

**Empire State Stem Cell Board
Ethics Committee Meeting Minutes
May 3, 2010**

The Empire State Stem Cell Board Ethics Committee held a meeting on Monday, May 3, 2010, at the Department of Health offices, 90 Church Street, New York, New York. Commissioner Richard F. Daines, M.D., presided as Chairperson.

Ethics Committee Members Present:

Dr. Richard F. Daines	Dr. Robert Klitzman
Fr. Thomas Berg	Rev. Maynard Hugh-Reid (arrived 2:00 PM)
Ms. Brooke Ellison	Dr. Samuel Packer
Dr. David Hohn, Vice Chair	Mr. Robert Swidler

Ethics Committee Members Absent:

Ms. Nancy Dubler*	Dr. Vivian Lee
Dr. Samuel Gorovitz	

(*participated in part by teleconference)

Department of Health Staff Present:

Mr. Thomas Conway	Ms. Lokia Rucker
Ms. Judy Doesschate	Dr. Lawrence Sturman
Ms. Susie Han	Ms. Linda Tripoli
Ms. Marti McHugh	Ms. Carrie Zolub
Ms. Beth Roxland	

Observers Present:

Mr. Ervel Douse	Mr. Sergio Morales
Ms. Jean Ellison	Ms. Merjema Ramusevic
Mr. Harrison Hashkin	Mrs. Phyllis Roxland
Ms. Natalia Laspina	

Approval of Minutes for the December 11, 2009, Ethics Committee Meeting

Dr. Daines directed members to the draft minutes for the December 11, 2009, meeting of the Ethics Committee and asked for a motion to approve the minutes. Dr. Klitzman so moved and Dr. Hohn seconded the motion. The motion passed unanimously.

Report on the Activities of the Funding Committee

Dr. Daines advised members that the Funding Committee met on March 4th and recommended approval of 52 awards totaling \$34.75 million for investigator-initiated research projects and innovative, developmental or exploratory activities in stem cell research. The Funding Committee also approved the issuance of two Requests for Applications (RFAs);

one that committed \$25 million to investigator-initiated research projects and innovative, developmental or exploratory activities in stem cell research, and another that committed \$80 million to accelerate stem cell research through consortia.

Dr. Daines advised members that the Funding Committee provided comments on another RFA that would provide an eight-week summer experience for teachers to be immersed in a stem cell research laboratory and develop a standards-based lesson plan or hands-on activity to be incorporated into their teaching. He said a revised proposal will be presented to the Funding Committee at its next meeting. Dr. Daines also advised members that the Funding Committee approved changes to Appendix A-2, which is appended to all NYSTEM contracts. He said the technical and administrative changes were designed to reduce duplication of effort, improve contract enforceability and increase consistency with federal reporting obligations.

Program Updates

Dr. Daines then turned the floor over to Dr. Sturman to update the Ethics Committee on program staff activities and developments.

Dr. Sturman noted that he had distributed an updated chart of the RFAs and awards approved by the Funding Committee and reviewed the chart with the Committee. He advised members that the Funding Committee is expected to make award recommendations on the Fellow-to-Faculty RFA and Shared Facilities RFA at its May 21st meeting.

Dr. Sturman advised members that a workgroup has been convened to discuss and recommend funding proposals for informal science learning opportunities. The workgroup includes Mr. Elliott from the Funding Committee, who has agreed to serve as chairperson for the workgroup; Ms. Ellison; Dr. Gorovitz; Dr. Packer; Mrs. Dickerman, who has worked with the Sterling and Francine Clark Art Institute; and Ms. Flatto, Director of External Affairs for the New York State Stem Cell Foundation. Dr. Sturman advised members that the workgroup met earlier in the day and would be reporting on its activities at the May 21st full Board meeting.

Dr. Sturman reminded members that the NYSTEM 2010 Awardees Meeting will be held on May 26th and 27th in New York City at the City University of New York (CUNY) Graduate Center located on Fifth Avenue at 34th Street. He provided members with information about the topics to be covered, members of the plenary committee and anticipated speakers. He advised members that they are welcome to attend the meeting.

Mr. Conway then provided the Committee with a brief update on the status of the litigation, Feminists Choosing Life of New York, Inc. v. Empire State Stem Cell Board, and the oral arguments held on April 19th.

