

**The UKRAINIAN I. I. Mechnikov ANTI-PLAGUE RESEARCH INSTITUTE**  
**Odessa, UKRAINE (MINISTRY OF HEALTH)**

(Organization's) Technical Area Keywords: Emergent Infections, State Territory Sanitary Protection, Biosafety



National and International Programs in collaboration with scientific and practical organizations, carrying out scientific research in STCU, CRDF, INTAS, etc. projects.

Institute accumulates the unique experience while modern (sentinel surveillance) monitoring epidemics of HIV/AIDS, Tuberculosis, STDs, Drug Abuse in different target groups in process research under supervision of the National and International Programs.

Institutes' laboratories fulfill monitoring of related territories and are ready for quick indication and identification of the QOEDI and OAI objects of biological pathogenic agents (BPA) of the III-IV level (CDC classification), including their biological properties, genetics, immunology, ecology and epidemiology study, estimation of epidemiological and epizootological potential of the BPA foci, methods of preventive maintenance and treatment

Method for antibiotics anti-bacterial activity increasing includes complex use of the antibiotics with proteolysis inhibitors and allows: to increase activity against Cholera, Tularemia, nosocomial infections agents, decrease effective doses of the antibiotics

Transdermal delivery system containing remantadine was developed. The main system's advantages are: prolongation of the drug action, absence of the drug concentration, reducing of the adverse reactions. On the base of E-aminocaproic acid (EACA) antiviral action investigations it was recommended by the Department of veterinary medicine of Ukraine for poultry and poultry farms treatment with aim to prevent Avian influenza Panzootia (TK#152, Protocol #10 26.01.2006).

#### Scientific Cooperation and Technology Transfer

The Institute collaborates with many related facilities in Ukraine and abroad. In Ukraine we deal with Central SES, Gromashevsky Institute of Epidemiology and Infectious Diseases (Kiev), Lviv Research Institute of Epidemiology and Hygiene, Odessa National University, Boghatsky Physical-chemistry Institute (Odessa), regional SESes, biosphere nature reserves. Abroad we traditionally collaborate with Russian related facilities. In addition, we collaborate very tightly with Canadian Ministry of Foreign Affairs, Canadian Center for human and Animal Health (Winnipeg), Robert Koh Institute (Berlin), Umea University (Sweden).

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#### General Information

The Ukrainian I. I. Mechnikov Anti-Plague Research Institute (UAPRI) was founded in 1886 in Odessa by I. I. Mechnikov, the Nobel prize winner, as a bacteriological station, which has been the second in the world after Pasteur station in Paris. Since 1999 our Institute has been working in present status. The work is based on the experience of FSU anti-plague system and achievements of modern science. The Institute is responsible for the quarantine and other especially dangerous infections (QOEDI) surveillance, study, epidemiological complications' analyses, identification and study of isolated agents, state sanitary document projects' preparation, new preparations' development.

#### Institute's Focus

- Improvement of the system of sanitary protection of the territory of the Ukraine from QOEDI penetration and distribution
- Investigation of the formation and development of the QOEDI natural foci for their localization and control over new foci formation
- Studying the biological properties of the QOEDI in order to estimate their epidemiological potential
- Identification/development of new chemical preparations for QOEDI effective diagnoses, prevention and treatment
- Reduction of the agents resistance to antibiotics by joint application of antibiotics and proteolysis inhibitors
- Development of methods for epidemics' forecasting and principles of organization of preventive and counter epidemic measures
- Development of new/or improved methods for diagnosing the QOEDI
- Development of immune-biological preparations and vaccines against emerging diseases
- Evaluation of the new methods and approaches of the original effective antiviral and antimicrobial preparations with the use of the contemporary computer technologies (QUSAR)
- Biosafety training for the staff of Ukrainian epidemiological sanitary stations departments of especially dangerous infections
- Museum collection of especially dangerous diseases agents is a branch of State Museum of Gromashevsky Institute and contains more then 850 strains of bacterial and viral agents

#### Valuable technology offerings

Studies of the biological protection of the territory and population in present time have special importance and prospective value and are fulfilled by the staff, which has practical experience of "in foci" investigations, including