LMU KLINIKUM
Institut für Humangenetik

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Information and consent for the use of biosamples and related data in the biobank for the study

„EURECA – European Registry of Familial CAKUT Cases“

Dear patient,

the analysis of human biosamples and the data obtained or to be obtained from it have become an important instrument for medical research. To understand diseases, it is important to learn more about the underlying biological processes. Today, we know that genetic material (genes) plays an important role in the development and treatment of diseases. Therefore, we ask our patients, including you, if they are willing to provide us with certain body materials and data for research purposes. The body materials, such as blood, urine, or tissue, are to be collected in a so-called biobank and linked to corresponding medical data. This biobank is operated by Prof. Dr. Julia Höfele, Institute of Human Genetics, LMU Hospital, Munich, Germany.

Your consent to the use of biosamples and related data is voluntary. If you do not wish to participate or later withdraw your consent, there will be no disadvantages for you.

In the following, we will inform you about the objectives of the biobank, the procedures, and the measures to protect your personal data so that you can form your own opinion and make a decision.

1. What are the aims of the biobank?

The biobank serves to promote medical research. To this end, the collected biosamples and associated data are to be kept for a long time and made available for research purposes in order to improve the prevention, detection, and treatment of diseases. The aim of this research is not only to diagnose you or other individuals or to identify disease-causing predispositions. Rather, biomedical interlinkages should be identified through the comparative study of larger groups of people.

Attached is a brief summary of the focus of the relevant biobank:
Congenital anomalies of the kidneys and urinary tract (CAKUT) are one of the most common causes of chronic kidney disease and end-stage kidney disease in children in Europe, which in severe bilateral cases lead to significant ante- and perinatal mortality. In many cases, renal replacement therapy including dialysis and kidney transplantation is indicated, and the socioeconomic burden is high. Many individuals with CAKUT exhibit familial aggregation, indicating a significant genetic influence in the pathogenesis of CAKUT. Disease-causing (likely pathogenic and pathogenic) variants have been identified in several genes involved in kidney development that are causative in a subgroup of children with CAKUT. However, the detection rate for most genes is low. New strategies including exome and genome sequencing will improve testing and thus the detection rate in these children.

The EURECA registry was initiated by the CAKUT/UTI/Bladder Dysfunction working group of the European Society for Pediatric Nephrology (ESPN). The registry is led by Prof. Dr. Julia Höfele, Institute of Human Genetics, LMU Hospital, Munich, Germany and Prof. Dr. Stefanie Weber, University Children’s Hospital, Marburg, Germany and systematically collects clinical and molecular genetic data from patients with familial CAKUT across Europe. Clinical data (such as diagnosis, disease progression,

laboratory results, genetic testing results) and family history are recorded. Biobank samples are analyzed and stored at the Institute of Human Genetics, LMU Hospital, Munich. The aim of the registry is to identify as yet unknown molecular genetic causes of CAKUT and thus optimize the treatment of these patients in the future.

2. What kind of biosamples and data are we discussing?

The biosample consists of tissues and body fluids that are taken during your current hospital stay/doctor's visit for the purpose of examination or treatment, but are no longer needed and would otherwise be destroyed. In addition, a 2-5 ml blood sample, a 20 ml urine sample, or a 2 mm tissue sample may be collected. The collected data includes selected information about you, particularly medical and genetic data.

3. How are biosamples and data used?

The biosamples and data provided by you are used exclusively for research on hereditary diseases of the kidneys and urinary tract. However, the exact research questions cannot be specified at the present time. Genetic testing may also be conducted on your biosamples, including a possible analysis of your entire genetic material (genome).

For logistic reasons, the biobank cannot make individual restrictions (e.g. exclusion of certain research, exclusion of material being passed on to third parties). If you do not fully agree with the described type and duration of use, you should not give your consent. The biosamples and data are intended to be stored for an indefinite period of time and made available for medical research.

4. What risks are associated with your donation?

a. Health risks

As part of your planned diagnostic or therapeutic blood draw, we would like to collect an additional 2-5 ml of blood (about 1 tablespoon) from you. This collection does not pose any additional health risks to you.

b. Other risks

With every collection, storage, and transmission of data from your biosamples for research purposes, there are confidentiality risks (e.g. the possibility of identifying you), especially with regard to information about your genetic material. These risks cannot be completely eliminated and increase as more data can be linked together, especially if you (e.g. for genealogy research) publish genetic data on the internet. In section 7 "Who has access to your biosamples and data?" we will explain in more detail how your privacy is protected.

5. What is the benefit to you personally?

Personally, you cannot expect any immediate benefit or advantage for your health from donating your samples and data. The analysis of these serves exclusively for research purposes and not to draw conclusions about your health. However, it is possible in individual cases that a researcher comes to the conclusion that an evaluation result could be of significant importance for your health. This is particularly the case if this leads to an urgent suspicion of a serious, possibly unrecognized disease that could be treated or prevented. In such a case, feedback may be given to you (see point 9 below). Please indicate in the consent form whether you would like to receive feedback in such a case (also see point 9 below). You can change your decision for or against the possibility of feedback at any time by notifying us. However, please note that you may have to disclose health information that you receive through such feedback to other entities (e.g. before concluding a health or life insurance policy) and may suffer disadvantages as a result.

