Guidance for Reviewers: Applications Proposing Use of Human Embryonic Stem Cells

This Reviewer Guidance is provided to cover issues that may arise during the review of applications that propose research using human embryonic stem cells (hESCs) or research involving certain uses of human induced pluripotent stem cells. Refer to the NIH web resource for stem cell research information (NIH Stem Cell Research Policy & FAQs | STEM Cell Information) which includes the NIH Guidelines for Human Stem Cell Research, FAQs, and other information about stem cell research.

REVIEW OF HESC APPLICATIONS

The NIH Stem Cell Registry now lists over 500 approved hESC lines. Applications proposing the use of hESCs must:

- Specify a cell line(s) from the NIH Stem Cell Registry that will be used in the proposed research, or
- Provide a strong justification for why an appropriate cell line cannot be chosen from the Registry at this time and a certification that one from the Registry will be used. The justification must be included in the Research Strategy section of the application.

If the proposed cell line(s) was not in the registry when the application was submitted but is approved by the NIH Stem Cell Registry at least 30 days prior to the peer review meeting, the SRO can include this update to the reviewers as part of the post- submission materials (see NOT-OD-19-083).

Reviewers will evaluate the scientific appropriateness of the proposed cell line(s). **This evaluation will be allowed to affect individual criterion scores, assessments of overall merit, and overall impact scores during initial peer review. Comments about the appropriateness of the proposed cell line(s) may be included under the Approach criterion.**

If an hESC application proposes research for which the specified hESC line(s) is pending review (i.e., has not been approved), only restricted awards will be issued until the specified hESC line(s) is approved for the Registry.

HUMAN SUBJECTS RESEARCH

Under most circumstances, in vitro research using established hESC lines will not involve human subjects, and in those cases, will not be considered human subjects research. Basic research using cell lines from which the identity of the donor(s) of the embryo that yielded the cell lines cannot readily be ascertained by the investigator is not considered human subjects research, is

not governed by 45 CFR part 46 or 21 CFR parts 50 & 56, and does not require institutional review board (IRB) review. NIH-supported or conducted research using cell lines that are identifiable with a donor(s) of the embryo, including cell lines that retain links to coded information that would allow identification of the donor(s), may be considered human subjects research and may, unless exempt under 45 CFR 45.104, require approval by an IRB. Guidance by the Office for Human Research Protections (2002) may be found at: HHS Human Embryonic Stem Cell Guidance.

hESC RESEARCH INELIGIBLE FOR NIH FUNDING

Certain types of research using hESCs and/or human induced pluripotent stem cells are ineligible for NIH funding, although the cells may come from eligible sources. See NIH Grants Policy Statement - 4.1.13 Human Stem Cell Research.

ISSUES REGARDING AN INVESTIGATOR'S ACCESS TO A PARTICULAR STEM CELL LINE (E.G., MATERIAL TRANSFER AGREEMENTS OR INTELLECTUAL PROPERTY RIGHTS AGREEMENTS)

These elements are not a component of the scientific review and will be handled by NIH grants administrative practices. If you encounter such issues during the initial review, include a comment in your reviewer critique, but they are not a part of and should not affect the scientific evaluation. Programmatic issues involving, for example, budget, special authorizations, clearances, and intellectual property are managed by NIH Institute and Center program officials. Under these circumstances, NIH grants administration expertise is used to assure that the necessary agreements and materials are in place prior to making an award.