

PL10. RECEPTOR RELATED PHARMACOLOGICAL ACTIVITIES OF *HYPERICUM PERFORATUM* L.

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Hypericum perforatum L. (St. John's Wort) is a medicinal herb which contains numerous active molecules with different pharmacological activities. Many studies showed that some of those mentioned pharmacological actions of *H. perforatum* and its active constituents occur via the interaction of this herb or its chemical ingredients with the related receptors. Additional to its well-known monoamine re-uptake inhibitor activity, *H. perforatum* extract, hypericin and hyperforin have been shown to have some affinity on various receptors with different concentration ranges. Sigma receptors, GABA-A and GABA-B receptors, NMDA receptors and weak affinity to benzodiazepine receptors have been shown to play some role in the central nervous system actions of this herb and its active constituents. Recently, some affinity to cholinergic receptors have also been observed in radioligand binding studies. *Hypericum* also regulates carbohydrate and lipid metabolism via the peroxisome proliferator-activated receptor (PPAR- γ). Additional to binding affinities of *H. perforatum*, it has also been shown that *Hypericum* and/or some of its active components can regulate the functions of some receptors like β -adrenergic, 5-HT_{1A} and 5-HT₂ serotonergic, GABA and dopaminergic type-2 receptors. Recently, *H. perforatum* has also been shown to effect on the expression of activated GPIIb/IIIa receptors on the platelets and can show antiplatelet action. As a result, it can be concluded that various receptors may play a role in the central nervous system as well as peripheral actions of *H. perforatum* and its active constituents.

Keywords: *Hypericum perforatum*; St. John's wort; Receptor; Hypericin; Hyperforin.

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