**Biological Fluid Sample Transport Standard Operating Procedure**

1. **Purpose**

These guidelines were developed to train UCSF medical center clinical laboratory and UCSF research staff on the appropriate techniques to package and transport clinical samples between USCF campuses, utilizing the UCSF medical center clinical laboratories courier.

1. **Scope**
   1. The intent of this SOP is:
      1. To ensure safe transport of clinical specimens and delivery to the intended recipient.
      2. Prevent accidental exposure of personnel to the biological material.
   2. Packaging and transport of biological materials are subject to strict UC, state, and federal regulations.
   3. This SOP covers transport of Category B infectious substances. Category A infectious substances should not be transported using this method.
2. **Responsibilities**
   1. The researcher that packages clinical specimens is responsible for ensuring that biological material is properly packaged and labeled.
   2. Clinical Lab staff is responsible for sealing the outer packaging and coordinating the courier pickup.
3. **Definitions:**

* Category A infectious substance - any infectious substance which is transported in a form that, when exposure to it occurs, is capable of causing permanent disability, life-threatening or fatal disease in otherwise healthy humans or animals.
* Category B infectious substance - any infectious substance that does NOT meet criteria for inclusion in Category A. Category B infectious substances include diagnostic or clinical specimens.

1. **Safety**
   1. Always follow universal precautions when handing clinical specimens.
   2. Anyone handling, packaging, or transporting hazardous materials must complete the appropriate safety training. Blood-borne pathogen training must be completed on an annual basis. Safe Shipping training must be renewed every two years.
2. **Materials, Equipment, and Forms**
   1. Primary container - leak-proof collection container, such as a blood collection tube.
   2. Secondary container - leak-proof secondary packaging that the primary container is placed within, such as a Ziploc bag or screw-cap plastic container.
   3. Absorbent material - absorbent material such as cotton balls or desiccant pack must be able to absorb the entire contents of the primary container(s) so that any leak will not compromise the integrity of the outer packaging.
   4. Outer packaging - hard-sided outer container used for transport, such as an Igloo Transport Cooler.
   5. UN3373 Biological Substance Category B Label – label required on the outer packaging of all Category B shipments.
3. **Methods**
   1. Submit a specimen transport request form for your protocol in order to initiate service.
   2. Visually inspect the primary collection container to make sure it is properly sealed.
   3. Pack the specimen container inside a secondary container.
   4. The secondary container must be smaller than **6 inches wide x 11 inches tall by 4 inches thick**. If the secondary container is larger than these dimensions, the Clinical Research team must provide an outer container with a handle for carrying, such as an Igloo cooler.
   5. Place absorbent material between the specimen container and the secondary packaging. The absorbent material must be able to absorb the entire contents of the specimen container(s) so that any leak will not compromise the integrity of the outer packaging.
   6. Create a requisition of all samples included in the transport container.
   7. The requisition must include the contact information for the sender and the recipient (name, phone number, and address).
   8. Verify that the samples included on the requisition match the contents of the secondary container.
   9. Attach the requisition to the secondary container (or attach to the outer container if the secondary container is larger than the dimensions specified in step 7.4).
   10. Label the container with “RESEARCH”.
   11. Label the container with the destination clinical lab (ex. “Deliver to Mission Bay Clinical lab”).
   12. The Clinical Research Coordinator (or other study team member) sending samples should notify the recipient so they expect the delivery, and pick up the specimens when they arrive at the receiving Clinical Laboratory location.
   13. Place the secondary container inside the outer packaging for transport to a Clinical Laboratory drop-off location.
   14. Deliver the package to the aliquot room at a UCSF Clinical Lab specimen drop-off location. Hand the package to a Clinical lab staff member within the aliquot room.
   15. Clinical lab staff will place the secondary container inside a designated green drop-off container (or leave the outer container if the secondary container is larger than dimensions referenced in step 7.4). The green container has three compartments to transfer specimens at different temperatures.
       1. Frozen compartment: contains dry ice to transport frozen specimens.
       2. Refrigerated compartment: contains refrigerated gel packs to transfer refrigerated specimens.
       3. Room temperature compartment: specimens will be transported at ambient temperature.
   16. See attached list for Courier pick-up times and locations.
   17. Clinical Lab staff will label and seal the green outer container and coordinate delivery.
   18. The outer packaging must be marked with a UN3373 Biological Substance Category B Label.
   19. Label the outer packaging with the name, the phone number and address of the shipper and the consignee.
   20. The courier will transport the green outer container to the recipient lab.
   21. Receiving Clinical Lab staff will retrieve the CRC specimen secondary container from the green container and place them in a designated yellow CRC pick-up bin at the receiving location.
   22. If the CRC Lab personnel do not retrieve the specimens from the delivery location, the clinical laboratory personnel will call the contact number listed on the secondary package to remind the research staff they have a package in their pick-up box.
4. **Applicable References, Regulations and Guidelines**
   1. Hazardous Materials Transportation - Code of Federal Regulations, Title 49, Parts 171-177
   2. Good Laboratory Practices – Code of Federal Regulations, Title 21, Part 58
   3. Best Practices for Repositories I. Collection, Storage and Retrieval of Human Biological Materials for Research. International Society for Biological and Environmental Repositories (ISBER), <http://www.isber.org>
   4. UCSF Biosafety Manual, http://www.ehs.ucsf.edu/biosafety-manual
   5. Pointers on Shipping Clinical Samples, Biological Substance Category B (UN3373) and Environmental Test Samples. Fedex, <http://images.fedex.com/downloads/shared/packagingtips/pointers.pdf>
   6. Packaging Guidelines for Clinical Samples. Fedex, <http://images.fedex.com/us/packaging/guides/Clinical_fxcom.pdf>