As investigations of your genetic material are also possible/intended, the above text may also refer to your genetic predisposition for certain diseases. Information about your genetic material can also have

an impact on your family members and family planning.

6. What benefit does the public derive?

Medical-scientific research projects aim to improve our understanding of the development and diagnosis of diseases, and on this basis, to develop improved treatment and prevention measures.

7. Who has access to your biosamples and data and how are they protected?

a. Encoding of your biosamples and data

All data that immediately identify you (name, date of birth, address, etc.) are immediately replaced by a code (pseudonymized) after the biosamples are obtained. The biosamples and data are only made available for research purposes in this form.

The data that identifies you immediately remain in the institution where the samples and data were obtained and are stored there separately from the biosamples and medical data. The samples and data cannot be attributed to you without the involvement of this institution. Such attribution is only made to supplement additional data from your medical records or to contact you again if you have agreed to contact (see point 9 below). Your personal data will not be disclosed to researchers or other unauthorized third parties, such as insurance companies or employers.

b. Transfer of biosamples and data

The encoded biosamples and medical data are stored by Prof. Dr. Julia Höfele by the Institute of Human Genetics at the LMU Hospital, Munich, but they may be transferred to other institutions within the EU, such as universities, research institutes, and research companies, for specific medical research purposes under previously established rules. The data may also be linked to medical data in other databases, provided that the legal requirements for doing so are met. Biosamples and data that have been released to researchers may only be used for the predetermined research purpose and may not be further transferred for other purposes by the recipient. Unused material is returned to the biobank or destroyed.

c. Transfer to countries outside of the European Union

Your samples and data may also be transferred to recipients in countries outside the EU if one of the following conditions is met:

- The European Commission has determined that the country has an adequate level of legal data protection, or
- The Institute of Human Genetics agrees with the research partners on contractual data protection clauses that have been adopted or approved by the European Commission or the competent supervisory authority. You can obtain a copy of these data protection clauses from the Institute of Human Genetics.

In addition, it may also happen that samples and data are to be transferred to research partners in third countries for which neither of these two conditions is met. These countries may have a lower level of data protection than the EU. The Institute of Human Genetics at the LMU Hsopital, Munich undertakes to contractually oblige the research partners to comply with the EU level of data protection, as far as legally possible, even in these cases. Nevertheless, there is a risk that government or private entities may access your data, even though this would not be permitted under European data protection law. In addition, you may have fewer or less enforceable data subject rights there, and there may be no independent supervisory authority to support you in exercising your rights. Transfer of your samples and data in this case can only take place if you have expressly consented to it. You can check the appropriate box in the consent form to give your consent.

d. Evaluation by an ethics committee
A prerequisite for the use of biosamples and data for a specific medical research project is generally that the research project has been positively evaluated by an independent ethics committee.

e. Publications
Scientific publications of results are made exclusively in an anonymized form, i.e., in a form that does not allow conclusions to be drawn about your person. This applies in particular to genetic information. However, it is possible to include genetic information in particularly protected scientific databases that are not accessible to the general public.

8. Do you or the biobank receive any financial benefit from the use of your biosamples and data?

By providing your biosamples to the EURECA Register (analysis and storage of biosamples at the Institute of Human Genetics at the LMU Hospital, Munich), they become the property of Prof. Dr. Julia Höfele of the Institute of Human Genetics at LMU Hospital, Munich. You also authorize by Prof. Dr. Julia Höfele of Human Genetics at the LMU Hospital, Munich to use your data. You will not receive any compensation for providing your biosamples and data. If any commercial benefit is derived from the research, you will not be involved. The biobank uses your biosamples and data exclusively for scientific purposes. The samples and data are not sold. However, the biobank may charge users a reasonable reimbursement for providing the biosamples and data.

9. Will you be contacted again later?

To collect further follow-up data, it may be useful to contact you again at a later time to request additional information and/or biosamples from you. In addition, renewed contact can be used, for example, to obtain your consent to link with medical data from other databases or to provide feedback to you/your treating physician/study physician/your family doctor regarding health-relevant results for you (see above point 5).

Contact with your treating physician will be made in writing and/or by phone by Prof. Dr. Julia Höfele from the Institute of Human Genetics at LMU Hospital, Munich or Prof. Dr. Stefanie Weber, University Children's Hospital in Marburg.

Please indicate in the consent form whether you wish to be contacted again in these cases.

10. What does your right of revocation include?

You can revoke your consent to the use of your biosamples and data at any time without giving reasons and without any disadvantages for you. However, the lawfulness of the use of the samples and data up to the revocation remains unaffected.

