

MAR 19 2018

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CONSENT FORM

Adults 18 years and older

Parents/Guardians of Children (less than 18 years)

Assent Form for Children Age 13-17

MOLECULAR ANALYSIS OF GENETIC NEURODEVELOPMENTAL DISORDERS

Researchers:

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Division of Genetic Medicine, Department of Pediatrics, School of Medicine
206-616-3788, Toll-Free 1-800-246-6312

24-hour emergency telephone number: 1-866-987-2000 (within Washington, Wyoming, Alaska, Montana and Idaho) Seattle Children's Hospital Switchboard, Seattle, Washington. Please ask the operator to page Dr. Doherty or the physician on call for Medical Genetics. If outside these states, place a collect call to 206-987-2000.

Researchers' statement:

We are asking you to be in a research study. The purpose of this consent form is to give you the information you will need to decide whether to be in the study or not. Please read the form carefully. You may ask questions about the purpose of the research, what we would ask you to do, the possible risks and benefits, your rights as a volunteer, and anything else about the research or this form that is not clear. When we have answered all your questions, you can decide if you want to be in the study or not. This process is called "informed consent." We will give you a copy of this form for your records.

PURPOSE OF THE STUDY

We are asking you to be in a research study because you, or someone in your family, have a neurodevelopmental (NDV) disorder. NDV disorders affect the brain, spinal cord, muscles, and other organs. We expect that our studies will may take many years to complete. We may never find the specific genetic change cause responsible for the disorder in you or your family. The goals of our research are to:

- Identify specific brain malformation conditions and other NDV disorders
- Determine how people with specific NDV disorders do over time ("natural history")
- Identify the genetic causes of NDV disorders
- Determine the biological mechanisms of NDV disorders

You or someone in your family may have one of the following conditions (check one):

- ☐ Joubert syndrome and related disorders (JSRD)
- ☐ Differences of the mid-hindbrain (the back part of the brain)
- ☐ Differences of the forebrain (front part of the brain) and cortical brain development (outer part of the brain), including developmental delay, intellectual disability, autism, and seizures

STUDY PROCEDURES

Participation consists of information collection and sample collection.

APPROVED

MAR 13 2018

Information Collection

Dr. Doherty and his research team will collect information about you from phone or email interviews, periodic questionnaires, and your medical records, which may include the following:

- Medical history and exams
- Photographs and videos
- Brain scans, especially MRI scans
- Genetic and other test results

We will use this information to confirm, or sometimes re-classify, your NDV disorder. We will compare your medical information with information from other people with NDV disorders. Medical information from many people with NDV disorders is helpful for understanding these disorders. Therefore, we plan to keep your information for many years.

We will also ask questions about your family history. You can decide not to answer any question. Photos and videos may be taken during a visit or you can send them by email or regular mail. This will also help us understand your disorder.

Sample Collection

We will ask for a sample of your DNA. This can be obtained from any of the following sources:

- A saliva (spit) sample (½ to 1 teaspoon)
- A blood sample (2-4 teaspoons)
- Previously collected and stored tissue samples (banked or collected for another reason)
- Skin sample collected for this research study

You can give the samples at the University of Washington, your local doctor's office, a conference, or a laboratory close to your home. You may also collect saliva at home and mail the samples to us.

We will study these samples in a laboratory and look at your DNA. If we find differences in your genes, we will study the genes to help us understand your NDV disorder.

We may send small samples of your DNA or growing cells to other qualified researchers. However, any shared samples will be labeled with a code that cannot be traced back to you.

Genetic Analysis

In our search for genes that cause or influence NDV disorders, we may perform several gene searches on your DNA. Usually, we study just parts of your genetic code that are linked to a disease or condition. This is called "genotyping and targeted gene sequencing." Other gene searches look at much larger areas such as parts of the DNA that code for proteins. This is called "whole exome" sequencing. In "whole genome" studies, all or most of your genes would be analyzed. Even if your sample is whole genome sequenced, we cannot promise any direct benefit to you personally, though some people might find satisfaction in contributing to scientific knowledge about genetic conditions.

Optional Participation

There are other OPTIONAL choices to taking part in this research. You will have the option to say YES or NO to each of these at the end of this form.

1. Photography (Optional)

If you agree, pictures and/or video clips may be taken during a visit or sent digitally to us by email. They will help us understand your clinical findings. Rarely, we will ask you for your permission to publish, in a peer-reviewed medical journal, a specific recognizable photo and/or video clip to show features of the disorder.

