

PARTICIPANT INFORMATION SHEET

Development of a UK Y Chromosome Reference Database

Who are we?

Forensic Information Databases Service (FINDS) is part of the Home Office and are the service provider for forensic DNA databases.

The Forensic Capability Network (FCN) is the National network for supporting the use of forensic sciences in policing in England and Wales.

What is DNA and Y-chromosome DNA?

DNA stands for **D**eoxyri**B**onucleic **A**cid. It is the genetic material found in nearly all cells within our body. It determines our genetics and many of our physical characteristics.

Males carry a specific piece of DNA called the Y-chromosome. This Y-chromosome DNA is passed down from father to son. Men in the same family will usually share exactly the same type of Y-chromosome.

What are we trying to do?

DNA profile testing of the Y-chromosome is a vital investigative method, often used to investigate sexual offences. Very small amounts of male DNA recovered from a female victim can provide a Y-chromosome profile to help identify and convict an assailant.

Part of this process requires the determination of how often a particular Y-chromosome profile occurs in the general population. This is done by checking large reference databases which provide a statistical estimate of how often that profile has been seen. Currently a global reference database called Y-Chromosome Haplotype Reference Database (YHRD) is used to obtain this statistical data when reporting on matches.

We want to develop a database of Y-chromosome DNA profiles specifically for the UK. This will enhance capabilities for our forensic scientists when estimating the rarity of a particular profile in the UK population.

Why are we trying to develop a UK Y-Chromosome Reference database?

The UK needs a Y-chromosome DNA database to better represent the complex ancestry and different ethnic groups within the UK population. This will be beneficial for police investigations and the criminal justice system.

What does your participation mean?

To enable us to develop the Y-chromosome Reference DNA database, we need to collect DNA samples from **males** from a variety of ethnic groups reflecting the general UK male population.

What will you be asked to do?

The sampling process will involve swabbing the inside surface of your mouth cheeks to collect a DNA sample. This uses a swab, which is similar to a cotton wool swab and is a painless procedure.

We need and would welcome your support with the project. If you would like to donate a sample for this purpose, we will provide you with a Research DNA sampling kit. Enclosed in the DNA sampling kit will be:

- 2 mouth swabs
- 2 sample tubes
- A sheet of barcodes
- 1 small tamper evident bag
- 1 large re-sealable bag
- 1 pair of disposable gloves

Document Title	Participant Information Sheet- Development of a UK Y Chromosome Reference Database	Document Reference	FCN-DNA-REF-0001
Version and Issue Date:	1.0 – 09/03/2023	Document Owner:	Lead Scientist (Physical)

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Accompanying the kit will be a 'Research Donor Consent Form' and a 'Survey form', which will need to be completed in full.

The survey form will ask you to detail the population group of your biological father and paternal grandfather. This information is not necessary, if you don't know it.

Frequently asked questions

Q: What will happen to my DNA and the information contained within my Y-chromosome profile?

A: DNA will be purified from your cheek cells and will be tested using a specific Y-chromosome profiling system. Your Y-chromosome profile will be identified using a barcode that came with your sampling kit. No personal information such as your name or date of birth will be taken from you. You will not be able to be identified by your DNA profile. Your anonymous DNA profile will be one of thousands used to develop a UK Y-chromosome Reference Database and will also be shared with the global Y-Chromosome Haplotype Reference Database (YHRD).

Q: How will my DNA and information be held?

A: Your cheek cell sample and the purified DNA sample will be destroyed once an adequate Y-chromosome DNA profile has been obtained from your sample. Your Y-chromosome profile will be kept securely in compliance with the Data Protection Act 2018. We will not keep any of your personal information and your DNA profile cannot be linked back to you.

Q: Can I withdraw consent?

A: You will **not** be able to withdraw your consent once you have returned your sample, as we will **not** hold any of your personal details and as such, we will be unable to identify which sample/profile is yours.

Q: Will my Y-chromosome profile be searched on the National DNA Database

A: The National DNA Database (NDNAD) contains DNA profiles from crime samples and from individuals arrested or convicted for certain offences. Your Y-chromosome profile will not and cannot be searched against this database. The NDNAD utilises a different form of DNA profiling not compatible with the Y-chromosome profile from your sample.

Your information cannot be matched with information on any other database, in order to establish identity.

Q: Will my Y-chromosome sample or profile be made available for medical, insurance or paternity testing?

A: No, your Y-chromosome DNA profile and DNA sample will **not** be made available to anyone for these purposes.

Q: How else will my Y-chromosome profile be used?

A: We may wish to publish the outcomes of this project in a scientific journal paper. This could assist others in research and further development of Y-chromosome testing. In any such publication, your profile will be totally anonymous and could not be linked to you.

For further information, please contact:

Annette Boniface, FINDS Scientific DNA Lead
Techrequirements@homeoffice.pnn.police.uk

Dr Debbie Sharp, FCN Lead Scientist
FCNPhysical@Dorset.PNN.Police.UK

Or visit our dedicated webpage at
www.fcn.police.uk/ystr

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