

**Materials Submitted to NIH**  
**From the University of Connecticut**  
***Submission #2009-ACD-005***

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NOTE: Duplicative information in the submission is not included.

**hESC Registry Application Database**

Detailed Listing for Request #: 2009-ACD-005

June 3, 2010

**hESC Registry Application Search Results****Request #:** 2009-ACD-005**Status:** Pending**Review:** ACD**Assurance:** Yes (Section II(B))**Certification:** Yes**Authority:** Yes**Cell Lines:** 4**Available:** 4**Previous #:**

2009-DRAFT-020

[Email](#)[Edit](#)[Delete](#)[Switch to ADM](#)**Organization:** UNIVERSITY OF CONNECTICUT SCH OF MED/DNT**Org Address:** 263 Farmington Avenue ARB, Room E2041 Farmington, CT 06030-3301 USA**DUNS:** 022254226 **Grant Number(s):****Signing Official (SO):** Dana Carroll / 860-679-4040 / [DCARROLL@UCHC.EDU](mailto:DCARROLL@UCHC.EDU)**Submitter of Request:** Ren-He Xu / 860-679-3363 / [renhexu@uchc.edu](mailto:renhexu@uchc.edu)**Submitter Comments:** I have attached three additional documents requested by the NIH Stem Cell Registry. I hope now it is ready for your review. Please keep me informed of the status of my application for the registration. Many thanks.**Line #1:** CT1**NIH Approval #:****Available:** Yes**Embryo from U.S.:** Yes**Embryo Donated in Year(s):** 2008**Provider Name:** University of Connecticut Stem Cell Core**Provider Phone:** 860-679-3363**Provider Email:** [renhexu@uchc.edu](mailto:renhexu@uchc.edu)**Provider URL:** <http://genetics.uchc.edu/Stemcell/index.html>**Provider Restrictions:** No animals transplanted with the human stem cells will be raised for reproduction.**NIH Restrictions:****Additional Information:****Line #2:** CT2**NIH Approval #:****Available:** Yes**Embryo from U.S.:** Yes**Embryo Donated in Year(s):** 2008**Provider Name:** University of Connecticut Stem Cell Core**Provider Phone:** 860-679-3363**Provider Email:** [renhexu@uchc.edu](mailto:renhexu@uchc.edu)**Provider URL:** <http://genetics.uchc.edu/Stemcell/index.html>**Provider Restrictions:** No animals transplanted with the human stem cells will be raised for reproduction.**NIH Restrictions:****Additional Information:****Line #3:** CT3**NIH Approval #:****Available:** Yes**Embryo from U.S.:** Yes**Embryo Donated in Year(s):** 2008**Provider Name:** University of Connecticut Stem Cell Core**Provider Phone:** 860-679-3363**Provider Email:** [renhexu@uchc.edu](mailto:renhexu@uchc.edu)**Provider URL:** <http://genetics.uchc.edu/Stemcell/index.html>

**Provider Restrictions:** No animals transplanted with the human stem cells will be raised for reproduction.

**NIH Restrictions:**

**Additional Information:**

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**Line #4: CT4**

**NIH Approval #:**

**Available: Yes**

**Embryo from U.S.: Yes**

**Embryo Donated in Year(s): 2008**

**Provider Name: University of Connecticut Stem Cell Core**

**Provider Phone: 860-679-3363**

**Provider Email: [renhexu@uchc.edu](mailto:renhexu@uchc.edu)**

**Provider URL: <http://genetics.uchc.edu/Stemcell/index.html>**

**Provider Restrictions:** No animals transplanted with the human stem cells will be raised for reproduction.

**NIH Restrictions:**

**Additional Information:**

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**Supporting Documents:**

**Document 1:** (PDF - 10/13/2009) Stem Cell Core consent form for embryo donation

**Document 2:** (PDF - 02/25/2010) IVF consent form for cryopreservation of embryos

**Document 3:** (PDF - 02/25/2010) IVF consent form for embryo donation

**Document 4:** (DOC - 02/25/2010) Stem Cell Core protocol for hESC derivation

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**Administrative Comments:** 11/12/2009--E. Gadbois moved application to draft status, as submitter has not submitted required certifications from signing official and not responded to prior email from NIH concerning this.

Feb 26, 2010--E. Gadbois moved application back to draft status, per request of Dr. Xu in order to add two more lines.

Feb 26, 2010--E. Gadbois uploaded SO letter and corrected certifications.

March 11, 2010--E. Gadbois uploaded correspondence from submitter and IIB staff analysis

April 13 2010--E. GAdbois uploaded correspondence with submitter

April 21 2010--E. Gadbois uploaded correspondence with submitter

May 4 2010--E. Gadbois uploaded correspondence with submitter

May 17 2010--E. Gadbois uploaded correspondence with submitter

June 1 2010 - D. Hannemann corrected spelling of "Univ of CT" on submission entry

June 1 2010 - D. Hannemann uploaded correspondence with submitter

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**Administrative Attachments:**

**Document 1:** (PDF - 02/26/2010) SO letter

May 4 2010--E. Gadbois uploaded correspondence with submitter

May 17 2010--E. Gadbois uploaded correspondence with submitter

**Administrative Attachments:**

Document 1: (PDF - 02/26/2010) SO letter

Document 2: (PDF - 03/11/2010) March 10 2010 correspondence

Document 3: (DOC - 03/11/2010) Section IIB NIH staff analysis

Document 4: (PDF - 04/13/2010) April 8 2010 email correspondence

Document 5: (PDF - 04/13/2010) April 8 email attachment ESCRO core

Document 6: (PDF - 04/13/2010) April 8 email attachment ESCRO continuation

Document 7: (PDF - 05/04/2010) May 4 2010 email response from UCT

Document 8: (PDF - 05/04/2010) May 4 2010 email attachment

Document 9: (PDF - 05/17/2010) May 14 2010 email from UCT

Document 10: (PDF - 05/17/2010) May 14 2010 email--protocol

Document 11: (PDF - 05/17/2010) May 14 2010 email--cryopreservation

**Status History:**

**Draft:** 02/26/2010

**Pending:** 02/26/2010

**Emails Sent:** 10/13/2009-New\_Applicaton\_Email -- 02/25/2010-

New\_Applicaton\_Email -- 02/26/2010-New\_Applicaton\_Email

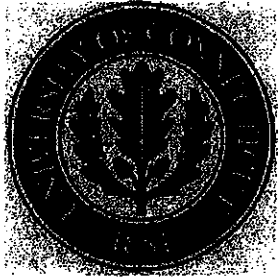
**Added By:** Commons\RENHEXU **On:** 09/28/2009 | **Last Updated**

**By:** NIH\gadboisel **On:** 05/17/2010 | **Record ID:** 20

**Total Record Count = 1**

Continuation Page

Public NIH Form 2890 Admin Site



THE UNIVERSITY OF CONNECTICUT HEALTH CENTER  
The Office of Research and Sponsored Programs  
263 Farmington Avenue  
Farmington, CT 06030  
t. 860-679-4040  
f. 860-679-2670  
[ORSP@uchc.edu](mailto:ORSP@uchc.edu)

January 19, 2009

NIH Stem Cell Registry:

I hereby certify that the statements in the Request for Human Embryonic Stem Cell Line to be Approved for Use in NIH Funded Research (NIH Form 2890), submitted by Dr. Ren-He Xu, and below, are true, complete and accurate to the best of my knowledge. I am aware that any false, fictitious, or fraudulent statements or claims may subject me to criminal, civil, or administrative penalties (U.S. Code, Title 18, Section 1001).

