



## DEVELOPMENT OF BIOLOGICALLY ACTIVE PREPARATIONS FOR TREATMENT OF PATIENTS WITH TUBERCULOSIS

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[Presentation](#)

**Objective of the project:** development of a method for the preparation of biologically active drugs - BAP (with a long-lasting negative ORP) based on aqueous solutions of wax moth larvae; conducting experimental clinical studies to study the bactericidal effect of BAP on Koch's bacillus in order to create new methods of treating patients with tuberculosis.

**Known:** for the treatment of tuberculosis patients, there are analogues of the proposed drugs - chemical drugs, but they are expensive and require long-term use. Along with the specific action, these drugs have a pronounced toxic effect and cause a number of complications in the human body.

**Known** prototype the proposed drug - an alcoholic solution of wax moth larva for the treatment of patients with tuberculosis - "[Tincture of Wax Moth](#)" (manufacturer [KFK "Medonos"](#)). The drug is of natural origin, has a physiological effect on the body and is not toxic. The disadvantages of the drug include the presence of a positive redox potential (ORP).

The proposed method allows contactless (without changing the chemical composition) to obtain biologically active drugs with long-term negative ORP based on aqueous solutions of wax moth larvae. It is known that aqueous solutions with negative ORP are reducing agents, possess powerful antioxidant properties, improve the permeability of biological membranes, and increase the protective properties of the body. The method is based on the transfer of liquids into a nonequilibrium thermodynamic state with resonant microcluster structures, with increased energy - [c\\_n\\_aw.htm](#).

Pilot studies were carried out to develop the proposed method for the non-contact activation of tincture of wax moth larvae with a long-term negative ORP. The results are presented in the table:

Date	09.07.11	12.08.11	18.08.11	24.08.11	06.09.11
Control (ORP, mV)	80	84	82	79	83
Experience (ORP, mV)	-193	-248	-301	-445	-476

### Commercialization perspectives

The proposed innovative development has no analogues in the world. The method of obtaining biologically active drugs (BAP) with a long-term negative ORP will increase the biological activity of aqueous solutions of wax moth larvae.

Post-market demand assessment:	1-й год (USD)	3-й год (USD)
Russia	50 000	200 000
CIS countries	70 000	300 000
EU countries, USA	100 000	350 000

Long-term negative ORP BAP makes it possible to reduce the number and dosage of drugs used, their toxicity, reduce the time and cost of a patient's stay in hospital.

In the future, this method can be used to obtain BAP with long-lasting ORP not only in the treatment of tuberculosis, but also in the treatment of pathologies of other systems.

\* - Finalist of the competition "U.M.N.I.K." in the Udmurt Republic in 2011 in the direction - Medicine and Pharmacology.

Translated by Shironosova O. E.

Found a mistake?

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