

University of Pittsburgh

*Policies and Procedures of the
Human Stem Cell Research Oversight
(hSCRO) Committee/Office*

Version – September 2014

PART ONE: GENERAL PROVISIONS; STANDARDS AND PROCEDURES FOR REVIEW

I. Institutional Authority under which the University of Pittsburgh hSCRO Committee is Established and Empowered

The Chancellor of the University of Pittsburgh (University) has delegated authority, through the Vice Chancellor for Research Conduct and Compliance (the designated Institutional Official), to the University Human Stem Cell Research Oversight (hSCRO) Committee to initially and periodically review, approve, require modifications of (to secure approval), or disapprove:

- **all human embryonic** stem (hES) cell research being conducted by University faculty, staff or students acting in their capacity as faculty, staff, or students respectively, using University facilities and/or University resources.
- limited categories of **non-embryonic** human stem cell research being conducted by University faculty, staff or students acting in their capacity as faculty, staff, or students respectively, using University facilities and/or University resources.

In addition, the hSCRO Committee is responsible for maintaining a registry of all human embryonic stem cell lines that are imported into or maintained at the University.

Additional responsibilities of the hSCRO Committee are outlined in **Section XV**.

II. Purpose of the hSCRO Committee

The primary purpose of the University's hSCRO Committee is to ensure that all federal and Commonwealth of Pennsylvania regulations governing the conduct of human embryonic stem cell research are met and that other human stem cell research is conducted in accordance with the general principles expressed in the National Academies' *Guidelines for Human Embryonic Stem Cell Research*¹ (NAS *Guidelines*), with the Policies and Procedures adopted by the University of Pittsburgh hSCRO Committee, and with other relevant University of Pittsburgh research policies. Human embryonic stem cell research conducted at the University must also comply with the applicable NIH Guidelines for Human Stem Cell Research (NIH Guidelines).² University researchers³ should be aware that the Commonwealth of Pennsylvania regulations and University policies are more restrictive than the NAS *Guidelines* and the NIH Guidelines.

¹ The NAS *Guidelines* for Embryonic Stem Cell Research were developed to encourage responsible practices in hES cell research – regardless of source of funding – including the use and derivation of new stem cell lines derived from surplus blastocysts, from blastocysts produced with donated gametes, or from blastocysts produced using nuclear transfer. The NAS *Guidelines* were initially developed in 2005, and amended in 2007, 2008 and 2010. (www.nap.edu/catalog/11278.html.)

² The National Institute of Health Guidelines for Human Stem Cell Research outline federal funding restrictions and may be found at <http://stemcells.nih.gov>

³ University researchers are University faculty, students, or staff acting in their capacity as faculty, students or staff.

III. Conflict of Interest – hSCRO Committee Chair, Members and Consultants

A. Disclosure

The hSCRO Committee Chair and hSCRO Committee members affiliated with the University shall be required to disclose conflicts of interest in accordance with University conflict of interest (COI) policies to include this Policy.

1. Potential conflicts of interest (COI) include but are not limited to:
 - being a listed investigator (or an immediate family member being listed as an investigator);
 - having a significant financial interest (or an immediate family member having such interest) in the sponsor of the research or the technology being evaluated; or
 - having any other conflict that might be perceived to inhibit a fair and unbiased review of the research.
2. To ensure understanding of COI issues, all members will be provided with the relevant University COI policies at the time of their hSCRO orientation training. In addition, this hSCRO Policy will be reviewed on an annual basis with all committee members to remind them of their COI disclosure obligations under this Policy and to ensure they are aware any relevant changes to other University COI policies.
3. hSCRO members who are considered non-affiliated with the University as defined in **Section XIII** will not be required to complete the annual University COI form. At their orientation, non-affiliated members will be asked to acknowledge in writing that they have received University COI policies and understand what may constitute a COI under University COI policies.
4. Conflict of interest will be evaluated and documented as outlined in Sections B through D below.

B. Evaluation of Conflict of Interest at each Meeting

hSCRO Committee members shall be polled at the beginning of each hSCRO Committee meeting to determine whether any member present has a conflict of interest to disclose based upon the proposed Agenda. Each disclosure shall be evaluated by the committee and such evaluation and resolution by the Committee shall be documented in the hSCRO meeting minutes.

C. Abstention from Deliberations and Absence from the Meeting Room

1. hSCRO Committee members shall abstain from participation in any hSCRO Committee deliberations or approval decisions relating to a research study in which they have a conflict of interest. At the request of the hSCRO Committee, such members may be asked to provide relevant information regarding the research and in such cases may be present for that portion of the research discussion.
2. Any actions taken during the meeting to evaluate and/or address a potential conflict of interest shall be documented in the hSCRO meeting minutes.

D. Consultants and Conflict of Interest Disclosure

Consultants shall be asked, at the time they are contacted to review a research study, if they (or a member of their immediate family) have a potential conflict of interest with the study on which they are being asked to consult. Potential conflicts of interest include but are not limited to:

- being a listed investigator;
- having a significant financial interest in the sponsor of the research or the technology being evaluated; or
- having any other conflict that might be perceived to inhibit a fair and unbiased review of the research.

The evaluation of a conflict of interest and its resolution shall be documented in the hSCRO meeting minutes.

IV. The Authority of the University hSCRO Committee

A. Initial Approval of Human Stem Cell Research

The hSCRO Committee shall have the authority to approve, require modifications of (to secure approval), or disapprove all research activities involving human stem cells that fall under its jurisdiction (see **Section I**). The hSCRO approval is **in addition to** all other required University oversight approvals (IACUC, IBC, IRB).

