

HOSPITAL OF THE UNIVERSITY OF PENNSYLVANIA

CONSENT TO PARTICIPATE IN A RESEARCH STUDY AND RESEARCH SUBJECT HIPAA
AUTHORIZATION

Protocol # POX-MVA-037

Title of the trial: Randomized, open-label Phase II trial to assess the safety and immunogenicity of MVA-BN[®] smallpox vaccine when increasing the number of injections compared to the standard regimen in immunocompromised subjects with HIV infection

Trial site: Hospital of the University of Pennsylvania
3400 Spruce Street
Philadelphia PA 19104

Investigators: Ian Frank, MD
Pablo Tebas, MD

Study Nurses Randee Silverman, RN, BSN
Joseph Quinn, RN, BSN

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(215) 662-6059

Sponsor: Bavarian Nordic

Why am I being invited to take part in this research trial?

You are being invited to voluntarily take part in a smallpox vaccine clinical trial because you are infected with the HIV virus. This new vaccine is being developed for the prevention of the disease smallpox in a highly immunocompromised population. Before agreeing to participate in this clinical trial, it is important that you read and understand the following description of the trial. If you are not completely truthful regarding your current medical conditions and your medical history, you may harm yourself and others by participating in this trial.

Please read the information provided below carefully, and do not hesitate to ask the Investigator or staff members any questions you may have. If you volunteer to take part in this trial, you will be one of about 90 people, who will be enrolled in this trial. About 15 people are expected to participate at the University of Pennsylvania.

A description of this clinical trial will be available on <http://www.ClinicalTrials.gov>, as required by US Law. This Web site will not include information that can identify you. At most, the Web site will include a summary of the results. You can search this Web site at any time.

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This is a consent form. It gives you information about this study. The study staff will talk with you about this information. You are free to ask questions about this study at any time. Your participation is voluntary which means you can choose whether or not you want to participate. If you choose not to participate, there will be no loss of benefits to which you are otherwise entitled. Before you can make your decision, you will need to know what the study is about, the possible risks and benefits of being in this study, and what you will have to do in this study. The research team is going to talk to you about the research study, and they will give you this consent form to read. You may also decide to discuss it with your family, friends, or family doctor. You may find some of the medical language difficult to understand. If you agree to take part in this study, you will be asked to sign this consent form. You will get a copy to keep.

Who is doing the trial?

This clinical trial is being performed in up to 10 trial sites in the USA; the Hospital of the University of Pennsylvania is one of them. The University of Pennsylvania is being paid by Bavarian Nordic, the sponsor of this trial who is also providing the material to conduct this research trial.

Dr. Ian Frank is conducting this trial at the University of Pennsylvania. There may be other people on the research team assisting at different times during the trial.

What is the purpose of this trial?

Smallpox was an infectious disease caused by a virus called variola. After vaccination campaigns throughout the 19th and 20th centuries the world was considered free of smallpox in 1980. As mass vaccinations against smallpox halted more than 30 years ago - in the US routine vaccinations for smallpox were stopped in 1971 - it is estimated that nowadays the majority of the world population has no existing protection against smallpox.

Because of the recent concern over the use of biological weapons (e.g. use of biological toxins or infectious agents such as viruses with intent to kill or incapacitate humans) as agents of terrorism, the United States government is making efforts to improve its ability to protect its citizens in the event of a bioterrorist attack. At least from the time when anthrax was used as a biological weapon it is feared that the smallpox virus, too, might be used by bioterrorists. As smallpox vaccine supplies worldwide are no longer sufficient and the currently approved smallpox vaccine, ACAM2000[®], can sometimes cause severe side effects, efforts are being made to develop new and safer smallpox vaccines.

MVA-BN[®] is a live virus smallpox vaccine. This vaccine does not contain the virus that causes smallpox known as variola virus (mentioned above). Rather, it contains a weakened virus known as “modified vaccinia virus”. Unlike ACAM2000[®], this weakened virus cannot grow and multiply (“replicate”) in humans.

