Transporting Either CHIP or AHIP Cell Products to the Clinical Infusion Site			
SOP# AHIP 2.16	Ver # 1	Author: Florinna Dekovic	
Implementation Date: on-file		Reviewed By: on-file	Date Reviewed: on-file

1.0 PURPOSE: This SOP explains the steps necessary for transporting an islet product to the clinical infusion site for a recipient patient. The islet product is a time-sensitive product and a biologic material that must be carefully handled and transported with caution.

Both types of islet products (**CHIP** or Clinical Human Islets, Pancreas - under an IND; and **AHIP** Autologous Human Islets, Pancreas, HCT/P 351 product) are cellular therapy products manufactured under GMP at the HICTF and have 6 hours expiration times. Transport of these products must be carefully coordinated and delivered in a **timely manner.**

2.0 SCOPE and RESPONSIBILITIES:

2.1 Scope:

2.1.1 The intent of this SOP is to:

- Ensure both safe transport of the cell therapy product, and delivery to the intended recipient.
- Prevent accidental exposure of personnel to the biological material.

2.1.2 The clinical infusion site for the islet cell product at UCSF is the Radiology Department at the UCSF Parnassus campus.

2.1.3 Alternately, the patient infusion site may be at another institution that contracts the manufacturing services of the HICTF and GMP Facility (i.e. UCLA).

2.1.4 Unless the cell product material is being moved within a single campus building, packaging, labeling and handling requirements must be strictly followed while the material is transferred through "public domain."

2.1.5 Packaging and transportation of biological materials are subject to strict UC, State, Federal AND international regulations.

2.2 Responsibilities:

2.1.1 The Islet Manufacturing Manager coordinates all aspects of delivery of the islet product.

2.1.2 The QA Manager approves cell product transport after process control steps have been completed.

2.1.3 Islet manufacturing staff transports and completes necessary documents to assure proper receipt of the cell product at the clinical infusion site.

2.1.4 The QA Manager oversees that this SOP is implemented, that all transports forms and "Chain of Custody" type forms are filed, and periodically audits transport records to ensure continued compliance.

3.0 DEFINITIONS and ABBREVIATIONS:

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3.1 Definitions:

- Double verification - the act or process of two people verifying concurrent information.
- *Islet Product Release Form* – this is a multipurpose form serving as the chain of custody and product Certificate of Analysis or CofA. This form is approved by QA and signed by the clinician, and must accompany the cellular product to the recipient patient infusion site.
- Product ID or batch lot number – this is the unique identifier assigned to each islet cell product manufactured at the HICTF. This number is assigned at the beginning of islet lot manufacturing; it is noted on each manufacturing form, label and testing form.
- Patient Infusion Site – location where the recipient study patient is to receive the islet cell product.
- Primary container - refers to the sterile bag that holds the isolated cells. It is the "final product bag" to which the product ID label or product ID tag is affixed. Depending upon the total number of cells isolated, there may be more than one bag per manufacturing lot.
- Secondary container – refers to the validated transport or shipping box that maintains the cellular product while in transit to the patient infusion site.
- Transport forms – these are QA forms that document the appropriate packing of the cell therapy product and provides proof that the cell product was likewise received, in acceptable condition at the infusion site.

3.2 Abbreviations:

- AHIP – Autologous Human Islets, from Pancreas
- CHIP – Clinical Human Islet Product, from Allogeneic pancreas
- CofA - Certificate of Analysis
- ID - identification
- EHS - Environmental Health and Safety
- GMP – Good Manufacturing Practices
- GTP – Good Tissue Practices
- HICTF – The Human Islet and Cellular Transplant Facility
- HCT/P – Human Cells and Cellular-Tissue based products (FDA 21 CFR, section 1271 nomenclature)
- IPA - Isopropyl alcohol
- PPEs - Personal Protective Equipment
- QA – Quality Assurance