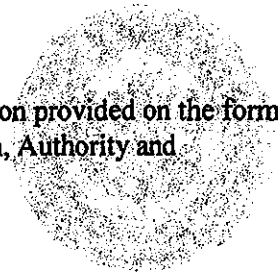
I further confirm that that I have the authority and/or rights pertaining to the human embryonic stem cell line(s) identified in item 6 of the form to make this request for NIH review and determination of eligibility for use in NIH funded research (e.g., I am the owner, deriver or licensee or have written permission of the same to submit). Any and all restrictions on the use of the stem cell line are clearly and completely identified in item 8 of the form.

**Assurance Statements** (mark the appropriate statement with an "X"; you may only check one Assurance statement.):

  X   **Assurance in accord with Section II(B) of the NIH Guidelines:**

I hereby assure that the embryo from which the cell line(s) identified in item 6 of the form was derived was donated prior to July 7, 2009, and the embryo: 1) was created using in vitro fertilization for reproductive purposes and was no longer needed for this purpose; and 2) was donated by individuals who sought reproductive treatment ("donor(s)") who gave voluntary written consent for the human embryo to be used for research purposes. The applicant is advised that the Working Group of the Advisory Committee to the NIH Director will consider submitted materials taking into account the principles articulated in Section II(A) of the NIH Guidelines for Human for Human Stem Cell Research, 45 CFR 46 Subpart A, and the following points to consider: during the informed consent process, including written and oral communications, whether the donor(s) were: (1) informed of other available options pertaining to the use of the embryo ; (2) offered any inducements for the donation of the embryo ; and (3) informed about what would happen to the embryo after the donation for research.

State of Michigan Department of Health and Human Services  
Michigan Department of Health and Human Services  
1400 Washtenaw Avenue, Lansing, MI 48917



**I acknowledge that I have read, understood, and agreed to the information provided on the form, including the Instructions for completing the form, and the Certification, Authority and Assurance provided above.**

Sincerely,

**Dana Carroll**  
Director

Michigan Department of Health and Human Services

1400 Washtenaw Avenue, Lansing, MI 48917

The undersigned hereby certifies that the information provided on this form is true and correct to the best of their knowledge and belief. The undersigned further certifies that the information provided on this form is true and correct to the best of their knowledge and belief.

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## Consent Form to Donate Human Embryos from the Center for Advanced Reproductive Services at UCHC to Stem Cell Core Laboratory

**Name of Principal Investigator (PI):** Dr. Ren-He Xu

**Project Title:** Derivation of Stem Cell Lines from Donated Human Embryos

**IRB Number:** 07-159-4

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This form is used to obtain your consent for the donation of your remaining embryos to embryonic stem cell research. You are being asked to consider donation of your embryos because you have used the services of the Center for Advanced Reproductive Services at the University of Connecticut Health Center (UCHC). Donation of your embryos is voluntary. The phone number to reach the U Conn Stem Cell Core Administrator is 860-679-8350.

### Background

Part of the embryo contains unique cells called embryonic stem cells. In order to isolate these unique cells, the embryo must be thawed and grown in the laboratory for no longer than 12 days. Before the first twelve days of development, the embryo develops from one cell fertilized egg, divides several times (called cleavage) then, the embryo forms into a solid ball of cells (called morula) and then, develops into a small cyst (called blastocyst) with a group of cells attached to the inner walls. A blastocyst has between 100 - 200 cells, and is smaller than the head of a pin. Embryonic stem cells are taken from any cell of the cleavage stage, or from the inner cells of the blastocyst. Collection of the embryonic stem cells stops the development of the embryo, and the embryo is destroyed. Neither the embryo nor the embryonic stem cells will grow into a child.

The embryonic stem cells will then be grown in the U Conn Stem Cell Core's laboratory to produce additional cells, called cell lines. Researchers will study the cell lines that are made. Researchers will try to understand how embryonic stem cells function and why they can develop into almost any type of cell that is found in the human body. They will also try to discover information that might help in the treatment of human diseases.

### Option to Withdraw Consent for Donation or Refuse Donation

If you decide to donate your embryos, you are free to withdraw your permission any time prior to the point at which the embryos are used to make cell lines. To withdraw your consent, contact the U Conn Stem Cell Core Administrator at 860-679-8350.

If you withdraw your permission to use your embryos for embryonic stem cell research, the frozen embryos will be discarded as medical waste and your information will be removed from the U Conn Stem Cell Core database. **Embryos that have been transferred from the Center for Advanced Reproductive Services cannot be returned to a storage facility and cannot be used for fertility treatment.**

The U Conn Stem Cell Core may also discard embryos that are not used in research as medical waste.



## Consent Form to Donate Human Embryos from the Center for Advanced Reproductive Services at UCHC to Stem Cell Core Laboratory

If the embryos have already been used to make cell lines, you will not be able to withdraw consent because the embryo will have been destroyed in the process of making the cell lines.

Any decision you make about donation at any time will not affect your present or future medical care from the University of Connecticut Health Center/John Dempsey Hospital and there will be no penalty or loss of benefits to which you are otherwise entitled.

### Duration of Participation

Your participation lasts from the time you sign the informed consent form until the embryos are used to make cell lines. This could take up to five years.

### Potential Risks of Embryo Donation

Following your donation, one or both of you may experience psychological discomfort. For example, you may become uncomfortable knowing that the donated embryos will not survive the process to make stem cell lines. Therefore, you are encouraged to talk with each other, and with your physician, family or friends to make sure you are comfortable with your decision.

There is also a small risk that your decision to donate your embryos to stem cell research will become known to someone outside of the research team. The steps to minimize this risk are described under the section about protecting your confidentiality.

### Potential Benefits of Embryo Donation

Donating your embryos will provide no direct medical benefit for you. The research done may or may not eventually lead to benefits for society. Society may benefit by having more knowledge about how stem cells function. Society may also benefit from the discovery of new treatments for a variety of human diseases.

### Cost and Compensation

There will be no costs to you for donating your embryos to the research. You will not receive any financial compensation for your donated embryos. The research that will be done may have commercial potential. You are not intended to share in any of the financial gains or other benefits that may result from the commercial potential.

### Alternatives

You can choose not to donate your embryos to research. Alternative options include continued storage of the embryos, donation of embryos to other infertile couples, removal from storage with disposal, or donation of embryos to another research facility.





# Consent Form to Donate Human Embryos from the Center for Advanced Reproductive Services at UCHC to Stem Cell Core Laboratory

## Protection of Personal Information

The frozen straw containing your donated embryo(s) that is given to the U Conn Stem Cell Core is labeled by Center for Advanced Reproductive Services with your name, your social security number, the date the embryos were frozen and the number of embryos in the container. The straws with their intact donor labels will be sent to the U Conn Stem Cell Core and kept there. A random code will be assigned to each embryo. The link between the donor and the code will be kept on a secure database, which is password-protected, and kept in a locked room. This database is only accessible by the U Conn Stem Cell Core Director or Administrator. Any established stem cell line derived from a thawed embryo will be assigned a new identifier by the lead researcher(s) who derives the line at the U Conn Stem Cell Core. The link between the donor and embryo will be destroyed after either consent has been revoked or after embryonic stem cell lines have been derived and the embryos have been destroyed.

