

**Rare Blood Disorder Surveillance Project**  
*Adult Patient Information Sheet*

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**Co-Investigators:** Dr. Tim Vander Leek, Dr. S. Carr, Dr. P. Lidman, Dr. A. R. Turner,  
Dr. L. Larratt, Dr. M. Hamilton, Dr. M. Mant, Dr. N. Dower, Dr. H. Pabst,  
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**Nurse Coordinators:** Bonny Marx 407-8822

**When parents/guardians are consenting on behalf of a minor child, 'you' should read as 'your child'.**

**Introduction**

You have a rare blood disorder and have been asked to take part in a research study. It is important for you to understand the purpose of this study and how it may affect you. This information sheet and consent form is to help you decide if you want to participate in this study or not. Taking part is entirely your choice. If you have any questions that these sheets do not answer, please ask the research nurse and/or the investigator, and they will be happy to answer all your questions.

**Background**

The Rare Blood Disorders include Hereditary AngioEdema, Primary Immunodeficiency, Congenital Neutropenia, Thalassemia, Sickle Cell Disease, Porphyria, Fabrys Disease, and some acquired auto-immune blood disorders including Aplastic Anemia, Pure Red Cell Aplasia, Amegakaryocytic Thrombocytopenia, Hereditary Hemorrhagic Telangectasia (HHT), Paroxysmal Nocturnal Hemoglobinuria (PNH), and Myelodysplasia.

They share a number of common features: they are uncommon; their treatment requires the use of expensive blood products or other expensive treatments; they may have genetic predisposition and are likely candidates for gene therapy; and they have been complicated by adverse reactions from their treatment.

Transfusion of blood has become a fundamental part of medical treatment since the second world-war. Separation of the cellular elements of blood products by centrifugation and fractionation of the remaining plasma, have made it possible to divide the blood up into components. These components can be used to replace the specific element(s) that are needed, making better use of this valuable resource. The efficiency of blood fractionation is significantly improved by pooling blood; pooled blood products, made from pools of tens of thousands of donors, are now the mainstay of treatment of many disorders, but particularly a group of rare, and mostly genetic disorders, which I will refer to as the Rare Blood Disorders. Recombinant products, made in the laboratory, and other synthetic treatments are now used in many of these disorders, but may also be complicated by adverse reactions.

A prominent adverse reaction to blood products has been the transmission of blood borne pathogens, including Hepatitis and AIDS. Justice Horace Krever reviewed errors in the handling of the testing and viral inactivation of blood product, and made recommendations including improved surveillance of blood products. We now know many of the pathogens that are transmitted by blood, and we know more about genetic changes that predispose people to bad outcomes from these infections, such as inheritance of the hemochromatosis gene which predisposes people infected with Hepatitis C virus to cirrhosis, or people receiving treatments that may be mildly toxic to the liver. The suppliers of blood products have developed new methods to screen for and remove pathogens from blood products, but patients, physicians, scientists, and government agencies remain concerned about the possibility of new and unknown agents entering the blood supply and causing problems in the future. The discovery of transmission of variant CJD by blood transfusion in the United Kingdom two years ago has raised concern. Similarly, as we look more closely we see adverse reactions from other non-blood treatments of these diseases. Gene therapy will likely allow people to avoid transfusion and other more traditional treatments, thereby avoiding these problems, but gene therapy may well be complicated by other side effects; the use of viral gene therapy treatments have been complicated by liver failure and leukemia.

In addition, there has been intense interest over the last 15 years in the specific genetic changes causing or predisposing to disease. This knowledge has become more important recently with the development of newer types of gene therapy, which target specific gene changes for correction within the chromosomes of living cells. Canadian researchers and the Public Health Agency of Canada would like to identify genetic changes that cause or predispose to your rare disorders and other genetic factors that modify these disorders.