The MVA-BN vaccine is not approved for use in the US in persons who are immunocompromised. However, in August 2013 the European Medical Agency (EMA) authorized for the use MVA-BN[®] smallpox vaccine for governments globally under their national emergency rules. The EMA reviewed data from trials in healthy adults and populations contraindicated to receive live smallpox vaccines, namely HIV- infected or people diagnosed with atopic dermatitis. MVA-BN[®] smallpox vaccine has shown to be safe and well tolerated in all tested populations.

All participants in this trial will be randomly (by chance) and evenly assigned to one of three

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groups (Group 1-3) to receive two, three or four injections. Group 1 will receive the standard regime consisting of one dose at each vaccination time point, Group 2 will receive two doses at each vaccination time point and Group 3 will receive a booster (additional) vaccination 12 weeks after the first dose of the standard vaccination schedule (Day 0 and Day 28) with MVA-BN[®] smallpox vaccine. MVA-BN[®] smallpox vaccine is given as an injection (shot) with a short needle below the skin of the upper arm.

The vaccine helps the body to have an immune response (produce special blood cells and antibodies) which can protect against smallpox without causing a vaccination sore or scar, like ACAM2000[®].

The main purpose of this clinical trial is to generate important additional safety data in a highly immunocompromised population of which HIV-infected persons constitute a significant proportion. Additionally, the immune system's response (protection against smallpox as measured by the amount of antibodies produced) following injections of MVA-BN[®] smallpox vaccine will be evaluated.

Where is the trial going to take place and how long will it last?

The research procedures will be conducted at the Hospital of the University of Pennsylvania at the MacGregor Clinic on 3 Silverstein. The trial is scheduled to last up to 75 weeks from the time you are first seen at the trial site until the last follow-up contact. During the trial, you will need to come to the trial site for six (6) visits at regular intervals and two follow-up visit for Group 1 and 2 and nine (9) visits and two follow-up visit for Group 3. These trial visits will usually take no more than 1 – 1½ hours each. The follow-up visits are two check up visits within one year after the standard second vaccination or the booster vaccination. The first follow-up visit will be conducted 6 months and the second follow-up visit 12 months after the standard second vaccination or the booster vaccination. However, if the trial physician feels it is necessary for medical reasons, you may need to come to the trial site for additional visits between the regularly planned site visits or to perform the follow-up visit.

What will I be asked to do?

You can voluntarily participate in this trial if you meet all relevant conditions and if you are willing to participate by attending all trial visits as shown in the Table below:

Table 1 – Visit Schedule

Visit	Blood draw	Blood volume	Vaccination	ECG
Screening Up to 28 days prior to Visit 1	■	13 ml or about 1 tablespoon		■
Visit 1, Day 0	■	9 ml or about 1 tablespoon	■	
Visit 2, Week 2	■	13 ml or about 1 tablespoon		■
Visit 3, Week 4	■	9 ml or about 1 tablespoon	■	
Visit 4, Week 6	■	18 ml or about 1½ tablespoons		□
Visit 5, Week 8	□			
Visit 6*, Week 12	■	9 ml or about 1 tablespoon	■	

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Visit	Blood draw	Blood volume	Vaccination	ECG
Visit 7*, Week 14	■	<i>18 ml or about 1½ tablespoons</i>		□
Visit 8*, Week 16	■	<i>2 ml or about ¼ tablespoon</i>		
<i>Follow-up 1 26 -30 weeks after Visit 3 or after Visit 6 for Group 3</i>	■	<i>11 ml or about 1½ tablespoons</i>		
<i>Follow-up 2 52-56 weeks after Visit 3 or after Visit 6 for Group 3</i>	■	<i>11 ml or about 1½ tablespoons</i>		

Explanation: ■ = to be performed; □ = performed only if the trial physician feels it is necessary for medical reasons; * Group 3 only; ECG = Electrocardiogram

The trial staff will give you a schedule of your individual visit dates.

Your participation is described in the section below. Depending on the group to which you have been randomly (by chance) assigned, you will either receive two, four or three injections with MVA-BN® smallpox vaccine. In Group 1, you will receive the first single injection on Day 0 and the second single injection between Day 28 and Day 35. If you are assigned to Group 2, you will receive two injections on each vaccination time point as described for Group 1. If you are assigned to Group 3, you will receive two single injections as described for Group 1 and a third additional single injection (‘booster’) three months after the first injection. All injections will be given to you by medically trained trial staff as a small shot under the skin.