B. Continuing Oversight

1. The hSCRO Committee shall have the authority to require progress reports from investigators involved in the conduct of hSCRO approved human stem cell research so as to permit its continuing review of compliance with hSCRO policies and applicable federal and state regulations. Progress Reports and Adverse Event Reports submitted to the University Institutional Review Board (IRB), Institutional Animal Care and Use Committee (IACUC), and/or Institutional Biosafety Committee (IBC) may be obtained for review by the hSCRO Committee.
2. The hSCRO Committee shall have the authority to review and approve, disapprove, or require modifications (to secure approval) of all proposed modifications to hSCRO approved human stem cell research prior to the implementation of such modifications by the investigator.

C. Monitoring of hSCRO Approved Human Stem Cell Research

The hSCRO Committee shall have the authority to observe or have a third party observe the conduct of any research activity subject to hSCRO Committee oversight. This function includes the authority to review all records associated with the conduct of the research.

D. Restrictions, Suspension, and Termination of Human Stem Cell Research

1. The hSCRO Committee shall have the authority to place restrictions on human stem cell research activities that fall under its jurisdiction.
2. The hSCRO Committee shall have the authority to suspend or terminate its approval of human stem cell research that falls under its jurisdiction and that is not being performed

in compliance with hSCRO policy requirements, applicable federal or state regulations, or University policies.

3. For research involving the administration of human stem cells to human research subjects, the hSCRO Committee shall recommend suspension or termination of the research through the Chair of the University IRB or through the chair of the institutional review board representing the collaborating site where the human stem cells are being administered to human research subjects (e.g. if the University sponsors or a University faculty or staff member or student participates as a co-investigator in the research at the collaborating site).
4. For research involving the administration of human stem cells to research animals, the hSCRO Committee shall recommend suspension or termination of the research through the Chair of the University IACUC.

E. Human Stem Cell Research Review by the hSCRO Committee

1. Research requiring Full Committee Review (see **Section V**) may be submitted for review by the hSCRO Committee in parallel with submission of the research to any other University entity that may have responsibility for oversight of other aspects of the research (e.g. IACUC, IBC, IRB,). The hSCRO submission must include the relevant approval letters (if already obtained) **or** the proposed IACUC protocol(s), University of Pittsburgh IRB protocol/consent (if applicable).
2. Human stem cell research activities approved by the hSCRO Committee may be subject to further review, modification of, approval and/or disapproval by the University IRB; the University IBC; the University Department of Environmental Health and Safety (EH&S) and Institutional Biohazard Committee; the University IACUC; and the University's Vice Chancellor for Research Conduct and Compliance (the Authorized Institutional Official). However, those committees and officials may not approve the conduct of human stem cell research if such research was previously disapproved by the hSCRO Committee.

F. Delegation of hSCRO Committee Authority for the Administrative Review (Registration) of Human Stem Cell Research

1. Research that qualifies for hSCRO Administrative review (Registration) (see **Section V**) is to be submitted to the hSCRO Office.
2. The hSCRO Committee has delegated its authority to the hSCRO Committee Chair or his/her designee(s) to determine whether or not a protocol meets the requirements for Administrative review (Registration).
3. If the hSCRO Committee Chair or his/her designee(s) determine that a protocol does not qualify for Administrative review (Registration) or if concerns are identified during the Registration process, the reviewer shall refer the protocol for Full Committee review.
4. The hSCRO Committee shall be provided with a listing of all stem cell research studies approved by the hSCRO Administrative review process during the interval between convened meetings.

V. Categories of hSCRO Review

All human embryonic stem cell research and limited categories of non-embryonic stem cell research require hSCRO review as outlined below. Non-embryonic stem cells include adult stem cells, fetal tissue stem cells, and iPS cells. In addition, research involving the transplantation of cells that originated from human iPS cells or ES cells requires hSCRO review. The hSCRO review is in addition to all other required University oversight approvals (IACUC, IBC, IRB).

There are two types of hSCRO review, full Committee review and Administrative review (Registration.) The type of review required depends on the nature of the research. Administrative review results in the registration of the research protocol with the hSCRO Office/Committee. The registration process ensures the project will be captured in the database of the different types of human stem cell research being conducted at the University of Pittsburgh.

A. Full Committee Review

Research that requires full hSCRO Committee review includes:

1. In vitro research involving any type of human pluripotent stem (hPS) cell where the experiment is designed or expected to yield gametes (oocytes or sperm)
2. The transplantation of human stem cells derived from adult/fetal gonadal or central nervous system tissue into animals hSCRO Committee approval is required before final IACUC approval will be granted.
3. The transplantation of ANY human **stem cells** and/or **cells that originated from human iPS cells or ES cells** into an animal embryo, blastocyst, germline, or central nervous system. hSCRO Committee approval is required before final IACUC approval will be granted.
4. Other human stem cell research not described in a listed category

B. Administrative Review (Registration) - The following categories of research qualify for Administrative review:

1. Clinical trial (human subjects) where the administration of the stem cells is considered to be experimental
2. Research involving human embryonic stem cells (hESC) on the NIH Registry

Research involving human embryonic stem cells not listed on the NIH Registry**

**University of Pittsburgh researchers may conduct human embryonic stem (hES) cell research using hES cell lines listed on the NIH Human Embryonic Stem Cell Registry. Research on other human embryonic stem cells lines may only be considered if the research work will be (a) conducted entirely in nonfederally funded space, (b) supported entirely by nonfederal money, and (c) in compliance with all other hSCRO Committee policies and procedures. University of Pittsburgh researchers are not permitted to be involved directly in the derivation of new hES cell lines from human embryos or blastocysts, including blastocysts created through somatic cell nuclear transfer. Investigators must contact the hSCRO Office prior to beginning any research on non-NIH Registry hES cell lines.

