ANTIISCHEMIC PROPERTIES OF THE NEW ANTIOXIDANT DRUG VALEOKOR-Q10 (EXPERIMENTAL STUDY)

© **Selezneva A. I.**[2], **Makarov V. G.**[1], **Djachuk G. I.**[2], **Makarova M. N.**[1], **Zabozlaev A. A.**[3], **Khodko S. V.**[1], **Kovaleva M. A.**[1]

[1]Saint-Petersburg Institute of Pharmacy, Russia
[2]Northwestern State Medical University n. a. I. I. Mechnikov, Saint-Petersburg, Russia
[3]NPK "PHARMASOFT", Moscow, Russia

The aim was an experimental study of antiischemic effect of the new antioxidant drug Valeokor-Q10 on the model of acute myocardial infarction. Acute experimental myocardial infarction was modulated by the method of H. Selye (1960) — occlusion of the descending branch of left coronary artery in Wistar rats. The drug Valeokor-Q10 was administered in forms of injection at doses of 1,6, 2,5, 7,4, 22,2 mg/kg intravenously, and suspension of the tablets at doses of 0,2, 1,6, 7,4 mg/kg intraperitoneally. Mildronate (JSC Grindeks, Latvia) was used as reference. The amplitude of the ST complex on the ECG, enzymes aspartate aminotransferase and creatine kinase and neovascularization of damaged myocardium were controlled. Positive effect of Valeokor-Q10 on the dynamics of the complex amplitude of the ST on ECG was observed. Valeokor-Q10 at a dose of 1,6 mg/kg intraperitoneally and doses of 1,6, 2,5 mg/kg intravenously reduced activity of creatine kinase. Intraperitoneal administration of Valeokor-Q10 in doses of 1,6 and 7,4 mg/kg reduced the level of aspartate aminotransferase. The drug increased the neovascularization of ischemic myocardium area and accelerated differentiation of blood vessels in arterioles and venules. The maximum effect was observed at a dose of 1,6 mg/kg. New drug has antiischemic effect and can be successfully used in the treatment of coronary heart disease.

DEVELOPMENT AND VALIDATION OF TLC METHOD FOR THE IDENTIFICATION OF *AERVA LANATA* HERB

© **Semionova M. V.**, **Obukhova V. V.**, **Kuzminova L. V.**

JSC "Krasnogorskleksredstva", Krasnogorsk, Moscow region, Russia

In order to ensure quality and efficacy of herbal medicinal products the national quality standards must contain the modern quality control methods. The purpose of our study was to develop and validate the identification method for *Aerva lanata* herb. The study object was *Aerva lanata* herb; TLC was chosen as an analytical method for identification of phenolic compounds profile in the samples. Ethanol (80 %) appeared to be the best extraction agent and the best *Aerva lanata* herb phenolic compounds resolution was achieved using mobile phase ethyl acetate — anhydrous formic acid — water (12:2.5:3) in the plates TLC Silica gel 60 F254 (aluminium sheets, Merck, Germany). Solutions of rutin and quercetin were used as reference solutions. After developing the plate was heated at 100–105 °C for 3–5 minutes. Then the plate was sequentially sprayed with 1 % diphenylboryloxyethylamin solution and 5 % polyethyleneglycol solution (both in 96 % ethanol) and dried at room temperature for 30 minutes. The following zones of reference compounds present: detection at 365 nm with the reference solutions: the zone with yellow, yellow-orange or orange color (R_f approx. 0.4–0.5 that was accepted as R_s = 1.0, due to rutin) and the zone with yellow, yellow-orange or orange color (R_s approx. 1.9–2.5, due to quercetin).

The following zones of phenolic compounds present in the plate with the test solution: the zone with yellow, green-yellow, yellow-orange or orange color (R_s (by rutin) approx. 0.3–0.4), 2 zones with green or green-yellow color (R_s approx. 0.4–0.5 and 1.8–2.2), the zone with light blue color (R_s approx. 0.8–1.0); others zones could be present. The method validation was performed on 6 industrial batches (from 2009 to 2012 production years) by workers of 2 laboratories (Research & Development Department and Quality Control Department). The method specificity was evaluated by coincidence of the different batches chromatographic profiles by the main zones and by compliance of abovementioned profiles with the test solution chromatogram description. Chromatographic profiles of the different batches have coincided and been compliant with the test solution chromatogram description. The resolution between zones of rutin ($R_s$approx. 1.0) and quercetin (R_s approx. 1.9–2.5) in the chromatogram obtained with the reference solutions has been chosen as a chromatographic system suitability index. The resolution value between the