Screening Visit

Within 28 days prior to the first vaccination (on Visit 1, Day 0) you will have a screening visit carefully checking if you are eligible for participation in the trial.

Trial staff will start by reviewing with you and documenting your health history. You will then have a thorough physical examination which will include measuring your vital signs (heart rate, blood pressure, etc.) and an electrocardiogram (ECG) will be performed to check your heart. During this visit, approximately 1 tablespoon (13 ml) of blood will be drawn for laboratory examination. Your blood will be tested as a general health screening to determine the health of your heart, kidneys, liver and blood. For female participants of child bearing potential a serum (blood) pregnancy test will be done to make sure you are not pregnant. All your laboratory test results will be coded and therefore your identity will not be revealed to anyone outside the research staff working on the trial.

Regular trial visits and vaccinations (Visits 1 to 5 or Visit 8, respectively)

If you are eligible for participation in the clinical trial as determined during screening and you are enrolled into this trial, you will have 5 further scheduled visits at the trial site or 8 further scheduled visits, if you are assigned to Group 3. The following procedures will be performed during these regular on-site trial visits (Visits 1 to Visit 5 or Visit 8).

At Visit 1 (Day 0) you will be randomly assigned to one of the three groups. After random assignment to one of these three groups, you will receive the first vaccination; the second vaccination will be given four weeks later at Visit 3. If you are assigned to Group 3, you will receive a third single vaccination (‘booster’) three months after the first single vaccination. Vaccinations with MVA-BN® smallpox vaccine are given to you by medically trained trial staff as a shot under the skin (‘subcutaneously’) with a short needle preferably into the non-dominant upper arm.

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After each vaccination you will remain in the trial site for 30 minutes to be observed by the trial site staff just to be sure that you do not experience any unexpected, rare, immediate side effects.

Following each vaccination, you will be asked to **keep a memory aid card** to record your oral temperature (measured in the mouth) and document symptoms each day for 8 days (day of vaccination + following 7 days) or longer if symptoms persist. You will receive a thermometer and a ruler to measure possible reactions at the vaccination site. You will be given a memory aid card after each vaccination visit i.e. at Visit 1 and Visit 3, and at Visit 6 if you are in Group 3. The trial staff will review the memory aid card with you so that you understand how to complete it. The card will be collected at the visits following the vaccination visits, i.e. Visit 2 and Visit 4, and Visit 7, respectively and the trial staff will review with you the entries you made on the memory aid card. In addition they will also examine the vaccination site.

At all visits except Visit 5 you will have blood samples taken. Only in case the trial doctor (Principal Investigator) decides further follow-up examinations are necessary, additional blood draws might be scheduled. Regularly scheduled blood samples are shown in Table 1 on page 3. The amount of blood taken varies between approximately 9 ml and 18 ml (about 1 tablespoon and 1½ tablespoons).

At every regular on-site trial visit, your vital signs will be measured and you will have a targeted physical examination (less thorough than at screening, primarily focusing on the heart and lungs and any changes in your health status).

An ECG will be performed at the Screening Visit, Visit 2 and, if the Investigator decides that it is needed at Visit 4, and at Visit 7, if you are in Group 3. In the unexpected case that symptoms which may indicate heart problems are detected during the trial, you will be examined additionally by a heart specialist (cardiologist) who will conduct additional examinations (e.g. exercise ECG, examination of the cardiac enzymes, cardiac ultrasound). These examinations may require additional visits at the cardiologist's.

If you are a woman of child bearing potential, you will have a urine pregnancy test done before each of your vaccinations (at Visits 1 and 3) and at trial Visit 5 (Group 1 and 2 only) and trial Visits 6 and 8 (Group 3 only) to make sure you are not pregnant.

At all visits you will be asked if you had any changes in your health or experienced any problems since your last visit.

