GUIDANCE TO STORE AND USE LEFTOVER HUMAN TISSUE FOR FUTURE RESEARCH

MOH has provided the following clarifications on the storage and use of leftover human tissue (HT)[1] for future research:

1. Researchers* who use leftover HT from an ongoing IRB-approved research for another **IRB-approved Clinical Trial or HBR research** would not need to come under the supervision of a Tissue Bank. This is because the use of the leftover HT in the subsequent CT/HBR will be regulated under the respective regulatory frameworks.

2. However, any leftover tissue **STORED** for future research **yet to obtain IRB approval** will need to be supervised by a Tissue Bank and regulated under the Human Tissue Framework (HTF). This is because there is no **clear research intent** that the HT will be used for yet.

** Researchers who are Principal Investigators (PI), Co-Investigators or Collaborators of the other IRB approved HBR research.*

A. What should I do if I am storing leftover HT for a future research which has yet to receive IRB approval?

Scenario 1

You completed your study, and have leftover HT to store for future research (yet to receive IRB approval). These HT were collected before 1 Nov 2019.

1. Register a tissue bank with NHG TCC or come under the supervision of a TCC-registered tissue bank

- To set up a new tissue bank, the tissue bank custodian must submit the following documents to NHG TCC at NHGTCCSecretariat@nhg.com.sg:

  - **TR 1703-01 Tissue Bank Application Form** endorsed by relevant institution authorities
  - Updated CV of the custodian which reflect their current appointment under the NHG institution
  - Certification of completion of NHG Human Tissue Framework (HTF) Minimum Training Course or Essential Research Conduct (ERC) Course of the custodian

  Please refer to **NHG Proper Conduct of Tissue Banking Activities (PCT) SOP 1501-B02 Interactions with NHG Tissue Compliance Committee** for more information on the submission requirements.

[1] Refer to **Annex 1** for definition of human tissue

- To come under the supervision of a TCC-registered tissue bank, the PI should make such arrangements directly with an existing TCC-registered tissue bank custodian. The custodian would need to submit an amendment to his/ her tissue bank to include the new source of tissue.

2. **Ensure the ICF(s) used to consent the subjects contain at least HBRA 12(2)(a), 12(2)(f) and 12(2)(i) elements (refer to Annex 2)**

- If the ICF(s) do not have the three 12(2) elements stated above, you will need to re-consent the subjects who had previously agreed to donate leftover human tissue in order to store, supply and/or use for future research.

- Re-consent may be obtained by using the **NHG TR 1704-15 Optional Consent Form for the Donation of Leftover Biological Samples**, which contains all 12(2) elements. This form must be submitted to NHG TCC together with the new tissue bank application or amendment application (for existing TCC-registered TB) and be approved by NHG TCC before it can be used.

- Re-consent should be completed in accordance to the **NHG PCT SOP 1501-C01 Informed Consent Requirements for the Removal, Donation and Use of Human Tissues.**

Scenario 2

You completed your study, and have leftover HT which you intend to store for future research (yet to receive IRB approval). These tissue were collected **on or after** 1 Nov 2019.

1. **Register a tissue bank with NHG TCC or come under the supervision of a TCC-registered tissue bank**

- To set up the tissue bank/ come under the supervision of a TCC-registered tissue bank, please refer to the submission process as per above (details in Scenario 1, section 1).

2. **Ensure the ICF(s) used to consent the subjects contain all HBRA 12(2) elements (refer to Annex 2)**

- If the ICF(s) do not have all the HBRA 12(2) elements, you will need to re-consent the subjects who had previously agreed to donate leftover human tissue in order to store, supply and/or use for future research.

- Re-consent may be obtained by using the **NHG TR 1704-15 Optional Consent Form for the Donation of Leftover Biological Samples**, which contains all 12(2) elements. This form must be submitted to NHG TCC together with the new tissue bank application or amendment application (for existing TCC-registered TB) and be approved by NHG TCC before it can be used.

- Re-consent should be completed in accordance to the **NHG PCT SOP 1501-C01 Informed Consent Requirements for the Removal, Donation and Use of Human Tissues.**

Scenario 3

You have an ongoing study, and intend to store leftover HT for future unspecified research (yet to receive IRB approval).

1. If HT was collected before 01 Nov 2019, the ICF used to consent the subjects who provided the leftover HT must at least have HBRA 12(2)(a), 12(2)(f) and 12(2)(i) elements (refer to **Annex 2**).

