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604-875-3229

BACKGROUND: Genomic imprinting occurs when the expression of a gene depends on which parent (mother or father) each copy of the gene was inherited from. Some disorders that are associated with abnormal gene expression of imprinted genes include, among others, Russell Silver syndrome, Beckwith-Wiedemann Syndrome, transient neonatal diabetes, and hemi-hypertrophy. These disorders can arise any one of several ways; one cause can be uniparental disomy (UPD), which is the situation when both copies of a pair of chromosomes (the structures into which our genes or DNA are packaged) have come from one parent rather than the usual situation where one copy is inherited from each parent. Another way is when the gene's genetic material is altered somehow and the copy inherited from the mother behaves like the one from the father (or vice versa).Your child has been observed to either have clinical features suggestive of an imprinting disorder or have a chromosome error that may be associated with an imbalance in gene contribution or gene regulation from the mother and father. We are interested in identifying the genetic changes associated with imprinting disorders and how the underlying cause leads to the clinical condition. This information can then be used to improve diagnosis, counselling, and eventually treatment of individuals with such disorders.

AIM: The aim of this study is to understand the causes of imprinting disorders. This will be done by DNA analysis of subjects who either present clinical features or a chromosomal change that is associated with an imprinting disorder. The DNA analysis compares the subject's chromosomes to his or her parents. Therefore, blood must be taken from the parents, as well as the subject, for families interested in participating in this study. Each individual participating will receive their own consent to sign. If the subject is not able to sign for themselves due to age or developmental capacity, their legally accepted guardian will sign. If the genetic parents are not able to participate, the subject may still participate. The results will be compared with clinical features in each subject. Any questions concerning participation can be addressed to Dr. Robinson at the above phone number.

PROCEDURE: Subjects with clinical characteristics suggestive of an imprinting disorder (ie. Russell Silver Syndrome, hemi-hypertrophy or transient neonatal diabetes) and their parents are invited to participate. Two 4cc tubes (~1½ teaspoons) of blood will be drawn from the subject and both parents for genetic studies. In some cases, a saliva sample (~2mL) may be obtained and/or cheek swab samples. Participation also involves submitting a clinical description. The total amount of time needed is approximately 20 minutes.

RISKS: There may be some discomfort associated with the placement of the needle for blood withdrawal and occasionally bruising, swelling, feeling faint or dizzy and/or the rare chance an infection may result. There is the potential for identifying an underlying

genetic change associated with clinical features. There may be psychological harm associated with identification of a genetic change that cannot be reversed, treated or cured. An additional risk inherent with genetic studies involving parents and a child is the risk of identifying non-paternity. In situations where non-paternity is identified it may cause psychological distress for the family. For risks associated with genetic testing in general please visit www.humgene.org.

BENEFITS: Participation in this study will help to further our understanding of the cause and clinical variability of imprinting disorders.

REMUNERATION: There will be no remuneration for your participation in this research study.

RESULTS: Participants will be provided with results from these studies. We do not have an estimated turn around time for the results as this study is unfunded and completed on a volunteer basis by lab personnel. When results are provided, the counselling regarding results will reside with the original health care professional who requested the study. Results will be provided to the requesting health care provider. The health care provider will contact you to inform you that the results are available. It is up to the health care provider to determine whether results will be provided by an in person appointment or whether a phone appointment is sufficient.

WITHDRAWING CONSENT: Your participation in this research is entirely voluntary. If you decide to enter the study and later decide to withdraw at any time in the future, there will be no penalty or loss of benefits to which you are otherwise entitled, and your future medical care will not be affected. Furthermore, your eligibility to participate in the main part of the study will not be affected. If you wish for your stored blood samples/data to be destroyed upon your withdrawal, you may contact the principal investigator of the study, at 604.875.3229. The investigator may decide to discontinue the study at any time, or withdraw you from the study at any time. If you choose to enter the study and then decide to withdraw at a later time, all data collected about you during your enrolment in the study and up to the time of withdrawal will be retained for analysis. By law, this data cannot be destroyed.

CONFIDENTIALITY: In Canada genetic information as a form of personal information is protected legally by privacy and discrimination Acts. Your confidentiality will be respected. No information that discloses your identity will be released or published without your specific consent to the disclosure. However, research records and medical records identifying you may be inspected in the presence of the Investigator or his or her designate, Health Canada, and the UBC Research Ethics Boards for the purpose of monitoring the research. However, no records which identify you by name or initials will be allowed to leave the Investigators' offices.

Dr. Robinson is the custodian to the list of participant names and the linking code. Dr. Robinson may provide access to the list of names and linking code to the research coordinator and lab manager. Both the research coordinator and lab manager have

signed confidentiality agreements. The samples will be de-identified and coded upon receipt. The list of names is in a password protected electronic file. The electronic file is kept on the lab server only accessible with an authorized computer login and password. Your de-identified DNA will be stored in Dr. Robinson's laboratory at the Child & Family Research Institute. The de-identified DNA sample labelled with the code will be stored until it is used entirely or until such DNA is withdrawn. The laboratory is in a secure building accessible only by photo key card.

Should your de-identified sample be requested by an outside investigator Dr. Robinson will obtain the proper ethics approval prior to donating the de-identified sample. Dr. Robinson will ensure that the outside investigator has the proper ethics approval from their institution. Samples will only be donated if the outside investigator's research goals involve genomic imprinting & its disorders. At no point will any identifiable data associated with the de-identified sample be sent to outside investigators. Your de-identified DNA sample will not be sold and will not be used for commercial purposes.

Signing this consent form in no way limits your legal rights against the sponsor, investigators, or anyone else. Your rights to privacy are also protected by the *Freedom of Information and Protection of Privacy Act of British Columbia.* This Act outlines rules for the collection, protection, and retention of your personal information by public bodies, such as the University of British Columbia and its affiliated teaching hospitals. Further details about this Act are available upon request.

We invite you to bank your de-identified DNA sample received from this study for use in future related genomic imprinting studies. A separate optional Tissue Banking Consent Form will be provided to you.

CONSENT TO PARTICIPATE

If you have any concerns about your rights as a research subject and/or your experiences while participating in this study, contact the Research Subject Information Line in the University of British Columbia Office of Research Services at 604-822-8598.

- I have read and understood the subject information and consent form.
- I have had sufficient time to consider the information provided and to ask for advice if necessary.
- I have had the opportunity 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 result will only be used for scientific objectives.
- I understand that my participation in this study is voluntary and that I am completely free to refuse to participate or to withdraw from this study at any time without effecting my participation in the main study and without changing in any way the quality of care that I receive.
- I understand that I am not waiving any of my legal rights as a result of signing this consent form.
- I understand that there is no guarantee that this study will provide any benefits to me
- I have read this form and I freely consent to participate in this study.
- I have been told that I will receive a dated and signed copy of this form.

☐ **I agree to be contacted by the Robinson Lab in the future.**

Print name of subject	Signature	Date
Print name of person obtaining consent	Signature	Date