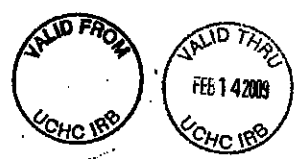
We will do our best to protect the confidentiality of the information we gather from you, however, absolute confidentiality cannot be guaranteed. Individuals involved with oversight of stem cell research may inspect your records. This may include individuals from the Health Center's Human Subjects Protection Office and Institutional Review Board, the University's Embryonic Stem Cell Research Oversight Committee, the Department of Health and Human Services, the Food and Drug Administration, the State of Connecticut Department of Public Health, or other regulatory agencies with oversight. They may inspect these records to ensure that the research is being done correctly, or that the research meets federal, state or local regulatory requirements.

No health information is required of you, as a donor, for the process of the creation of stem cell lines. No information obtained from the cell lines will be provided back to you.

During the course of this research the researchers may publish their findings. Information will be presented in summary format. You will not be identified in any publications or presentations.

## How Many Donors Will be Needed in the Study

We plan to derive 5-10 human embryonic stem cell lines which we estimate can be accomplished once approximately 100 couples donate their extra embryos. This number is based on the wide range of the success rate of human embryonic stem cell derivation in the literature and the big variation of the number and quality of embryos from the donors.



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# Consent Form to Donate Human Embryos from the Center for Advanced Reproductive Services at UCHC to Stem Cell Core Laboratory

## How Embryos Will be Used by the Researchers

Human embryonic stem cell lines will be made with procedures that will incorporate the best practices. No embryo will be cloned and no human embryonic stem cell lines will be transplanted into a human being. Frozen embryos, the derived stem cells, and cell lines may be kept for many years.

Stem Cell Research is a rapidly changing area of research. It is impossible to predict all of the potential research that could be done. One type of research with embryonic stem cells or cell lines could require the transplantation of embryonic stem cells to fetal, newborn, or adult animals (such as rats, mice, sheep and non-human primates). Although combining human and animal cells or tissues is a common practice in biological research, there is uncertainty about the effects of this research in research animals. No animals transplanted with the human stem cells will be raised for reproduction.

## Results of This Research

You will not be informed of the final disposition of your donation. You will not be specifically informed of any results from the research project that made use of your donation.

## Answers to Additional Questions

You should obtain answers to any questions you may have before you make your decision. You may also want to talk with family members or your primary care physician before making a decision.

The research staff at the U Conn Stem Cell Core is willing to answer any questions you have about making a donation. You are encouraged to ask questions before deciding whether to donate. If you have questions, complaints or concerns about the donation process, you should call the U Conn Stem Cell Core Administrator at 860-679-8350, who will route your call to the appropriate individual.

If you have questions about your rights as a research donor you may contact the UCHC's Institutional Review Board at 860-679-1019 or 860-679-8729.



### Consent Form to Donate Human Embryos from the Center for Advanced Reproductive Services at UCHC to Stem Cell Core Laboratory

**Consent To Donation:**

By signing this form you acknowledge that you have read, or have had read to you, this informed consent document, have talked with UCHC Stem Cell Core Staff about this donation to research, have been given the opportunity to ask questions and have them satisfactorily answered, and voluntarily consent to donate your embryos to stem cell research.

By signing this form the individual obtaining consent is confirming that the above information has been explained to the donors and that a copy of this document, signed and dated by both persons giving consent and the person obtaining consent, will be provided to the donors.

Role	Printed Name	Signature	Date	Time
Female Donor				
Male Donor				
Person Obtaining Consent				



## AUTHORIZATION TO USE AND DISCLOSE PROTECTED HEALTH INFORMATION FOR RESEARCH PURPOSES

### Information About the Research Study

Ren-He Xu and his staff are conducting a research study called Derivation of Stem Cell Lines from Donated Human Embryos. The purpose of the study is to derive stem cell lines from spare embryos donated by patients who have completed their infertility treatment. The stem cell lines will be used for basic research to understand human development and diseases, and their potential treatments.

### Voluntary Status

Because of a federal law called the Health Insurance Portability & Accountability Act (HIPAA), we must get your permission to use and disclose your identifiable health information for this research study. This form is used to document that permission. Because of HIPAA you must also receive a copy of the Health Center's rules about privacy.

Your decision whether to give permission is voluntary. The only consequence of not granting permission is that you will not be allowed to participate in this research study. Your decision has no impact on your treatment, payment, or enrollment in any health plans, or effect on your eligibility for benefits. You also permit your doctors and other health care providers to disclose your protected health information to Ren-He Xu and his staff for this research project.

### Information That Will be Used / Disclosed

The following information about you may be used and disclosed for the purpose of this research study:

- Your name, social security number, date of birth, and medical record number.
- The date that your embryos were frozen and the number of the frozen embryos.

### How the Information Will be Used / Disclosed

The information noted above will be used and disclosed for the following purpose(s):

- Assigning random codes to your donated embryos. Your protected health information (listed above) will be present on the label of the frozen straw that contains your donated embryos. Once the embryo is thawed to derive stem cells it will be assigned a random code. The original label and straw will be discarded. Your protected health information and the link between the codes and the information will be kept in a password-protected computer database, in a locked room, and your donor consent forms will be kept in a locked cabinet at the U Conn Stem Cell Core.

### People/Offices That Will Have Access to Your Information

The following people/entities may use and disclose your protected health information.

- Ren-He Xu and his staff
- The Health Center's Institutional Review Board and Human Subjects Protection Office and Office of Research Compliance
- Hospital or University of Connecticut Health Center representatives.



University of Connecticut Health Center

- Government representatives, such as the Food & Drug Administration or Office for Human Research Protections; when required by law.

The researchers and staff agree to protect your information by using and disclosing it only as stated in this document and as directed by state and federal law and as contemplated in the NIH Certificate of Confidentiality (<http://grants2.nih.gov/grants/policy/coc/>).

Once your health information has been disclosed to anyone outside of this institution, the information may no longer be protected under this authorization.

Reasons to share your information are to be able to conduct research, and to ensure that the research meets legal, institutional and/or accreditation requirements.

**Right to Access Information**

You will not be allowed to review the information collected for this research project. You do have the right to request that your medical record be released to your personal physician.

**Expiration of Permission**

Your permission to use and disclose your protected health information does not have an expiration date.

**How to Withdraw Permission**

You can withdraw your permission at any time by sending a letter to Ren-He Xu to inform him (below is his contact information).

Ren-He Xu, M.D., Ph.D., Director of UConn Stem Cell Core, 263 Farmington Avenue, ARB, Room E2041, Mail Code 3301, Farmington, CT 06030. Phone: 860-679-3363, Fax: 860-679-8345. Email: [renhexu@uchc.edu](mailto:renhexu@uchc.edu)

If you withdraw your permission you will no longer be allowed to participate in this study. If you withdraw your permission the PI and his staff will no longer be able to use and disclose your protected health information. There are exceptions to this. For example, the researchers may continue to use and disclose the protected health information that was collected for the research study prior to receiving the request to withdraw your permission.

**Questions or Complaints**

If you have any questions, concerns or complaints about your privacy rights, you may write to the Director of Patient Relations at the University of Connecticut Health Center, 263 Farmington Avenue, Farmington, CT 06030-1112. If you have a complaint, you may also write to the Federal Department of Health and Human Services (DHHS) at DHHS Regional Manager, Office of Civil Rights, U.S. Dept. of Health and Human Services Government Center, J.F. Kennedy Federal Building, Room 1875, Boston MA 02203. Complaints should be sent within 180 days of when you knew, or should have known, of the problem.