2. If the human tissue was collected on or after 01 Nov 2019, the ICF that you use to consent current subjects must include all HBRA 12(2) elements (refer to **Annex 2**).

    - If the ICF(s) in your ongoing study do not have the required HBRA 12(2) elements, you are strongly recommended to re-consent subjects who have agreed to donate leftover human tissue for future research prior to the completion of the study. Otherwise, you cannot store, supply and/or use the human tissues for future research.

    - Re-consent may be obtained by using the **NHG TR 1704-15 Optional Consent Form for the Donation of Leftover Biological Samples**, which contains all 12(2) elements. This form must be submitted as a study amendment to the IRB overseeing your current ongoing study. The form must be approved by the IRB before it can be used.

    - As this study is still ongoing, re-consent should be completed in accordance to the **NHG Proper Conduct of Research (PCR) SOP 501-C01 Informed Consent Form and Process**.

3. Once you have completed your study and you have determined that there are leftover HT for future research, you would need to set up a tissue bank by following the submission process above (details in Scenario 1, section 1).

B. How do I re-consent non-English speaking donors/legal representatives?

Subjects should be provided with consent forms written in the language understandable to them. As such, subjects could be consented using a fully translated ICF. Investigator Initiated Studies may also use a translated Short Consent Form appended to the English approved ICF.

Translated Short Consent Forms in local language (i.e. Tamil, Malay, Simplified Chinese) are available for **NHG TR 1704-15 Optional Consent Form for the Donation of Leftover Biological Samples** on the NHG Research Website.

C. Where can I find the relevant SOPs/templates for obtaining consent for leftover tissues?

- NHG TR 1704-15 Optional Consent Form for the Donation of Leftover Biological Samples Template (English and translated SCFs) *– NHG intranet access not required*

Location: NHG Research Website (http://www.research.nhg.com.sg) > Resources > Ethics Forms and Templates

- NHG TR 1703-01 Tissue Bank Application Form –*NHG intranet access required*
  Location: NHG Research Website (http://www.research.nhg.com.sg) > Conducting Research > Human Tissue Framework

- NHG Proper Conduct of Research (PCR) SOPs/templates – *NHG intranet access required*
  Location: NHG Research Website (http://www.research.nhg.com.sg) > Resources > Proper Conduct of Research SOP & Templates

- NHG Proper Conduct of Tissue Banking Activities (PCT) SOPs/ templates – *NHG intranet access required*
  Location: NHG Research Website (http://www.research.nhg.com.sg) > Resources > Human Tissue Bank Policy and Proper Conduct of Tissue Banking Activities (PCT) SOPs & Templates

