

ABSTRACT

“Update on the current status of the collection of variola virus strains” 10th Meeting of WHO Advisory Committee on Variola Virus Research, Geneva, November 19-20, 2008

According to an inventory inspection, the Russian collection of variola virus strains contains:

- freeze-dried & frozen cultures – 120 strains;
- 17 primary specimens isolated from human patients in the past;
- The total number of registered stored units – 691.

Beginning November 2007 we continued the work with variola virus in 4 directions:

- for viruses stored in a frozen condition, glass vials were replaced by polypropylene cryovials because of their being safer during both storage and work;
- recovery of variola virus strains of Asian origin, which had not been studied or recovered before;
- testing of the antiviral properties of compounds with previously identified antiviral efficacy against other orthopoxviruses;
- testing of the neutralization properties of mini-antibodies with previously identified neutralization activity against other orthopoxviruses.

As a result, one-third of all glass vials, containing variola virus, was replaced by the polypropylene cryovials. To choose a reference strains of Asian origin, we tested the viability of 5 variola virus strains, which mostly had not been subjected to such research before. As a result of 3 sequential passages on the chorioallantoic membrane of fertilized chicken eggs, no viable virus was detected. To assess the level of preparedness for studying the antiviral properties of promising chemical compounds, we defined the concentration of viable virus in 4 previously grown variola virus strains.

This year we have been working to build a permanent repository for the variola virus stocks in a facility, which is exclusively used for work with variola virus. By now, we have completed building and assembly work specified in repository's construction project; we have also purchased and installed the necessary equipment.

Once the newly constructed repository is commissioned, it will allow giving up the transfer of variola virus strains from one facility into another, which was done previously at beginning and completing each campaign of research on variola virus.