PARTICIPANT INFORMATION LEAFLET

Title	**Investigation of the anti-inflammatory effects of Psychedelic compounds on blood cells in Depression (Immuno-Psych)**
Research Site(s)	• Tallaght University Hospital • Trinity College Institute of Neuroscience • Dublin South Central Mental Health Service
Principal Investigator(s)	John R. Kelly, Consultant Psychiatrist and Associate Professor in Psychiatry, Trinity College Dublin (TCD), Trinity Centre for Health Sciences, Tallaght University Hospital (TUH), D24 NR0A, kellyj37@tcd.ie, (01) 463 5200 Andrew Harkin, Professor in Pharmacology, Pharmacy, Deputy Director of Trinity College Institute of Neuroscience, TCD
Co-Investigator(s)	Claire Gillan, Professor in Psychology, Trinity College Institute of Neuroscience, TCD Martha Finnegan, Consultant, Psychiatry of Later Life TUH Clinical Senior Lecturer TCD
Data Controllers (joint)	Trinity College Dublin and Tallaght University Hospital
Data Protection Officer	Data Protection Officer, Secretary's Office, Trinity College Dublin, Dublin 2. dataprotection@tcd.ie
Data Controller (medical records)	Tallaght University Hospital and the HSE
Data Protection Officer (TUH)	Data Protection Officer, Tallaght University Hospital, D24 NRO, DPO@tuh.ie

Invitation to take part

You are being invited to take part in a research study to be carried out at Tallaght University Hospital (TUH) and the Trinity College Institute of Neuroscience (TCIN) by Dr John R. Kelly.

Before deciding whether to participate or not, you should understand the purpose of the study and what your participation will mean for you. To enable you to make an informed decision please take the time to read this participant information leaflet (PIL) carefully and discuss with others, if necessary.

If there is anything that is not clear or if you would like more information, please ask Dr John R. Kelly or a member of the research team. You should read the information provided in this

leaflet carefully. Take time to ask questions – do not feel rushed or under pressure to make a quick decision. You should understand the risks and benefits of taking part in this study so that you can make a decision that is right for you. You may wish to discuss it with your family, friends, or GP. The process of providing this information to help you decide whether to participate is called the "Informed Consent Process".

There is a 'Key Words' section at the end of this document that explains some of the terms used in this leaflet.

PART 1 – THE STUDY

What is the purpose of this study?

Depression has a major impact on the person, and on our society. In order to better treat and manage Depression, we need to conduct research into Depression and its related conditions.

The causes of Depression are complex and not fully understood. Excessive and prolonged stress is strongly linked to Depression. Stress also affects how the immune system functions. Some people with Depression may have slight changes in their immune system. This may show in the blood as low-grade inflammation. This means that some of the inflammatory blood markers are slightly increased in some people who suffer with Depression.

Classical psychedelics (e.g. psilocybin, dimethyltryptamine (DMT), D-lysergic acid diethylamide (LSD) are substances that can temporarily change perception, thought and emotion. In recent years, there has been a renewed interest in the therapeutic potential of psychedelics, which are given under psychiatric supervision and with psychological support.

In this study we are interested in finding out if psychedelics have **anti-inflammatory effects**. We will do this by testing these psychedelic compounds on blood cells, taken from blood samples from people with Depression and from healthy controls.

We hope this will provide valuable information about the potential therapeutic effects of psychedelics and possible anti-inflammatory capabilities.
You will not be given psychedelics; they will be added to the blood samples after they are taken.

Why am I being asked to take part?

You are being asked to take part because you have either depression or are a healthy person who can be a "control" for (someone to compare with) a person who has depression.

Do I have to take part? What happens if I say no? Can I withdraw?

No. You do not have to take part. Your decision is completely voluntary and will not affect your medical care now, or in the future. Consenting to both this specific study and biobanking (BioDepTT) is not required; you can consent to one part while declining consent for the other.

What if I change my mind?

