APPLE-CKD

APolipoprotein L1 in **P**eople of african ancestry **L**iving in the UK: **E**xploration of genetic and environmental factors associated with Chronic Kidney Disease

Participant Information Sheet

You are being invited to take part in a research study. Before you decide to take part it is important for you to understand why the research is being done and what it will involve. Please take time to read the following information carefully and discuss it with relatives and friends if you wish. Please ask if anything is not clear or if you would like more information. Take time to decide whether or not you wish to take part.

Why have I been invited to take part?

You have been invited to take part because you are of African or Afro- Caribbean ancestry and you **DO NOT** have kidney disease.

What are we trying to find out?
People of African or Afro-Caribbean ancestry are five times more likely to have kidney disease. They also develop kidney failure when they are about ten years younger than white people. The connection between ethnicity and kidney disease is complex.

A gene pattern (APOL1-G1/G2 alleles) has been found which is common in people of African and Afro Caribbean ancestry. We think this gene pattern prevents some forms of sleeping sickness which is why so many people of West African and Afro-Caribbean ancestry have these gene patterns. This gene pattern may make it more likely for some people to develop kidney disease (including particular types of disease: Focal Segmental Glomerulosclerosis (FSGS), hypertensive associated kidney disease). We do not completely understand why some people with these gene patterns develop kidney disease while others do not. We think there are additional factors including extra genetic changes and/or environmental triggers e.g. infection which lead to onset of kidney disease.

We would like to test your blood, urine to get more information. This will allow us to develop tests to predict who is going to have kidney damage and find ways to prevent damage.

Do I have to take part?
No. It is entirely up to you whether you take part or not. Any medical care you receive now and in the future will not be affected by your decision. You are also free to withdraw at any time without giving a reason.

What will happen to me if I do take part?
You will see one of the doctors or nurses who will answer any questions that you may have. If you agree to take part, we will ask you to sign a consent form and you will be given a copy to keep. We will then take extra blood, and urine from you. We will also look at your medical records.

We will check your blood pressure, kidney function and for protein in the urine. It is possible that we may find that you have signs of high blood pressure or kidney disease.

If we find that you have high blood pressure we will provide routine information and support you to see your GP for further investigation and treatment. If we find any kidney abnormalities, we will ask if you are happy for us to refer you to your GP or to a kidney doctor, depending on what is found. You can also agree to be contacted about other studies about kidney disease.

What will the tests involve?
We will take a minimum of one extra blood test from you. We will take 35ml (6 teaspoons) of blood at each test. We will also ask you to provide a urine sample

What will happen to the samples that you take?
Samples will be stored in security approved freezers for up to 5 years at King's College London and only the research team will have access to samples. Some tests will be done in laboratories at other hospitals and universities including outside of the UK. We will also ask commercial companies who develop tests and treatment for kidney disease to help us look at your samples.

Your samples will be labelled with a study code and will not have your name on them so the laboratories and companies involved in the study will not know who you are. If we need to transport your samples we will do this carefully and with respect. Unused samples will be destroyed at the end of the study. We will only do genetic tests on the APOL1 gene and other genes which may contribute to kidney disease.

The results of the APOL1 genetic testing will be provided to your study doctor who will then provide the results to you. There may be a delay from when you give a blood sample to when you receive the test results. We cannot give you the results of the rest of the research tests immediately but we hope that they will give us information for the future.

What are the benefits of taking part?
Your samples and information may help us to improve the treatment of people of African or Afro-Caribbean ancestry with kidney disease in the future.

What are the possible risks or side effects of taking part?
There are no risks to you by taking part. The amount of extra blood that we take will not affect you. Occasionally people experience pain or bruising from having blood taken, but we will try to do this at the same time as your routine blood tests to minimise discomfort.

What will happen it I don't want to carry on with the study?
If you do not wish to continue taking part, you are free to withdraw at any time without giving a reason. We will ask you if the information and samples already collected can still be used or if you want them destroyed (unless you take part in the induced pluripotent stem cells substudy – see below).

What are your choices about how your information is used?

- We need to manage your records in specific ways for the research to be reliable. This means that we won't be able to let you see or change the data we hold about you.

You can find out more about how we use your information:

- on the Health Research Authority website www.hra.nhs.uk/information-about-patients/
- in a leaflet called: HowWeWillUseYourData KCH V1 (21-11-19) – available from the study team
- at our website https://www.kch.nhs.uk/about/corporate/data-protection
- by emailing our Data Protection Officer on kch-tr.dpo@nhs.net

We will ask you if you are happy, and consent, to be contacted about future research**.**

What if there is a problem?
If you have a complaint about the way you have been dealt with during the study or are worried by possible harm, you can talk to your research doctor who will do their best to answer your questions. If you remain unhappy, you can make a formal complaint through the NHS complaints procedure. Details can be obtained through the King's College Hospital Patient Advisory Liaison Service (PALS) on 020 3299 3601 or kch-tr.PALS@nhs.net.