- QAU – Quality Assurance Unit
- QIR - Quality Improvement Report form

4.0 SAFETY and QUALITY CONTROL:

4.1 Always follow Universal Precautions.
4.2 For handling biologic samples per UCSF policy, see SOP QA 1.90 – "Policy for Lab Safety."
4.3 Wash hands after handling and packing cell therapy product.
4.4 Check that a ***validated*** transport box or shipping container is used in this SOP.
4.5 The transport container must be shatter and leak resistant; surface must be easily cleanable; there must be sufficient room to hold coolant and absorbent packing material.
4.6 Use 70% IPA or 10% bleach solution to decontaminate the exterior surfaces of transport container prior to use.
4.7 In case of spillage or leakage, persons assigned to transport islet cell product must be trained in emergency procedures per UCSF EHS policy.
4.8 HICTF and GMP Facility manufacturing staff may use the UCSF Intercampus Shuttle System to transport cellular products provided staff have taken EHS training on packaging and shipping biological materials.

5.0 MATERIALS, REAGENTS, and EQUIPMENT:

5.1 Cell therapy product - contained in one or more bags, depending upon the final number of cells procured.
5.2 Islet Bag Label(s) - placed on the cell product bag(s) at the time of product-release.
5.3 Transport Igloo or insulated Thermo Safe box
5.4 Thermasure™ Temperature Stabilizer
5.5 Temperature monitor tag, single-use type; 2-8°C range
5.6 Islet Cell Product Release Form
5.3 Universal Biohazard sticker (placed on islet bag label(s)

6.0 SPECIAL NOTES:

6.1 Description of Thermasure™ Temperature Stabilizer:

- This is a gel pack used with a well-insulated transport cooler or container to provide temperature stability. For transport of islet product at 2-8°C, place the gel pack, flat in a refrigerator until it is completely solid to activate it. The Thermasure™ pack will maintain a 2-10°C range during transport.

7.0 PROCEDURE:

7.1 General considerations:

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7.1.1 Person transporting islet cell product must be prepared for "emergency procedures" (e.g., contact names and information, spill cleanup kit readily available, disinfection protocols, etc.).

7.1.2 Never transport the islet cell product directly in your hand or lab coat. A secondary container or transport container must be used!

7.1.3 Cell product must not be at risk for spilling during transportation.

7.1.4 Cellular product should be delivered directly to the patient infusion site.

7.2 Prior to transporting the islet cell product, verify that the following are done:

7.2.1 QA has approved the Treg manufacturing *Batch Documents*. (See SOP AHIP 2.14 – "Reviewing the Manufacturing Batch Records and Source Documents.")

7.2.2 Cell product release criteria have all been met

7.2.3 The *Islet Cell Product Release Form* is completed.

7.2.4 *Product ID Label* is affixed to the primary cell product container.

7.2.5 Double verification of the *Product ID Label* is performed (see 7.4, below).

7.3 Evaluate the suitability of the transport container:

7.3.1 Is the container designated to transport islet cell product? If yes, proceed. Otherwise contact QA Manager to identify a suitable container.

7.3.2 Visually inspect box for gross contamination. Disinfect container if necessary. Let air dry before using.

7.4 Before boxing the product, perform a final double-verification of cell product identity:

7.4.1 Check and review cell product label information:

- Does cell product ID label match the accompanying documents? If yes, proceed. Otherwise, contact QA Manager to evaluate manufacturing Batch Documents.
- Is ID label or ID tag affixed to cell product? If yes, proceed.
- Inspect the integrity of the cell product primary container for leakage or breakage. If acceptable, proceed.

7.5 Pack the islet product per SOP AHIP 2.15 – "Labeling and Packing the Islet Product"

7.6 Check that a temperature monitor is secure and visible in the container.

7.7 Process-control steps over delivery of cell product to infusion site:

7.7.1 Before the cell product is transported, manufacturing Manager must confirm that study recipient is at the clinical infusion site indicated during coordination.