Concept Paper Discussion: Journalism Programs

Dr. Sturman then presented members with a concept paper that would fund programs for journalists and journalism students to increase their knowledge of developmental and stem cell-related biology, regenerative medicine, the translation of discoveries into clinical applications or therapies, and the ethical, legal and social implications of stem cell research.

Dr. Sturman noted that the proposed maximum award is \$250,000 annually, for a maximum of four years and that \$4 million will be set aside for this proposal. He informed members that only New York State post-secondary institutions that grant journalism degrees would be eligible to apply and that each institution could only submit one application.

Dr. Hohn expressed his support for the proposal, but questioned whether the award amounts are larger than what is needed. Fr. Berg suggested the RFA should include an expectation that funded programs will expose journalists to the full array of ethical perspectives on stem cell research. Ms. Ellison stated that she thought the program should focus on ensuring that journalists are provided with scientifically accurate information. Dr. Klitzman suggested the RFA should be expanded to include other kinds of media, specify the anticipated products, and require the awardees to make any materials used in the program available to NYSTEM. He also expressed an interest in increasing the number of awards and decreasing the size of the awards. Dr. Hohn suggested it might be appropriate to allow creative writing programs to apply and to require program participants to attend the NYSTEM annual scientific conference.

Dr. Sturman thanked the Committee for their input and advised members that their comments will be taken into consideration in drafting the RFA.

International Standards for Stem Cell Research: Presentation and Discussion

Ms. Roxland updated the Committee on the status of the National Institutes of Health (NIH) human embryonic stem cell (hESC) registry by advising them that five of the hESC lines that were eligible for use during the Bush presidency were recently approved by NIH. She noted that this included the widely used H7 cell line that accounts for a significant percentage of published stem cell research. She stated that 64 lines have been approved to date and that 7 of the recently approved lines were developed by New York University. In response to questions, Ms. Roxland advised members that it is not clear whether investigators or the sponsoring institutions are required to submit information regarding the lines for approval and that the delay in the approval of existing lines is likely due to the volume of submissions.

Ms. Roxland then referred members to the chart included in their agenda packets on international stem cell policies. She advised members that the chart summarizes the stem cell research policies of ten countries with regard to permitted activities, prohibited activities, informed consent and payments to embryo and gamete donors. She noted that citations to the applicable laws and regulations and research oversight mechanisms are provided at the end of the document. During her presentation, Ms. Roxland noted that some of the policies cited in the chart are carried over from the in vitro fertilization (IVF) context and others are specific to government-sanctioned research and may not extend to research conducted by the private sector.

Ms. Roxland stated that most countries have enacted several pieces of legislation that govern stem cell research. She noted that some countries have a unified approach to regulation, while others have a piecemeal approach. For example, the United Kingdom has a unified approach and is often referred to as “permissive, but controlled” for its extensive licensing and oversight system, while Canada is more like the United States with one overarching law and more stringent regulations for publicly-funded research. Ms. Roxland noted that all countries ban human reproductive cloning and prohibit the development of embryos beyond 14 days.

Ms. Roxland advised members that the use of excess IVF embryos in research is permitted in all countries listed in the chart except for Germany, which does not allow the derivation of new hESC lines. She noted that Japan allows the donation of embryos for research, but only if the embryo was created using the gametes of a married couple. In South Korea, the donation of embryos for research is allowed, but only if the embryos have been frozen for more than five years or if the donors have re-consented to the donation.

Ms. Roxland advised members that the majority of countries on the chart allow the creation of embryos solely for research, but that most countries that allow it limit it to the creation of embryos for research through somatic cell nuclear transfer rather than through IVF. Ms. Roxland also informed members that most countries included in the chart allow the donation of oocytes specifically for research, but that some countries impose restrictions on it. For example, Israel prohibits it unless the excess oocytes are retrieved during the course of a medically necessary procedure, e.g. IVF.

Ms. Roxland noted that every country on the chart prohibited payments for oocytes, but that many countries allow some form of compensation, such as the reimbursement of expenses related to the donation. She advised members that Singapore permitted compensation for time and that the United Kingdom allowed egg-sharing. In response to a question from Fr. Berg, Ms. Roxland said she is not aware of any other country that allows egg-sharing. In response to another question, Ms. Roxland advised members that she does not know if the issue of financial compensation has been discussed in the countries where it is not expressly permitted except for in the United Kingdom where it was part of the discussion that led to the egg-sharing policy.