King's College Hospital has professional indemnity for Clinical Trials and duty of care to patients via NHS indemnity cover, in respect of any claims arising as a result of clinical negligence by its employees, brought by or on behalf of a study patient.

How we will use your data

We will need to use information from your medical records for this research project. We will collect this information from the Rare Renal Disease Registry study that you have already agreed to take part in.
This information will include your:

- Name / Age / Gender / Medical records / Contact details

People will use this information to do the research or to check your records to make sure that the research is being done properly.
People who do not need to know who you are will not be able to see your name or contact details. Your data will have a code number instead.
We will keep all information about you safe and secure.

Once we have finished the study, we will keep some of the data so we can check the results. We will write our reports in a way that no-one can work out that you took part in the study..

What will happen after the study has been completed?

We will ask if you are happy for your blood and urine to be stored anonymously for use in future ethically approved research. However, all your personal information will be destroyed. Only appropriately trained researchers would have access to your samples. Future research may involve other academic or commercial partners and your samples may be transferred to countries outside the UK.

We will ask your permission for these things separately on your consent form. You can say no to any part of the study that you are not happy with.

What will happen to the results of this research study?

The information we get will help us work out if there is a better way of predicting and treating kidney disease in people of African or Afro-Caribbean ancestry. The results may be published at conferences and in professional journals but you will not be identified. The results of these research tests

will not be immediately available to guide your care but we hope that they will give us information for the future. If you wish to know the results of the study we will send you a summary by e-mail as detailed on your consent form.

Who is organising and funding this research?
The person in charge of this study is Dr Kate Bramham. The study is co-sponsored by King's College Hospital NHS Foundation Trust and Kings College London and funded by AstraZeneca.

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 your interests. This study has been reviewed and given favourable opinion by North West - Greater Manchester West Research Ethics Committee. It has also been approved by the Health Research Authority and each local hospital will also give confirmation that the study can go ahead.

What do I do if I have further question or want to take part?
The research team can be contacted on 020 7848 0431. In an emergency or if you are very worried and wish to speak to a doctor or nurse about your health, we recommend that you contact the renal secretaries on 020 3299 6223. If you wish to make a complaint about the study please contact the King's College Hospital 'Patient Advice and Liaison Service' (PALS) on kch-tr.palsdh@nhs.net or 020 3299 3601, 9am to 4.30pm, Monday to Friday (not bank holidays)

Further information and contact details

Local Contacts:
Your doctor ..... Tel: .....
Your nurse/study coordinator..... Tel: .....

Or you can direct questions to the Chief Investigator for the study:
Dr Kate Bramham
Renal Unit, King's College Hospital, London, SE5 9RS
Telephone: 0203 299 6233
Email: kate.bramham@kcl.ac.uk

Additional information for induced pluripotent stem cells substudy (For KCH Participants ONLY)

We would also like to process your blood to extract special 'induced pluripotent stem cells (iPSCs)' to allow us to do additional tests to understand APOL1 related kidney disease. Induced pluripotent stem cells are cells capable of duplicating indefinitely (cell lines). iPSCs can be generated from cells circulating in the blood. They can develop into any cell type in the body (e.g. specific kidney cells – (podocytes), blood vessel lining cells (endothelial cells) or even multicellular structures called organoids.
With this part of the study study we aim to generate iPSCs from blood samples of participants with and without APOL1 mutations to understand the underlying how APOL1 affects kidney cells.

What will it be done with your stem cells?
After blood sample collection, the cells in the blood will be converted into iPSCs by special processing. The iPSCs will be grown into multiple cell types. After completing this process your initial sample will be destroyed. Your cells will be stored in ways that allow the cells to grow and multiply. These multiplying cells may grow to what is called a 'cell line'. This allows researchers to have an unlimited supply of your cells in the future without asking for more samples from you. Cell lines can be used for many future studies and these cells may be kept alive by King's College London for many years. Your cells might be used:

- In research involving genetic alteration of the cells
- To develop treatments for kidney disease
- To share with other researchers and commercial partners worldwide

The genetic material (RNA and DNA) from the cells (iPSCs and any cells derived from these) may also be analysed to help us understand more about kidney disease. This might be carried out in multiple ways. A very useful tool to analyze all the genetic material is Whole Genome Sequence (WGS). WGS provides an image of all the genetic modifications in your DNA. Because the created stem cells will be genetically matched to you, this may reveal genetic information about you and your family. However, it will not be possible for researchers to link these cells to you after they have been processed. This means that if you decide in the future that you do not want to take part in the study, we will not be able to identify the cells you have donated, but other samples and your data will be removed and destroyed.
Additional ethics approval will be sought before any additional work is carried out on cell lines using your stem cells.