With funding from the Blood Safety Surveillance and Health Care Acquired Infections Division of the Centre for Infectious Disease Prevention and Control of the Public Health Agency of Canada, a surveillance lab has been established at the University of Alberta in Edmonton to perform surveillance on patients with bleeding disorders. This lab was developed under the supervision of the Association of Hemophilia Clinic Directors of Canada (AHCDC) as an archive of blood samples to look for known and emerging blood borne diseases, as well as known and emerging blood clotting gene changes. This project has been successfully audited by a multidisciplinary group including Health Canada, the AHCDC, and the Canadian Hemophilia Society in 2004, and more recently by the Centers for Disease Control from the US in 2005. The recently developed Network of Rare Blood Disorders has asked the Public Health Agency of Canada to expand the current archive to include other patient groups who are exposed to blood products. This project will collect samples from these additional people for surveillance of their treatment.

### **Purpose**

The project described here will expand the current archive to establish a secure bank of samples to test for:

1. known and emerging adverse reactions from the treatment of Rare Blood Disorders with blood products and other treatments, focusing on blood borne pathogens at first
2. the genetic changes that predispose people to damage from these adverse reactions, such as the hemochromatosis mutations in people with hepatitis C, or iron overload from transfusion
3. known and emerging genetic changes causing or modifying the underlying rare blood disorder.

## **Procedure**

On the day of your annual visit, the study nurse and doctor will ask you if you would like to participate in this research study. This information sheet and consent form will be reviewed at this time. If you agree to participate, you will then be asked to:

- Sign the informed consent form
- Allow the lab personnel to take an additional 6-14.5 cc of blood (1.5-3 tsp) in addition to your routine blood tests
- Give a urine sample

As the results of your blood and urine sample are analyzed, you will be informed of the results. You may reverse your decision to be involved in this study at any time, for any reason. If you request, any samples and clinical data that have been collected will be destroyed at that time. Please notify your doctor of all changes in your decision, regarding your participation in this study.

## **Re-Consent**

We plan to do continual testing of your blood and urine samples. This means that we will need samples of your blood every year. If you agree to participate again next year we will contact you by mail or phone and book an appointment for you to give the next samples. We would like to do this every year, until you no longer wish to take part in this project, you pass away, or the project ends.

***Please remember it is your responsibility to keep the clinic, and your doctor, informed of any name, address, or telephone changes during your participation in this study.***

## **Benefits**

Identifying adverse reactions such as new blood borne agents or new complications of treatment and those persons affected is expected to lead to earlier treatment and prevention of further transmission. There may be no direct benefit to you. In the future, the information gained in this study may benefit others.

## **Discomfort**

The only associated discomfort is with getting your blood taken. There may be temporary pain and bruising at the puncture site.

## **Risk**

Results of testing done in this study will go into your clinical record and you will be told of these results. As with any clinical or medical information, the information discovered by this study could make it difficult for you to obtain life or health insurance in the future.

## **Confidentiality**

All the information learned about individual participants, and all their personal records will remain strictly confidential. You will never be named. All reports and documents will be coded with a number code. If the results of this study are used for any publication, your identity will not be released. However, in addition to the investigators, other appropriate regulatory

agencies (such as Health Canada) may have access to your records to assure that the study is being conducted in a safe, and ethical fashion.

For this study, the study doctor may need to access your personal health records for health information such as past medical history and test results. He/she may also need to contact your family physician and your other health care providers to obtain additional medical information. The health information collected as part of this study will be kept confidential unless release is required by law, and will be used only for the purpose of the research study. By signing the consent form you give permission to the study staff to access any personally identifiable health information which is under the custody of other health care professionals as deemed necessary for the conduct of the research.

In addition to the investigators(s), the Health Research Ethics Board, the Health Products and Food Branch of Health Canada, or the Public Health Agency of Canada may have access to your records to monitor the research and verify the accuracy of study data, and to assure the study is conducted in a safe, and ethical fashion.