7.7.2 For UCSF recipients:
Place transport container in the delivery vehicle and proceed directly to the UCSF clinical infusion site. Alternatively, the UCSF Intercampus Shuttle System may be used, provided an HICTF staff travels with the transport container on the shuttle.

7.7.3 For non-UCSF recipients:
Ascertain that all travel arrangements have been coordinated with ground or air courier.

7.7.4 Keep in touch with the courier during the entire transport process and ascertain that product is hand-delivered to designated person at clinical infusion site.

7.8 Clinical Infusion site personnel receives, unpacks and inspects islet cell product

7.9 The clinician at the receiving site signs the *Islet Cell Product Release Form* to indicate receipt and responsibility of the cell therapy product.

7.10 Though the receiving site should keep the original, arrange for a copy of the *Islet Cell Product Release Form* to be faxed to the HICTF (415) 502-7712 or scanned to the QA Manager.

7.11 Arrange for return of packing supplies to the HICTF Manufacturing Facility:

7.11.1 Upon return of packing supplies, place materials in the Quarantine Room for evaluation and decontamination.

7.11.2 Throw away unacceptable packing supplies.

8.0 CORRECTIVE ACTIONS:

8.1 Situations when cell product must be held in quarantine at the HICTF for the following:

8.1.1 Arrangements with the Infusion site are not confirmable. Islet Manager will find out why there is a problem and hold the cell product in quarantine indefinitely until further notice.

8.1.2 A discrepancy between information on the Product ID label or the forms is discovered. Leave cell product in quarantine until resolution is achieved by the QAU.

8.1.3 Islet cell product primary container is leaking or damaged. Leave cell product in quarantine until resolution or other type of disposition is achieved.

8.1.4 Temp monitor on the product has unacceptably changed color during transport. Leave cell product in quarantine until resolution or other type of disposition is achieved.

8.2 For each incident, immediate attention is required! Fill out a QIR form and note corrective action measures. After resolution, give the QIR for to the QA Manager for error management and process improvement evaluation with the QAU.

9.0 SOP REFERENCES:

9.1 SOP AHIP 2.14 – Reviewing the Manufacturing Batch Records and Source Documents
9.2 SOP AHIP 2.15 – Packing and Labeling the Final Islet Product
9.3 SOP QA 1.90 – Policy for Lab Safety

10.0 REFERENCES:

10.1 FDA: 21 CFR Part 1271 – Current Good Tissue Practice (GTPs) for Manufacturers of Human Cellular and Tissue-Based Products; Inspection and Enforcement

10.2 UCSF Office of Environmental Health and Safety Biological Safety Manual, current edition

10.3 Sebra Haemonetics Instruction Manual for the ThermaSure™ Gel Pack – 12900001 Rev. N – Sept 2004

10.4 Textbook – "Cellular Therapy: Principles, Methods, and Regulations" edited by Areman, E and Loper, K.

11.0 APPENDIX:

- Transport container label
- Igloo transport container
- Sebra ThermaSure gel pack

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- Transport Container Label
  (to be placed in plastic sleeve on the side of the Transport Container)

This is a medical specimen

» DELIVER PROMPTLY – DO NOT X-RAY

STORE PRODUCT AT TEMPERATURE INDICATED ON COMPONENT LABEL

In an emergency, please call: **HICTF & GMP Facility QA Office**

At: **(415) 502-7711** or Cell phone: (_____)

UCSF HICTF and GMP Facility
1855 Folsom St, San Francisco, CA 94103

DO NOT LEAVE UNATTENDED

Deliver to: _____

Contact Person: _____

Telephone: _____ Cell or Pager: _____

This product intended for a Recipient Patient. Product ID **#** _____

Patient MR #: _____ Recipient Study ID:_____

- Igloo Transport container:

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- Thermasure gel pack or Temperature Stabilizer, Model 1290:

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