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Immune Responses to Modified Vaccinia Ankara Vaccine (IMOVA) Study

People who are receiving a vaccine against monkeypox are being invited to participate in the IMOVA Study.

The IMOVA Study involves looking at how the body's immune system responds to the vaccine.

The study is run by a team of doctors, nurses and scientists working together across the Oxford University Hospitals NHS Foundation Trust and the University of Oxford.

When you attend your vaccine appointment, you may be approached about the study. If you think you would like to take part, please contact the study team below. They may arrange for you to attend your appointment at a slightly earlier time since they would need to go through the information with you before you have the vaccine.

Taking part in the study involves having some blood samples taken and coming back into the clinic for some extra visits. The study team will also ask you to complete some questionnaires.

If you would like to know more about it, please see information below and please contact the study team (details below)

Renumeration for time and travel expenses reimbursement will be offered.

If you do not wish to take part in the study, this will not affect your routine care in the vaccine clinic.

Vaccine Team

Oxford University Hospitals NHS Foundation Trust

PARTICIPANT INFORMATION SHEET

Immune responses to Modified Vaccinia Ankara vaccine (IMOVA)

We'd like to invite you to take part in our research study. Before you decide, it is important that you understand why the research is being done and what it would involve for you. Please take time to read this information and discuss it with others if you wish. *If there is anything that is not clear, or if you would like more information, please ask us.*

What is the purpose of the study?

Monkeypox is a virus which can cause fever, lymph node swelling and painful skin lesions. It is related to the virus that caused smallpox outbreaks last century. The United Kingdom Health Security Agency (UKHSA) coordinate responses to these kinds of outbreaks. They have said people at risk of contracting monkeypox need to be vaccinated. The vaccine available for this is a smallpox vaccine called Imvanex (also called MVA-BN, or Jynneos). Vaccinations for people at high risk have started in the NHS. There is little research about how the body responds to this vaccine. We are running a study alongside the vaccine programme. The study will learn more about how the immune system responds to the vaccine.

Why have I been invited?

You have been invited because you are having a vaccine to reduce the risk of illness if exposed to the monkeypox virus. We plan to recruit up to 100 patients into the study.

Do I have to take part?

No. Participation is voluntary. If you agree to take part, you can still withdraw at any point without giving a reason and without affecting your routine clinical care.

What will happen to me if I decide to take part?

Taking part in this study involves having blood samples taken from you and completing some questionnaires. Including the day of your vaccination, there will be up to 8 study visits. We are expecting participants to be involved in the study for up to about 6-9 months, depending on when you receive your second dose of the vaccine. There is also an option to continue with annual visits for up to 5 years.

Study visits are detailed in the table below:

Day 0	**Day 1 (Early Response Cohort of 20 participants)**	**Day 14**	**Day 28**	**Day 90**	**Day 0 (day of 2nd vaccine**	**Day 28 (after 2nd vaccine)**	**Day 90**
Informed consent							
Baseline blood sample (101mL)	Blood sample (36mL)	Blood sample (76mL)	Blood sample (70mL)	Blood sample (70mL)	Blood Sample (70mL)	Blood sample (70mL)	Blood sample (70mL)
Health questionnaire		Health questionnaire	Health questionnaire	Health questionnaire	Health questionnaire	Health questionnaire	Health questionnaire
Vaccine				Vaccine			

We will ask you to complete questionnaires at all the timepoints above. These will take only a few minutes and can be completed during the visit on paper forms or taken away to complete and post back to us in a prepaid envelope. The questionnaires relate to possible exposure to the monkeypox virus, including questions about sexual activity. There will also be questions about any other infections or treatment you have had recently.

The follow up visits can be made at a time convenient to you as best we can but will need to be in the morning (before 12pm). The visits required to take blood samples may be coordinated with any routine visits you have to the hospital. Each visit will take up to 30 minutes.

Blood samples taken will involve taking between about 30 and 100 mls of blood per visit (about 2-7 tablespoons). This may seem like a lot but the amount of blood that you would give in this study is similar to that given by someone who regularly donates blood (approximately 400mL, or two cups, in any 90 day period). If you enter this study, you should not also donate blood for other purposes (e.g. to NHS Blood and Transplant) during the study. Taking blood samples like this may cause some minor bruising and tenderness in the area.

Early response cohort

We would like to assess a smaller group of participants' immune system responses the day after having the vaccine. They will need to meet further inclusion criteria such as: a negative HIV test ('rapid test' administered on the day of your vaccination); aged between 18-40 years with no previous monkeypox or smallpox vaccination. Participation in this visit is optional and we only need 20 participants for this analysis.