Dr. Klitzman mentioned that France has a restriction similar to Japan's that limits the donation of embryos to those created using the gametes of married couples. Members then suggested the chart should be expanded to include information about policies in India, Russia, the United States and New York State. Dr. Hohn also suggested the Committee should be provided with an update on the policies in other states.

Ms. Roxland advised members that the countries listed in the chart permit hybrid and chimera research to varying degrees, but that all prohibit the introduction of a hybrid or chimeric embryo into the uterus of a human or, in many cases, the uterus of another animal. A few countries prohibit the creation of chimeric embryos, but allow the creation of hybrid embryos as long as the embryo is not allowed to develop beyond 14 days or is not implanted. She noted that some countries have a blanket prohibition against creating hybrid embryos using human cells.

Ms. Roxland advised members that most countries require informed consent from both of the gamete donors and the couple donating the embryo for research. Ms. Roxland noted that some countries impose additional requirements on the informed consent process.

In response to questions, Ms. Roxland advised members that she did not come across any novel issues that had not already been identified by the Committee. She also advised members that the sharing of biological materials is easier when countries establish registries that document compliance with the applicable requirements or when countries allow researchers to use "acceptably derived" materials that substantially comply with the country's applicable requirements. Dr. Hohn noted that intellectual property laws can also impact the sharing of hESC lines across international boundaries.

Dr. Daines concluded the discussion by advising members that staff will provide the Committee with information about any significant developments in international policies that might reveal a new area of concern that the Committee should explore.

Committee Discussion: Standards for Research Involving Chimeras

Dr. Daines stated he would be turning the floor over to Ms. Roxland to facilitate the Committee's deliberations on the development of standards for research involving chimeras. He noted that the Committee had heard from notable experts on this issue, including Dr. John Gearhart of the University of Pennsylvania and Dr. William Lensch of the Harvard Stem Cell Institute, and that staff had provided members with many articles and perspectives on the topic.

Ms. Roxland then turned the floor over to Mr. Swidler to explain a diagram that he had developed and that was distributed to the Committee. Mr. Swidler advised members that he created the chart to help him understand the variables at play in consideration of chimeric research and the ethical issues they presented. He noted that the top row of boxes listed variables within chimeric research that most people would agree did not present significant ethical issues and that variables lower on the chart were more problematic ethically. He suggested the Committee could use the chart to assist it in identifying the types of research that it wants to explore further in its discussions, possibly focusing on the factors in the lowest row on the chart.

Ms. Roxland then offered to explain the diagram she developed that showed the research variables that triggered Embryonic Stem Cell Research Oversight (ESCRO) committee review and those that are prohibited under the National Academies of Science (NAS) or International Society for Stem Cell Research (ISSCR).

Fr. Berg asked whether the Committee wanted to discuss the philosophical issues of research involving chimeras or whether they wanted to focus primarily on developing the standards to be applied. He stated that he thought it would be helpful to have the Committee articulate why it may not want to allow certain types of research and noted that he found that missing in the NAS and ISSCR guidelines.

Members agreed that they wanted to discuss why certain things should or should not be permitted from a philosophical and ethical standpoint as well as to develop the actual standards for funded research. Mr. Swidler clarified that he believes that the Committee should not only address what is allowed and explain why it is not prohibited, but also address what is prohibited and explain why it is not allowed. Dr. Hohn noted that sometimes research is prohibited because of the fear of the unknown. Dr. Packer stated that he thought engaging in the discussion and ensuring clarity and consistency in the Committee's thoughts is as important as the Committee's final product or decision. Fr. Berg concurred, saying he thought that articulating the array of views is beneficial and educational to the public.

Dr. Klitzman suggested that the Committee start by discussing the areas where Committee members might disagree. Dr. Hohn agreed and suggested the Committee determine whether any members might want to go beyond the standards contained in the NAS or ISSCR guidelines. Dr. Packer suggested the Committee start by addressing a specific issue and recommended that it could start with obvious "low-hanging fruit" demonstrated on Mr. Swidler's

chart, such as the prohibition on the breeding of chimeric animals that have hESCs. Mr. Swidler agreed and noted that NAS, ISSCR and all countries prohibit the breeding of chimeric animals.