2. Re-contact (Optional)

If you agree, we may contact you in the future to learn about any changes in your health and/or to ask new questions. We may also want to tell you about new research studies.

3. Results Reporting (Optional)

We may find the genetic cause of the NDV disorder in your family. If you want to know these results, we can contact you to tell you this information. Receiving results is your personal choice. You do not have to receive results. If you choose to know these results, genetic counseling will be recommended, and we can help you arrange this.

4. Skin Biopsy for Fibroblast Cell Cultures (Optional)

If you agree, we may ask you to provide a small skin sample. We get the skin by performing a minor procedure known as a “skin biopsy.” The purpose of the skin biopsy is to get a small amount of skin to grow cells called fibroblasts. A doctor who routinely performs skin biopsies will explain the procedure to you. Your skin will be numbed with a special cream before the skin is removed.

5. Genomic Data Sharing (Optional)

The National Institutes of Health (NIH) has developed data (information) banks that collect study data. If you agree, the NIH will store de-identified information from this study in these banks for other researchers to use in future studies on any topic. The researchers could be from government, academic, or commercial institutions. The information from this study may be stored in a public unrestricted data bank that anyone can use. This information will not include your name or other information that could identify you. You will not receive any results from allowing your data to be placed in the NIH data banks. You can withdraw your consent any time you decide you do not want your data in the NIH data banks. There will be no consequences for withdrawing consent. There will be no direct benefit to you if you agree to participate in Genomic Data Sharing.

RISKS, STRESS, OR DISCOMFORT

Information Collection

You may feel badly when discussing the NDV disorder in your family. You may feel uneasy sharing your medical or family history. If you do feel uneasy, you may refuse to answer any question.

Specimen Collection

Drawing blood may cause a small amount of pain, but a numbing cream can be used to lessen the discomfort. You might get a bruise. Very rarely, an infection may develop. We do not think there will be any discomfort when giving saliva.

Optional Participation

1. Photography (Optional)

Some pictures and/or video clips may include features that allow people to recognize you, such as your face. If we use these pictures and/or video clips for scientific publication, we will try to hide these features as much as possible before publication. If someone recognizes you, the confidentiality of participating in the research study may be broken. Once the photo and/or video clip has been published, it may be shared with additional organizations for educational purposes if the journal has policies to allow this.

2. Re-contact (Optional)

You may not want to answer more questions about our study. You can say no and ask not to be re-contacted in the future.

3. Results Reporting (Optional)

You may feel stressed or anxious if you learn the genetic cause of your NDV disorder or that you are a carrier for an NDV disorder. Although we may report clinical results to you, it is up to you and your doctor to decide whether these results should be included in your medical files. If your results were shared with a third party, this could affect your

employability or your ability to get certain types of insurance. Rarely, genetic studies show that the man thought to be the father of a child is not the biological father. Should we find this type of information, we will NOT disclose it to you or others.

4. Skin Biopsy for Fibroblast Cell Cultures (Optional)

You may feel slight pain from the needle for the medicine used to numb your skin and/or the punch instrument used to collect the sample. Medicines used to numb skin can give some people a rash. Skin biopsies can leave a small scar.

5. Genomic Data Sharing (Optional)

It is possible that your genomic information could be used to identify you or your close biological relatives when combined with information from other public sources, but we believe this is unlikely to happen. The current risk of this happening is very small but may grow in the future as new technologies are developed. Theoretically, someone could use this information to learn something about your health or genetic heritage. If linked to a medical condition and inappropriately shared with someone, it could affect your ability to get or keep some kinds of insurance. There is a possibility that this information could affect family members because certain conditions and traits run in families. This could hurt family and other relationships. There may also be other risks of re-identification that are unknown at this time.

ALTERNATIVES TO TAKING PART IN THIS STUDY

You do not have to join this study. If you do not join, your medical care will not be affected.

BENEFITS OF THE STUDY

If you agree to be in this study, you may or may not benefit. The study may produce information that is helpful to doctors and to patients with NDV disorders. It is possible that the genetic cause of your or your family's NDV disorder will be found. These results may help with your medical care or reduce the stress associated with uncertainty. We will provide you with information about passing on this disorder to your children. If you are not a carrier of the NDV disorder, you may feel a sense of relief.

SOURCE OF FUNDING

The study team and/or the University of Washington receives financial support from the National Institutes of Health, University of Washington Department of Pediatrics, and private non-corporate donors.

