PARTICIPANT INFORMATION and OPTIONAL BIOBANK CONSENT FORM

The BCC3 Cohort:
Cellular Aging in Women Living with HIV

(BC CARMA-CHIWOS Collaboration)

~ BCC3 Biobanking ~

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1. INTRODUCTION

In addition to the main part of the research study, you are being invited to participate in this optional part of the study because the data and samples you provided as part of the main study could be used to continue our research in this area. As more information becomes available on the effects of HIV medications we would like to have the opportunity to do further new laboratory studies on your tissues/samples. You can choose to participate in the main study without participating in this optional part of the study.

This consent form will explain why we wish to keep your tissues/samples and what will happen to your

tissues/samples after they are collected. Once you understand the study, if you agree to take part in the study, you will be asked to sign this consent form. You will be given a copy of this form to keep for your records.

Your samples and data will become part of an existing Biobank, opened in 2008, called the 'CARMA Biobank'. CARMA stands for "**C**hildren and women, **A**nti**R**etrovirals and **M**arkers of **A**ging". It represents a series of studies conducted over the last decade that have sought to better understand what it means for people living with HIV and their children, living with or exposed to HIV, to age with their HIV or HIV exposure. In a number of ways, CARMA has been studying what aspects of a person's health and medication exposure have on markers of aging and inflammation that exist in body cells, all with the goal of informing and then improving health and quality of life for. The foundation of the CARMA study is what the BCC3 study is based on and visits in both studies will be able to be compared with one another.

This project is funded by a grant from the Canadian Institute of Health Research (CIHR).

2. BACKGROUND

Our research project that you've already consented to participate in will study changes in mitochondrial DNA (mtDNA, an energy producing part of body cells) and damage drugs may do to telomeric DNA (the length of DNA at the end of chromosomes) compared with your health and medication experience. We believe that changes in mtDNA or in the telomeric DNA may impact people's health and even lifespan.

3. PURPOSE

The reason we want to keep your sample stored is that this field of research is changing very rapidly and new discoveries are made often. If we keep your sample, we will be in a position to apply new tests that are not available today but would be in the future. Of course, any new test that we would apply to your sample would be geared toward the same research goal, the study of the effects and possible toxicity of HIV drugs on humans, and how this may affect their long-term health. For example, these may include:

- new technologies to analyze the quantity of mtDNA
- new technology to analyze the genetic coding in mtDNA
- new technology to analyze damage to mtDNA
- new technologies to analyze telomeric DNA damage
- new technologies to analyze markers of inflammation and activation of the immune system
- new technologies to measure the presence of molecules that promote inflammation and activate the innate (naturally present) and adaptive (developed in response to an infection or vaccination) immune systems in the body
- other tests that would reveal changes in the sample that are associated with aging or disease

This team has other areas of scientific interest that may provide more in depth information about the complex interplay between an individual's genetic makeup and the influences of their environment and lifestyle on the processes of health and aging. Testing in the scientific areas described below may be done on your samples. You will not be re-consented if this testing is done and results will not be provided.

Metabolomics

This is the science of studying all of the metabolites in a biological specimen (eg. a human). Metabolites are small molecules involved in many of the cellular processes in the human body; these processes leave behind unique 'chemical fingerprints'. Gaining a better understanding of these 'chemical fingerprints' for a specific person can increase the understanding of how to design disease prevention and clinical care strategies taking into account individual differences in environment, lifestyle and genetics.

Epigenetics
This is the study of biological mechanisms that will switch genes on and off. Genes are often called the 'blueprint for life' because they tell each cell in the body what to do and when to do it: be a muscle, make a bone, carry a nerve signal and so on. Genes do this by making proteins. Things like where you live, what you eat, when you sleep, how you exercise and certain life circumstances can cause genes to be switched off or on. Certain diseases, like cancer, can also cause genes to be switched to their opposite / not healthy state - off when they should be on or on when they should be off. Better understanding of what causes genes to switch on and off can offer valuable information for medical science.

Proteomics
This is the study of the entire set of proteins within a cell or tissue or person. The human body makes more than 100,000 different proteins that are vital parts of living. Proteins are needed to coordinate bodily functions such as digestion, circulation, immunity and communication between cells. Because proteins are so vital to life, understanding ways in which a person's 'entire set' of proteins is structured, how they function and how they interact with other cells may lead to better understandings of contributors to health and disease.