**State of Connecticut Requirement**

In this study we are not asking for information about AIDS, HIV infection, behavioral health services, psychiatric care, or treatment for alcohol and/or drug abuse. If this type of information pertains to you, there is a slight chance that it may be inadvertently disclosed during the course of the study. The State of Connecticut requires that any

University of Connecticut Health Center

release of this type of information be specifically authorized. By signing this dual-purpose authorization you acknowledge that there is a chance that such information may be disclosed.

**Permission for Use and Disclosure of Information**

You are a voluntary participant in this research study, or you are authorized to act on behalf of the participant and are doing so voluntarily. By signing you acknowledge that you have read this form, had the opportunity to ask questions, and obtain satisfactory explanations, and that you authorize the use and disclosure of protected health information as described in this form. You will receive a copy of this form after it is signed.

Signature of the research participant or the research participant's legal representative\* \_\_\_\_\_ Date \_\_\_\_\_

Printed name of the research participant and if applicable the participant's legal representative\* \_\_\_\_\_

Representative's relationship to the research subject \_\_\_\_\_

\*Please provide documentation of your status as an authorized representative

[Faint, mostly illegible text in the lower half of the page, likely bleed-through from the reverse side of the document.]

University of Connecticut Health Center

The University of Connecticut Health Center's Notice of Privacy Practice is provided to all patients and research participants. The Notice is available on-line at <http://health.uhc.edu/privacy/index.htm>. The Notice explains how your medical information may be used and disclosed and how you can get access to this information.

Please initial the appropriate choice:

You have previously received the University of Connecticut Health Center's Notice of Privacy Practice that explains your rights and the policy of the institution.

You have been provided with a hard copy of the University of Connecticut Health Center's Notice of Privacy Practice by the researcher(s) and have been given the opportunity to read it and ask questions prior to signing this form.

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Medical research may result in new products, tests or discoveries. These may have commercial value and may be developed and owned by the University of Connecticut Health Center, its faculty and/or others. Please initial to acknowledge that the intent that you will not share in the financial benefits, if any, from these products tests or discoveries has been explained to you.

You acknowledge that the provision that you will not share in the financial benefits, if any, from these products tests or discoveries has been explained.

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 Yes, we grant permission for use and disclosure of our health information.

No, we don't grant permission for use and disclosure of our health information.

Role	Printed Name	Signature	Date	Time
Female Donor				
Male Donor				

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**THE CENTER FOR ADVANCED REPRODUCTIVE SERVICES**

**CONSENT FOR CRYOPRESERVATION AND STORAGE OF EMBRYOS**

Female Name: \_\_\_\_\_ Female ID# \_\_\_\_\_

Partner Name: \_\_\_\_\_ Partner ID# \_\_\_\_\_

Address: \_\_\_\_\_

We (I), the undersigned, request, authorize and consent to the cryopreservation (freezing) and/or storage of embryos by The Center for Advanced Reproductive Services, PC (The Center), and, as appropriate, its employees, contractors, and consultants and authorized agents.

If numerous eggs are retrieved during our (my) cycle, the number of eggs exposed to sperm will be decided by us (me) and our (my) doctor. If we (I) elect to expose most or all of our (my) eggs to sperm in order to develop as many embryos as possible, any viable embryos not transferred to the uterus will be frozen (cryopreserved). We (I) understand that execution of this consent does not guarantee that embryos will be cryopreserved and the number of embryos frozen will be at the discretion of The Center staff, based upon the embryo quality and our (my) choice in consultation with our (my) physician. We (I) understand that we (I) will be notified if embryos are cryopreserved.

If a pregnancy does not occur as a result of the initial embryo transfer, if we (I) have a miscarriage, or if a successful pregnancy does occur but we (I) subsequently desire another child, the frozen embryos will be available to us (me) for thawing and transfer during a subsequent menstrual cycle. This procedure may be repeated until all the frozen embryos have been utilized. We (I) understand and agree that it is a policy of The Center to store our (my) embryos for a maximum time period of five (5) years.

On average, over 70 % of embryos survive the freezing and thawing process, so the number of embryos that are viable after thawing may be less than the number of embryos frozen. It is possible that none of the embryos will survive the freezing and thawing process. There is no guarantee that the transfer of frozen embryos will result in a successful pregnancy. We (I) have discussed The Center's pregnancy rates for frozen embryo transfers with our (my) doctor. We (I) also understand that it does not appear that the utilization of frozen embryos increases our (my) risk of having a child with a birth defect above the incidence observed in the spontaneously conceiving population. We (I) understand that both the cryopreservation and storage procedures involve the use of mechanical and/or electrical equipment. The Center will make all best efforts to maintain and monitor this equipment and provide backup in the event of an equipment failure. However, despite their best efforts, equipment failure may result in the damage or loss of one or more embryos. We (I) understand and agree that The Center shall be responsible only for acts of negligence on its part and the part of its employees, contractors, and consultants and authorized agents.

At any time during the storage of our (my) embryos, when our (my) treatment at The Center is completed, at the end of five years of storage or if The Center closes (whichever comes first) we (I) understand that we (I) have several options regarding our (my) frozen embryos in storage at The Center including:

1. Donation of the embryos to another couple or woman for their (her) own attempts at pregnancy.
2. Disposal of the embryos according to American Society for Reproductive Medicine (ASRM) ethical standards.
3. Transfer of the cryopreserved embryos from the Laboratory at the Center to another fertility center, long term storage facility or research facility.

We (I) understand that each of these options requires execution of a separate written consent form signed by both of us (me) at the time that this option is exercised.



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Consent for Embryo Cryopreservation and Storage  
Page: 2

**In the event of Death:**

1. We (I) understand, agree and consent that if *one* of us dies (PLEASE CHECK ONE AND BOTH PARTNERS SHOULD INITIAL):

- The disposition of the embryos will be left to the surviving partner.
- The embryos will be discarded according to American Society for Reproductive Medicine Ethical Guidelines

Female's Initials \_\_\_\_\_

Partner's Initials \_\_\_\_\_

2. We (I) understand, agree and consent that if *both* of us dies or if I die, as a *single woman* (PLEASE CHECK ONE AND BOTH PARTNERS SHOULD INITIAL):

- The embryos will be discarded according to American Society for Reproductive Medicine Ethical Guidelines.
- The embryos will be transported to a long term storage facility at the expense of our (my) estate.

Female's Initials \_\_\_\_\_

Partner's Initials \_\_\_\_\_

**In the event that we divorce or our relationship ends:**

We (I) understand, agree and consent that if *we divorce* or our relationship ends (PLEASE CHECK ONE AND BOTH PARTNERS SHOULD INITIAL):

- Custodial decisions and expenses will be left to the female partner.
- Custodial decisions and expenses will be left to the male partner.
- Custodial decisions and expenses will be left to the following designee (Same sex partners, please write in designee):

\_\_\_\_\_  
(Write in Designee Name)

- The embryos will be discarded according to American Society for Reproductive Medicine Ethical Guidelines.

Female's Initials \_\_\_\_\_

Partner's Initials \_\_\_\_\_

**Additional Considerations:**

We (I) understand that consents for future donation, disposal, transfer out or utilization (subsequent thaw cycle) must be signed by both individuals who signed this Cryopreservation consent, unless an applicable court decree or death of one of us supersedes it or I am a single woman.