HIV Testing

In order to assess your immune response to the vaccine, we will need to know your HIV status. If you are known to be HIV positive, then we do not need to do this test. This information is used for the purposes of the study only and will not be communicated outside of the study team. For those who don't know their HIV status we will use Rapid HIV tests to check. Rapid HIV tests involve taking a small sample of blood via a finger prick. The result is given within about 20 minutes. Rapid HIV tests are very reliable, although they can occasionally produce a positive result which is found to be negative when tested again. This is called a false positive and is rare (less than 1 in 1000 cases). It is also important to know that these tests can miss early infections (e.g., within the last 90 days), so if you think you might have been exposed to HIV in this time then please speak to your sexual health provider or GP about repeat testing.

If you test positive for HIV for the first time, we will talk to you about this result, and you will not take part in the study at this time. Then we will refer you to the doctors in the hospital or Sexual Health service who will assist you further.

If you are HIV positive

If you are HIV positive and already receiving treatment, you can take part in the study, provided you have good adherence to your antiretroviral medications, and have a fully supressed viral load (less than 200 copies/mL) on your most recent blood tests (which must be within the past 9 months). We will ask to check the results of any recent monitoring tests (CD4 count and HIV viral load) in your Sexual Health or hospital record, because we would like to understand how this affects the vaccine response.

Extended time course cohort

We will also ask for your optional consent to donate further blood samples after the main part of the study, to understand vaccine responses over a longer time. If you agree to this, you may be asked to provide further blood samples (of 50-100mL), no more than once per year, for up to 5 years.

What should I consider?

Please consider if you are able to attend the follow up visits required and if you are ok with having blood taken from a vein in your arm.
If you are involved in any other studies, please check whether it is ok for you to participate in this one. Please let us know if you are involved in any other studies too.
If you contract monkeypox, this does not affect your participation in the study, although we may delay any study visits until you are recovered and no longer infectious.

The study also requires that you don't donate blood whilst you are participating in the study.

Are there any possible disadvantages or risks from taking part?

We will ask you to attend regular visits over approximately the next 6 to 9 months. Each visit will involve taking blood samples. With this there is the possibility of bruising to the area where the blood was taken from (on the arm). Some people can feel faint when this happens, but we will do our best to ensure you are safe and prepared. Some of the questions in our questionnaire may be of a personal nature. The answers are not shared with anyone involved in your routine care (in Occupational Health nor in the Sexual Health clinic).

What are the possible benefits of taking part?

There are no direct benefits to participating in this study. The results of this study will be used to inform future research in this clinical area.

Will my General Practitioner/family doctor (GP) be informed of my participation?

Your GP does not need to be informed of your participation in the study. You may tell them about it if you wish, but this study has no direct effect on your health.

Will my taking part in the study be kept confidential?

Taking part in the study will be confidential. People outside of the study team will not know you are participating and will not have access to the information you provide.

You will be given a unique study identification number. The blood samples and answers to questionnaires you provide will be identified by that number only.

If you tell us you have contracted monkeypox; you present with symptoms; report having treatment for any other infection; or report recent vaccination, we will ask for confirmation of this information from: the Sexual Health Clinic (for patients who are participating); or from Occupational Health (for staff who are participating). To do this we will use the contact name you have given us. This information is used to inform the analysis of the samples and information you provide and will not be communicated with any other healthcare agency.

Responsible members of the University of Oxford and the Oxford University Hospitals NHS Foundation Trust may be given access to the study data for monitoring and/or audit of the study to ensure that the research is complying with applicable regulations.

Contact Details

In order to contact you about future study appointments, we will ask for your contact information and for you to indicate the method you would like to be contacted ie: text, WhatsApp, email, telephone, letter. This contact information will be kept separately from the answers to questionnaires, blood test results etc. Your information will be “de-identified”. This means any personal information you contribute to the study will not be used in analysing the results nor in any publication.

Your contact details will be kept in a secure excel file, on the University network. The file will only be accessible to members of the study team. Any paper copies of your information will be kept in a locked filing cabinet in a card swipe protected office. We will ask if we can keep your contact details after the study has ended. If you do not wish us to do so, the data will be removed from our records.

Responsible members of the University of Oxford and the Oxford University Hospitals NHS Foundation Trust may be given access to data for monitoring and/or audit of the study to ensure we are managing the study appropriately.

Will I be reimbursed for taking part?

Renumeration for participation in the study will be offered. We will offer renumeration of up to £450. For completion of baseline and days 14 and 28 you would receive £200. An additional £50 will be given for those in the Early Response Cohort. Participants attending for their second vaccine and follow ups can

receive another £200. Further renumeration will be available for any longer-term follow up visits you may opt into.

We can also reimburse you for any travel expenses incurred in attending visits additional to routine care.

What will happen to the samples I give?

The blood samples you give will be used to assess how the immune system responds to the vaccine.

Analysis of the blood will take place in laboratories at the University of Oxford, Oxford University Hospitals NHS Foundation Trust laboratories and also at laboratories in the UK who do work for the public health laboratories run by the United Kingdom Health Security Agency (UKHSA, previously known as Public Health England).

