Invitation for parents to participate in *Norwegian CF Register and CF Research Biobank*

Background information

This is an invitation for you to allow your child to participate in a medical quality assurance register and associated research biobank that holds information about patients with cystic fibrosis (CF). The National Center for Cystic Fibrosis (NSCF) at Oslo University Hospital (OUS) Ullevål aims to further develop the register as a national quality assurance register for CF (Norwegian CF Register) and a national biobank for CF (CF Research Biobank). We therefore ask your permission to use your child's health information.

Purpose of the register and biobank and associated studies

The purpose of the Norwegian CF Register and CF Research Biobank is to use the data and biological material for further research and quality assurance – nationally and internationally – to provide us with better information on how the treatment of cystic fibrosis can be as best as it possibly can be. Data from the register and material from the biobank may be used in medical research and to improve the quality of treatment and care for patients with CF. The results can also be used to improve the services provided to CF patients.

What does participation in the register and research biobank entail?

NSCF will be responsible for entering your child's data into the Norwegian CF Register and keeping it up to date. NSCF is also responsible for storing biological material in the research biobank. Children and adults with CF and CF-like diseases in Norway will be invited to participate. This information can be used to monitor the patients' disease development and to research cystic fibrosis and related conditions. Strict control procedures are introduced to ensure your child's confidentiality. The information will be retrieved from the child's medical records. Some information will undergo a quality assurance review, and the research will be sent to the European CF Register.

Possible pros and cons

Your child will not have any special benefits from participating in the register or research biobank, but experience from the register and biobank will help others in the future when diagnosed with the disease. Participation will not involve additional sampling, as one will make use of the usual routine health checks and treatment stays for sampling.

What happens to the samples and information we collect from your child?

The information we collect and register will only be used as described above. All information will be treated confidentially. The register is estimated to be in use from 2015-2043. The Norwegian Data Protection Authority has granted the register a research concession until 2028, but an extension may also be sought. Due to links to other registers, it is necessary to register the personal identity number and full name in the Norwegian register. When using data from the register for research or when disclosing data to the European CF Register, the name and personal identity number will not be visible. A code will link your child and his or her information via a list of names. Only authorised personnel associated with the project have access to the list of names and can identify your child. The list of names will be deleted 10 years after the Register and Biobank have been completed, i.e. in 2053. It will not be possible to identify your child in the results of the study when these are published. When sampling in connection with health checks and treatment, the sample material will be stored in a research biobank. Please see the information about this in Chapter B.

Voluntary participation

Participation in the study is voluntary. If you do not want your child to participate, you do not have to state any reason, and there are no consequences for you. If you want your child to participate, sign the Declaration of Consent on the last page. You can withdraw your consent later without any consequences for your child. If you later wish to withdraw your consent, or have questions for the register, you can contact the head of section at the NSCF or his deputy in medical professional questions. Telephone: 23 01 55 90

Further information about the register can be found in Chapter A Further explanations of what the register entails. Additional information about the biobank, privacy and your rights can be found in Chapter B Privacy, Biobank and Economics. The Declaration of Consent is found at the end of Chapter B.

Chapter A – Further information about what participation entails

Who is asked to participate in the register and biobank?
All patients in Norway diagnosed with cystic fibrosis (CF), and patients with conditions that are similar to CF.

Background information for the register and biobank
Cystic fibrosis (CF) is a hereditary multi-organ disease caused by mutations in the CFTR gene (cystic fibrosis transmembrane conductance regulator). Inheriting a mutated CFTR gene from both parents results in reduced functioning of the cells' CFTR. CFTR regulates chloride and sodium transport in the cells of the body. The result is abnormal concentrations of salts in the cells of the body (chloride channel defect). The clinical consequences are disease in several of the body's organs. In the long term, this can cause lung damage that leads to respiratory disease, many have pancreatic failure (about 85%), liver disease, disturbances in the movements of the intestine and salinity of sweating. Practically all men with CF are infertile, without any medical help being available.
CF is a complex disease. Treatment of the chloride channel defect is still being studied and there are only a few drugs approved for certain mutations. Treatment and care are managed by specialised centers with medical personnel and other interdisciplinary staff who are trained in and have experience working with CF. These persons are essential to optimal patient care with the lowest possible morbidity and the best possible quality of life. Specialised treatment at specialised CF centers is associated with improved survival and quality of life. Such treatment requires frequent clinical checks and monitoring of complications. Registers are therefore an important tool in the follow-up and treatment of cystic fibrosis. Leading international academic communities recommend that all patients with CF should be affiliated with a national register. Information about previous developments in the disease and complications in individuals can help when decisions are made concerning existing treatments. The registers are also important research tools.
The biobank allows us to store all types of human biological material from patients with CF. The material will be collected during health examinations, treatment, follow-up or through separate cystic fibrosis research projects. The biological material we collect will only be used to better understand CF or CF-like conditions. This will help shed some light on the importance of different genetic factors in the development of severe or mild CF diseases, but predictive (diagnostic) genetic examinations of samples stored in the CF research biobank will not be done.

The data in the register includes

i. demographic data on age (month and year), gender, ethnicity, place of residence
ii. relevant environmental factors
iii. medical data providing information about the following: What the diagnosis is based on, age at diagnosis, gene mutations, presenting symptoms, medical data describing morbidity and functionality within many organ systems (upper and lower respiratory tract including lungs, digestive organs, genitals, hormone systems, muscle/skeleton and others), bacterial findings, complications, exacerbations
iv. treatment and treatment pathways
v. data on health-check intensity, need for hospital admission and other support
vi. data on payment of benefits and social medicine data
vii. data on quality of life and mental health

Chapter B – Privacy, Biobank and Economics

Personal data protection

Information that the register contains about your child includes clinical data, laboratory results, x-ray results, lung functionality measurements and other relevant medical records information. We will cooperate with your child's local hospital to obtain relevant information and samples. The Norwegian CF Register may be used for research, so the information we have about your child may be linked up with the following 9 existing registers;

Register	Reason
Norwegian Population Register	You will be able to update the register in accordance with national regulations with information like your personal identity number/ death/ emigration.
Norwegian Patient Register (NPR)	The main purpose of the possibilities for linking to the NPR is to validate the completeness of the quality assurance register, since all contact with the specialist health services are registered there along with diagnoses and personal identity numbers.
Cause of Death Register	Linking to this register makes it possible to get an overview of cause of death. This is important for studying whether the occurrence of complications and other causes of mortality than the primary disease.
Norwegian Cancer Register	Linking to this register makes it possible to investigate whether people with CF have a higher incidence of certain types of cancer, as well as whether the chosen treatment pathway stands out compared to other patients with the same cancer diagnosis.
Prescription Database	Linking to this database can tell us something about the extent of prescribing and the use of, for example, antibiotics and other drugs for patients with CF.
The NAV Register (Statistics Norway)	Linking to this register can validate information about basic and auxiliary economic benefits, social insurance benefits (nursing care, sick pay, disability benefits, pensions), income and housing conditions.
Medical Birth Register – FHI	Linking to this register helps us study conditions related to birth in children with CF or women with CF who are pregnant and have given birth to children.
Norwegian Diabetes Register for Adults, OUS	Diabetes is a known complication of cystic fibrosis. Linking to this register helps with research on the relationship between CF and diabetes
National Quality Register for Children and Adolescent with Diabetes, OUS	Diabetes is a known complication of cystic fibrosis. Linking to this register helps with research on the relationship between CF and diabetes

Some information in the Norwegian CF Register will be sent to the European CF Register. Furthermore, external researchers in Norway and Scandinavia may be granted access to the samples and de-identified information. This is subject to individual approvals by the Regional Committees for Medical Research Ethics (REK).

Executive administration at OUS functions as the Data Controller.

Special considerations concerning the CF Research Biobank
Various samples are often taken for routine health checks and treatment (blood tests, urine samples, mucus samples, tissue samples, stool samples and other bodily fluids) that will be stored in the CF Research Biobank at OUS. Oslo University Hospital (OUS), via the Norwegian CF Register, is responsible for the CF Research Biobank. As part of future research projects, upon application to the Regional Committee for Medical Research Ethics and the Norwegian Data Protection Authority, the samples may be sent for analysis to other laboratories inside and outside of Norway. The biobank is scheduled to exist until 2043. After this, the material will be destroyed according to internal guidelines. If the biobank is to be extended, new consent will be obtained for both the Register and Biobank. If biological material was provided by your child from previous research projects at OUS, these will also be stored in the CF Research Biobank.

Sending material and information to others
If you agree to your child participating in the Norwegian CF Register and CF Research Biobank, you also consent to sending samples and de-identified information to the European CF Register (ECFSPR) in Denmark. The University Hospital of Aarhus, Denmark, is the Data Controller for the European Register.

Right to access and delete information about your child and deletion of samples
If you agree to your child participating in the Norwegian CF Register and CF Research Biobank, you have the right to see which information is registered about you. You also have the right to have any errors corrected in the information we have registered. If you withdraw from the project, you can demand that the samples and information collected be deleted, unless the information has already been entered into analyses or used in scientific publications.

Economics
The Register and Biobank will be financed via NSCF and external project funds

Information about the use of register and biobank data
Data from the Register and Biobank will be published in national and international journals, and an annual report will be prepared that will be openly available to everyone. On our website (see the link below) you can regularly find updated information about the Register and Biobank.

https://oslo-universitetssykehus.no/nscf

Consenting to participate in the Medical Quality Assurance Register for Cystic Fibrosis (Norwegian CF Register) and CF Research Biobank

Declaration of Consent: I am willing to participate in □ NORWEGIAN CF REGISTER □ CF RESEARCH BIOBANK --- (Name in block letters) --- (Signed by project participant, date) --- (Signed by parent, date) *For participants under the age of 12, both parents must sign* *Participants between the ages of 12 and 16 sign together with both parents* *Participants older than 16 years can sign for themselves*	**PARTICIPANT** Name: Personal identity number (11 digits): Address: Hospital: **DOCTOR** I hereby confirm that I have provided information for the study: --- (Signed, date) Treating physician (stamp /name in block letters)