Follow-up Visit 1

26 – 30 weeks after the second vaccination(s) (Visit 3) or the third vaccination (Visit 6), you will be invited for a physical visit into the trial site. You will be asked if you have experienced any serious health problems, e.g. for which you had to go to the hospital, since your last visit. You will also be asked if there is any new information on health problems ongoing since the last visit. In case you have experienced any serious health problems, your trial doctor will decide which examinations may be necessary. Additionally, a targeted physical examination, evaluation of vital signs and a blood draw will be done. The amount of blood drawn at the Follow-Up Visit 1 would be 11 ml (about 1 tablespoon), and if an additional blood draw for laboratory examinations will be necessary, the amount of blood drawn in total would be 18 ml (about 1½ tablespoons).

Follow-up Visit 2

52 – 56 weeks after the second vaccination(s) (Visit 3) or the third vaccination (Visit 6), you will be invited for the final scheduled physical visit into the trial site. Procedures will be the same as for your first follow-up visit. You will be asked if you have experienced any serious health

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problems, e.g. for which you had to go to the hospital, since your last visit. You will also be asked if there is any new information on health problems ongoing since the last visit. In case you have experienced any serious health problems, your trial doctor will decide which examinations may be necessary. Additionally, a targeted physical examination, evaluation of vital signs and a blood draw will be done. The amount of blood drawn at the Follow-Up Visit 2 would be 11 ml (about 1 tablespoon), and if an additional blood draw for laboratory examinations will be necessary, the amount of blood drawn in total would be 18 ml (about 1½ tablespoons).

Which tests are done during the trial with my blood?

The blood taken before and during the trial including the two Follow-Up Visits, will be used to examine your general health (blood, heart, kidney and liver health) and to see how your immune system responds to the vaccine. Please see Table 1 for the amount of blood drawn at each visit during the trial. If you experience health problems or side effects to the vaccine you might be asked by your investigator to have additional blood samples taken in between regular visits. Your blood will be identified by a unique code; your name will not be used. Portions of your samples taken during the trial will be stored and/or analyzed at University of Pennsylvania, a central laboratory, and the laboratory of Bavarian Nordic.

Any remainders of your blood samples will be stored at Bavarian Nordic or an affiliated laboratory and may be used for possible future research studies. These samples will not be sold or used to make products for profit. They will only be used when they may help to develop future tests or to learn more about smallpox vaccine or other diseases. The samples will only be used anonymously, allowing no identification of the person from whom they came. No human genetic tests will be performed on your samples. Reports about future research done with your samples will not be kept in your health records but may be kept with the trial records or at other secure sites.

Are there reasons why I should not take part in this trial?

You **cannot participate** in this trial if you meet certain conditions which will be evaluated and discussed with you by the Investigators or nurses. For example if you:

- Are below 18 years of age or older than 45
- Have been vaccinated with a smallpox vaccine or a poxvirus based vaccine in the past
- Have a serious health condition which is not adequately treated or which would make it unsafe for you to participate in this trial
- Take or apply certain medications such as steroids
- Are allergic to certain products, e.g. hen eggs or aminoglycoside antibiotics
- Are a woman and are pregnant, breastfeeding or plan to become pregnant within 28 days after your final vaccination, or if you do not agree to use an approved form of birth control for 30 days before vaccination and throughout the trial period up through 28 days following the second vaccination.

The investigators or nurses will review with you those things which may prevent you from participating in the trial.

What are the possible risks and discomforts?

Immunization with MVA-BN[®] smallpox vaccine

The vaccine has been used in completed clinical trials in more than 3400 subjects. Very common side effects after vaccination with MVA-BN[®] smallpox vaccine were redness, hardness, pain, itching and swelling at the vaccination site as well as feeling sick, tiredness, myalgia (muscle pain) and headache. Less frequent were bruising, a lump, or warmth at the vaccination site as well as

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fever, chills, loss of appetite, dizziness, pain in extremities, arthralgia (joint pain) and clinically not significant increases in cardiac enzymes.

As with all vaccines or drugs, you could have an unexpected allergic reaction - a rash, hives or even difficulty breathing. Allergic reactions can be dangerous; therefore, the trial center staff will watch you for 30 minutes after each vaccination. There may be other side effects of MVA-BN[®] smallpox vaccine even serious ones that are not yet known. Therefore, it is important that you report any health problems to the trial staff even if you think they are not related to the trial vaccine. You will be asked to keep a memory aid card for seven days after each vaccination to record any side effects which you might experience.