3. Transplantation of ANY human **stem** cells and/or **cells that originated from human iPS cells or ES cells** into animals EXCEPT transplantation into an animal embryo, blastocyst, germline, or central nervous system (this exception requires hSCRO Committee review and approval before final IACUC approval will be granted.)

C. Current Restrictions -Restrictions that arise from federal and state regulations and hSCRO policies are as follows:

1. University of Pittsburgh researchers may conduct human embryonic stem (hES) cell research using only those hES cell lines that appear on the NIH Human Embryonic Stem Cell Registry.
2. Research on other human embryonic stem cells lines may only be considered if the research work will be (a) conducted entirely in nonfederally funded space, (b) supported entirely by nonfederal money, and (c) in compliance with all other hSCRO Committee policies and procedures. This type of research requires a detailed submission process and the hSCRO Office should be contacted for submission guidance.
3. University of Pittsburgh researchers are not permitted to be involved directly in the derivation of new hES cell lines from human embryos or blastocysts including blastocysts created through somatic cell nuclear transfer.
4. University of Pittsburgh facilities and equipment, funded in whole or in part by federal monies, may only be used in the conduct of hES cell research using hES cell lines listed on the NIH Human Embryonic Stem Cell Research Registry or on those hES cell lines that have been shown to meet all of the applicable requirements of the NIH Guidelines. University of Pittsburgh facilities and equipment are not permitted to be used in the derivation of new hES cell lines from human embryos or blastocysts including blastocysts created through somatic cell nuclear transfer.
5. University of Pittsburgh researchers are not permitted to be involved in human research involving somatic cell nuclear transfer techniques for the purpose of reproductive cloning.
6. University of Pittsburgh researchers are not permitted to conduct research in which hES cells are introduced into nonhuman primate pre-implanted embryos or in which any human or non-human embryonic stem cells are introduced into human blastocysts.
7. University of Pittsburgh researchers may not breed any animal into which **any** human stem cells have been introduced at any stage of development.
8. Prior to receiving/sending research materials (e.g. stem cells, stem cell derivatives) from/to an **external entity**, an appropriate University endorsed agreement/contract must be in place. External entities may include other universities, government agencies (e.g. NIH), and the for-profit sector.

VI. Submission Requirements for hSCRO Review (*Full Committee and Administrative Review*)

The hSCRO application is available on the hSCRO website <http://www.rcco.pitt.edu/hscro/> and should be submitted electronically. The review pathway will be determined by the hSCRO Office.

Copies of other University oversight committee approval letters should accompany the submission. If applicable, copies of the supporting IACUC protocol(s) should be provided. A copy of the University of Pittsburgh IRB protocol and consent form(s) should accompany the submission in clinical trials where the University of Pittsburgh is the IRB of record.

Submission to the UPMC OSPARS Office may be done in parallel with the hSCRO submission. The investigator should forward any outside IRB approval letters to the hSCRO Office. However, the industry-sponsored clinical protocol should NOT be forwarded to the hSCRO Office when the contract is through UPMC OSPARS.

Prior to receiving/sending research materials (e.g. stem cells, stem cell derivatives) from/to an **external entity** an appropriate University endorsed agreement/contract must be in place. External entities may include other universities, government agencies (e.g.NIH), and the for-profit sector.

VII. Procedures for Human Stem Cell Research Requiring Review and Approval by the hSCRO Committee

A. Quorum Requirements

The hSCRO Committee shall officially conduct its review of proposed human stem cell research at convened meetings at which more than fifty percent (50%) of the voting members (quorum) of the hSCRO Committee are present. Quorum requirements include that there be representation of at least two scientific members, one unaffiliated member, and one member whose expertise is in ethical issues.

In order to ensure the presence of quorum, alternate hSCRO members may be requested to participate as members of the hSCRO Committee.

B. hSCRO Committee Review of Human Stem Cell Research

1. Research requiring Full Committee review (see **Section V**) may be submitted for review by the hSCRO Committee in parallel with submission of the research to any other University entity that may have responsibility for oversight of other aspects of the research (e.g., IRB, IACUC, IBCV,). The hSCRO submission must include the relevant approval letters (if already obtained) **or** the proposed IACUC protocol, University of Pittsburgh IRB protocol/consent (if applicable).
2. As outlined in **Section III**, possible conflicts of interest of hSCRO Committee members will be evaluated prior to the start of each hSCRO Committee Meeting. Each human stem cell research study requiring review and approval by the hSCRO Committee shall be addressed separately at the committee meeting.
3. The hSCRO Committee Chair or his/her designee(s) from the roster of voting hSCRO Committee members shall summarize the proposed stem cell research followed by an open discussion of the research by the Committee members. Members should share any comments and/or concerns that they may have surrounding the research proposal. This discussion shall be recorded by a member of the Research Conduct and Compliance Office (RCCO) for inclusion in the minutes of the hSCRO Committee meeting.
4. Following open discussion, the hSCRO Committee Chair shall call for a vote of the committee to grant:
 - a) Full Approval: No changes are required to the proposed human stem cell research.
 - b) Approval Pending Concurrence with hSCRO Committee-Directed Changes: The proposed human stem cell research may be granted full approval by the

hSCRO Committee Chair pending principal investigator concurrence with specific revisions stipulated by the hSCRO Committee. The research may not receive full approval until such time that the research procedures have been modified to comply with the specific revisions stipulated by the hSCRO Committee and such revisions have been reviewed and approved by the hSCRO Committee Chair or his or her designee.