Ms. Roxland explained that not all chimeric animals are prohibited from breeding depending upon when the hESC are introduced in the animal's development. Ms. Roxland used the diagram she handed out to demonstrate this and explained how the document showed the distinctions between the different kinds of chimeras and the level of ESCRO review that might be required. Dr. Hohn questioned how the issue of breeding of chimeric animals even arises when a chart Mr. Roxland prepared and provided to the Committee at a prior meeting shows that the ISSCR guidelines prohibit the development of chimeras beyond 14 days. Ms. Roxland advised members that they should disregard the chart she distributed previously because it contained an improper interpretation of the ISSCR guidelines on this point. She then distributed copies of the actual language contained in the NAS and ISSCR guidelines and clarified that the ISSCR restriction on embryo development beyond 14 days only applies to "in vitro culture of post-fertilization human embryos or organized cellular structures that might manifest human organismal potential."

In response to members' questions about the extent to which these issues are relevant to funded scientists, Dr. Sturman advised members that it is not possible for any one person to know and understand everything that is being pursued scientifically. He also noted that while funded researchers may not have talked about a particular type of research proposal, it would not be possible to know when researchers might decide to undertake it.

Dr. Klitzman suggested that several hours should be set aside on a future agenda to discuss chimeras and the standards to be applied and that an expert be brought in to refresh the Committee's recollection regarding the biology and the types of research being conducted. Ms. Roxland agreed that it may be beneficial to have an expert familiar with both the science and the ethical issues sit with the Committee while it discussed specific ethical issues and the distinctions made in the guidelines.

Dr. Daines then inquired whether the Committee wanted to reaffirm its guidance that researchers should comply with the NAS and ISSCR guidelines while the Committee continues its deliberations on this issue or whether the Committee wants to provide additional guidance at this time. Members expressed their comfort with requiring researchers to comply with the NAS or ISSCR guidelines while the Committee continues to study this issue.

Mr. Swidler suggested that the Committee may want to explore what it expects an ESCRO committee to do when it reviews research. Dr. Hohn stated that ESCRO committees need to consider the ethical issues in the context of the specific research proposal and possibly bring in experts to probe specific issues further. Dr. Sturman offered to inquire with ESCRO committees regarding the types of research proposals they have been asked to review that involve chimeras and to have staff review the funded research proposals to determine which proposals may involve these kinds of issues.

Dr. Daines asked Committee members to identify specific issues in advance of its next discussion on this topic. As an example, he cited research involving the breeding of chimeras where the stem cell lines could impact the germ line. He said he would like to understand the breeding restrictions better and determine whether there should be more or fewer restrictions.

Ms. Doesschate encouraged members to advise staff especially of any of the prohibited areas of research that they want to know more about so that staff and the experts can be prepared to address those issues. She reminded members that the other areas that raise ethical concerns are required to be reviewed by ESCRO committees, so that if something is not prohibited it does not mean that it will automatically be allowed. She noted that in creating ESCRO committees and similar review mechanisms, both the ISSCR and NAS recognized that certain issues would need to be reviewed on a case by case basis.

Ms. Roxland encouraged Committee members to review the language in the NAS and ISSCR guidelines that she had distributed. She also agreed to attempt to line up a speaker to participate in future discussions on chimeras and to redistribute the philosophical articles and explanations contained in the NAS guidelines that she distributed previously. Dr. Klitzman also expressed an interest in: 1. hearing from scientists regarding the potential purposes of research that might be restricted by the guidelines, such as breeding of chimeric animals; 2. learning more about how ESCRO committees operate and address these ethical issues; and 3. knowing if there are areas of concern that do not involve neural or germ cells.

Dr. Daines summarized the Committee's discussions by noting it was in agreement that funded researchers should continue to use the standards in the NAS and ISSCR guidelines and that staff will: 1. bring in an expert to assist the Committee in its deliberations on breeding issues, primate implantation and other restrictions; 2. provide the Committee with information about the types of funded research currently subject to ESCRO review and how they deal with these issues; 3. provide information on the actual interests of researchers in this area; and 4. re-circulate the materials that were provided to Committee members on this topic in the past. Members also emphasized that they are interested in delving into the philosophical issues as they consider the development of standards and that they are interested in having staff identify the articles that may be most beneficial to their deliberations of the specific topics being teed up for discussion.