We (I) understand and agree that the Center will store these embryos for maximum period of five years, regardless of any instructions indicated above.

We (I) understand and agree that, in any situation where there is a conflict between the parties, the embryos will be moved to a long term storage facility at our (my) expense.

*Consent for Embryo Cryopreservation and Storage*  
Page: 3

We (I) understand and agree that it is our (my) obligation to keep The Center informed of our (my) current address. If we (I) fail to do so or we (I) cannot be reached or do not respond to correspondence received from the Center, we (I) understand and agree that the embryos will be considered abandoned and will be discarded by the Center according to American Society for Reproductive Medicine Ethical Guidelines.

We (I) understand, agree and acknowledge that we (I) are (am) not married to individuals who are not parties to this informed consent.

**Storage:**

The first year of storage is included in the cryopreservation fee. At the end of the first year, we (I) will be billed quarterly, in advance, for continued storage of the embryos, up to the five year maximum storage period. If we (I) do not pay the quarterly fee in advance, we (I) will be sent a second notice and, if necessary, a third notice, by certified mail.

If we (I) do not respond within 30 days of the third certified letter, we (I) understand and agree that our (my) embryos will be considered abandoned and they will be discarded.

We (I) acknowledge that, at any time during the five year maximum storage period, we (I) can execute the appropriate consents to exercise any of the options listed above including embryo donation, disposal or transfer to another facility, or utilization in a subsequent thaw cycle. We (I) understand that consents for future donation, disposal, transfer out or utilization (subsequent thaw cycle) must be signed by both individuals who signed this Cryopreservation consent, unless an applicable court decree or death of one of us supersedes it or I am a single women.

Embryo Cryopreservation and Storage has been explained to us (me) by our (my) doctor , together with the known risks. We (I) understand the explanation that has been given to us (me). We (I) have had the opportunity to ask questions and those questions have been answered to our (my) satisfaction. Any further questions we (I) might have may be addressed to The Center staff or IVF/ET Program Director, Dr. John Nulsen at (860) 679-4580. We (I) acknowledge that IVF/ET and Embryo Cryopreservation is being performed at our (my) request and with our (my) consent.

Date:   /  /   Female Signature \_\_\_\_\_ Witnessed By \_\_\_\_\_

Date:   /  /   Partner Signature\*\*\*\* \_\_\_\_\_ Witnessed By \_\_\_\_\_

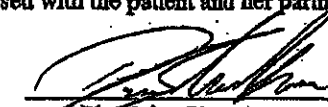
\*\*\* If no partner, write N/A

**Note: Each Signature Must Be Witnessed Separately**

**Physician Signature:**

This consent has been discussed with the patient and her partner, if any.

  /  /    
Date

  
\_\_\_\_\_  
Physician Signature

CENTER FOR ADVANCED REPRODUCTIVE SERVICES

CONSENT TO DONATE EMBRYOS

Female Name: \_\_\_\_\_ Female ID# \_\_\_\_\_

Partner Name: \_\_\_\_\_ Partner ID# \_\_\_\_\_

Address: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

We (I), the undersigned, request, authorize and consent to the donation of our (my) cryopreserved (frozen) embryos by The Center for Advanced Reproductive Services, PC (The Center), and as appropriate, its employees, contractors, consultants and authorized agents, for use by an infertile couple or woman.

We (I) understand that donation is only one of several options we (I) have for the final disposition of our (my) remaining cryopreserved embryos. We (I) may:

- 1. Use these embryos ourselves (myself) in an effort to have a child.
- 2. Request that the embryos be discarded according to the American Society for Reproductive Medicine Ethical Guidelines.
- 3. Have the embryos transferred to another facility for long term storage, for our (my) own use, or so that we (I) may donate the embryos for research.

By our (my) signatures below, we (I) exercise our (my) right to donate the remaining embryos to another infertile couple or woman. We (I) understand and consent that embryos cryopreserved after May 25, 2005 may not be donated *anonymously* unless federally mandated infectious disease testing and related requirements were completed on both the egg and sperm source within 7 days of the egg retrieval. We (I) understand we will not be paid for this donation.

We (I) understand, agree and consent that the selection of the recipient will be determined at the sole discretion of The Center for Advanced Reproductive Services, PC (The Center), and, as appropriate, its employees, contractors, consultants and authorized agents, unless we (I) have listed a specific designated recipient couple or woman.

Please check the appropriate choice and initial:

- The Center may determine the recipient(s) of these embryos.

Female Initials: \_\_\_\_\_

Partner Initials: \_\_\_\_\_

- We (I) designate the couple (woman) listed below as the recipient(s) of these embryos.

Designee \_\_\_\_\_

Female Initials: \_\_\_\_\_

Partner Initials: \_\_\_\_\_

We (I) understand that there currently are no statutes in the state of Connecticut concerning embryo donation. By our (my) signatures below, we (I) are giving up all rights to use or make decisions about our (my) embryos. Should the utilization of our (my) cryopreserved embryos by another couple result in the birth of a child, by our (my) signature(s) below, we (I) are (am) giving up all rights and claims to such a child. We (I) acknowledge that the Center will not inform us (me) if our (my) donation results in the birth of a child.

Unless we have designated our recipient(s), we pledge that we will never seek the identities of the recipients, except as allowed below or if a court orders otherwise. We (I) also understand that the Center will protect our (my) identity and will not reveal it to the recipient(s) except as allowed below or if a court orders otherwise.

However, we (I) understand that if a child born from this donation has a medical or psychological need that might be met by us (me), then the recipient(s) may contact the Center and ask that their request be relayed to us (me). Such requests may be for a medical need such as a bone marrow transplant, or, **once any child or children born from this donation are legal adults**, a request may be made by the child or children for our identities.

We (I) understand and agree that, if we have designated a recipient for these embryos, that aspects of our (my) medical care and conditions and that of the recipient may be revealed and/or discerned as part of the treatment process.

We (I) consent to any blood tests, infectious disease or genetic testing and any other tests, interviews or screening required to permit donation of these embryos as mandated by federal law. We (I) understand and consent that embryos cryopreserved after May 25, 2005 may not be donated *anonymously* unless federally mandated infectious disease testing and related requirements were completed on both the egg and sperm source within 7 days of the egg retrieval. We (I) understand that the cost of this testing may be born by the intended recipient(s). We (I) further acknowledge and consent that medical, psychological, genetic/infectious disease, technical or other considerations may contraindicate or preclude the donation of these embryos to a recipient despite our (my) request. We (I) agree that the disposition of these embryos will ultimately rely on the best medical judgement of The Center for Advanced Reproductive Services, PC (The Center), and as appropriate, its employees, contractors, consultants and authorized agents, at the time of the potential donation. We (I) agree to notify The Center of any medical condition or disease, particularly genetic diseases, that arises in us (me) or our (my) immediate family. We (I) understand and agree that if either of us (I) is adopted that the embryos cannot be donated for use in producing a pregnancy.

We (I) understand and agree that if these embryos cannot be donated for use by a recipient, for any of the reasons described above, we have two options (Please check and initial the appropriate choice):

- Discard the embryos according the American Society of Reproductive Medicine Ethical Guidelines.

Female Initials: \_\_\_\_\_

Partner Initials: \_\_\_\_\_

- Donate the embryos for use in medical research.