- c) Reconsideration: Approval of the proposed human stem cell research requires substantive clarifications or modifications of the research design or procedures. The principal investigator must respond to the identified clarifications, modifications, or revisions and resubmit the revised research protocol for re-review by the hSCRO Committee.
 - d) Disapproval: The proposed human stem cell research has fundamental design problems and/or presents significant ethical, legal or regulatory compliance concerns. The principal investigator must undertake a major revision of the proposed human stem cell research before it can be resubmitted for re-review by the hSCRO Committee.
5. hSCRO Committee members who provide written comments regarding the proposed human stem cell research but who are not present at the meeting shall not be counted in the committee vote.
6. The vote of the majority of the hSCRO Committee members present at the meeting shall determine the final approval status (i.e., full approval, approval pending concurrence with hSCRO Committee-directed changes, reconsideration, disapproval) of the proposed research.

An electronic vote may be used only in situations where:

- 1. the committee engaged in previous deliberations at a convened hSCRO meeting on the specific issue and the vote was not able to be completed at that time; and
- 2. postponing the vote would not be in the best interest of the Committee, the Investigator, or both.

Only those voting members who were in attendance at the meeting will be eligible to participate in the electronic vote.

7. Following an hSCRO Committee vote for full approval or approval pending concurrence with hSCRO Committee directed changes:
- a) hSCRO Committee members voting to reconsider or disapprove the research in the face of a majority vote for full approval or approval pending concurrence with hSCRO Committee directed changes shall be requested to summarize the reasons for their contravention. A member of the RCCO Office staff shall record major discussion points for inclusion in the hSCRO Committee meeting minutes.
 - b) hSCRO Committee voting members shall be polled as to whether continuing hSCRO Committee review of the research is warranted and, if so, what should constitute an appropriate review interval.
8. The principal investigator shall be notified, in writing or by e-mail, of the hSCRO Committee's decision. Investigator correspondence is described in the following section.

C. Modification Review

1. Modifications should be submitted using the most current version of the hSCRO application found on the website <http://www.rcco.pitt.edu/hscro/> Proposed modifications to human stem cell protocols given prior hSCRO Committee approval shall be reviewed by the hSCRO Chair or his/her designee(s) to determine the nature of the modification. If, at the Chair's (or his/her designee(s)) discretion, the proposed modification is minor in nature (e.g. change in investigator), the hSCRO Chair or his/her designee(s) may grant approval to the minor modification. Modifications determined by the Chair (or his/her designee(s)) to be major in scope (e.g. change in study design, change in category of research) shall be processed for review at the next convened meeting of the hSCRO Committee.
2. For modified human stem cell research that qualifies for approval by the hSCRO Chair or his/her designee(s), subsequent investigator correspondence will occur as outlined below in **Section VIII**.

VIII. Investigator Correspondence Following Full hSCRO Committee Review

The RCCO shall notify the investigators in writing of the hSCRO Committee's decision to approve, reconsider, or disapprove the research, or of the hSCRO-directed changes required to secure hSCRO Committee approval of the research. The type of correspondence generated will be based on the vote of the hSCRO Committee as outlined below.

A. Correspondence for Protocols Reconsidered or Disapproved

If the hSCRO Committee decides to reconsider or disapprove the proposed human stem cell research, the notification to the principal investigator must include:

- the primary reason(s) for the hSCRO Committee's decision to reconsider or disapprove the research
- a listing of additional problems or/deficiencies identified by the hSCRO Committee
- instructions regarding the resubmission of the research for Full Committee review, including a requirement to address the statements and concerns emanating from the first hSCRO Committee review
- notification to the investigator that s/he may appear in person at the next convened meeting of the hSCRO Committee wherein the research will be re-reviewed; so as to address any additional questions or concerns of the committee and
- notification to the principal investigator that s/he must respond to the hSCRO Committee's request for revisions within six (6) weeks of the date of the notification, and that failure to respond within this six (6) week period will result in termination of the respective human stem cell research submission.

B. Correspondence for Protocols Approved Subject to Concurrence with hSCRO Committee-Directed Changes

1. If the hSCRO Committee decides to approve the proposed human stem cell research pending concurrence with hSCRO Committee required changes, the notification to the

principal investigator shall address the specific revisions stipulated by the hSCRO Committee in order to obtain full approval of the research.

2. The notification shall instruct the investigator to revise the research to concur with the specific revisions stipulated by the hSCRO Committee and to resubmit for full approval.
3. The written notification shall specify that the principal investigator must respond to the hSCRO Committee's request for revisions within six (6) weeks of the date of the notification, and that failure to respond within this six (6) week period will result in termination of the respective human stem cell research submission.
4. For human stem cell research approved by the hSCRO Committee pending concurrence with committee-directed changes, the revised protocol submitted in response to the specific revisions shall be reviewed by the hSCRO Committee Chair and, based on an appropriate response, the Chair may grant final approval. Any problems or concerns related to the principal investigator's response shall be communicated, in writing or by e-mail, to the principal investigator. In the event that the principal investigator does not agree with certain specific revisions stipulated by the hSCRO Committee, the protocol (to include any hSCRO Committee-directed changes agreed on by the principal investigator) and the investigator's justification for not complying with certain of the hSCRO Committee-directed change(s) shall be placed on agenda for review at the next convened meeting of the hSCRO Committee. The investigator shall be notified that s/he may appear in person at the convened meeting of the hSCRO Committee wherein the protocol will be re-reviewed.

C. Correspondence for Protocols Granted Full Approval

Investigators will be notified of full approval by the hSCRO Committee per Section IX (C)

IX. Procedures for Administrative Review (Registration) of Human Stem Cell Research

A. Administrative Review of Research Submitted for hSCRO Registration

Research studies submitted for hSCRO Registration shall be administratively reviewed by the hSCRO Chair or his/her designee(s) to determine if the proposed study qualifies for hSCRO Registration. hSCRO Registration approval is in addition to all other required University oversight approvals (IACUC, IBC, IRB). Investigator may initiate all the required approval processes (hSCRO, IACUC, IBC, IRB) in parallel, following the submission guidelines of each oversight office. hSCRO Registration approval is independent of other RCCO approvals. Related RCCO approval letters should be included with the submission or forwarded to the hSCRO Office once obtained.