Clinical Trials: Committee Identification of Issues, Options and Approaches

Dr. Daines advised members that staff thought that it would be good for the Committee to have some initial discussions regarding clinical trials to identify the specific issues involving clinical trials that the Committee may want to discuss and determine how the Committee might want to approach those issues. He noted that any clinical trials funded through the Empire State Stem Cell Trust Fund are required to comply with existing federal and state standards and requirements. Dr. Daines then turned the floor over to Ms. Roxland to facilitate the discussion.

Ms. Roxland noted that Ms. Dubler had some specific thoughts about this and deferred to Ms. Dubler who had called in to participate in this portion of the meeting. Ms. Dubler stated that the prospect of supporting clinical trials involving stem cell research raised two concerns. The first related to the empirical studies that have been conducted that show that most research subjects had not understood the stakes, the risks and the benefits they are asked to weigh when deciding to participate in a clinical trial. She stated that the studies show that the most important aspect of the informed consent process is the relationship between the subject and the clinician. She noted that the studies suggest that the comprehension of a potential research subject can be increased by encouraging them to engage in a dialogue and by asking the subject to repeat what they have been told. She suggested that the Committee could require funded research to imbed

some of these techniques in the informed consent process to increase the comprehension of potential subjects.

Ms. Dubler explained that her second area of concern is the high level of innovation involved in stem cell research protocols. She noted that this research involves novel issues and that she was not sure that every Institutional Review Board (IRB) in New York State would be able to muster the very best techniques for engaging research subjects in this novel area. She said that she thought the Committee could help researchers enhance their thinking and improve their processes in the area of clinical trials in the same way the Committee had done with regard to the informed consent process for egg donors. She concluded by saying that the situation is analogous to other IRB issues, but are not the same.

Dr. Hohn advised members that he thinks the Committee should deliberate on this issue and may have the potential to make unique contributions in this area as it has in other areas. Dr. Hohn noted that this type of research is a very different kind of clinical research undertaking. He noted that it is not only groundbreaking and potentially controversial, but also vastly more complex because it is new territory for the federal Food and Drug Administration and requires regulatory expertise. He also noted that it is very expensive to conduct clinical trials and that such endeavors raise issues regarding the need for specific core facilities. He noted that there is a need to get the information right and that the west coast requires expert advisory boards to guide the process for each patient. He said there is also a need for communication expertise.

Dr. Klitzman stated that he would like information on the experience in California and the types of issues and problems that people have run into in clinical trials involving stem cells. He suggested that the Committee may want to invite someone to come to speak to the Committee. Ms. Dubler concurred and stated that she will speak to Jerry Menikoff at the Health and Human Services' Office of Human Research Protections regarding potential relevant information. Dr. Klitzman also expressed an interest in seeing a copy of the research protocols and informed consent documents and learning more about what the Funding Committee anticipates funding.

In response to questions about what types of clinical trials the Funding Committee might fund, Dr. Sturman noted that the RFA has not been issued yet. He also noted that the program will not have the capacity to fund clinical trials involving hundreds of millions of dollars. He agreed to keep the Ethics Committee informed of any developments in this area.

Development of Future Agendas

Dr. Daines advised members that the next meeting of the Ethics Committee will take place on May 21st as part of the full Board meeting. He noted that the Committee usually only has about an hour to devote to discussions of the Ethics Committee and solicited input from the members regarding what they would like to address at that meeting and future meetings. Ms. Roxland suggested that the Committee not attempt to take up the issue of chimeras at the next meeting since the Committee anticipates spending more time on the topic than the next meeting will allow.

Members suggested a number of topics, including continuation of the Committee's discussion of standards for clinical trials and intellectual property issues. Dr. Klitzman also

suggested the Committee consider addressing what potential research subjects should be told about intellectual property issues. After some discussion, it was agreed that the Committee would benefit from being provided with information about the types of research being reviewed by ESCRO committees, how they are operating and what issues have been raised in the process of their oversight. Staff agreed to attempt to bring in the chairs of a couple of ESCRO committees operating in New York State to be able to respond to Committee members' questions regarding ESCRO committee activities and provide feedback to the Committee on the policies adopted by the Board to date. Members also expressed an interest in hearing if there are any areas about which ESCRO committees might be interested in guidance.

Adjourn

Dr. Daines then asked for a motion to adjourn the Ethics Committee meeting. Dr. Packer so moved and Fr. Berg seconded the motion. The motion passed unanimously.

*s/ Judy L. Doesschate, Esq.
Executive Secretary to the
Empire State Stem Cell Board
Approved: May 21, 2010*