Female Initials: \_\_\_\_\_

Partner Initials: \_\_\_\_\_

It is our (my) understanding that all rights and responsibilities for the care of any child resulting from the donation of our (my) excess embryos will be the responsibility of the recipient couple (woman). This includes any financial burdens associated with the care and upbringing of such a child.

We (I) have had the opportunity to review this option and ask questions of our (my) physician concerning the alternative options to Embryo Donation.

The nature of Embryo Donation has been explained to us (me). We (I), understand the explanation that has been given to us (me). We (I) have had the opportunity to ask any questions we (I) might have and those questions have been answered to our (my) satisfaction. Any further questions may be addressed to The Center staff or IVF Program Director, Dr. John Nuisen at (860) 679-4580. We (I) acknowledge that Embryo Donation is being performed at our (my) request and with our (my) consent.

We (I) acknowledge this consent requires the signature of both members of the couple who signed the original embryo cryopreservation consent. We (I) agree that if an individual or couple has inherited these cryopreserved materials for their (his/her) own use or obtained the cryopreserved materials for use from a known donor, copies of these agreements and/or consents must be provided along with this consent. In that case, only the signature of the individual(s) involved in that agreement is (are) required.

**NOTE: If TWO signatures are required, BOTH signatures must be notarized. If both partners cannot appear before the notary at the same time, then the form can be duplicated and each partner can sign separately.**

\_\_\_\_\_/\_\_\_\_\_/\_\_\_\_\_  
Date Female Signature

\_\_\_\_\_/\_\_\_\_\_/\_\_\_\_\_  
Date Partner Signature\*\*\* If no partner, write N/A

**Note: Notarization of BOTH signatures is required.**

State of Connecticut )  
County of \_\_\_\_\_ )

On \_\_\_\_\_, before me, \_\_\_\_\_ (Insert name of

Notary), personally appeared \_\_\_\_\_ (List only the names of individuals who actually appeared for this signature), personally known to me (or proved to me on the basis of satisfactory evidence) to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

WITNESS my hand and official seal.

Signature \_\_\_\_\_ (Seal)

THE CENTER FOR ADVANCED REPRODUCTIVE SERVICES MUST RECEIVE THIS CONSENT FORM PRIOR TO THE TRANSFER OF THE MATERIALS. THIS FORM MAY BE MAILED TO:

John Nulsen, MD, Program Director  
The Center for Advanced Reproductive Medicine  
Dowling South Building  
263 Farmington Avenue  
Farmington, CT 06030  
Tel: 860-679-4580

**Physician Signature:**

This consent has been discussed with the patient and her partner, if any.

\_\_\_\_\_/\_\_\_\_\_/\_\_\_\_\_  
Date Physician Signature

Protocol for  
Derivation of Stem Cell Lines from Donated Human Embryos

Ren-He Xu, M.D., Ph.D., Director

Uconn Stem Cell Core, Version 2

March 11, 2007

The U Conn Stem Cell Core was established at the University of Connecticut Health Center (UCHC) in April 2006. Based on a Core Facility grant awarded by the State Stem Cell Research Program, we are charged to provide existing human embryonic stem cell (hESC) lines provided by other laboratories and related technologies to interested and eligible scientists throughout Connecticut. We are also allowed to derive new hESC lines from embryos donated by patients who have completed treatment of infertility at the Center for Advanced Reproductive Services (CARS) of UCHC. We are requesting IRB approval for this research project which covers only the procurement of embryos to be used specifically to derive hESC lines, the storage of these embryos in the U Conn Stem Cell Core's laboratory prior to derivation of hESC lines, and storage in the U Conn Stem Cell Core's laboratory of de-identified hESC lines that have been derived from these embryos. A separate protocol that covers banking of these de-identified hESC lines and distribution to other researchers (attached) has been submitted to ESCRO for approval.

Deriving new hESC lines is necessary because the existing lines are limited in number and diversity, and have potentially been contaminated by xenogenic molecules due to co-culture with animal-derived materials. HESCs cultured for a long term may develop abnormal karyotypes. In addition, procuring hESC lines with disease-related genotypes would be invaluable for research into the bases of the diseases and development of new methods of diagnosis and therapy. In this protocol, we plan to derive 5-10 hESC lines under animal feeder cell-independent or possibly animal material-free conditions with diagnosed genotypes. We will derive these hESC lines in year 1 of the state grant, characterize, stock, and distribute them in years 2 and 3. One hundred donor pairs are requested to derive the 5-10 hESC lines. This number is based on the wide range of the

success rate of hESC derivation in the literature and the big variation of the number and quality of embryos from the donors.

The staff of the CARS at UCHC will refer potential donors to their website which has a list of disposition options for of their patients' excess embryos. Among the options they may chose is to donate their excess embryos to the U Conn Stem Cell Core for research. This option will provide them with contact information to the U Conn Stem Cell Core Administrator. A specific research donation consent form for this project will be given to the donors by the U Conn Stem Cell Core Administrator. This donation consent form gives some explanation to the donation process. The donors may discuss any questions or concerns with the U Conn Stem Cell Core Administrator, and if there are questions that the U Conn Stem Cell Core Administrator can not answer, she will forward the contact information to the U Conn Stem Cell Core Director, who will address them. The donation consent form will be completed by the donors of both gametes that were used to produce the embryo when they have made the decision to donate. The donated embryos will be transferred from the CARS to the U Conn Stem Cell Core. The embryo vials that accompany the embryos will contain the donor's identifiable information. Embryos will be de-identified when they are thawed for use by being assigned a random code by the U Conn Stem Cell Core Administrator. The U Conn Stem Cell Core's database is kept in a locked cabinet and a link will be maintained between the code and the donor information. Only the U Conn Stem Cell Core Administrator and Director will have access to the key to the codes, and will agree not to use or disclose this information to any investigators who receive hESC lines derived from the embryos.

HESCs will be derived from the donated embryos, expanded, maintained at the U Conn Stem Cell Core, and distributed to researchers for study of human development and of disease treatment. The protocol to permit the distribution of de-identified hESC lines from the U Conn Stem Cell Core will be approved by the ESCRO committee prior to any such distribution. Embryos that are obtained for this research project will not be transferred from the U Conn Stem Cell Core to other researchers.

Upon approval of this protocol by the IRB and approval of a separate protocol by the ESCRO, embryo donation may start as early as March 15, 2007, and hESC derivation shortly after.





University of Connecticut  
*Office of the Vice Provost for Research & Graduate Education*

ESCRO  
(Embryonic Stem Cell  
Research Oversight)

March 23, 2007

Ren-he Xu, Ph.D., MD  
Department of Genetics and Developmental Biology  
Code 3301  
University of Connecticut Health Center  
263 Farmington Avenue  
Farmington, CT 06030

Dear Re-he,

This is to let you know that your ESCRO Protocol #2006-025 "Human ES Cell Core at the University of Connecticut and Wesleyan University" has received final ESCRO approval in accordance with the mutually agreed upon restrictions and qualifications outlined previously in the contingent approval letter of March 22. This letter attests to the fact that your protocols have also received IRB approval, and that the ESCRO has found your protocols to be in agreement with Ct.Gen.Stat.19a-32d.

