



The WHO Collaborating Center for Smallpox and other Poxviruses at the Centers for Disease Control and Prevention Atlanta, GA: 2009 report on the variola collection

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The World Health Organization (WHO) Collaborating Center for Poxviruses in Atlanta, GA continues to maintain one of two consolidated, international collections of variola strains. The majority of these viruses were originally isolated on embryonated eggs and characterized during the final years of the intensification of the smallpox eradication campaign. The virus collection is maintained in two separate freezers, one of which is a back-up freezer which has remained largely untouched. Secure databases, which address WHO recommendations as well as U.S. Select Agent requirements have been implemented to track usage of variola virus. In February 2009, a complete physical inventory of the repository was conducted and boxes sealed in accordance with U.S. Select Agent recommendations. Annual reports on the status of these collections are provided to the WHO. Since the last report to WHO in 2008, no new variola virus seed pools were added to the inventory. WHO-approved research activities that have utilized variola virus from the inventory within the last year have focused on the following: *in vitro* analysis of promising antiviral compounds with high orthopoxvirus specificity and activity, support of less reactogenic vaccine development, analysis of potential variola-specific monoclonal antibodies for virus recognition, determination of whether variola infection of *Cynomys ludovicianus* is a suitable animal model for human smallpox, and maintenance and regeneration of non-infectious variola-derived materials for diagnostic development support. In accordance with recommendations of the WHO inspection visit of March 2009, we also conducted in-depth evaluation of the ability of a new manual

DNA extraction kit to completely inactivate variola virus, in order to replace the previous kit that has been discontinued.