You can change your mind at any time. Please contact Dr John R. Kelly if you have changed your mind. At that point, if you wish, the team will destroy any of your remaining samples and associated data. However, it will not be possible to destroy samples already being used in research projects or to remove your data from research that has already been completed or is ongoing as this could impact on the research results. We will keep a record of the destruction of your samples and any associated data that had been stored if you withdraw.

How will the study be carried out?

This study will take place either in Tallaght University Hospital, HSE Sheaf House, or in Trinity College Institute of Neuroscience (TCIN) and blood samples will be analysed at TCIN.

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

If you decide to take part, a member of the research team will discuss this information leaflet and consent form with you. It should take about half an hour to take you through the consent process and answer any questions you may have.

You will be given a copy of your signed consent forms and this leaflet to keep.
If you are happy to take part, the hospital site where you are recruited will collect some or all the following samples from you:

- **Blood samples:** We will need to collect a blood sample of up to 60ml (equivalent to between two and four tablespoons).

- Fill out **questionnaires** about your symptoms and experiences. This will take about **one hour.**

- Download the **smartphone app Neureka,** for free from the google play or app store. This will require you to use an email address. Complete games that probe aspects of cognition and complete additional questionnaires. This will take about **2 hours**.

We may ask you to provide follow-up samples at a later time.

If you are a patient with depression, where possible the collection of samples will occur as part of your routine care. But you may be asked to attend for sample donation outside of your routine visits, if this will help facilitate sample collection and if you agree to this. We will also access your medical records.

Will genetic research be carried out on my samples?

Yes, we will extract DNA from your blood to carry out research on Depression. Your genome is the total of all of your DNA and contains all the information to run your body. It is unique to you, and you inherited it from your parents. Today, it is possible to read each of the 3 billion letters that make up the code of your DNA, using a technology called sequencing.

Researchers may use sequencing to determine the letters in your DNA, RNA or proteins (see Key Words) to understand if differences in your genome might make you more likely to suffer from Depression. As these analyses are carried out as part of a research study and not a clinically validated diagnostic test, we are not able to return any individual results to you.

Are there any benefits to me or others if I take part in the study?

Research can lead to better diagnostic tests, treatments, and a better quality of life for people affected by Depression. The treatments we have today were developed as a result of past research studies. It can take a long time for some research results to impact care. This means that research from this project may not directly influence your care or benefit you personally. However, your participation may contribute to improved healthcare in the future.

Are there any risks to me or others if I take part in the study?

Data privacy: Your privacy is very important to us. Every effort will be made to protect your privacy. If you agree to take part, your samples and healthcare data will be coded with a unique study code number e.g., 0001 instead of your name to reduce the risk of any accidental or unlawful disclosure of your healthcare data.

Your coded samples will be stored in a secure freezer at the Tallaght University Hospital Research Laboratory under the direction of Dr John R. Kelly and the transferred to TCIN laboratory located at Trinity College Dublin under the direction of Professor Andrew Harkin.

Sample donation: There are small risks associated with sample donation. These risks are rare and mostly related to normal blood sample taking, such as dizziness, fainting, and bruising and/or swelling and/or infection at the site of the injection. Should you experience any symptoms, please let the team know. Unexpected adverse events, such as thrombosis (clot) of the vein due to trauma and infection which results in thrombophlebitis are extremely rare.

What will happen if something goes wrong when I'm taking part in the study?

In the extremely unlikely event that something goes wrong, we will refer you to the relevant medical specialist.

Will I be told the outcome of the study? Will I be told the results of any tests or investigations performed as part of this study that relate to me?

The results will be published in scientific journals and presented at conferences. These publications will acknowledge that participants donated their samples and data. You will not be identified in any publications or presentations.

PART 2 – DATA PROTECTION

What information about me (personal data) will be used as part of this study? Will my medical records be accessed?

All information is Coded (see key words at end). This means that the processing of personal data will no longer be linked to you specifically without the use of additional information. Such additional information will be kept carefully separate from your personal data. Dr John R. Kelly keeps the link between this code and your identity.

The following information will be collected:

Healthcare data: if you are a patient with depression, health information may be taken from your hospital chart, hospital electronic patient record, other hospital databases and/or may have been shared from your GP record to the hospital where you were recruited. It includes for example your treatments, test results, family medical/psychiatry history, and other types of personal data such as health-related lifestyle data, and diagnoses.

