

Information about the study on "Identification of causes of genetic syndromes by genome-wide sequencing"

Dear parents,

We would like to inform you about the study indicated above. The cause of many genetic syndromes has not been identified yet or may not be identifiable with currently used technology. This also seems to apply to the disorder of your child. With the present study, we try to detect the genetic cause of your child's disorder by using novel technologies that allow for examination of nearly all genes of an individual at once. This study is supported by Klinikum rechts der Isar and Helmholtz Zentrum München.

Which data will be generated in this study?

In the present study, genes (DNA) and possibly also gene products (RNA, proteins, metabolites) will be extracted from your and your child's biosamples (blood, cells, tissue samples) in order to identify the genetic causes and risk factors of your or your child's disorder by using methods of genome-wide gene analysis. "Genome-wide" means that the genetic information of nearly all genes will be analyzed as completely as possible. For that purpose, DNA sequencing techniques will be applied that address the entire genome or relevant parts of it (i.e., whole genome sequencing or exome sequencing, respectively). Besides genetic data, clinical (medical) data on you and your child will also be used. The information derived from the genetic and clinical data will not only serve for the research on your child's disease, but will also be applied as a control in the research on other diseases.

Which results of the study will be disclosed and how will they be disclosed?

In this study, we will not only analyze genes that are already known to be associated to your child's disease. We will also search for novel genetic causes that are not known as yet. Results that are likely to be the cause of your child's disease will be disclosed to the medical doctor who admitted your child to this study. This medical doctor will then inform you about the results. If additional results will be generated in future studies, we will also try to disclose them to your doctor but we cannot guarantee that all future results will be disclosed.

How will secondary findings be dealt with?

Genome-wide analyses may produce findings which do not relate to the disease that is the reason for your child's participation in this study. Such secondary findings may for instance include risk factors for certain cancer dispositions, or information on the carrier status for inherited diseases. Currently, we do not list such secondary findings systematically, but we try to identify those sequence variations that have specific relevance for therapy or for which preventive medical check-ups are available. Findings of this kind of relevance may be disclosed, but we cannot guarantee regular, complete, or updated disclosure. We will not disclose the carrier status for autosomal-recessive diseases or genetic factors that influence drug sensitivities (i.e., pharmacogenetic sequence variants).

What is the duration of the study?

This study is open-ended. The research on genetic causes of diseases by genome-wide sequencing has been initiated only recently. We expect that sequencing techniques and human genetic knowledge will further

improve over the next years. By participating in this study you agree that your and your child's samples may be investigated again at a later time, that the data may be reanalyzed, and that the samples may be stored without limit of time.

Where will the data be archived?

The data will be archived at the Institute for Human Genetics, Technical University Munich. Data and biological samples may possibly be exchanged with cooperating institutions in the context of research projects. Before any data are exchanged, they will be stripped of personal identifiers such as name or address. We will take every precaution to secure your and your child's data. **However, we cannot completely exclude the possibility that the data may be stolen in the event of a security breach.**

Where will the data be published?

Data may be published in scientific journals and databases. The European Genome-phenome Archive (EGA; <http://www.ebi.ac.uk/ega/>) and Decipher (<http://decipher.sanger.ac.uk/>) are examples of databases that store genome-wide data. Genetic and clinical data (including images if you agree) will be published only after personal identifiers such as name or address have been removed. Access to this information will only be available to *bona fide* researchers who will use the information for good scientific reasons, and will safeguard the information. However, there is a remote possibility that a third party matches the data to you or your child. This is possible because genetic data are specific for individual persons. Someone who has obtained partial genetic data from you may compare this data to the sequence data generated in this study and thereby match the latter to your person.

How to withdraw from this study?

It is possible at any time to withdraw from this study by sending a written request to the physician who admitted you to this study or to the director of the study. In case of withdrawal your and your child's data and samples will not be used for any further investigation. However, data and results that have already been generated or published in scientific journals or databases prior to the date of your request cannot be reversed, undone, or withdrawn. The standard of your child's medical care will not be affected in case you/your child wish to withdraw from the study.

Is it possible to obtain sequencing data?

On request, we will provide you with the "raw" sequence data. Raw sequence data do not contain any medical interpretation. The request can be sent to the physician who admitted you to this study.

If you have any further questions, please do not hesitate to contact us (see phone number above).

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Patient data	
Name	Prenome
Date of birth	Phone:
Street	
ZIP	City

Specimen:
Clinical Diagnosis:
Responsible Physician:

Consent form for the study on "Identification of causes of genetic syndromes by genome-wide sequencing"

Participation in the study

I confirm that I have read and understood the information sheet for the study above and that the physician mentioned below orally explained to me the aim, the procedure, and the meaning of this study. I have been given copies of the information sheet and the consent form. I agree to participate in the study above, with the donation of biosamples (blood or tissue samples) and the unlimited storage of these biosamples and the corresponding results obtained from

my child

myself

Use of the biosamples for other scientific studies

I agree that the biosamples and the generated data may be used in other studies that pursue a different scientific objective. I understand that the biosamples and data may be used in these other studies as controls.

Yes

No

The participation in the study is voluntary

I understand that the participation in the study above is voluntary and that I may withdraw my consent at any time without causing any disadvantage for my child or myself.

Yes

No

Disclosure of findings

I understand that those findings that are likely to be the cause of my or my child's disease will be disclosed to me by the medical doctor who admitted my child to this study.

Yes

No

Secondary findings

In this study, secondary findings may be generated that do not relate to the disease which is the objective of the study. Secondary findings may for instance include risk factors for certain cancer dispositions or information on the carrier status for inherited diseases. I understand that such secondary findings may be disclosed to me if they have relevance for therapy or preventive medical check-ups. I understand that I do not have a contractual claim on disclosure, completeness or updating of these results.

Yes

No

Storage and publication of data

I agree that my and my child's biosamples and data will be exchanged with cooperating research institutes. I understand that this exchange will be made only after personal identifiers such as name or address have been removed.

I agree that data of me and my child may be published in scientific journals and stored in scientific databases if all personal identifiers have been removed. The European Genome-phenome Archive (EGA) and Decipher are examples of databases that store genome-wide data and serve for research purposes only.

I understand that there is the remote possibility that the data published in databases may be matched to me or my child by a third party who has obtained partial genetic data from me or my child and compares these partial data to the databases.

Yes

No

Participation in the study does not provide any remuneration

I understand that I will not benefit financially in any form when I participate in this study by providing blood or tissue samples from me or my child.

Yes

No

Mother/Father

Name:

Date:

Signature:

Responsible Physician

Name:

Date:

Signature:

Address: