STATENS SERUM INSTITUT

DANMARKS NATIONALE BIOBANK

Framework for the Disclosure of Biological Material from the Danish National Biobank for Research Purposes

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This document is a non-certified translation of the Danish version.
In the event of a dispute the Danish version applies.

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1 Purpose

The purpose of the present guidelines is to ensure the framework for the disclosure of human biological material and associated meta data from the Danish National Biobank (DNB) for research purposes. Statens Serum Institut (SSI) receives on a daily basis both biological material and associated data from patient treatment, screenings or research projects. DNB is both organisationally and physically located at SSI. DNB is also SSI's central freezer infrastructure and stores both biological material and an overview of the material itself and the material's location in the biobank.

DNB also operates a national biobank register with the purpose of retrieving samples for research purposes. The Biobank Register also contains information about biological material located in other biobanks in Denmark, e.g. the Bio- and Genom Bank Denmark.

DNB furthermore functions as freezer facility for external parties who wishes to store biological samples under safe conditions.

2 Materials in the DNB

The biological material in the DNB falls into two overall categories:

a) Samples that fall under SSI's data responsibility and decision-making competences. These include diagnostic samples sent to SSI for analysis, including filter paper samples from screening of new-born babies for congenital diseases (PKU cards) and samples from research projects. In addition, this category also includes residual material that may be left over from routine tests at other public health authorities and which is passed on to DNB for research purposes.
b) Other samples are stored by SSI (as data processor) on behalf of other parties. These include samples from specific research projects around Denmark. Such external parties use the DNB for storage and handling/shipping of samples only.
   NB: If a researcher wishes to gain access to the biological material from such external parties, each data controller must be contacted.

3 The National Biobank Register

In addition to the biological material, the DNB also comprises the Danish Biobank Register. The Danish Biobank Register contains information about biological samples in the DNB as well as in a number of other biobanks in Denmark.

The information in the register is maintained and updated with information both from the DNB and other biobanks as well as with information from other health registers.

Using this register researchers can view information about existing samples via DNB's website. The user of the biobank register cannot view personal data, as the register only contains information on existence and location of the biological material. The Danish Biobank Register is administered by the Coordinating Centre at the DNB, and the Centre's staff assists researchers with further advice in connection with an application for material placed in biobanks other than the DNB.

4 Responsible authority

The DNB is part of SSI under the Ministry of the Interior and Health.

SSI's tasks are laid down in section 222 of the Danish Health Act. It follows, among other things, that SSI aims to prevent and fight infectious and congenital diseases through research, monitoring, diagnostics and guidance.
Furthermore, it is stated that SSI conducts scientific research and provides advice and assistance in areas related to its tasks. THE DNB serves as SSI's central freezer infrastructure.

5 The legal bases for access to biological material in the DNB

As a public authority, SSI is subject to a number of rules on the disclosure of biological material from DNB, including the Health Act[1], the Committee Act[2], the Public Information Act[3], the Public Administration Act[4], the General Data Protection Regulation (GDPR) [5] and the Danish Data Protection Act[6].

5.1 Administrative law

The principles of administrative law concerning factual administration, equality and proportionality also apply to SSI's disclosure of data from the DNB. The provisions of the Danish Public Administration Act on impartiality also apply to the authorities' handling of cases concerning the conclusion of contractual relationships or similar private law transactions, cf. section 2(2) of the Danish Public Administration Act. SSI's processing of requests for disclosure of data from the DNB is thus also subject to these rules.

The Ministry of the Interior and Health, as the overall authority for the SSI, has, based on the general principles of state- and administrative law, a non-statutory duty to supervise the disclosure of data from the DNB. This supervision applies to the general administration of the area, but it also covers questions about whether SSI's – and thus the DNB's – administration in specific cases is lawful.

However, the assessment of a request for disclosure of material from the DNB is not an administrative decision as defined by the Danish Public Administration Act, and therefore the applicants right of appeal does not apply. However, the Ministry of the Interior and Health using its non-statutory supervision duty, is presumed to be competent to ascertain - by means of non-binding pronouncements - whether the applicable law has been complied with for general decisions or in individual cases.

[1] LBK nr. 1011 af 17/06/2023 (Bekendtgørelse af sundhedsloven)
[2] LBK nr. 1338 af 01/09/2020 (Bekendtgørelse af lov om videnskabsetisk behandling af sundhedsvidenskabelige forskningsprojekter og sundhedsdatavidenskabelige forskningsprojekter)
[3] LBK nr. 145 af 24/02/2020 (Bekendtgørelse af lov om offentlighed i forvaltningen)
[4] LBK nr. 433 af 22/04/2014 (Bekendtgørelse af forvaltningsloven)
[5] EUROPA-PARLAMENTETS OG RÅDETS FORORDNING (EU) 2016/679 af 27. april 2016
[6] LOV nr. 502 af 23/05/2018 (Lov om supplerende bestemmelser til forordning om beskyttelse af fysiske personer i forbindelse med behandling af personoplysninger og om fri udveksling af sådanne oplysninger (databeskyttelsesloven)

5.2 Data Protection Rules

The General Data Protection Regulation and the Danish Data Protection Act lay down the overall framework governing when and how personal data can be processed, including stored and disclosed. The General Data Protection Regulation and the Danish Data Protection Act apply to both private companies and public authorities. As a general rule, the General Data Protection Regulation and the Danish Data Protection Act apply to all electronic processing of personal data, as well as manual processing of personal data contained in a register.

It follows from practice that a structured collection of human biological material falls within the scope of the General Data Protection Regulation as such a collection constitutes a manual register.

The Danish Data Protection Agency supervises any processing covered by the General Data Protection Regulation and the Danish Data Protection Act, cf. section 27 of the Danish Data Protection Act.

Article 5 of the General Data Protection Regulation stipulates that processing of personal data must take place for explicitly stated and objective purposes, and that further processing must not be incompatible with such purposes. Further processing of data for historical, statistical or scientific purposes alone shall not be considered incompatible with the purposes for which data was collected. The information must be accurate and up to date. In addition, the data shall be processed lawfully, fairly and in a transparent manner and no more data shall be processed than necessary in relation to the purposes for which data are processed. Data shall also not be processed longer than necessary and data shall be processed in a manner that ensures adequate security for the personal data concerned.

As data controller for the processing of personal data in DNB, SSI may disclose biological material and connected data to research projects under certain conditions. It follows from the Data Protection Act that access to samples and data may be granted if access is given solely for the purpose of carrying out statistical or scientific studies of significant societal importance and if access is necessary for the performance of such studies, cf. section 10(1) of the Danish Data Protection Act.

Thus, it follows from the data protection rules that SSI may only disclose the personal data, including biological material necessary to fulfil the purpose of the processing, e.g. a research project. In any application for disclosure of personal data, including biological material, the applicant must therefore document that the requested data and biological material are necessary and proportionate to the project description. The applicant must also explain that the research project is of significant societal importance.

It is SSI's responsibility as data controller to ensure that disclosure of biological material, e.g. to a research project, takes place within the framework of the data protection rules and in accordance with an approval from the Danish Committees on Health Research Ethics cf. section 5.3. In certain cases, SSI must obtain permission from the Danish Data Protection Agency prior to disclosure, cf. section 10(3) of the Danish Data Protection Act. The permission from the Danish Data Protection Agency specifies the terms that the disclosure must comply with.

5.3 Ethics

When a research project includes human biological material, approval must be obtained from a Danish Committee on Health Research Ethics, cf. section 14 of Danish Act no. 1338 on scientific ethical

reviewal of health science research projects and health data science research projects of 1 September 2020. The approval may include a requirement to obtain the consent of the data subjects from whom the samples originate. The approval may also include a requirement that the persons from whom the samples originate must be notified. If the approval contains a requirement to notify citizens, the notification wording must be reviewed by SSI's Data Protection and Information Security Department (databeskyttelse@ssi.dk) prior to the notification being sent. The same will apply to any notification under Article 14 of the General Data Protection Regulation.

5.4 The National Database of Non-Consent to the Use of Tissue Samples for Scientific Purposes (Tissue Utilisation Register)

Once the samples to be used in the research project have been identified, DNB's IT staff will investigate whether the persons from whom the samples originate have enlisted in the Tissue Utilisation Register. If so, their samples will not be used and will not be disclosed for research purposes.
Read more about the Tissue Utilisation Register[7] ("Vævsanvendelsesregisteret") on the Danish Health Data Authority's website.

5.5 Greenland

If biological samples from Greenlandic citizens are part of a request for disclosure of biological material for a research project that does not specifically deal with Greenlandic conditions or where research is specifically carried out on Greenlandic citizens, these samples must be removed prior to disclosure.

If disclosure of samples from Greenlandic citizens is specifically requested, the Health Research Ethics Committee in Greenland is consulted in the same way as the Biobank's Special Committees would be, cf. section 6.1.

5.6 Application form for access to biological material

SSI makes the application form available on the Danish National Biobank's website.
The application form must be fully completed to allow SSI to assess whether the biological material can be disclosed, cf. sections 5.1-5.4. In addition to permission from a Danish Health Research Ethics committee, a project description and extraction description must also be submitted. If the desired samples are available in external biobanks, the Coordinating Centre can guide and advise on access to the material.

[7] BEK nr. 361 af 04/04/2019 (Bekendtgørelse om Vævsanvendelsesregisteret) The National Database of Non-Consent to the Use of Tissue Samples for Scientific Purposes

6 SSI assessment of applications requesting disclosure of DNB materials

6.1 The DNB Scientific Advisory Committee

As data controller and competent administrative authority, it is SSI who assesses the basis for and extent of disclosure of material from the DNB in specific cases, cf. section 5.

In order to ensure equal representation of all relevant interests, a Scientific advisory committee and several special committees have been set up at SSI. Biological material is a limited resource, and it is therefore important that the biological material is used in the best possible way for the benefit of as many individuals as possible.

The purpose of the DNB Scientific Advisory Committee is to ensure the best possible use of the material in the biobank for use in research under equal and transparent conditions for all.

To fulfil this purpose, the committees discuss both general questions of principle in relation to the biobank and make recommendations, etc. to SSI. The committees also contribute with specific recommendations concerning SSI's processing of requests for disclosure of biological material from the biobank for research projects. In this connection, an important task for the committees is to contribute with a qualified assessment of whether the purpose of the project can be said to be of significant societal importance, as well as an assessment of whether the information is necessary when the purpose of the project is taken into consideration.

The DNB Scientific Advisory Committee consists of the following members:

- 2 members appointed by SSI, including the chairman
- 1 member appointed by the Independent Research Foundation (Health and Disease)
- 1 member appointed by Danish Regions
- 1 member appointed by the association “Danske Patienter” (Danish Patients)

The necessary competencies must be present in the DNB Scientific Advisory Committee in order for it to perform its function at a high level. All members of the Scientific Advisory Committee must therefore have research experience at postdoc level and have documented experience in the evaluation of scientific protocols involving the use of biological material. However, this does not apply to the member appointed by Danish Patients. The committee must also at all times have at least two members with special expertise in technologies concerning extraction of information from the blood (e.g. genetics, biochemistry, immunology). The members' handling of matters in the Committee shall comply with the general principles of impartiality.

If SSI rejects a request for disclosure of biological material for an otherwise approved research project, SSI will present a justification for the rejection.

The DNB special committees:

In addition to the Scientific Advisory Committee, SSI has also set up special committees in connection with the processing of requests for specific collections. The special committees are set up if access to

biological material from the Biobank's specific collections is requested, e.g. PKU cards or biological material from citizens living in Greenland. When requests for disclosure of biological material from citizens residing in Greenland are handled, the Health Research Ethics Committee in Greenland will be consulted. The members' handling of matters in the committee is subject to general principles of impartiality and the principles listed below for the committees' recommendation on the disclosure of the material.
The SSI obtains both an opinion from the Special Committee and an opinion from the Scientific Advisory Committee prior to SSI's decision to hand over biological material from the Danish National Biobank.

The administrative work is handled by the DNB Coordinating Centre, cf. section 6.2, which ensures documentation of the case processing by filing in the SSI's ESDH system. In addition to complying with applicable legislation, SSI has established principles for the conditions that shall apply to the disclosure of material, cf. below.

The basic principle is that biological material must be available for e.g. research purposes on equal terms for researchers and for the benefit of the citizens. It is also important for SSI that citizens' privacy and rights are safeguarded in accordance with, among other things, the data protection rules. SSI therefore has assessed that it is important to have advisory committees that possess broad representation and the professionalism called for.

The advisory committees are organised as follows:

- A decision on the recommendation for the disclosure of material is made by simple majority.
- The proceedings of committees shall be valid if four members take part in the reviewal. In the event of a tie, the chairman's vote will be decisive. Participation in the proceedings cannot be done by representative.
- The recommendation must be submitted to SSI and accompanied by a justification. If the Committee cannot reach agreement, the nature of the disagreement, including the number of votes must be stated.
- The recommendation is not binding for SSI's final assessment of a request for disclosure of material, as a request is assessed based on the overall information, including the Committee’s recommendation. The final assessment is made by SSI with the involvement of SSI's Data Protection and Information Security Department. In the event of a total or partial refusal to disclose material SSI's final assessment will contain a detailed justification that the applicant may use when he/she adjusts the project and submits a new application.
- The committees may decide to seek advice from external experts.

The general principles for the Committees' recommendation on the disclosure of material are as follows:

- Due to the – in some cases – scarce quantity of material in the Biobank, the Committee includes in the assessment for disclosure whether the quantity applied for is necessary, whether the quantity can be reduced or whether the application should be rejected altogether on this basis.

- There must be consistency between the project title and purpose in the application to the Health Research Ethics Committee and the submitted project description.
- The project description and extract description must be complete, so that it is possible to assess whether the project complies with section 10 of the Danish Data Protection Act. Thus, sufficient information must be available for SSI to assess whether the processing is necessary for the execution of the project.
- The research project must comply with the basic principles of Article 5 of the General Data Protection Regulation and this must be sufficiently documented.
- Some of the DNB material is part of specific collections, and this must be considered when the request for disclosure is reviewed. This includes, for example, PKU cards collected for diagnostic purposes and for quality assurance and further development of neonatal screening. Disclosure of material from the PKU collection can only take place if there is sufficient material left to fulfil the above purposes.
- SSI may require that surplus material be returned to SSI. This could occur when scarce resources are concerned.
- As a general rule, the approval from a Health Research Ethics Committee must be valid for at least two years after the request for biological material has been received. This minimum duration allows time for data/biological material to be processed and analysed.

For the DNB's assessment of whether disclosure is justified, it may be necessary to obtain additional information. For example, it may be necessary to provide an additional project description or an in-depth description of the background for the request for specific information.

A quarterly list of some of the applications handled concerning the disclosure of biological material from the DNB is published on the DNB website.

6.2 The DNB Coordinating Centre

The Coordinating Centre is the advisory link between the DNB and the biobank's researchers and collaborators and provides administrative assistance to all of the DNB Advisory Committees. The Centre connects the physical biobank, the biobank register and the laboratory with partners outside the DNB. Bridging the gap between the parties and acting as a central link that facilitates contact the Coordinating Centre advises on research opportunities and collaboration processes. The Coordinating Centre's research support is described on DNB's website.

6.3 Application for access to biological material

The application should be submitted to the DNB Coordinating Centre. As a starting point, applications are treated in the order in which they are received.

An application to the DNB for access to biological material must always contain:

- A completed application form, which is available on the DNB website
- Full project description, including.:
    - Description of the analyses to be carried out, the laboratories in which the work will be carried out, description of timetable and project funding.

    - In case of scarce and depletable material, arguments to that fact that it is necessary to use the sample material asked for rather than alternative accessible samples/resources.
    - Documentation that the project group is able to perform the planned analyses on the desired sample material (e.g. filter paper), and argumentation showing that the analytical precision is sufficient to elucidate the biological problem.
    - Information about storage location of analytical data throughout the project period.
- Application to and approval from a Health Research Ethics Committee.
- Confirmation that the research project is listed with* the responsible researcher's institution.
- Sample extraction description, e.g. a report from the National Biobank Register.

Researchers who wish make changes or additions to the original protocol (e.g. add analyses or methods that change the original purpose of the study or request additional biological material) must submit an appendix application as well as an updated project description and extraction description to the Coordinating Centre. An updated permission from a Health Research Ethics Committee must also be presented. The DNB Scientific Advisory Committee will then assess whether the changes to the project can be implemented.

6.4 Protection of IP rights

Research access to DNB data and material is limited. SSI does not disclose ownership rights to DNB data and material, but merely allows researchers to use data and material for research purposes in accordance with the approved research project.

6.5 Publications

The lead applicant is obliged to notify the Coordinating Centre if a publication is likely to trigger controversy or otherwise attract significant public reactions.

All publications must contain the following text under 'Acknowledgements': "This research has been conducted using the Danish National Biobank resource. The Danish National Biobank is supported by the Novo Nordisk Foundation". An article link must be shared with the DNB.

6.6 Outreach

Titles of completed projects are published on the DNB communication platforms. For selected projects, a summary of the protocol in layman's terms, a summary of research results and links to related publications are prepared. It is the task of the responsible researcher to contribute this information. Contact information for the main applicant for each study can be obtained from the Coordinating Centre.

6.7 Application processing time

The application is processed by the DNB, and the objective is to review the application by email in the Scientific Advisory Committee and respond to the applicant within a maximum of 30 working days (i.e.

approx. 6 calendar weeks). The processing time will be extended if there is a need for further information.

Requests for extracts from sample collections external to the DNB are forwarded by the Coordinating Centre to the Advisory Committee of the respective collection, which typically takes 1-2 months. The time spent is not included in the above processing time.

Once the DNB Scientific Advisory Committee has approved a project, the main applicant will receive an email from the Coordinating Centre informing him/her that the project has been approved together with a brief description of the subsequent steps

6.8 Shipping of biological material

The recipient of the biological material and associated data must ensure that the material is shipped in accordance with appropriate security, cf. Article 32 of the General Data Protection Regulation.

6.9 Terms of delivery and service

DNB operations are covered by a financial law grant. When DNB staff retrieve samples and hand them out, it is free of charge for the recipient, unless the samples have to be treated in a very special way before they are handed over.