For proposed human stem cell research that is determined not to qualify for hSCRO Administrative review, the research shall be processed for review at the next convened meeting of the hSCRO Committee.

B. Communications with Investigators Post hSCRO Registration

1. If applicable, comments or concerns of the hSCRO Chair or his/her designee(s) with respect to the content of applications qualifying for hSCRO Registration shall be communicated in writing or e-mail to the involved principal investigator.
2. The communication to the principal investigator shall specify that s/he must respond to the comments or concerns of the hSCRO Registration within six (6) weeks of the date

of the communication, and that failure to respond within this six (6) week period will result in termination of the respective hSCRO submission.

3. Responses of the principal investigator shall be reviewed by the hSCRO Chair.

C. Committee and Registration Approval Letters

The approval letter will include:

1. The hSCRO number assigned to the human stem cell research protocol and the title of the research;
2. The hSCRO approval category;
3. The associated approval date;
4. The requirement to obtain and maintain as current all other applicable University approvals (IACUC, IBC, IRB) prior to initiating the research.
5. The requirement to undergo an abbreviated annual hSCRO review process; and that notification of the annual review will be sent by the hSCRO Office within approximately 60 days of the one year anniversary of the initial approval.
6. The requirement to notify the hSCRO Office/Committee prior to any modifications to the protocol as well as the termination of the hSCRO protocol.

D. Modification Review

1. Proposed modifications to human stem cell research approved by Administrative review (Registration) shall be reviewed by the hSCRO Chair or his/her designee(s) to determine if the modified human stem cell research continues to meet the criteria for hSCRO Registration as outlined in **Section V**. For modified human stem cell research that is determined to not qualify for hSCRO Registration, the research shall be processed for review at the next convened meeting of the hSCRO Committee.
2. For modified human stem cell research that continues to qualify for hSCRO Registration, subsequent investigator correspondence will occur as outlined in **Section VIII**.

X. Annual Review - Approval Expiration Dates Assigned to Protocols

hSCRO approval will be issued for one year. All protocols will be required to undergo an abbreviated annual hSCRO review process. The annual hSCRO review process is the hSCRO Committee's method of assessing the current project status (active/inactive/closed) and ensuring that no changes have inadvertently taken place in the approved activity that might require further review by the hSCRO. Project status may remain as inactive for up to three years. Upon continuing review, protocols that remain inactive for three years will be closed by the hSCRO Office. To resume work on the project, investigators will be required to submit a new protocol for review/approval.

A. Annual hSCRO Review Process

1. The Investigator is sent the annual review e-mail and the currently approved protocol approximately 60 days prior to the one year anniversary of initial approval. The investigator is asked to review the current protocol and verify by e-mail response the status of the project (active/inactive/closed) and confirm there are no changes required. Changes requiring

modification may be made at the time of annual renewal by submitting a revised application and indicating *Renewal with Modification*. The renewal approval will be issued along with the modification approval.

2. The hSCRO Chair may request that the annual review be discussed by the convened hSCRO Committee at the monthly meeting if the Chair feels that it is necessary.
3. Once the annual hSCRO review is approved by the hSCRO Chair (his/her designee(s)) or the Committee, the hSCRO Office will notify the Investigator and the hSCRO database is updated. The investigator's e-mail annual review response will be saved in the electronic file.
4. Investigators who do not reply to the annual review will be sent a reminder e-mail prior to the approval expiration date. The hSCRO approval will be terminated for lack of response. Notice of approval termination will be sent to the investigator, with copies to the Department Chair and Institutional Official. Other relevant oversight offices (IACUC, IBC, IRB) will also be notified of the hSCRO approval termination.

XI. hSCRO Committee Meeting Minutes

A. Contents of the Convened hSCRO Committee Meeting Minutes

The minutes of the convened hSCRO Committee meetings shall include but not be limited to the following items:

1. Record of Attendance

The minutes of the hSCRO Committee meetings shall specify the voting members of the committee and the ex-officio members of the committee who were present at the meeting and the voting members who were absent. Consultants to the committee and guests shall be listed separately.

2. Conflict of Interest

Absence or presence of any potential conflict of interest will also be included in the meeting minutes.

3. Documentation of Protocols Reviewed

Each research submission reviewed by the hSCRO Committee shall be listed by the identifying hSCRO number, principal investigator's name, and the research project title.

4. Documentation of Committee Vote

For each research submission reviewed by the hSCRO Committee, the minutes shall record the action taken by the committee and the corresponding numerical vote. Documentation of the numerical vote shall address the number of hSCRO Committee members voting for and against the action taken by the committee; and the number of hSCRO Committee voting members abstaining from the vote (e.g., 10-1-1; for-against-abstain); to include the name(s) of any voting member(s) who abstained from the vote due to conflict-of-interest or other considerations.

5. Documentation of Pertinent Comments, Concerns, and or Controverted Issues

Pertinent comments and concerns of the hSCRO Committee members and pertinent comments and concerns expressed during open discussion of the human stem cell research submission shall be recorded and, where applicable, a summary of controverted issues documented.

6. Documentation of Approval Interval (if applicable)

If the hSCRO Committee has determined that approval for a research proposal be granted only for a specified interval, the minutes shall record the approval interval specified by the committee.

B. Review of Minutes by hSCRO Chair

Minutes of the hSCRO Committee meeting shall be reviewed and accepted by the hSCRO Committee Chair prior to their use in generating respective investigator correspondence.

C. Use of Meeting Minutes to Generate Investigator Correspondence

Following their acceptance by the hSCRO Committee Chair, the minutes of the hSCRO Committee meeting shall be used directly to generate written notifications of hSCRO Committee decisions regarding the approval status of the research submission for dissemination to the respective principal investigators.

D. Distribution of Meeting Minutes

The minutes of the hSCRO Committee meeting shall be included with the materials prepared for review at the next convened hSCRO Committee meeting.

E. Approval and Modification of Meeting Minutes

At each meeting, a vote of committee members shall be taken to approve the minutes of the previous meeting. In the absence of a quorum, hSCRO Committee meeting minutes may also be approved via an electronic means. If the minutes are distributed for an electronic vote and an issue is identified that requires further deliberation, the minutes will be presented for discussion and modification or approval at the next convened hSCRO Committee Meeting. Any member of the Committee may request that an item be brought to a meeting for further discussion in which case the electronic vote will not be effective. The minutes must be approved by a majority vote of the members.

Principal investigators shall be notified should any modifications of the minutes of the hSCRO Committee meeting affect the approval status of their research submission or result in requested concurrence with additional hSCRO Committee-directed changes to the research protocol.

XII. Amendments to hSCRO Policies and Procedures

As noted in the above polices, the hSCRO Committee members and the hSCRO Committee Chair are responsible for reviewing on a routine basis the current University hSCRO Committee Policies. Amendments to the policies may be initiated by a proposal signed by at least two hSCRO Committee members, or by an identical proposal sent by e-mail by two Committee members to the Committee Chair. The signed proposal shall be delivered to the hSCRO Chair. Within 30 days thereafter, the hSCRO Chair shall send notice of the proposed policy amendment electronically to the hSCRO Committee. The proposed modification may be discussed and voted on via electronic communication or

at the next convened meeting. All amendments to the policies must be approved by a majority vote of the members. Any proposed changes that have been presented electronically, which cannot be resolved without further deliberation, will be placed on the agenda of the next convened hSCRO Committee meeting. Any member of the hSCRO Committee may request that an item be brought to a convened meeting for further discussion in which case the electronic vote will not be effective.

PART TWO: COMMITTEE ORGANIZATION, RESPONSIBILITIES AND MANAGEMENT

XIII. hSCRO Committee Composition

A. Number

The hSCRO Committee shall be composed of at least 8 voting members, who shall collectively have adequate training and experience so as to promote the appropriate review of human stem cell research activities conducted at the University and/or by University faculty, staff or students acting in their capacity as faculty, staff or students respectively.

B. General Demographic Composition of the Committee

The hSCRO Committee shall include both men and women with representation of more than one profession. The hSCRO Committee shall include scientific members from the University and at least one public (“non-affiliated”) representative (an individual who or whose immediate family members have no direct affiliation with the University).

C. hSCRO Committee Chair

The hSCRO Committee shall have one committee chair. In the event of his/her absence from a previously scheduled meeting of the hSCRO Committee, the Chair will designate a member of the hSCRO Committee to preside over the convened meeting.

D. Expertise of Committee Members

The membership of the University’s hSCRO Committee shall include, but not be limited to, University faculty or staff with expertise in the following areas:

- Stem cell research
- Developmental biology
- Molecular biology
- Assisted reproduction
- Legal and ethical issues in human embryonic stem cell research

E. Consultants

The hSCRO Committee may, at its discretion and subject to notification of the hSCRO Chair, invite individuals with competence in certain aspects of human stem cell research or representing community perspectives to assist in the review of issues which require expertise beyond or in addition to that possessed by the hSCRO Committee.

F. Alternate Members

The hSCRO Committee may include alternate voting members to serve in the absence of regular voting members.

The alternate voting member shall have similar expertise as the regular voting member for whom s/he is serving as a replacement.

The alternate voting member shall assume all of the responsibilities of the voting member for whom s/he is serving as a replacement.

Alternate voting members may attend hSCRO meetings without serving as a replacement for a regular voting member; however, in this capacity, the alternate member may not participate in any of the final approval decisions of the committee.

G. Voting Members

Voting members of the hSCRO Committee shall include the Chair, the Director of the hSCRO Office, the public representative(s), the members outlined in **Section XIII.D** and alternate members serving as a replacement for a voting member.

H. Non-Voting and Ex-officio Members

A representative of the University's Office of General Counsel and a representative of UPMC's Office of Legal Services shall serve as non-voting counsel to the hSCRO Committee. To ensure clear lines of communication, representatives of the University's Research Conduct and Compliance Office (RCCO) and Office of Research may serve as non-voting, ex-officio members of the hSCRO Committee. Consultants shall be non-voting participants of the hSCRO Committee. Alternate members who attend hSCRO meetings without serving as a replacement for a regular voting member shall be non-voting members of the hSCRO Committee.

XIV. hSCRO Committee Appointments and Terms

A. Appointment of hSCRO Committee Chair

The chair of the University's hSCRO Committee shall be appointed by and report directly to the Vice Chancellor for Research Conduct and Compliance (unless the Vice Chancellor for Research Conduct and Compliance is appointed as the chair, in which case the chair shall report directly to the Chancellor).

B. Term of the hSCRO Chair

The term of the hSCRO Chair shall be three years with the option of re-appointment for additional three-year terms.

C. Appointment of Members

The initial members of the University's hSCRO Committee shall be appointed by the Vice Chancellor for Research Conduct and Compliance in consultation with the Provost and the Senior Vice Chancellor for Health Sciences. Future committee members shall be appointed as outlined below.

1. Scientific Members

The hSCRO Chair shall recommend, to the Vice Chancellor for Research Conduct and Compliance, potential scientific members to the hSCRO Committee. Recommendations will be based on considerations including but not limited to: required committee composition, expertise and experience; knowledge of individual interest; recommendations of institutional leadership; and/or investigators of research studies currently or previously approved by the hSCRO Committee.

2. Public (Non-affiliated) Members

The hSCRO Chair shall recommend, to the Vice Chancellor for Research Conduct and Compliance, potential public (non-affiliated) voting members to the hSCRO Committee based on considerations including, but not limited to: leaders of local religious institutions; persons active in the community; members of local and state governmental bodies; and/or recommendations of current or past public members.

D. Term of Members

Members will be appointed to a three-year term on the hSCRO Committee, with approximately one-third of the member terms expiring each year. Voting members may be reappointed to additional three-year terms depending on the member's interest and the needs of the hSCRO Committee.

XV. Management and Responsibilities of the hSCRO Committee

A. General Management of the hSCRO Committee

The hSCRO Committee shall be managed as determined by the Vice Chancellor for Research Conduct and Compliance acting through the Research Conduct and Compliance Office (RCCO). The Vice Chancellor for Research Conduct and Compliance shall ensure that adequate facilities, equipment, and resources are available to support the hSCRO Committee. The University's RCCO shall be responsible for providing an appropriate level of administrative support to the chair of the University's hSCRO Committee and the committee members. Management on a day-to-day basis shall be carried out under the direction of the hSCRO Chair and assigned administrative/management staff of the RCCO.

B. Overall Responsibilities of the hSCRO Committee

The University's hSCRO committee shall be responsible for:

1. Providing oversight of all issues related to the derivation and/or research use of hES cell lines by University faculty, students or staff or involving University facilities, regardless of the source of funding;
2. Providing oversight of certain other types of human stem cell research conducted by University faculty, staff or students or involving University facilities, regardless of the source of funding;
3. Maintaining a database of the human stem cell research, that falls under hSCRO purview, being conducted by University faculty, students or staff or using University facilities;
4. Maintaining a registry of all human embryonic stem cell lines that are imported to, and/or maintained by the University or University researchers;
5. Suspending or terminating hSCRO Committee approval of human stem cell research not being conducted in compliance with applicable federal and state regulations, University policies;
6. Reviewing, on a routine basis, current University hSCRO Committee policies regarding human stem cell research and assuring appropriate revisions to these policies as new, applicable federal and/or state regulations are implemented and/or the *NAS Guidelines* or NIH Guidelines are revised; and

7. Developing and disseminating pertinent education and training programs for University investigators involved in the conduct of human stem cell research.

C. Responsibilities of the hSCRO Committee Chair

The hSCRO Committee Chair shall exercise leadership responsibility for the hSCRO Committee review and approval of human stem cell research in accordance with applicable federal and state regulations, University policies, the NAS *Guidelines*, NIH Guidelines and the policies and procedures established by the hSCRO Committee. In addition, the hSCRO Committee Chair shall:

1. Oversee the recruitment, training, continuing education and retention of hSCRO Committee members;
2. Oversee the hSCRO Committee's development and implementation of appropriate policies, procedures and guidelines directed at the research derivation and use of human stem cells;
3. Preside over hSCRO Committee meetings and communicate hSCRO Committee decisions, directives, and sanctions to human stem cell research investigators;
4. Oversee the review of submitted human stem cell research qualifying for hSCRO Registration;
5. Have authority to request audits of human stem cell research activities;
6. Be responsible for drafting written correspondence to the NIH and other state and federal regulatory agencies involved in the oversight of research involving human stem cells; such correspondence being subject to final approval by University Legal Counsel and the Vice Chancellor for Research Conduct and Compliance;
7. Ensure that a review of the hSCRO Committee policies and procedures is conducted every three years as well as when changes in federal or state regulations, institutional policies or the NAS *Guidelines* or NIH Guidelines necessitate revision; and
8. Represent the University at national and local meetings related to hSCRO Committee activities and the legal and ethical conduct of human stem cell research.

D. Responsibilities of the hSCRO Committee Members

hSCRO Committee Members are responsible for:

1. Reviewing and evaluating proposed human stem cell research in accordance with applicable federal and state regulations, and in a manner that is consistent with the Policies and Procedures of the University of Pittsburgh hSCRO Committee;
2. Attending hSCRO Committee meetings, unless exigent circumstances prevent such attendance on an occasional basis; reporting promptly at the designated time that the meeting convenes; and remaining in attendance at the meeting until the full agenda has been addressed;
3. Participating in hSCRO Committee deliberations concerning issues inherent to proposed human stem cell research;

4. Voting as individual committee members for proposals requiring review by the hSCRO Committee.
5. Recommending improvements to hSCRO Committee policies and procedures so as to enhance the hSCRO Committee review process and/or the legal and ethical conduct of human stem cell research; and
6. Conforming, at all times, their behavior to be within legal and ethical principles accepted by the hSCRO Committee; including, but not limited to, non-disclosure of reviewed human stem cell research and hSCRO Committee deliberations, and good faith participation in hSCRO Committee deliberations to avoid actual or perceived discrimination or conflict-of-interest.

E. Resignation or Termination of hSCRO Chair and Members

1. hSCRO Committee Chair

Only the Vice Chancellor for Research Conduct and Compliance shall have the authority to terminate the appointment of the hSCRO Chair.

Termination of appointment (by the Vice Chancellor for Research Conduct and Compliance) or resignation of appointment by the hSCRO Chair shall be subject to a minimum of 3 months advance notice unless extenuating circumstances exist.

2. hSCRO Committee Members

hSCRO Committee membership status may be terminated by the hSCRO Committee Chair due to a failure of the hSCRO Committee member to attend and/or otherwise actively participate in hSCRO Committee functions. Termination of any individual from hSCRO Committee membership shall be reported to the Vice Chancellor for Research Conduct and Compliance to include a written justification for the termination.