Microbiome
This term refers to the complete bacterial community on and inside of human bodies. Most of these bacteria, which number in the trillions, are located in the gut (intestines). The make-up of microbiome has been found to be crucial for the normal balance and functioning of the immune system as well as the hormonal and metabolic systems in the human body. There is increased research around the world working to understand if and how the microbiome of persons living with HIV is different than their peers who are not living with HIV.

4. WHO CAN PARTICIPATE?
This optional part of the study is open to all participants enrolled in the main part of the study.

5. WHAT DOES THIS PART OF THE STUDY INVOLVE?
This part of the study does **not** involve any more of your time or the collection of any additional blood or information from you.

6. STUDY PROCEDURES / BIOBANKING DETAILS
- All of your samples such as, your blood samples, mouth swabs and rectal swabs (tissues) will have been collected as part of the main study (the amount of each is described in the main consent).
- The tissues will be stored in a deep-freezer at the Cote Lab located inside the UBC Hospital (Koerner Pavilion) at the Point Grey Campus.
- The tissue samples at the Cote Lab have **none** of your personally identifying information on them; they are identified with your main study ID number only.
- Your name, as a part of the main study, is on a password-protected electronic master list kept on a password-protected computer network in a locked research office.
- Dr Helene Cote is the custodian of the tissue samples for as long as they are stored.
- Dr Melanie Murray, is the custodian of the study master list.
- The tissues will be tested as outlined in the main consent.
- It is possible that tests yet to be developed or identified, but which are related to the tests being done in the main study could become available in the future. It is in the event of an opportunity such as this

that the research team requests your consent to store and test your samples for an indefinite amount of time.

- Should the research team want to conduct any future tests on your samples that are NOT directly related to the main study tests (mtDNA quantity, quality, mtRNA, DNA length, mitochondrial proteins, markers of inflammation), this would only be done after you are asked to participate and choose whether or not to give your consent.
- You will not be notified of the results of the tests in the main study; the exact relevance of these tests and how they might impact your medical care is not known.
- If you decide to withdraw yourself from this part of the study you can choose to either have your stored tissue samples destroyed OR you can choose to have all of the study identification removed (in this case the tissue could still be stored and tested but never linked back to you).
- Only investigators who are part of the main study or collaborating with the study investigators will have access to your banked samples. Projects that meet the following criteria will be considered as substudies and can be submitted to the BCC3 team for their consideration and approval:
  - the research premise of the proposed project aligns with the research objectives established by BCC3
  - collection of additional data or material for the substudy will not impair completion of the primary BCC3 objectives
  - the proposed substudy falls within current ethical guidelines and good clinical practices
  - the principal investigator of the substudy is responsible for obtaining ethics approval from all relevant institutions prior to the initiation of the proposed substudy
- If at any time you wish to have your tissue samples destroyed, you can contact Dr Helene Cote at 604 822 9777 who will personally ensure your wish is respected.

7. RISKS AND/OR DISCOMFORTS

We will make every effort to protect your privacy and confidentiality during the study; however, it is possible that people may learn you are participating in this study and this may make you uncomfortable. The chances that research data would be accidentally released are estimated to be exceedingly small.

8. BENEFITS OF PARTICIPATING IN THIS PART OF THE STUDY

There is no direct benefit to you from taking part in this part of the study.

We hope that the information learned from this study can be used in the future to benefit other people and children living with HIV or those not living with HIV but who have been exposed to anti-HIV drugs.

9. ALTERNATIVES TO PARTICIPATION IN THIS PART OF THE STUDY

The alternative is to not participate at all, and this will have no effect on your participation in the main study.

10. NEW INFORMATION

If new information arises during the research study that might affect your willingness to remain in the study, the research team will inform you of this information.

11. IF YOU DECIDE TO WITHDRAW YOUR CONSENT TO PARTICIPATE

Your participation is entirely voluntary, so it is up to you to decide whether or not to take part in this part of the study. Please take time to read the following information carefully and to discuss it with your family,

friends, and doctor before you decide.

You can choose to withdraw your participation in this part of the study at any time without affecting your participation in the main study. You do not have to provide any reason for your decision not to participate nor will you lose the benefit of any medical care to which you are entitled or are presently receiving.

You have the right to request the withdrawal of your information collected during the study. This request will be respected to the extent possible. Please note however that there may be exceptions where the data will not be able to be withdrawn for example where the data is no longer identifiable (meaning it cannot be linked in any way back to your identity) or where the data has been merged with other data. If you would like to request the withdrawal of your data, please let your study doctor know.

If you decide to withdraw yourself from this part of the study you can choose to either have your tissue samples destroyed and data deleted OR you can choose to have all of the study identification removed (in this case the tissue could still be stored and tested but never linked back to you).