Vaccination with a smallpox vaccine could possibly have an increased risk to those with cardiac disease, such as chest pain caused by heart problems (angina), poor heart muscle blood circulation (coronary artery disease) or prior heart attacks (myocardial infarction).

Blood drawing

Blood drawing may cause pain, soreness, bruising, bleeding, and rarely infection at the site where the blood is taken. Sometimes, being stuck with a needle causes people to feel light-headed or even faint; this might also happen to you. Rarely, damage to blood vessels or nerves is observed or infections can occur where you were stuck with the needle.

Pregnancy

Possible effects of the vaccine on the unborn child are not known. Therefore, women must have a negative pregnancy test before each vaccination or known to be sterile. If you are a woman of childbearing potential or if you are a male having sex with a woman who is of childbearing potential, you must agree to use an approved method of birth control for 30 days before vaccination and throughout the trial period up through 28 days following the second vaccination (or the third vaccination if you are assigned to Group 3). Acceptable birth control methods are restricted to abstinence, barrier contraceptives (e.g. prophylactics / condoms), intrauterine contraceptive devices or licensed hormonal products. Please talk to the trial staff about specific questions concerning acceptable birth control methods, if applicable. If you suspect that you have become pregnant during the trial you **must notify your trial doctor immediately**. If you become pregnant during the trial, you will not receive any further vaccinations however you may continue in other trial procedures i.e. you may have blood drawn for safety and antibody testing, if the investigator decides it is safe for you and your unborn child. Until the pregnancy is over (study participant or partner of participant) information about the health of the mother and the baby will be requested by the study staff. Partners of male participants will need to sign a separate consent form in order for this information to be obtained.

There is always a chance that any medical treatment can harm you, and the vaccine in this trial is not different. In addition to the risks listed above, you may experience a previously unknown risk or side effect. We will do everything we can to keep you from being harmed.

What will be my responsibilities in this trial?

While you are in this trial it is important that you do the following:

- Come to your trial visits as scheduled.
- Completely and honestly fill out your memory aid card as instructed and bring it to the clinic at each visit.
- Tell the trial staff of any health problems you are having, even if you think they are not important.
- Tell the trial staff if you wish to stop being in the trial and if so, come back for a final examination.

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It is very important that you follow the instructions given to you by the trial staff.

Will I benefit from taking part in this trial?

You may or may not personally benefit from participating in this trial. It is currently unknown whether you will have definite protection against smallpox after vaccination with MVA-BN[®] smallpox vaccine. Previous studies using MVA-BN[®] smallpox vaccine in animals have shown that the vaccine protects against a smallpox infection, however, you should not assume that you are protected against smallpox.

The benefit to society is the possible development of a safe new vaccine against smallpox.

There will be no direct benefit to you from any future studying of your samples. We may learn more about smallpox or similar diseases such as how to prevent them, how to treat them, how to cure them.

If I don't want to take part in the trial, are there other choices (alternative treatments)?

Currently, vaccination against smallpox is not available to the general population. Therefore, the alternative is not participating in this trial.

Can my taking part in the trial end early?

Your trial doctor may determine it's in your best interest not to administer the second vaccination. In this case you will be asked to still perform other visit procedures.

Your trial doctor may also withdraw you from the trial prematurely. This may occur if it is determined by the trial doctor to be in your best interest, if you are not able to follow the instructions they give you, or if the agency funding the trial decides to stop the trial early for a variety of scientific reasons.

If you are withdrawn or you decide to withdraw early, you will be asked for your own safety to come to the trial site for a final examination.

In any case your trial doctor will discuss with you the procedure and examinations you should perform prior to your trial discontinuation.

What will it cost me to participate?

There are no direct costs to you to participate in this trial. All costs for the required trial visits, examinations, laboratory procedures and vaccines will be provided by Bavarian Nordic, the sponsor of the trial.

The University of Pennsylvania is not allowed to bill your insurance company, Medicare or Medicaid for the costs of medical procedures done strictly for this trial. The sponsor has agreed to pay all trial costs.