The following activities are approved:

1. You are approved to receive donated supernumerary IVF human embryos from up to 100 donor pairs from the Center for Assisted Reproduction Services at UCHC for the ultimate purpose of deriving hESC lines.
2. You are approved to bank, culture, and distribute the NIH-registered hESC lines WiCell H1, H7, H9, H13, H14 and the ESI HESC-3 derivative envy. You are also approved to bank, culture, and distribute the non-NIH-registered lines HUES-1, HUES-3, and HUES-9 obtained from the Melton Lab at Harvard.
3. Distribution of any new cell lines derived at the UConn-Wesleyan Core may not occur without an approved ESCRO protocol amendment.. The banking and culture of additional lines imported from sources external to the institution also require an approved ESCRO amendment.

*An Equal Opportunity Employer*

438 Whitney Road Extension Unit 1039  
Farmington, Connecticut 06269-1039  
Telephone: (860) 486-2215  
Facsimile: (860) 486-5381  
e-mail: anne.hiskes@uconn.edu  
web: www.escro.uconn.edu



**ESCRO approval is for one year after the date of final approval. A requirement for renewal for a second year is the existence of a written plan and timetable for implementing GMP for deriving and maintaining clinical quality hES cell lines.**

**Please send the ESCRO copies of your MTAs for any cells imported into the institution for hESC research as they become available.**

Best wishes,

*Anne L. Hiskes*  
**Anne L. Hiskes**  
**Chair, University of Connecticut ESCRO**  
**Associate Professor, Philosophy**  
**Director, Program on Science and Human Rights**

**Cc. Dr. Marc Lalande**  
**Ms. Leann Crandall**  
**Dr. Leonardo Aquila**  
**Dr. Brenton Graveley**  
**Dr. Alexander Lichtler**

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University of Connecticut  
Office of the Vice Provost for Research & Graduate Education

ESCRO  
(Embryonic Stem Cell  
Research Oversight)  
Ren-he Xu, Ph.D. MD  
Department of Genetics and Development Biology  
University of Connecticut Health Center unit 3301  
263 Farmington Avenue  
Farmington, CT 06030

RE: ESCRO Protocol 2006-025

April 23, 2008

Dear Dr.Xu:

This letter continues your ESCRO Protocol 2006-025 until May 1, 2009.

A. Amendments Approved

1. Change in Staff: Adding Ge Lin: Personnel leaving: Elpida Fragouli and Caixia Yang
2. Change in room: from E3045 (ARB) to E2011(ARB)

B. Protocols continued until May 1, 2009:

1. The research activities as described in ESCRO Protocol No. 2006-025 "Human ES Cell Core at the University of Connecticut and Wesleyan University".
2. Banking, culture and distribution of NIH-registered lines WiCell H1, H7, H-9, H13, H14, and ESI HESC-3 derivative envy and the non-NIH-registered lines HUES-1, HUES-3, and HUES-9 obtained from the Melton Lab at Harvard.
3. Supplemental protocols and operating procedures as referenced in the ESCRO approval letter of September 24, 2007.

**Future Concerns:** The ESCRO committee has requested that I convey two of its continuing concerns and urge you to consider them in planning future activities of the Stem Cell Core. One concern is the need for ethnically diverse stem cell lines to ensure that stem cell research can address the needs of a racially and ethnically diverse population. A second concern is that there be some level of discussion and planning, however preliminary, for the future derivation of stem cell lines under GMP conditions so that their later therapeutic use remains an open possibility. We are happy to work with you on these issues.

Best wishes,

Anne L. Hiskes  
Chair, University of Connecticut ESCRO  
Associate Professor, Philosophy  
CC: Marc Lalande Dr. Don Saha

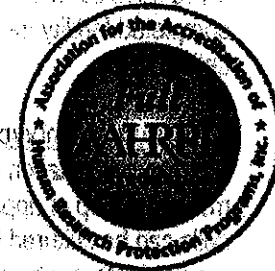
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438 Whitney Road Extension Unit 1039  
Storrs, Connecticut 06269-1039

telephone: (860) 486-2215  
Facsimile: (860) 486-5381  
e-mail: anne.hiskes@uconn.edu  
web: www.escro.uconn.edu



University of Connecticut Health Center  
Human Subjects Protection Office



**To:** Ren-He Xu  
Principal Investigator  
Genetics & Developmental Biology  
MC-3301

**From:** IRB Office  
MC-3926

**Date:** February 4, 2008

**Re:** **Final Approval for Continuation of Project**  
**Review Category:** Full Board  
**IRB Number:** 07-159-A **IRB Panel:** Panel 04 **Meeting Date:** 1/16/2008  
**Project Title:** Derivation of Stem Cell Lines from Donated Human Embryos  
**Sponsor / Funding Agency:** Connecticut Department of Public Health~  
**Approved Investigators:** Xu, Ren-He-Crandall, Leann J.-Root, Sierra Seaman~  
**Risk Level:** Minimal  
**Protocol Version:** Version 2 of 3/11/07 **Consent Version:** Version 2 of 3/11/07

The study referenced above was approved for continuation on 1/31/2008 and remains valid through 2/14/2009. Should you wish to continue this study beyond that date you must apply to the Institutional Review Board Office for continuation of the study. The modification submitted with this request was also reviewed and was approved 1/16/2008. If applicable to your study, copies of the stamped and dated consent form must be used when obtaining consent and the form must be signed and dated by the participant and the individual obtaining consent.

All approved studies are subject to audit by the Research Compliance Monitor. Our Department of Health And Human Services Federal Wide Assurance Number is 00006064.

It is the responsibility of the PI to ensure that all investigators and staff associated with this study follow the approved protocol, use the approved forms and comply with all IRB policies including the reporting policies for non-compliance with the approved protocol, applicable regulations or the requirements or determinations of the IRB; unanticipated problems involving risk to subjects or others; adverse events; and any suspensions or terminations of IRB approval. Policies are available from the web site, <http://resadm.uhc.edu/hspo/>.

Approval from the IRB for any modification or addition to the protocol, forms or recruitment materials, must be obtained prior to implementation, except when necessary to eliminate immediate hazards to the subjects in which case the change must be reported within 5 days of occurrence. Administrative changes that pose no increased risk (e.g. correction of typographical errors, approval of an advertisement) may be approved through expedited review however the Chair reserves the right to send any request for modification to the full board.

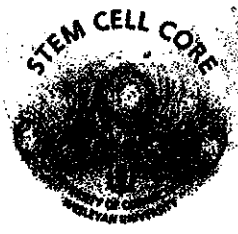
If the risk level noted above, as determined by the Board, is minimal, you may request expedited continuation under category 9 providing that the study does not involve an IND, IDE or prisoners and that no additional risks are identified over the coming year.

c: Leann Crandall MC-3301  
Isolde Bates MC-3301  
Dhanonjoy Saha

Equal Opportunity Employer

263 Farmington Avenue  
Farmington, Connecticut 06030-3926

Telephone: (860) 679-3054  
Facsimile: (860) 679-1005



**Embryo donation for stem cell research**

If you have used the Center for Advanced Reproductive Services and have completed fertility treatment, you may wish to give remaining frozen embryos to embryonic stem cell research.

**About human embryonic stem cells**

The pre-implantation embryo, at about four or five days of development, contains an inner cell mass, a group of approximately 100 cells from which embryonic stem cells may be derived. These cells can be cultured by researchers in a laboratory. What makes these cells unique is that they are pluripotent, which means they have the potential to form any kind of cell in the body, and many of them can be formed in a dish in the laboratory. This quality gives them a special ability to be used in the laboratory to study many types of disease. They can provide a tool to study early human development to which researchers did not previously have access. They may also be used in drug development to screen out medications which have harmful side effects to human beings that may not be detectable in animal trials.