Socio demographic data: including for example date of birth, ethnicity, education, living conditions.

Questionnaires: we will collect specific information from standard questionnaires that can be compared with other studies internationally. Each questionnaire will be approved for use by an ethics committee before you complete it. These questionnaires will ask you about your mood, anxiety/stress, resilience, social connectedness and also about your childhood. Some people may find it distressing to be asked about their childhood, especially if it was traumatic. Please note, that the team will have to report past abuse to TUSLA – The Child and Family Agency, if there is a possibility of ongoing risk to children.

Neureka: Data you submit to the Neureka app will be shared with us and linked to the other data you provide us as part of this study. This is done using a "study ID" that we will ask you to enter into the Neureka app at the time of download. Data sharing goes in one direction only; we will not share your personal information with the Neureka team. Once the clinic visit is over and you have gone home, you will be asked to complete the Multimood Component, which will ask you to rate your mood along two dimensions: positive and negative affect. Ratings will take place twice per day for at least 8 weeks. You will receive a push notification to your phone in the morning and in the evening. You are free to participate more broadly with the Neureka project and complete additional science challenges. These data will not be provided to us and will be stored and managed in accordance with the procedures and policies of the Neureka team, run by the Gillan Lab at Trinity College Dublin. For further information about how your data is handled in the Neureka app, you can read the information sheet and consent form at the time of download.

Who is responsible for the information and samples you provide (i.e., the data controller(s))?

Tallaght University Hospital and the HSE are responsible for the healthcare information in your medical records. Tallaght University Hospital and the Health Service Executive (HSE) are responsible for the healthcare information in your medical records. Trinity College Dublin and Tallaght University Hospital are the lead institutions for this research.

What will happen my personal data?

Personal data will be processed only as is necessary to achieve the objective of the health research and will not be processed in a way that will cause damage or distress. We will store the coded data, and any research results at Trinity College Dublin (TCD) on a secure server indefinitely (forever).

Who will access and use my personal data as part of this study?

Dr John R. Kelly will access your medical records. The fully anonymized blood sample will be analysed by Prof. Andrew Harkin's team in TCIN.

Will my personal data be kept confidential? How will my data be kept safe?

Yes. All information, which is collected about you, during the course of the research (including blood and questionnaire data), will be kept strictly confidential and pseudonymous. Your name will not be attached to any information about you.

You will only be identified by a study number. The key to this number code and any personal information will be kept confidentially by Dr John R. Kelly. You will not be identified in any presentation or publication emanating from this study.

What is the lawful basis to use my personal data?

We will only use and or share your coded healthcare data for approved research projects, to help advance scientific research on Depression. We will be using your personal information for public interest and scientific purposes as per Article 6(1)(e) and 9(2)(j), of GDPR.

What are my rights?

- You can request access to the data held, and you can ask to receive a copy of that data.
- You can request restriction of the use of your data.
- You can object to the use of your data, and any further use.
- You can request that inaccurate information about you is corrected.
- You can request deletion of your data.

You can request any of the above unless the request would make it impossible or very difficult to conduct the research. (For example, if research is about to be published).

You can exercise these rights by contacting Dr John R. Kelly.

PART 3 – COSTS, FUNDING & APPROVAL

Will it cost me anything if I agree to take part?

No. It will not cost you anything to take part. We are not directly paying participants to take part in the biobank. However, participants may receive a small voucher as a token of appreciation for their time and contribution. You will not receive money if research leads to a new test, treatment, medicine or medical device.

Who is funding this study? Will the results study be used for commercial purposes?

The project has been funded by the Health Research Board (HRB) for the first four years. We may also receive additional funding through research collaborations using your data and samples. While the results of the study will not directly be used for commercial purposes, if any of the psychedelic compounds that are investigated are found to be safe and efficacious, they may enter clinical trials and may be approved for medical indications, at which point the results of the study would have been used for commercial purposes. Researchers in this study are not being paid to recruit patients.

