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Comparative neuropharmacological studies on two varieties of Solanum nigrum

Mehjabeen¹, Mansoor Ahmad², Noor Jahan³, Asif Bin Rehman⁴ and Farah Saeed³ ¹Federal Urdu University of Arts Science and Technology, Pakistan ²University of Karachi, Pakistan ³Dow University of Health Sciences, Pakistan ⁴Hamdard University, India

The crude extracts of *S. nigrum* (SNRL, SNBL, SNRS, and SNBS) were selected for individual and comparative analysis. SNRS and SNBS showed highly positive results for the presence of sterol. SNBS give more positive results for steroids and triterpene glycosides and alkaloids as compared to SNRL, SNRS and SNBL. The result of SNRS with lead acetate showed fewer amounts of tannins. Powder drug studies, fluorescence analysis and TLC, FTIR and HPLC also gave an idea about the presence of active constituents. Gross toxicological studies of crude extract of *S. nigrum* (SNRL, SNRS, SNBL, SNBS) on kidney, liver, stomach and heart showed non toxic behavior. Gross behavior and neuro-pharmacological results also gave an idea about their application in stress, depression or psychotic illness. SNRS produced stimulating and anxiolytic behavior. SNBS exhibited CNS depression, SNRL and SNBL initially stimulated than produced relaxation of muscles. Remarkable observed results showed the involvement of muscarinic and non-muscarinic receptors to produce the therapeutic effects. Among all crude extract SNRS was found to be more effective as anxiolytic agent.

mehjbn1@gmail.com