They will be stored in a "de-identified" way by being assigned a unique study identification number.

We will perform genetic tests (DNA or RNA) on your samples to understand how genes can affect response to vaccination. These results will not be relevant for your medical care, and because they are for research purposes only, we will not tell you the results of these tests.

If you agree, remaining samples may be provided to researchers running other ethically approved studies at the University of Oxford, and in other research organisations. These organisations may be universities, NHS organisations or companies involved in health and care research in this country or abroad.

What will happen to my data?

Data protection regulation requires that we state the legal basis for processing information about you. In the case of research, this is 'a task in the public interest.' The University of Oxford is the sponsor for this study, based in the United Kingdom, is the data controller and is responsible for looking after your information and using it properly.

We will be using information from you and the sexual health clinic or occupational health in order to undertake this study and will use the minimum personally-identifiable information possible. We will keep identifiable information about you for up to a year after the study has finished. This excludes any research documents with personal information, such as consent forms, which will be held securely at the University of Oxford for 5 years after the end of the study.

As part of the consent process in this study, we will also ask if you are happy to be contacted about any related research conducted by this team in the future. This is optional. If you agree to your details being held to be contacted, we will retain a copy of your consent form until such time as your details are removed from our database but will keep the consent form and your details separate.

If you agree to your samples being used in future research, we will retain a copy of your consent form until the samples have been depleted or destroyed.

The local NHS Trust will use your name, NHS number, and contact details, to contact you about the research study and to oversee the quality of the study.

Data protection regulation provides you with control over your personal data and how it is used. When you agree to your information being used in research, however, some of those rights may be limited in order for the research to be reliable and accurate. Further information about your rights with respect to your personal data is available at https://compliance.web.ox.ac.uk/individual-rights

You can find out more about how we use your information by contacting the study team using the details at the top of this information sheet.

What will happen if I don't want to carry on with the study?

Participation is voluntary and you may change your mind at a later stage. Withdrawal will not affect the care you receive from any relevant healthcare service. Please let us know if you no longer want to participate; you do not need to provide a reason.

If you withdraw from the study, unless you state otherwise, any blood samples which have been collected whilst you have been in the study will be used for research as detailed in this participant information sheet. You are free to request that your blood samples are destroyed.

What will happen to the results of this study?

Results of this study will be published in a medical journal and presented at a medical conference. You will not be identified in any report or publication placed in the public domain. A summary of the study will be published on www.ndorms.ox.ac.uk and along with information on where to seek more details about the study results.

Data from this study may be used to support other research. It will only be made available in a form that does not identify you. Genetic data will be held in a manged access repository (such as the European Genome-phenome Archive (EGA)) that requires approval and agreements for access to ensure participant data is secure. This data will also not directly identify you. Your DNA is unique to you, however, so it can never be completely anonymous.

Some of the research being undertaken will also contribute to the fulfilment of an educational requirement (a doctoral thesis).

What if we find something unexpected?

If there is anything from analysis of your blood samples that may be relevant for your medical care, we will consult with you and, with your consent, your nominated healthcare provider (e.g: Occupational Health, GP or Sexual Health clinic staff member).

What if there is a problem?

The University of Oxford, as Sponsor, has appropriate insurance in place in the unlikely event that you suffer any harm as a direct consequence of your participation in this study.

NHS indemnity operates in respect of the clinical treatment which is provided.

If you wish to complain about any aspect of the way in which you have been approached or treated, or how your information is handled during the course of this study, you should contact Dr Philip Drennan, philip.drennan@ndorms.ox.ac.uk or you may contact the University of Oxford Research Governance Ethics and Assurance office on 01865 616480, or the director of RGEA, email ctrg@admin.ox.ac.uk.

How have patients and the public been involved in this study?

Patient representatives were involved in reviewing the Participant Information Sheet. In designing this study we have taken into account patient opinions on the frequency of participant visits and the tests that we will carry out.

Who is organising and funding the study?

This study is being organised by a team of clinical researchers based at the University of Oxford and at the Oxford University Hospitals NHS Foundation Trust. The team include doctors, nurses, scientists, and patient representatives working in collaboration to manage this study. The study is sponsored by the University of Oxford and is funded by The Kennedy Trust and the Chinese Academy of Medical Sciences Oxford Institute and the UKHSA.

Who has reviewed the study?

All research in the NHS is looked at by an independent group of people, called a Research Ethics Committee, to protect participants' interests. This study has been reviewed and given favourable opinion by Surrey Borders Research Ethics Committee.

Participation in future research:

If you consent to be approached about other research, your contact details would be held separately from this study in an electronic file stored securely on the University network. This is accessible only to members of the immediate research team Agreeing to be contacted does not oblige you to take part in future research. You can request to have your details removed at any time.

Further information and contact details:

Please contact Dr Philip Drennan, philip.drennan@ndorms.ox.ac.uk

Thank you for reading this information.