Resignation of hSCRO Committee membership status, based on the wishes of the hSCRO Committee member, shall be submitted, in writing, to the Vice Chancellor for Research Conduct and Compliance and a copy sent to the hSCRO Committee Chair and, where applicable, the member's department chair or center/institute director.

XVI. Continuing Education

hSCRO Committee members shall receive, on an ongoing basis, continuing education related to the ethical, legal, scientific, and policy issues surrounding human stem cell research.

XVII. Research Conduct and Compliance Office (RCCO) Support Functions for the hSCRO Committee

A. Tracking of Receipt of hSCRO Submissions in RCCO

1. All human stem cell research submitted for hSCRO review shall indicate the date of receipt.
2. All e-mail submissions shall be maintained in the research file and shall specify the date of receipt.

3. The RCCO shall notify human stem cell research investigators via e-mail of the receipt of hSCRO submissions.

B. Protocol Number Assignment to Human Stem Cell Research Proposals

1. All human stem cell research submitted for hSCRO review shall be assigned an hSCRO number by the RCCO staff.
2. The hSCRO number assigned to the research study shall be based on the year that the submission was received followed by a number based sequentially on the number of submissions previously received during that year; followed by the type of review R = Registration C=Convened Committee (e.g. 07-004-C).
3. The hSCRO number assigned to the research shall remain constant throughout the hSCRO review and record-retention life span.

C. hSCRO Protocol Files and Record Retention

The RCCO shall maintain files of human stem cell research submitted for hSCRO review and approval. The files shall be maintained for five years following the termination of hSCRO approved human stem cell research. For research subject to FDA regulations, the research records and reports shall be retained for two years after a marketing application is approved for the drug; or if an application is not approved for the drug, until two years after the shipment and delivery of the drug for investigational use is discontinued and the FDA has been so notified or for five years, whichever time period is longest.

1. Contents of hSCRO Research Protocol Files

Each hSCRO research protocol file should contain:

- The notification documenting hSCRO approval of the research;
- All previous and subsequent investigator-hSCRO correspondence related to the Administrative or hSCRO Committee review of the human stem cell research;
- The notification(s), if applicable, documenting approval of modifications to the human stem cell research and all previous and subsequent investigator correspondence related to hSCRO review of proposed modifications to the prior approved human stem cell research;
- Reports of human stem cell research protocol deviations or other problems encountered in the conduct of the research and the respective actions taken by the hSCRO Committee, the hSCRO Committee Chair or his/her designee; and
- Reports of serious adverse events observed during the conduct of human stem cell research and copies of corresponding reports submitted to the University IRB.

2. Other Records

- The RCCO shall maintain a copy of all hSCRO Committee meeting minutes. These minutes will be kept indefinitely.
- The RCCO shall maintain a roster of all current hSCRO Committee members and biographical sketches of each committee member.

D. Database of Human Stem Cell Research and Registry of Human Embryonic Stem Cell Lines

1. The RCCO shall maintain a computer database of the human stem cell research that falls under hSCRO purview. The database will be password protected and accessible only to designated staff of the RCCO. The database of human stem cell research submissions shall include, at a minimum:
 - the hSCRO number assigned to the submission;
 - the title of the submission;
 - principal investigator's name;
 - alternate contact name;
 - hSCRO approval dates; and
 - the type of hSCRO review (hSCRO Committee or Administrative (Registration))
2. The RCCO shall maintain a registry of all human embryonic stem (hES) cell lines imported into the University. The registry of hES cell lines shall include, at a minimum:
 - the name and source of the hES cell line
 - the investigator responsible for maintaining the hES cell line; and
 - the location of storage of the hES cell line.

E. Investigator Notifications

1. General Requirements

The RCCO will be responsible for drafting hSCRO correspondence to investigators. All hSCRO correspondence to human stem cell investigators shall be signed by the hSCRO Committee Chair or his/her designee(s), dated, and copies maintained in the respective hSCRO protocol file. All dated e-mail correspondence to human stem cell investigators shall be maintained in the corresponding hSCRO file.

2. Notification of Receipt of Submissions

The RCCO shall notify human stem cell research investigators via e-mail of the receipt of hSCRO submissions.

3. Notification of hSCRO Committee Decisions

The RCCO shall be responsible for sending investigator correspondence generated by hSCRO Administrative or Full hSCRO Committee Review.

F. RCCO Review of Submitted Materials

1. Human stem cell research applications submitted for hSCRO review shall be screened by the RCCO to verify that the submission is complete and if the proposed research qualifies for hSCRO Administrative (Registration) or requires Committee review.
2. For proposed human stem cell research that requires Committee review, the research shall be assigned by the RCCO staff to the next scheduled meeting of the hSCRO Committee (subject to announced deadlines posted on the hSCRO web site).

G. Distribution of Materials for Review at the Convened Meeting of the hSCRO Committee

1. The committee meeting agenda and review materials shall be distributed to the voting members of the hSCRO Committee at a minimum of five (5) days prior to the scheduled hSCRO Committee meeting.
2. All hSCRO voting and non-voting members will be provided with a complete copy of all submission materials.
3. With each meeting agenda, all voting hSCRO Committee members shall be provided a listing of research studies approved by Administrative review since the last convened meeting, and shall be informed that they are permitted to access the hSCRO protocol files for any research study in which they may have an interest. A listing of protocols receiving annual hSCRO review within the previous month will also be provided.
4. The minutes from the previous hSCRO Committee meeting shall be included with the materials for review at the next convened hSCRO Committee meeting and shall be voted for approval or approval subject to change(s). Pertinent changes to the hSCRO Committee minutes shall be communicated, if applicable, to the respective human stem cell investigator(s).