By signing the consent form you give permission for the collection, use and disclosure of your medical records. In Canada, study information is required to be kept for 25 years. Even if you withdraw from the study, the medical information which is obtained from you for study purposes will not be destroyed. You have a right to check your health records and request changes if your personal information is incorrect.

### **Freedom to withdraw**

Your decision to take part in this study is entirely voluntary. You may refuse to participate in this study or withdraw from it at any time. If you do not participate in the study or if you withdraw at any time, the quality of care provided to you will not be affected in any way.

If you decide to withdraw from this study, at any time, for any reason, please call the doctor immediately, so that your samples will be removed from the storage bank, and be destroyed to prevent further testing and continued participation in this study.

You are encouraged to ask any questions about the study that you may have, and all your inquiries will be answered.

**Additional Contact**

If you have any concerns about any aspect of this study, you may contact the Patient Concerns Office of the Capital Health Authority at 407-1040. This office has no affiliation with study investigators.

**If you have any questions about this study, please call one of the following individuals directly involved with this surveillance project.**

**Principal Investigator: Dr. Bruce Ritchie 492-3550**

**Co-Investigators:** Dr. Tim Vander Leek, Dr. S. Carr, Dr. P. Lidman, Dr. A. R. Turner, Dr. L. Larratt, Dr. M. Hamilton, Dr. M. Mant, Dr. N. Dower, Dr. H. Pabst, Dr. J.F. Elliott, Dr. A. Woods, Dr. H. Vliagoftis, Dr. D. Vethanayagam

**Nurse Coordinators: Bonny Marx 407-8822**

|   |                              |                             |
|---|------------------------------|-----------------------------|
| • I am aware that the results of all future testing will be given to me   | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| • In event of death:  |                              |                             |
| 1. I wish to have my samples destroyed  | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| 2. I wish to have my samples remain in the study for future continued participation   | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| • I consent to participate in the development of a bank of plasma, DNA, RNA and Urine to look for known and new blood borne diseases.                     | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| • I consent to the use of any samples left-over from other studies, for the studies described above.  | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| • I consent to participate in the research to search for the genetic mutation causing my disorder, and for other genetic factors which affect my disease. | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| • Would you be interested in participating next year?   | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| • May we contact you and call you when the time comes?  | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| _____   | _____                        | _____                       |
| Patients Name   | Date                         | Patients Signature          |
| _____   | _____                        | _____                       |
| Witness Name  | Date                         | Witness Signature           |

**Adult Informed Consent Form**

**Title of Project: Rare Blood Disorder Surveillance Project**

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**Nurse Coordinator: Bonny Marx 407-8822**

**To be completed by the research subject:**

Do you understand that you have been asked to be in a research study? Yes No

Have you read and received a copy of the attached Information Sheet? Yes No

Do you understand the benefits and risks involved in taking part in this research study? Yes No

Have you had an opportunity to ask questions and discuss this study? Yes No

Do you understand that you are free to refuse to participate or withdraw from the study at any time? You do not have to give a reason and it will not affect your care. Yes No

Do you understand who will have access to your records, including personally identifiable health information? Yes No

Do you want the investigator(s) to inform your family doctor that you are participating in this research study? If so, please provide your doctor's name: Yes No

This study was explained to me by: \_\_\_\_\_

I agree to take part in this study.

\_\_\_\_\_  
Signature of Research Participant

\_\_\_\_\_  
Date

\_\_\_\_\_  
Witness

\_\_\_\_\_  
Printed Name

\_\_\_\_\_  
Printed Name

I believe that the person signing this form understands what is involved in the study and voluntarily agrees to participate.

\_\_\_\_\_  
Signature of Investigator or Designee

\_\_\_\_\_  
Date

**THE INFORMATION SHEET MUST BE ATTACHED TO THIS CONSENT FORM  
AND A COPY GIVEN TO THE RESEARCH SUBJECT**