CONFIDENTIALITY OF RESEARCH INFORMATION

All of the information you provide is confidential. The study records will not be used to put you at legal risk. We have a Certificate of Confidentiality from the federal National Institutes of Health. This helps us protect your privacy. The Certificate means that we do not have to give out identifying information about you even if we are asked to by a court of law. We will use the Certificate to resist any demands for identifying information.

We cannot use the Certificate to withhold your research information if you give your written consent to give it to an insurer, employer, or other person. Also, you or a member of your family can share information about yourself or your part in this research if you wish.

There are some limits to this protection. We will voluntarily provide the information to:

- a member of the federal government who needs it in order to audit or evaluate the research;
- individuals at the University of Washington, the funding agency, and other groups involved in the research, if they need the information to make sure the research is being done correctly;
- the federal Food and Drug Administration (FDA), if required by the FDA;
- Washington state authorities, if we learn of child abuse, elder abuse, or the intent to harm yourself or others.

OTHER INFORMATION

Taking part in research is always a choice. If you decide to be in the study, you can change your mind at any time. If you provide consent for a child under 18, he/she can decide to withdraw from the study after he/she turns 18. If you take part, we will make every effort to keep your information confidential. We will store all of your research records in locked cabinets and secure computer files. We will label your information with a study number. The master list that links a person's name to their study number is stored in a locked cabinet or in a secure computer file. If results of this research are published, we will not use information that identifies you unless you agree to publishing photographs.

Government or university staff sometimes review studies such as this one to make sure they are being done safely and legally. If a review of this study takes place, your records may be examined. The reviewers will protect your privacy. The study records will not be used to put you at legal risk.

We plan to keep your data and samples until the project is completed which is likely to be years or decades. You may refuse to participate or may withdraw from the study at any time without penalty or loss of benefits to which you are otherwise entitled.

Neither you nor your insurance company will be billed for any study procedures. You will not receive any money if you take part in this study. Future research using your sample may lead to the development of commercial products (although this is not a specific goal of the research). You will not share in any profits that the research may produce.

For pregnant women: Maternal samples collected during pregnancy will not be tested or studied until we have confirmation that the pregnancy has ended.

RESEARCH-RELATED INJURY

If you think you suffered an injury or illness related to this study, contact the study staff right away. We will recommend or refer you for necessary medical treatment at a UW Medicine facility or an institution where you live. The costs of the treatment may be billed to you or your health insurance just like other medical costs, or it may be covered by the UW's discretionary Human Subjects Assistance Program (HSAP), depending on a number of factors. The researcher may request HSAP coverage by following established procedures. If you wish to request HSAP coverage for yourself, contact the researcher or the UW Human Subjects Division at hsdinfo@uw.edu or (206) 543-0098. You may also call collect to the UW Human Subjects Division at (206) 221- 5940 if you do not otherwise have access to a telephone. Ask the researcher if you would like information about the limits and conditions of the HSAP. The UW does not normally provide any other form of compensation for injury. However, the law may allow you to seek payment for injury-related expenses if they are caused by malpractice or the fault of the researchers. You do not waive any right to seek payment by signing this consent form. We will bill your health insurance for treating problems that result from your NDV disorder or from standard clinical care. If you have no health insurance or your insurance refuses to pay, we will bill you.

Printed name of study staff obtaining consent

Signature

Date

Subject's statement

This study has been explained to me. I volunteer to take part in this research. I have had a chance to ask questions. If I have questions later about the research, I can ask one of the researchers listed above. If I have questions about my rights as a research subject, I can call the Human Subjects Division at (206) 543-0098. I give permission to the researchers to use my medical records as described in this consent form. I will receive a copy of this consent form.

Optional participation as described above: (Please circle YES or NO)

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|---|------------|-----------|
| 1. You may obtain photographs and/or video clips and use them for educational purposes and peer-reviewed scientific publication. | YES | NO |
| 2. You may contact me for health updates and about future studies. | YES | NO |
| 3. You may contact me with the results of my research testing. | YES | NO |
| 4. You may obtain a skin biopsy and establish a fibroblast cell culture if requested. | YES | NO |
| 5. You may share my de-identified genetic data with NIH data banks. | YES | NO |

Printed name of subject	Signature of subject	Date
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When subject is a minor:

Printed name of parent	Signature of parent	Date
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When subject is not able to provide informed consent:

Printed name of representative	Signature of representative	Date
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Relationship of representative to subject

Printed name of witness	Signature of witness	Date
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Witness signature is required for: ☐ Subjects who are illiterate/educationally disadvantaged