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Instructions for Shipping samples to the Center for Environmental & Systems Biochemistry (CESB)

Sample collection parameters, by CESB procedures:

- For plasma:
  - Blood to be collected in purple top vacuum tubes and chilled on ice.
  - Blood to be centrifuged in collection tubes within 30 minutes of collection
  - Plasma to be removed promptly and at least 1.0 milliliter (ml) flash frozen in polypropylene, screw-cap tubes.
  - Plasma to remain at -80 degrees Celsius, or lower, until shipment.
- For tissue:
  - Excised tissue to be rinsed in PBS, to remove excess blood and fluid, than in nanopure water to remove salts.
  - Tissue flash frozen in liquid nitrogen; free floating so as not to stick to foil or inside of tubes.
  - Frozen tissue placed in tubes or foil marked with unique identification.
  - Tissue to remain at -80 degrees Celsius, or lower, until shipment.
- For Cell Culture:
  - Adherent cells cannot be shipped for analysis without chemical quenching (see below).
  - Non-adherent cells to be centrifuged and rinsed with PBS to remove media completely.
  - Be sure that cell pellet is finally collected in a centrifuge tube that will tolerate liquid nitrogen temperatures (we recommend USA scientific products). Remove ALL buffer after final rinse and flash freeze in liquid nitrogen.
  - Frozen cell pellets to remain at -80 degrees Celsius, or lower, until shipment.
- For Media and any extracts (polar or non-polar):
  - Mark both the top and the sides of the tubes with unique identification.
  - Organized tubes in a 2 inch cardboard freezer box and identify your research group and the experiment on the SIDE of the box lid.

Metadata requirement:

- A copy of the current metadata template for either tissue or cell culture experiment should be obtained from a research coordinator at CESB.
- Complete the metadata and return to CESB PRIOR to shipping samples.
- Research coordinators at CESB will modify the filled metadata file as needed and return for confirmation that the experiment and samples are described adequately to provide for best possible analysis and consultation.
- No work can be performed on any sample without verified metadata.

Sample tracking requirements:

- Tubes containing samples must be marked with UNIQUE identification.
    - Since samples will be coming from more than one location, uniqueness will be most likely if the identification includes a code for the site of origin. Three letters is probably sufficient.
    - Patient number alone is probably insufficient.
- Identifier(s) on the tubes must match a hard copy manifest included in the shipping container. If more than one tube is used to contain a single sample, please note the number of tubes included for each sample ID. The total count of both samples and tubes should be included in the manifest.
- If there is a mixture of tube sizes or tube types in one shipment, please note that fact on the manifest.

Communicating with CESB regarding your samples:

- Upon confirmation with Dr. Higashi and Alicia Colliver of account status, the sample manifest should be electronically submitted (emailed) to Research Coordinator Terri Cassel (terricassel@gmail.com).
- A date to receive the samples will be agreed upon with the research coordinators.
- Once samples have been shipped, please email the shipping company's tracking number to the research coordinators.
- Research coordinators will email confirmation when samples are received.

Shipping samples:

- Frozen samples should be sealed in zipper top plastic bags, to exclude moisture and preserve sample labels.
- Frozen samples should be SURROUNDED in Dry Ice within an appropriate Styrofoam shipping container. Dry Ice needs to be on top of the samples, as well as underneath.
- The manifest should be placed between the Styrofoam box and a cardboard box containing it, or placed in a zipper bag and set on top of the dry ice in the Styrofoam box.
- Samples must be shipped overnight.