Will I receive any compensation for taking part in this trial?

Your time and travel expenses for you to get to and from the trial site will be reimbursed by the sponsor, Bavarian Nordic, through the hospital/clinic personnel involved in the trial. Trial staff will provide this reimbursement to you directly using a system called ClinCard. Trial staff will give you

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debit-like card call ClinCard during your first visit at site. You will be paid for completed trial visits at your hospital/clinic according to the payment schedule below. After each completed visit the compensation will be loaded onto your ClinCard. You can use the ClinCard like a credit card and to withdraw cash at any ATM.:

If you are in Group 1 or 2, the compensation will be as follows:

Screening	Visit 1	Visit 2	Visit 3	Visit 4	Visit 5	Follow-up Visit #1	Follow-up Visit #2	Total
\$25	\$95	\$95	\$95	\$95	\$95	\$75	\$75	\$650

If you are in Group 3, the compensation will be as follows:

Screening	Visit 1	Visit 2	Visit 3	Visit 4	Visit 5	Visit 6	Visit 7	Visit 8	Follow-up Visit #1	Follow-up Visit #2	Total
\$25	\$95	\$95	\$95	\$95	\$95	\$95	\$95	\$95	\$75	\$75	\$935

Should a product be developed resulting from blood samples obtained as part of this trial, there are no plans to share any monies obtained from the sale of the product with you.

Who will see the information that I give?

All information collected during the trial will be maintained in a confidential manner and in compliance with regulations enacted pursuant to the Health Insurance Portability and Accountability Act of 1996 (HIPAA). Your identity will not be disclosed unless required by law. Your name will not appear in any publication or presentation of the data collected during this trial. You hereby authorize that all records and data relating to your participation in this trial, including medical information, may be used or disclosed by Dr. Ian Frank for purposes of conducting and administering this clinical trial, and for regulatory review purposes. This information may be disclosed to Bavarian Nordic, its legally authorized representatives and agents, participating Institutional Review Boards, the US Food and Drug Administration (FDA), Department of Health and Human Services (HHS), international drug regulatory authorities, or other involved regulatory agencies. You acknowledge that any and all records or information related to your participation in the trial shall remain part of the trial, even if you withdraw from the trial.

STATEMENT ABOUT PRIVACY

Records identifying you will be kept confidential and, to the extent permitted by applicable laws and/or regulations, will not be made publicly available. Your personal information may be given out if required by law. If you test positive for HIV, Hepatitis B or Hepatitis C, by law we have to report the infection to the City of Philadelphia Health Department/PA Department of Health. We would report your name, gender, racial/ethnic background, and the month and year you were born. This is to keep track of how many people in the U.S. have HIV infection. It is also to make sure that states get enough money from the federal government to support the medical care of people living with HIV. The Health Department does not share the names of HIV infected people with anyone else. It removes all personal identifiers, such as your name, before giving information on the number of HIV infections to the federal government. Please note that it is likely that this information has been already reported to the PA Health Department as the HIV test being done for this study is not the first test for you. In the event of any publication regarding this study, your identity will remain confidential.

Representatives from government agencies, including the U.S. Food and Drug Administration ("FDA"), institutional review boards, the Sponsor and/or the Sponsor's authorized representatives

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may need access to your original medical records and study records for the purpose of checking data collected for the study. By signing this consent form, you authorize this access.

AUTHORIZATION TO USE AND DISCLOSE RECORDS

The authorization part of the consent gives more detailed information about how your personal health information may be used and disclosed by the University of Pennsylvania Health System (UPHS), the School of Medicine and the individual Principal Investigator, subject to University of Pennsylvania procedures.

What personal health information is collected and used in this study and might also be disclosed?

The following personal health information will be collected, used for research, and may be disclosed during your involvement with this research study:

- Name, address, telephone number, date of birth, MRN, email address
- Social Security Number (if you receive more than \$600 for participating in studies at PENN, we will need your SSN for the W-9)
- Personal and family medical history
- Current and past medications or therapies
- Results of physical exams, laboratory tests and procedures you will undergo during this research study

Why is your personal contact and health information being used?