In the event of revocation, the biosamples will be destroyed and the data deleted. However, data deletion can only be carried out to the extent that is technically feasible. In addition, data from already conducted analyses cannot be removed.

Instead of destruction or deletion, you can also agree that the biosamples and data may continue to be used in anonymized form for scientific purposes. Anonymization means that the identification code, which can be used to determine from which person the sample originates (see above point 7a/b), is deleted. Such anonymization of your biosamples can never completely exclude future attribution of genetic material to your person. Once anonymization has taken place, targeted destruction based on your decision is also no longer possible.

For a revocation, please contact: Prof. Dr. Julia Höfele, Institute of Human Genetics, LMU Hospital, Goethestr. 29, 80336 Munich, Germany.

11. What other data protection rights do you have?

The legal basis for data processing is your consent in accordance with Art. 6 paragraph 1 letter a and Art. 9 paragraph 2 letter a of the German General Data Protection Regulation. The responsible party according to the General Data Protection Regulation is: Prof. Dr. Julia Höfele, Institute of Human Genetics, LMU Hospital, Goethestr. 29, 80336 Munich, Germany.

You can request information from, Prof. Dr. Julia Höfele, Institute of Human Genetics, LMU Hospital, Goethestr. 29, 80336 Munich, Germany about the data stored about you within the scope of legal requirements. You can also request the correction of incorrect data, the transfer of the data you have provided, as well as the deletion of the data or restriction of its processing. You can contact Prof. Dr. Julia Höfele, Institute of Human Genetics, LMU Hospital, Goethestr. 29, 80336 Munich, Germany to exercise these rights.

For matters concerning data processing and compliance with data protection, you can also contact the data protection officer: LMU Hospital, Pettenkoferstr. 8, 80336 Munich, Germany, E-Mail: datenschutz@med.uni-muenchen.de. You also have the right to lodge a complaint with any data protection supervisory authority. A list of supervisory authorities in Germany can be found at: https://www.bfdi.bund.de/DE/Infothek/Anschriften_Links/anschriften_links-node.html.

12. Where can I get further information?

If anything is unclear to you, please ask the treating doctor before giving your consent. You can also contact Prof. Dr. Julia Höfele, Institute of Human Genetics, LMU Hospital, Goethestr. 29, 80336 Munich, Germany or Prof. Dr. Stefanie Weber, University Children’s Hospital, Baldingerstr., 35033 Marburg, Germany at

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Please read the following declaration of consent carefully, check the applicable boxes, and sign the declaration of consent at the end of this page if you agree.

Declaration of Consent

Patient/Proband Name, Surname: _____

Date of Birth: _____

I have read the information brochure and had the opportunity to ask questions. I am aware that my participation is voluntary and I can withdraw my consent at any time without giving reasons, without any disadvantages to me.

I consent to my biological samples and data, as described in the information brochure, being provided to the EURECA registry and Prof. Dr. Julia Höfele, Institute of Human, LMU Hospital, Munich and being used for the medical research purposes mentioned in the information brochure. In particular, I consent to, as described in the information brochure,

- that the EURECA-Registry represented by Prof. Dr. Julia Höfele, Institute of Human Genetics LMU Hospital, Goethestr. 29, 80336 Munich, Germany and Prof. Dr. Stefanie Weber, University Children’s Hospital, Baldingerstr., 35033 Marburg, Germany collect personal data from me, in particular information about my health, may obtain further personal data from my medical records, and stores the data pseudonymized (i.e. encoded);

- the biological samples are stored pseudonymized by Prof. Dr. Julia Höfele, Institute of Human Genetics, LMU Hospital, Munich. I transfer ownership of the biological samples to Prof. Dr. Julia Höfele, Institute of Human Genetics, LMU Hospital, Munich;

- the pseudonymized biological samples, together with the above-mentioned data, may be passed on to universities, research institutes, and research-oriented companies for the purpose of medical research.

In addition, I also consent to the transfer of my biological samples and data to countries outside the EU, even in cases where there is declaration of adequacy from the European Commission and no officially approved data protection clauses are used. I have been informed about the possible risks associated with such transfer (see section 7c in the information).

□ Yes **□ No**

I consent to the possibility of being contacted again at a later date:

- for the purpose of obtaining further information/biosamples:

□ **Yes** □ **No**

- for the purpose of obtaining my consent to link with medical data from other databases:

□ **Yes** □ **No**

- for the purpose of receiving feedback on important health-related results for me:

□ **Yes** □ **No**

This feedback should be provided through the facility where the biosamples/data were obtained, or through the following phyician (if desired, please specify):

Name and address of the physician: _____

I have received a copy of the patient/participant information and consent form.

_____

Name of the Patient in Printed Letters

_____

Location, Date (to be filled in by the patient) Signature of the Patient

I have conducted the explanatory briefing and obtained the patient's consent.

_____

Name of the Informing Person in Printed Letters

_____

Location, Date Signature of the Informing Person