

Biolaboratories and Biosafety: Modern Approaches to the Creation of Biological Weapons within the Framework of International Cooperation

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Abstract: *The article is devoted to the analysis of the current situation of biological safety and the creation of biological laboratories in the interests of individual countries.*

Keywords: biological safety, biological agent, biological laboratories, Central Asia, Tajikistan, Ukraine, Biological Weapons Convention

The term “biological agent” refers to a bacterium, virus, protozoan parasite, or fungus that is used purposefully as a biological weapon, as well as for bioterrorism purposes. Artificially created and modified microorganisms have the ability to adversely affect human health in a variety of ways, ranging from relatively mild, allergic reactions to serious medical conditions, even death. Because many microbes reproduce rapidly and require minimal resources for survival, they are a potential danger in a wide variety of occupational settings [1].

Despite the expensive equipment for creating bio-agents in the laboratory, the production of biological weapons is much cheaper than nuclear weapons and is considered more deadly. After the two world wars many countries began large-scale research and development programs in this direction. As a result of such research, a number of dangerous infectious diseases have appeared in the world: anthrax, botulinum toxin, plague bacillus (plague pneumonia and septicemic plague), Ebola virus and others [2].

In 1972, the world community adopted the Biological Weapons Convention, which prohibits the use or stockpiling of bioagents. At present, many countries, including China, are in favor of establishing a verification mechanism under the aforementioned Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons for Security. However, the US remains almost the only country that has vehemently opposed the proposal over the past 20 years.

The outbreak of coronavirus in 2019 caused a new controversy over programs for the study of biological agents, as well as the activities of biolaboratories in the system of international cooperation. As a result of finding out the causes and circumstances of the emergence of a new strain of the virus, the world scientific community was divided into the following groups: 1) COVID-19 leaked from a laboratory; 2) the new virus is of natural origin. Despite official World Health Organization statements about natural origin of COVID-19, a \$20 trillion lawsuit has been filed against China in the US over coronavirus outbreak. Washington continues to argue that the modern viral disease is a biological weapon designed

to mass destruction. But in the absence of any hard evidence, these claims are still speculation.

Washington's accusations against Beijing in connection with the "cover-up" of the alleged origin of COVID-19 in Wuhan have raised questions about a network of secret US biological laboratories located near the borders of China, which have been developing for decades. Thus, at a press conference on May 8, 2020, Chinese Foreign Ministry spokeswoman Hua Chunying noted that although China has only two P4 laboratories (biosafety level 4) dealing with dangerous viruses, there are about 13 actively working such structures in the United States. In addition, there are 1,495 P3 facilities in the US, "not counting the many other laboratories that have been built in the former Soviet Union, such as Ukraine, Kazakhstan, and many other places around the world."

The Chinese side provided indisputable data on the establishment of the United States on the territory of other countries, including near the borders of the PRC, biological laboratories. By creating such research centers abroad Washington seeks not only to protect its population in the event of a “leakage” of a bioagent, but also to solve legal problems under the Biological Weapons Convention, reducing the pressure of the world community. Thus, since the early 2000s, the United States has been actively providing humanitarian assistance to Tajikistan in the field of medical services and laboratory research. It is worth noting that bordering Afghanistan and China, Tajikistan is a key ally in promoting regional stability and security under the leadership of Washington. This is shown especially by the activities of the United States Agency for International Development (USAID). According to official data, the United States does not stop actively investing in Tajikistan in this direction. Thus, in June 2020 the US government through USAID allocated two tranches of funds: 866 thousand and 2.6 million dollars to increase the ability of Tajikistan to respond to the ongoing COVID-19 pandemic [3]. At the same time earlier in 2013 a level 3 biological safety laboratory was put into operation in Dushanbe with funding from European and American funds. The total cost of construction and equipment is more than 3 million US dollars. Along with the above mentioned, on a regular basis within the framework of the EU Centers of Excellence on Chemical, Biological,

Radiological and Nuclear Risk Mitigation (CBRN CoE) project trainings on biosafety are conducted in Afghanistan and Tajikistan. Thus, in Dushanbe from June to October 2018 7 trainings were held as part of the “53 project”.

The choice by the United States of other countries and regions to create a network of biological laboratories is not accidental. Study of the susceptibility of biological agents to meteorological and climatic conditions makes it possible to create the most effective biological weapons capable of operating in different climatic zones [4]. The territory of the former Soviet Union (Central Asia, Eastern Europe) meets these conditions; in addition, the diversity of microorganisms and fauna has a positive effect on developments in the field of genetic engineering due to mutations and transfer by animals. At the same time, the loyalty of local authorities caused by interest in the inflow of additional investments and real money allows the creation of new foreign laboratories without hindrance.

The military operation on the territory of Ukraine, which began in February 2022, uncovered a whole network of foreign biological laboratories. During a press conference in March 2022 Chinese Foreign Ministry spokesman Zhao Lijian said that Washington's reaction to the information released by the Russian side indicates the actual creation of biological weapons on the territory of Ukraine [5]. In accordance with an agreement between Washington and Kiev in 2005 representatives of the US Department of Defense are authorized to participate in all studies of Ukrainian biological objects. At the same time, official Kiev is prohibited from disclosing information that the United States considers "confidential." It was established that under the control of Washington there were more than 26 laboratories and other joint facilities on the territory of Ukraine, the total amount of investments by the American side since 2005 has exceeded \$200 million. As a result, hiding behind the development of “biological security” for Ukrainian citizens, the country’s authorities officially allowed another country to implement programs to create mechanisms for the covert spread of deadly viral pathogens (such as plague, anthrax).

Currently scientists from different countries are concerned about new developments of the US Department of Defense Advanced Research Projects Agency (DARPA). This military unit is exploring the possibility of using insects to increase the resistance of plants by changing their genes as a promising direction. Some experts say the work could be viewed as a potential bioweapon. However, the American side says its goal is to protect the country's food supply from threats such as drought, crop disease and bioterrorism by using insects to infect plants with viruses that protect against such dangers. Guy Reeves, a biologist at the Max Planck Institute for Evolutionary Biology in Germany, says the technology is more effective as a biological weapon than as an agricultural tool [6].

Thus, the modern system of international relations allows leading countries to create biolaboratories abroad using investments and active financial support. At the same time, in the event of a possible "leakage" of biological agents, the risks and responsibility of customers are excluded. The

current situation in the world shows that the Biological Weapons Convention needs to be amended to oblige states to ensure the openness of biolaboratories in the interests of human security.

References

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