Your personal contact information is important for the research team to contact you during the study. Your personal health information and results of tests and procedures are being collected as part of this research study. In some situations, your personal health information might be used to help guide your medical treatment.

Which of our personnel may use or disclose your personal health information?

The following individuals may use or disclose your personal health information for this research study:

- The Principal Investigator and the Investigator's study team
- Authorized members of the workforce of the UPHS and the School of Medicine, and University of Pennsylvania support offices, who may need to access your information in the performance of their duties (for example: for research oversight and monitoring, to provide treatment, to manage accounting or billing matters, etc.).

Who, outside of UPHS and the School of Medicine, might receive your personal health information?

As part of the study, the Principal Investigator, the study team and others listed above, may disclose your personal health information, including the results of the research study tests and procedures. This information may be disclosed to those listed below:

Individuals or organizations responsible for administering the study:

- Pharmaceutical sponsor (Bavarian Nordic): This is the company that supplies the vaccine for the study. Information regarding safety and adverse effects needs to be collected and monitored.
- Contract Research Organization (Chiltern): Monitors will visit the site on a regular basis to review data and assure accuracy and completeness of information before the data are analyzed.

Regulatory and safety oversight organizations

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- The Food and Drug Administration and regulatory agencies in other countries
- The Office of Human Research Protections
- The Study Monitoring Committee

Once your personal health information is disclosed to others outside of UPHS or the School of Medicine, it may no longer be covered by federal privacy protection regulations. Data are reported to the sponsor on Case Report Forms that identify you by your unique study number and not your name or medical record number. Information regarding your health, such as side effects of the study medications you experience will be reported only by code number. All samples collected for analysis will be labeled with your study number, visit number and date of your visit.

The Principal Investigator or study staff will inform you if there are any additions to the list above during your active participation in the trial. Any additions will be subject to University of Pennsylvania procedures developed to protect your privacy.

How long may UPHS and the School of Medicine be able to use or disclose your personal health information?

Your authorization for use of your personal health information for this specific study does not expire.

Your information may be held in a research repository (database). However, UPHS and the School of Medicine may not re-use or re-disclose information collected in this study for a purpose other than this study unless:

- You have given written authorization to do so
- The University of Pennsylvania's Institutional Review Board grants permission after ensuring that appropriate privacy safeguards are in place
- As permitted by law

Will you be able to access your records?

Since this is an open-label study, you will be able to access some or all of your medical records after the study is over. The Principal Investigator is not required to release research information to you that is not part of your medical record.

Can you change your mind?

Yes, at any time you may withdraw your approval to allow the use and disclosure of your personal health information as described here. You must do so in writing to the Principal Investigator at the address on the first page. Even if you withdraw your permission, your personal health information that was collected before we received your written request may still be used and disclosed, as necessary for the study. If you withdraw your permission to use your personal health information, you will also be withdrawn from the research study.

If you withdraw your permission to use any blood or tissue obtained for the study, the Sponsor may need to retain and use any samples that have already been collected to comply with its legal obligations and to maintain the scientific integrity of the study.

You will be given a copy of this Research Subject HIPAA Authorization describing your confidentiality and privacy rights for this study. You will also be given the UPHS and School of Medicine's Notice of Privacy Practices that contains more information about the privacy of your personal health information.

WHAT IS AN ELECTRONIC MEDICAL RECORD?

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An Electronic Medical Record (EMR) is an electronic version of the record of your care within a health system. An EMR is simply a computerized version of a paper medical record.

If you are receiving care or have received care within the University of Pennsylvania Health System (UPHS) (outpatient or inpatient) and are participating in a University of Pennsylvania research study, results of research-related procedures (i.e. laboratory tests, imaging studies and clinical procedures) may be placed in your existing EMR maintained by UPHS.

If you have never received care within UPHS and are participating in a University of Pennsylvania research study that uses UPHS services, an EMR will be created for you for the purpose of maintaining any results of procedures performed as part of this research study. The creation of this EMR is required for your participation in this study. In order to create your EMR, the study team will need to obtain basic information about you that would be similar to the information you would provide the first time you visit a hospital or medical facility (i.e. your name, the name of your primary doctor, the type of insurance you have). Results of research procedures performed as part of your participation in the study (i.e. laboratory tests, imaging studies and clinical procedures) may be placed in this EMR.