12. IN CASE OF RESEARCH RELATED INJURIES

Signing this consent form in no way limits your legal rights against the sponsor, investigators, or anyone else.

13. COSTS AND REIMBURSEMENT

There will not be any reimbursement for this part of the study. Dr Murray and the other doctors involved in the study will not receive any money for your participation in this study.

14. CONFIDENTIALITY

You will be assigned a unique study number as a subject in this study. Only this number will be used on any research-related information collected about you during the course of this study, so that your identity [i.e. your name or any other information that could identify you] as a subject in this study will be kept confidential. Information that contains your identity will remain only with the Principal Investigator and/or designate. The list that matches your name to the unique study number that is used on your research-related information will not be removed or released without your consent unless required by law. No information or records that disclose your identity will be published without your consent, nor will any information or records that disclose your identity be removed or released without your consent unless required by law.

Your rights to privacy are legally protected by federal and provincial laws that require safeguards to insure that your privacy is respected and also give you the right of access to the information about you that has been provided to the sponsor and, if need be, an opportunity to correct any errors in this information. Further details about these laws are available on request to your study doctor.

15. HEALTH INFORMATION LINKAGE AND SECURITY

As part of the main study, we plan to link data from the BCC3 Part 2 surveys to provincial health databases (e.g. birth, death, name change, cancer or pharmacy registries). In order to link to these health databases, we use your first name, last name, birth date and provincial health card number (PHN) stored in the secure BCC3 Participant Database. Once linkage is made, a non-identifying, unique LINKAGE ID is assigned across all files so that data sets can be linked without needing to access your personal identifying information again. Linkage will be done by only one authorized member of the study team, the Data Analyst, within a high-security environment. The provincial health databases and BCC3 Teams follow strict provincial PRIVACY policies. We want to link health databases to get accurate data and because it is not possible to ask about all important

health information such as blood work results, lifetime hospitalizations, use of health care services, emergency room visits and medication information in a 2.5 hour interview. This linkage will provide us with extra information to help better understand the health of people living with HIV. If you do not feel comfortable with providing your PHN or if you are concerned about the privacy and confidentiality of this linkage it would be best for you not to participate in the main study.

16. FUTURE SHARING of DATA

As per CIHR policy, your de-identified research data (which means your name, birthdate, and other identifiers have been removed) may/will be deposited into a publicly accessible location at the time of publication. This can enhance the transparency of the research data and allows for external validation and fraud control, but it also allows others to access the data for re-analysis of this study or to do other kinds of analyses in the future beyond those you are consenting to in this study. Also, this future use of your data may not be subject to oversight by a research ethics board, and thus the data may be publicly shared and used in currently unknown ways. Once the data are made publicly available, you will not be able to withdraw your data nor will your child have the chance to individual consent to this use at the age of majority. Even though the identifying information will be removed from the data it is possible that others may be able to find out who you are. The chance of this is currently thought to be quite low.

17. ADDITIONAL INFORMATION

If you have any questions or need more information about this study at any time, please contact Dr Melanie Murray at 604 875 2212, or Dr. Helene Cote at 778-288-5125.

If you have any concerns or complaints about your rights as a research participant and/or your experiences while participating in this study, contact the Research Participant Complaint Line in the University of British Columbia Office of Research Ethics by e-mail at RSIL@ors.ubc.ca or by phone at 604-822-8598 (Toll Free: 1-877-822-8598). Please reference the study number (H19-00896) when contacting the Complaint Line so the staff can better assist you. You may also contact the Fraser Health Research Ethics Board co-Chair by calling 604-587-4681 if you have any concerns about your rights as a research participant.

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Biobank Consent and Signature Page

- I have read and understood the information in this consent form.
- I have had enough time to think about the information provided.
- I have been able to ask questions and have had satisfactory responses to my questions.
- I understand that all of the information collected will be kept confidential and that the results will only be used for scientific purposes.
- I understand that my participation in this study is voluntary.
- I understand that I am completely free at any time to refuse to participate or to withdraw from this study at any time, and that this will not change the quality of care that I receive.
- I authorize access to my health records and samples as described in this consent form.
- I understand that I am not waiving any of my legal rights as a result of signing this consent form.
- I understand that this study will provide no direct benefits to me.

I will receive a signed copy of this consent form for my own records

I have read this form and I consent to my participation in this study

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Printed name and signature of **participant** Date

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Printed name and signature of **person obtaining consent** Date