemical constituents and biological activities of *Hypericum hookerianum* Wight. and Arn., family – Hypericaceae.

Speciality: Medicinal Materials - Traditional Medicine; Code: 9720206

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Name of academic institute: National Institute of Medicinal Materials

Summary of new findings of the dissertation:

The new contributions of the thesis are shown on all three parts: botany, chemistry and biological effects of the studied species.

Regarding botany, it has been confirmed that scientific name of Ban hooker sample growing wild in Sa Pa Commune, Sa Pa District, Lao Cai Province is *Hypericum hookerianum* Wight. and Arn., (Hypericaceae).

37 compounds have been isolated and identified, among those there are 11 compounds (**HH6**, **HH7**, **HH11–HH16**, **HH24**, **HH31** and **HH37**), within my knowlegde, which were found for the first time in a species belongs to the genus *Hypericum*. On the other hand, with the species *H. hookerianum* alone, except for furohyperforin (**HH4**), all the remaining compounds could have been isolated for the first time from this species. Among 37 isolated compounds, according my research, 9 compounds (**HH7**, **HH10**, **HH12**, **HH13**, **HH5**, **HH16**, **HH31**, **HH32** and **HH36**) have not been studied for biological activities before.

The protective effects on HT₂₂ rat hippocampal neurons and SH-SY5Y neuroblastoma cells againt neurotoxicity agents were evaluated for 20 isolated compounds from *Hypericum hookerianum* Wight. and Arn. Among those, 4- hydroxy-

2,6,4'-trimethoxydihydrochalcon (**HH12**) exhibited highest protective effect on HT₂₂ rat hippocampal neurons against glutamate; sesamin (**HH15**) exhibited highest protective effect on SH-SY5Y neuroblastoma cells against 6-OHDA. Within my knowledge, biological activity of two mentioned compounds have not been published before.

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