

## REFERENCE

supervisor

**Doctor of biological sciences, associate professor O.V. Rybalchenko**

**on graduating qualification work of the student of the medical faculty of St. Petersburg State University Irina D. Porokhnyak on the theme "Morphological and physiological characteristics of healing of skin wounds of animals under the influence of a helium plasma jet of atmospheric pressure"**

A sixth-year student at the St. Petersburg State University's Medical Faculty, Porokhnyak Irina Dmitrievna, began her graduation qualification in 2016. In the process of performing the WRC, Porokhnyak I.D. an experimental study was carried out to determine the effect of a helium plasma jet of atmospheric pressure on the morphophysiological properties of tissues in infected skin wounds of animals. Despite the existence of a large number of methods and approaches to the treatment of wounds, the urgent need now is for a new concept to prevent complications in the form of wound inflammation and a new strategy for treating chronic wounds. In connection with this, perhaps, a promising strategy may be the use of a cold plasma of atmospheric pressure on the basis of a helium plasma jet.

The work carried out by the author, including selection, modification and execution of the experimental model of the wound process in rats and mice, morphometric and electron microscopic methods of investigation, makes it possible to reveal the nature of the effect of low-temperature atmospheric pressure plasma on epidermal cells and skin wound microorganism cells. Irina Dmitrievna correctly formulated the goals and objectives of the study, as well as the main conclusions from the results of the work done. All the provisions and conclusions set forth in the work are scientifically substantiated and convincing, follow from the tasks set. In addition, the literature sources with generalizations and conclusions were successfully analyzed.

During the study, Porokhnyak I.D. successfully mastered the methods of working with laboratory animals, the technique of performing a model of complicated wound process in rats and mice. She made biopsy material fixation, received semi-thin and ultra-thin sections of wounds.

During the period of the work, Irina Dmitrievna participated in four conferences with oral and poster presentations, the materials of which were published in theses collections.

Graduation qualification work Porokhnyak I.D. "Morphological and physiological characteristics of healing of skin wounds of animals under the influence of a helium plasma jet of atmospheric pressure" can be presented to protection.

Scientific adviser:



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