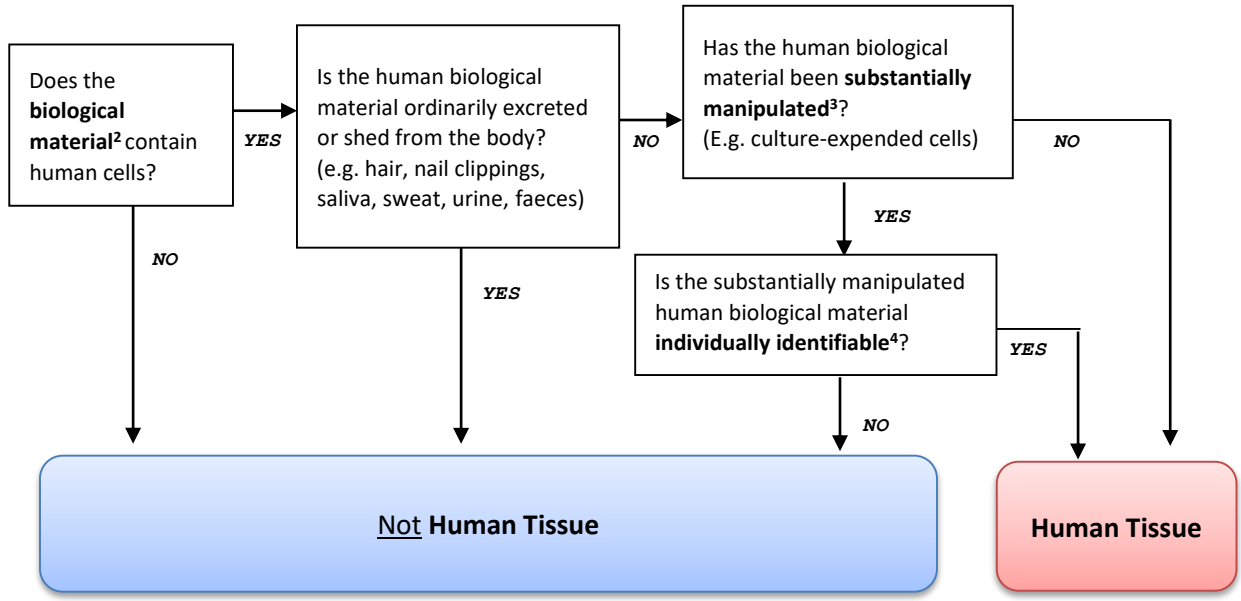
APPLICABLE REGULATIONS AND GUIDELINES

1. Human Biomedical Research Act 2015
2. Human Biomedical Research (Tissue Banking) Regulations 2019

REFERENCES

1. NHG PCT SOP 1501-B02 Interactions with NHG Tissue Compliance Committee
2. NHG PCT SOP 1501-C01 Informed Consent Requirements for the Removal, Donation and Use of Human Tissues
3. NHG PCR SOP 501-C01 Informed Consent Form and Process
4. NHG TR 1703-01 Tissue Bank Application Form
5. NHG TR 1704-15 Optional Consent Form for the Donation of Leftover Biological Samples

ANNEX 1: Guide to assessing if you are collecting HBRA defined Human Tissue (HT)



Adapted from Ministry of Health – A Guide to the Prohibition Against Commercial Trading of Human Tissue Version Date: February 2017.

[2]**Biological materials** such as DNA, sera, plasma and de-identified Formalin-fixed paraffin embedded (FFPE) are not regarded as human tissue under the HBRA.

Processes that would not be considered to be [3]**substantial manipulation** include cutting, grinding, shaping, centrifugation, soaking in antibiotic or antimicrobial solutions, sterilization, low-level irradiation, cell separation, concentration or purification, filtering, lyophilisation, freezing, cryopreservation, vitrification.

Biological specimens collected considered human tissues under HBRA should be registered with the NHG TCC.

[4]**Individually Identifiable** - in relation to human biological material or health information pertaining to an individual, means that the individual can be identified –

a. From the human biological material or health information; or
b. From that human biological material or health information and other information to which the person, research institution, tissue bank or other organisation has or is likely to have access. (HBRA)

ANNEX 2: HBRA Requirements for Appropriate Consent (Removal, Donation or Use of Human Tissue)

Reference: HBRA 2015, Part 3, section 12(2) -

In the case of the removal, donation or use of human tissue, the appropriate consent must be obtained after the tissue donor or, where applicable, the person authorised to give consent under this Part, has been informed of all of the following:

(a) the specific research purpose for which the tissue is intended to be used, if this information is available but if not available, the purpose for which the tissue is intended to be used may be stated as for general research;
(b) whether the tissue will be used for any purpose other than research and if so, the specific purpose for which the tissue will be used;
(c) the proposed areas of research approved by the institutional review board in a case where it has waived the requirement that the removal of the tissue is primarily for a therapeutic or diagnostic purpose under section 37(3);
(d) the reasonably foreseeable risks, discomforts or inconveniences to a living donor arising from the removal of the tissue;
(e) the donation of the tissue is voluntary and the renunciation of the donor's rights to the tissue and any intellectual property rights that may be derived from the use of the tissue;
(f) the donor's right to withdraw his or her consent in the circumstances specified in section 14 and the limitations of such withdrawal as specified in that section;
(g) any compensation and treatment available to the donor in the event of injury arising from participation in the process of tissue donation;
(h) any anticipated expenses the donor is likely to incur as a consequence of donating tissue;
(i) the extent to which records identifying the donor will be kept confidential;
(j) whether individually-identifiable information obtained from the tissue donor will be used for future research;
(k) where applicable, whether biological material taken from the tissue donor will be destroyed, discarded or stored and used for future research;
(l) whether, and the circumstances under which, the donor or the person authorised to give consent under this Part, as the case may be, will be contacted for further consent;
(m) whether the tissue donation would result in the use of the donor's tissue in an individually-identifiable form;
(n) whether the tissue will be used in restricted human biomedical research involving human-animal combinations;
(o) whether the donor or the person authorised to give consent under this Part, as the case may be, would wish to be re-identified in the case of an incidental finding if the future research expressly provides for such re-identification;
(p) the person or persons to contact to obtain further information on the purposes for which the tissue will be used and to provide feedback in relation to such purposes, respectively;
(q) whether the tissue will be exported or removed from Singapore to a place outside Singapore;
(r) such other information as may be prescribed.