Has this study been approved by a research ethics committee?

Yes. This study has been approved by the St. James's and Tallaght Hospital Ethics Committee. (Project ID: 0037).

PART 4 – FURTHER INFORMATION

Where can I get further information?

Principal investigator & Data Controller:

Principal investigator & Data Controller:
Dr John R. Kelly, Consultant Psychiatrist and Associate Professor in Psychiatry,
Trinity College Dublin, Trinity Centre for Health Sciences, Tallaght University Hospital, D24 NR0A, (01) 463 5200, kellyj37@tcd.ie

Data Protection Officer: Tallaght University Hospital, DPO@tuh.ie

What happens if I wish to make a complaint?

Please contact the principal investigator Dr John R. Kelly.

Will I be contacted again?

Yes. You may be contacted in the future by our research team, if there are any clinically relevant results, or to discuss future research.

PART 5 – KEY WORDS

When we say…	We mean…
Academic research	Research which is carried out in hospitals, universities, colleges, and research institutes.
Biobank	A large collection of biological samples and healthcare data, donated by people for health research.
Biological samples ('samples')	Samples donated by people for research. Samples included but not limited to blood, urine or tissue that is not required for diagnosis. These samples are Coded before being shared. Researchers are only given access to Coded samples.
Coded	This is where information that might identify you (such as your name) has been replaced with a unique code (for example - 001). This means you cannot be directly identified from the information.
DNA	DNA stands for deoxyribonucleic acid, which is a molecule that makes up genes and contains the instructions a living thing needs to develop, live and reproduce. These instructions are passed down from parents to their children. You can read more about DNA at https://www.genome.gov/genetics-glossary/Deoxyribonucleic-Acid
GDPR	This stands for "General Data Protection Regulation". It is a European data protection law that gives individuals more control over their personal information.
Genomic research	Research which examines peoples' genetic information (genes) to help us understand Depression. You can read more about genomics at https://www.genome.gov/genetics-glossary/genomics
Healthcare data	Health Information which may be taken from your hospital chart, hospital electronic patient record, other hospital databases and/or may have been shared from your GP record to the hospital where you were recruited. It includes for example your treatments, test results, images/scans, family medical history, and health-related lifestyle data.

Health research regulations	In Ireland there is specific legislation that gives individual more control over their personal information used for health research.
Health-related commercial companies	Businesses which develop and sell new diagnostic tests, treatments, medicines, medical devices, for profit. Examples are start-ups, academic spin-out companies, diagnostic and biopharmaceutical companies.
Identifiable data	This is information that may identify you, such as your name, address, date of birth, hospital number, medical record number or electronic record number
Principal Investigator	The person responsible for a biobank or specific research study, for example, a researcher, a hospital consultant, or a hospital doctor.
Proteins	Proteins are molecules that play many critical roles in our body. They do most of the work in cells and are required for the structure, function, and regulation of the body's tissues and organs. The instructions for how our body makes protein is encoded in our DNA. You can read more about proteins at https://www.genome.gov/genetics-glossary/Protein
Research Ethics Committee (REC)	This is an independent group of people with the experience and skills to review a proposed research study, to ensure that research is carried out ethically and safely and that your rights are protected. A Research Ethics Committee is the acknowledged international best practice structure for overseeing the conduct of ethical standards in healthcare research.
Research Study	This is a study that researches the processes involved in health and disease. Research studies involving this biobank would be to learn more about Depression such as the causes, and how Depression evolves and will support the development of new strategies for prevention, diagnosis and treatment.
Researchers	The scientists, doctors, nurses and other healthcare professionals doing Depression research. They may come from hospitals,

	universities, research institutes or health-related companies.
RNA	RNA stands for ribonucleic acid. RNA plays an important role in how our cells make proteins from the instructions in our genes. You can read more about RNA at https://www.genome.gov/genetics-glossary/RNA-Ribonucleic-Acid
Steering Committee	This is a committee of individuals with representatives from each participating institution, and patient representatives. The role of this committee is to decide “why” and “how” the Biobank samples/and or data are used and by whom.