**State of Connecticut Stem Cell Research Program**

On June 15, 2005, Public Act 05-149 was signed into law by the Governor of the State of Connecticut. The goal of this act is to provide 100 million dollars in state public funding to attract new research scientists and businesses to Connecticut. As carefully determined by the Connecticut Stem Cell Research Peer Review and Advisory Committees, almost 20 million dollars in funding has been provided to stem cell researchers in Connecticut. Dr. Ren-He Xu's laboratory is one of these recipients.

**About Dr. Ren-He Xu**

Dr. Ren-He Xu has been studying human embryonic stem cells in the laboratory for more than six years, five with Dr. James Thomson, who discovered the technique to first derive them. Since leaving Wisconsin, Dr. Xu has set up a Stem Cell Core Laboratory at the UConn Health Center to share his considerable expertise with Connecticut researchers. He aims to derive human embryonic stem cell lines to study genetic disease and early human development.

**For more information**

If you would like more information about the process by which to donate your frozen embryos for research, please contact the University of Connecticut Stem Cell Core administrator at 860-679-8350. Participation is strictly voluntary.



**From:** Xu, Ren-He  
**To:** HESCREGISTRY (NIH/NIDCD)  
**Cc:** Carroll, Dana  
**Subject:** Re: New hESC Registry Application Request #2009-ACD-005  
**Date:** Tuesday, May 04, 2010 7:41:41 AM  
**Attachments:** Approval\_ConfMod\_ICF v2\_020408.pdf

Hi Dr. Gadbois,

Please see my reply below. Thanks.

Ren-He Xu

-----  
 Ren-He Xu, M.D., Ph.D., Associate Professor  
 University of Connecticut Stem Cell Institute  
 Department of Genetics and Developmental Biology  
 University of Connecticut Health Center  
 263 Farmington Avenue  
 ARB, Room E2041  
 Farmington, CT 06030-3301

Phone: 860-679-3363  
 Fax: 860-679-8345  
 Email: renhexu@uchc.edu  
 Web: <http://genetics.uchc.edu/faculty/xu.htm>

On 29/04/2010 1:38 PM, "HESCREGISTRY (NIH/NIDCD)" <hescregistry@mail.nih.gov> wrote:

- > Hello Dr. Xu and Ms. Carroll,
- >
- > During the review of this submission, the ACD Working Group has raised the
- > following questions:
- >
- > 1) We note that your submission indicates donation of the embryos in 2008, and
- > the consent form is stamped with IRB approval valid from November 24, 2008 -
- > February 14, 2009. Are we seeing the consent form that was used at the time
- > of the donations? If there is another version of the consent form that was
- > used for these donations, please provide that version for review.

Yes, there was another version of the IRB approved consent form (attached) that covered the period from Jan. 31, 2008 to Feb. 14, 2009. This form was used for the donations of the embryos, which led to the derivation of CT1-4 hESC lines.

- >
- > 2) Please confirm the dates (month and day) of the donations of the embryos
- > used to derive these cell lines.

The dates for donations of the embryos used to derive the four hESC lines are as follows:

[ April 30, 2008 for CT1 and CT2

Sept. 11, 2008 for CT3 and CT4

- >
- > 3) Finally, we note that the ESCRO approval letter of March 23, 2007, states
- > that "Distribution of any new cell lines derived at the Uconn-Wesleyan Core
- > may not occur without an approved ESCRO protocol amendment." Is there anything
- > related to this requirement that you would want to list in the "Provider
- > Restrictions" section so that potential requesters of the cell lines would
- > know more about this process?

I contacted Dr. Audrey Chapman, the chair of our institutional ESCRO (now SCRO). She told me that " The language refers to the need of the Core to get ESCRO approval before it can distribute a new line and for (University of Connecticut) researchers to submit an amendment form when they want to use an additional hESC line. There are no restrictions on the use of the cells". So there is no need to change the current requirements I listed in the "Provider Restrictions" section.

- >
- > We appreciate your assistance as we continue with the review process.

> Sincerely,  
 > Ellen Gadbois

> Ellen L. Gadbois, Ph.D.  
 > Office of Science Policy Analysis  
 > Bldg 1 Room 218D  
 > National Institutes of Health  
 > voice: 301-594-2567  
 > fax: 301-402-0280

> -----Original Message-----  
 > From: Xu,Ren-He [mailto:RENHEXU@uchc.edu]  
 > Sent: Wednesday, April 14, 2010 11:43 AM  
 > To: HESCREGISTRY (NIH/NIDCD)  
 > Cc: Carroll,Dana  
 > Subject: Re: New hESC Registry Application Request #2009-ACD-005

> Hi Dr. Gadbois,  
 >  
 > Sorry for missing my answers to your questions. Please see below.  
 >  
 > Thank you very much!

> Ren-He

> On 13/04/2010 12:06 PM, "HESCREGISTRY (NIH/NIDCD)"  
 > <hescregistry@mail.nih.gov> wrote:

- >> Hello Dr. Xu,
- >>
- >> Thanks for your email. I can't find your response to my first question below:
- >> "1)Could you please confirm that the lines in this submission were derived
- >> from embryos for which both members of the couple seeking reproductive
- >> treatment (unless it was a single woman) gave consent to donate for research?
- >> The protocol refers to obtaining consent from both GAMETE donors, but we need
- >> confirmation that if either of the members of the couple seeking reproductive

>> treatment was not a gamete donor, his or her consent was still obtained."



> Yes, both members of the couples seeking reproductive treatment gave consent  
> to donate their embryos for research (derivation of human ES cell lines),  
> and both members were gamete donors.

>> Did you mean to reply within the email or attach a response? I do have all  
>> the  
>> ESCRO documentation.

>> Thanks again,  
>> Ellen Gadbois

>> Ellen L. Gadbois, Ph.D.  
>> Office of Science Policy Analysis  
>> Bldg 1 Room 218D  
>> National Institutes of Health  
>> voice: 301-594-2567  
>> fax: 301-402-0280

>> -----Original Message-----

>> From: Xu, Ren-He [<mailto:RENHEXU@uchc.edu>]  
>> Sent: Thursday, April 08, 2010 3:10 PM  
>> To: Gadbois, Ellen (NIH/OD) [E]  
>> Cc: HESCREGISTRY (NIH/NIDCD); Carroll, Dana  
>> Subject: Re: New hESC Registry Application Request #2009-ACD-005

>> Dear Dr. Gadbois,

>> Please see below my answers to your questions and also attached the documents  
>> you required. Our Signing Official Dana Carroll concurred with my answers.

>> Thank you very much!

>> Sincerely,

>> Ren-He Xu

>> -----  
>> Ren-He Xu, M.D., Ph.D., Associate Professor University of Connecticut Stem  
>> Cell Institute Department of Genetics and Developmental Biology University of  
>> Connecticut Health Center  
>> 263 Farmington Avenue  
>> ARB, Room E2041  
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>> Web: <http://genetics.uchc.edu/faculty/xu.htm>

>> On 01/04/2010 10:35 AM, "Gadbois, Ellen (NIH/OD) [E]" <[gadboisel@od.nih.gov](mailto:gadboisel@od.nih.gov)>  
>> wrote:

>>