Once placed in your EMR, these results are accessible to appropriate UPHS workforce members that are not part of the research team. Information within your EMR may also be shared with others who are determined by UPHS to be appropriate to have access to your EMR (e.g. health insurance company, disability provider, etc).

What happens if I get hurt or sick as a result of being in this trial?

Should you suffer an adverse reaction, you will be compensated financially for costs required to diagnose and treat the medical condition. Payment of compensation will require that the adverse effect or treatment requirement is a direct consequence of you having been treated with MVA-BN[®] smallpox vaccine and you having been treated in accordance with the protocol and that the adverse or side effect is not due to negligent acts or omissions. Compensation will be payable by Bavarian Nordic in accordance with mandatory statutory legislation applicable for trial activities carried out at the trial site where you are being treated.

If more follow up medical treatment is required, the trial staff will tell you where you can obtain the treatment.

Payments for costs like lost wages, expenses other than medical care, or pain and suffering are not available from the University of Pennsylvania, your doctor(s), or Bavarian Nordic.

Who can I call with questions, complaints or if I'm concerned about my rights as a research subject?

If you have questions, concerns or complaints regarding your participation in this research study or if you have any questions about your rights as a research subject, you should speak with the Principal Investigator listed on page one of this form. If a member of the research team cannot be reached or you want to talk to someone other than those working on the study, you may contact the Office of Regulatory Affairs with any question, concerns or complaints at the University of Pennsylvania by calling (215) 898-2614.

What else do I need to know?

HOSPITAL OF THE UNIVERSITY OF PENNSYLVANIA

POX MVA 037 Consent Form

You will be informed of any new information that is discovered during this trial that may be relevant to your willingness to continue participation in the trial. If any new information is discovered about the vaccine used in this trial that may impact your health, the trial staff will contact you.

The sponsor of this trial reserves the right to stop the trial early should safety issues arise or due to scientific reasons based on information that become available during the course of the trial.

HOSPITAL OF THE UNIVERSITY OF PENNSYLVANIA

POX MVA 037 Consent Form

Subject screening number: _____

Consent Signatures

- I confirm that I have had the opportunity to ask all questions I have had about the trial vaccine and any trial-related procedures.
- I confirm that I have spoken with the Investigator or one of the trial staff who have answered to my satisfaction, all of my questions concerning this trial.
- I confirm that portions of my medical notes may be looked at by responsible individuals from Bavarian Nordic or its affiliates and/or related companies or from regulatory authorities where relevant.
- I hereby give permission for these individuals to have direct access to my records and to use such records for purposes as described in this Informed Consent Form.
- I confirm that based on this information, I consent to participate in this trial voluntarily.

This field must only be completed by the trial subject!

Signature of subject

Date

Printed name of subject

I have explained the information contained in this document fully and carefully to the trial participant. Furthermore, the trial participant has been given the opportunity to ask any questions regarding nature, risks and benefits of his/her participation in this trial. It is my opinion that the subject understands the risks, benefits and procedures involved with participation in this trial.

Signature of person conducting informed consent discussion

Date

Printed name of person conducting informed consent discussion

HOSPITAL OF THE UNIVERSITY OF PENNSYLVANIA

POX MVA 037 Consent Form

The trial investigator wants to know if they can store your leftover blood samples for future research. You do not have to take part in this optional blood sample storage to be in the rest of the study. Information about the optional blood sample storage is included earlier in this form. If you later change your mind about storing your leftover blood samples, tell the trial investigator or trial staff.

Check only **one box** below:

- Yes, I agree to the storage and use of my leftover blood samples for future research.
- No, I do not agree to the storage and use of my leftover blood samples for future research. I can still be in the rest of the study.

This field must only be completed by the trial subject!

Signature of subject

Date

Printed name of subject

I attest that the participant named above had enough time to consider this information, had an opportunity to ask questions, and voluntarily agreed to be in this trial.

Printed Name of Person Explaining Consent