

**Brief Participant Information Sheet**

**Healthy Volunteers**

**TaRGeTS Study:** **Targeting the Role of Glutathione and Glutamate in the Treatment of persisting deficits in Schizophrenia**

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We would like to invite you to take part in a research study. This leaflet explains why the research is being done and what it involves. There is no rush to take part and there is plenty of time for questions. Discuss it with others if you wish. If you agree take part, you can withdraw any time you like with no hard feelings from anyone. The research is funded by the British Medical Association (BMA) Foundation for Medical Research, supported by the National Health Service. The study is being carried out at the University of Nottingham. The study does not involve taking any additional medication.

**Why is the study being done?**

The aim of this research is to follow up recent clues, which suggest that people with psychosis and schizophrenia have subtle but important alterations in brain chemistry and function. Recent research suggests that chemicals in the brain, glutathione and glutamate, which are important for keeping brain cells healthy and for communication between brain cells, behave abnormally in people with psychosis and schizophrenia. In some people this may be because a form of mild inflammation takes place. In others, glutamate and glutathione problems could be due to which genes they inherited from their parents. However, it is not clear if problems with glutathione and glutamate occur in everyone who has schizophrenia or only in some people. In this study, using simple blood tests and a non-invasive magnetic resonance imaging (MRI) scan, we want to find out if we can pinpoint which people with schizophrenia have these problems and how they differ from those who have not experienced any symptoms of psychosis. This will allow clinicians to select the right treatments for the right group of people, in the future.

**Why have I been invited to take part in this study?**

We are inviting you to take part in the study as you are healthy, aged between 18-55 and do not have a personal or family history of psychosis. We are inviting you to take part in a session with one of the research workers to find out if you would be suitable for the study.

**What will participation involve?**

If you agree to take part in the study, there will be one or two study visits. These visits will take place

at the Sir Peter Mansfield Imaging Centre, University of Nottingham and Queen’s Medical Centre. These visits will be scheduled with you in advance, according to your preference and the availability of the research team and the scanners. You may be able to bring a family member, friend or carer along with you to the study visit/s, depending on the COVID-19 protocols in place at the time. During your visit/s, you will be asked to do the following:

1. *Questionnaires, tests and clinical interview:* We would like you to complete some standard questionnaires and interview you about some of the experiences you may have had. We will also carry out some standard tests of your thinking and reasoning skills. These assessments are widely used and are done at your own pace. We will give full instructions about each of the tasks before you do them.
2. *Blood test:* We will take a research blood sample for inflammatory markers and genetic analysis.
3. *MRI scanning*: We would like to take images of your brain using different imaging techniques. This involves a Magnetic Resonance Spectroscopy (MRS) scan which will allow us to measure levels of glutathione and glutamate in the brain, and other imaging techniques that allow us to study the structure and function of the brain. We will be in communication with you throughout the scanning session. You will also be given a call-bell that can be pushed at any time to stop the procedure and request assistance.

After the visit/s, we will inform your GP about you taking part in the study. In the unlikely situation where there is an abnormality in the brain scans, we will inform your GP of these findings. In the unlikely situation where we find a genetic risk factor which may have important implications for your future health or for the health of your family, we will contact your GP only if you want us to do so.

**What about expenses?**

The amount you will be compensated is dependent on whether you complete the study. If you complete the study you will be compensated £70. If for whatever reason you do not complete the study, you will be compensated for the parts you did take part in (£40 for MRI scanning session, £20 for completing cognitive and clinical assessments and £10 for consent and blood test). We will also provide refreshments and snacks or lunch during the study visit/s. In addition, we will either arrange your travel or you reimburse you for travel expenses for all study visits, depending on your preference. We can arrange taxis for both pick up and drop off and these will be paid for by the research team. Alternatively, if you prefer to travel by car, paid parking is available outside the Sir Peter Mansfield Imaging Centre and we will reimburse you for fuel and parking.

**Contact for further information**

If you require further information about the study, you may contact one of the following people:

Dr. Mohammad Zia Ul Haq Katshu

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Thank you very much for taking the time to read this brief information leaflet. For more information, please refer to the full participant information sheet.