

MEMBRANETROPIC ACTION OF PLANT SUBSTANCES WITH IMMUNOMODULATING PROPERTIES

Vislobokov A.I., Prosheva V.I.¹

The Saint-Petersburg State Medical University of I.P.Pavlov, 197022, Russian Federation,
Saint-Petersburg, 6/8, Leo Tolstoy Str.

¹Institute of Physiology, Komi Sci.Center, Urals Branch of the Russian Academy of Sciences,
167982, Russian Federation, Syktyvkar, 50 Pervomayskaya Str.

Tel.: (8821)44-78-90, Fax: (8821)44-78-90,
E-mail: V.Prosheva@physiol.komisc.ru

In the given paper we have investigated the membranotropic effects of some plant substances with immunomodulating properties. The experiments were conducted on isolated molluscan *Lymnaea stagnalis* neurons using voltage-clamp technique. Ecdysteroid substance «Serpisten» from *Serratula coronata* L., polysaccharides from campion *Oberna behen* (L.)I. (*Silene vulgaris* (M.) G callus (acid arabinogalactan and pectin named silenan) applied from outside in 0.1-10.0 µg/ml range concentration was shown to activate in a weakly concentration-dependent manner and non-selectively ionic currents (they increase reversibly sodium, calcium and potassium ionic currents amplitude of neurons). The kinetics of currents under the influence of these substances was not changed. We conclude that the investigated substances have modulating and similar mechanism of their action which is probably due to increasing of membrane stability.