

HPSCRO Guidance: Human Subjects Informed Consent Language

The HPSCRO committee recommends inclusion of the following elements in the informed consent form for a human subjects study when human tissue or cells will be obtained for induced pluripotent stem (iPS) cell derivation. This list may not be exhaustive.

Overall informed consent approval for human subject research at the University of Michigan is within the U-M IRB purview, and remaining aspects of the consent will be addressed through the IRB review process.

Consent Form Elements for iPS

- A) Explanation of what iPS cells are and where they come from (e.g., the patient's own tissue/cells). Include a statement that animal testing is conducted to verify that the derived cell line is pluripotent (i.e., can become any type of cell).
- B) Explanation that iPS cells containing the subject's DNA may multiply indefinitely, and may be kept forever (including the tissue/cells from which they were derived).
- C) Explanation that the patient's tissue/cells/iPS cell lines may be used for future purposes not yet known and unrelated to the present study. Include consent option with a statement that opting-out means one's tissues/cells may not be used for the study.
- D) Explanation that the patient's tissue/cells/iPS cell lines may be shared with other investigators (relates to B and C, above). Include consent option with a statement that opting-out means one's tissues/cells may not be used for the study.
- E) Explanation that donated tissue, cells, and derived iPS cell lines may not be available for removal from the study in cases of withdrawn consent.

The elements listed above overlap conceptually in many respects. It may not be necessary or feasible to cover each as a discrete paragraph in your consent form. It is important that the ideas represented by the elements are conveyed in a clear, understandable way, whether they are presented as a group or separately.

Sample Consent Form Language

The consent language below has been adapted from the Stanford University consent template and consent form guidance from the University of California San Francisco. The samples address only issues relating to pluripotent stem cell research and are not necessarily exhaustive. Red text in brackets represents where information unique to the study would be entered.

Element A: iPS cell definition with identification of source material

The purpose of this study is to learn more about [disease]. A technique referred to as "induced pluripotent stem cells" will be used to enable [tissue type] to be changed to [type of cell you plan to create]. Such cells are called induced

pluripotent stem cells, or iPS cells. To create iPS cells from your tissue after it has been collected, certain genes are introduced into cells from your tissue to “reprogram” these cells to become *pluripotent*; that is, able to become any cell in the body, such as brain, liver, or heart cells. Animal testing is conducted to verify that the “reprogramed” cells are pluripotent.

Element B: iPS cells containing the subject’s DNA multiply and may be kept forever

Cells multiply by dividing in two, and the genetic material is replicated every time a cell divides. It is possible that iPS cell lines, which can live indefinitely, may contain all or part of your DNA. You should be aware that your tissues, cells or other materials derived from these tissues may be kept for many years.

Variation:

If samples, such as tissues or blood, will be destroyed at the end of the study add the following: Any samples left over after analysis will be destroyed when the study is completed.

Element C: iPS cells saved/stored for future or unrelated research, specify location

This research will focus on the study of [disease] from the [tissue/cell type (e.g., skin cells)] of [population (e.g., "people with... relatives of people with... healthy volunteers unrelated to someone with...")]. This research holds special importance in studying [disease] and in the development of treatments for human diseases in general.

In most instances your tissue or cells will be stored indefinitely in [PI's name] laboratory located at [location]. Only [name of PI] and his/her study staff will know your identity. [As applicable, insert information indicating how samples will be stored; if samples will be personally identifiable. If samples are de-identified, indicate how (e.g., medical record or code number).]

Your stored tissues and cells and the iPS cell lines derived from them could be used in future related and unrelated studies, which are not foreseeable now. There are several possible research uses for tissues and cells donated for pluripotent stem cell research, including:

- Injecting or transplanting the stem cells into animals for research-only purposes
- Testing for genetic and DNA composition. Genes may be analyzed and/or manipulated to study normal function or development.
- Patenting derived stem cells, which contain your DNA, for scientific or medical use.
 - If any new products, tests, discoveries or patents that result from this research have potential commercial value, you will not share in any financial benefits. You will not receive patent rights. You will

not have control over the product sales and uses (except as stated in this consent).

- *Alternative text:* Any tissues you have donated which are used in research may result in new products, tests or discoveries. In some instances, these may have potential commercial value and may be developed and owned by the investigators, the University of Michigan and/or others. By consenting to participate, you authorize use of your tissues or samples for the research described above and understand that there are no plans to provide you with compensation or a share in any financial benefits from these products, tests or discoveries.
- Creating a tissue-specific stem cell line, which could be transplanted into another human for the purpose of treating people with [disease] or other disorders.
- Other, currently unknown uses. Science is always evolving and it is therefore difficult to determine exactly how these cells will be used in the future.

OPT-IN Text for storage of tissues, cells, iPS cell lines; may imply sharing

You have the right to refuse to allow your tissues to be saved for future study. The investigators might retain the identified samples, e.g., as part of your routine clinical care, but not for additional research. You also have the opportunity to impose restrictions on future uses of donated materials and iPS cell lines derived from them. However, researchers may choose to use materials only from donors who agree to all future uses without restriction.

I consent to my samples [tissue] being saved for future research

No restrictions.

Restrictions (please specify):

I do not consent to my samples being saved for future research.

Element D: Sharing of iPS cells

Your donated tissues, cells, and the iPS cell lines derived from them may be shared with other researchers at the University of Michigan or with researchers at entities outside of the University of Michigan for related or unrelated studies. The studies may include research that involves genetic manipulation. Only [name of PI] and his/her study staff will know your identity.

Variations:

If samples will be sent out of the University of Michigan for analysis or other purposes related to this study, add the following: Your samples will be sent outside of the University of Michigan for [explain purpose]. Only [name of PI] and his/her study staff will know your identity.

OPT-IN Text for future research and sharing

I give my permission for my samples [name tissue] and iPS cell lines derived from them to be used by other scientists at the University of Michigan and collaborating scientists elsewhere for future research on [name condition/disease] as well as other unrelated conditions and diseases. I understand that my samples will be shared without any personally identifying data about me. The only information that will be shared along with my samples includes: [Fill in categories of information to be shared, if applicable. E.g., general demographic data such as: age, race, and gender, clinically relevant information, etc.].

Yes No

Element E: Consent withdrawal guidelines

Your direct participation in this study will be over after you have donated your [tissue, cells]. However, this is an ongoing study and the researchers will continue to study your [cells, fibroblasts] and any iPS cell lines derived from them indefinitely.

If you first agree to participate and then you change your mind, you are free to withdraw your consent and discontinue your direct participation. However, after donation, we may not be able to withdraw the tissue, cells isolated from the tissue, and/or other products made from the isolated cells because they have been:

- Stored without personal identifying information
- Provided to researchers for derivation of the stem cell line
- Reprogrammed into iPS cell lines or incorporated into other cells/cellular material

Additional issues that may need to be addressed in your consent (check with the IRB):

- Will medical information about the donor be shared along with the induced line or derivative?