The Submitter’s Guide to the
Biological Sciences Bureau at SLD
Funded through APHL grant
Our Website: nmhealth.org/about/sld/

Our Directory of Services (DOS):
http://nmhealth.org/publication/view/general/1496/

**Biological Sciences Bureau**

The Biological Sciences Bureau tests for indigenous and exotic diseases using clinical and animal specimens, autopsy and necropsy materials, environmental samples, and serves as a center for training and education. They investigate and surveill clinical and environmental samples for infectious diseases threatening people, livestock and wildlife, as well as for hazardous materials and pollutants in our water, air and land. They also test for alcohol and drugs in DWI criminal cases and for autopsies. Over the course of a year, the lab performs more than 35,000 tests on nearly 80,000 samples.

**Services**
- BSBL Directory of Services
- BSBL Service Schedule

**Scientific Laboratory Division**

The Scientific Laboratory Division (SLD) is the sole public health, environmental, and drug laboratory for New Mexico. It conducts tests for infectious diseases threatening people, livestock and wildlife, as well as for hazardous materials and pollutants in our water, air and land. It also tests for alcohol and drugs in DWI criminal cases and for autopsies. Over the course of a year, the lab performs more than 35,000 tests on nearly 80,000 samples.

**Mission**

Our mission is to provide analytical laboratory support services and scientific advisory services for state-supported agencies and groups of entities administering health and environmental programs for New Mexico citizens.

**Accreditation**

We are a member in good standing of Association of Public Health Laboratories (APHL) and our division is proud to currently hold the following accreditations and certifications.
### Contact Information:

<table>
<thead>
<tr>
<th>TITLE</th>
<th>PHONE/FAX</th>
<th>COMMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>BSB Chief</td>
<td>505-383-9122</td>
<td>General inquiries</td>
</tr>
<tr>
<td>SLD QA Director</td>
<td>505-383-9005</td>
<td>Quality issues</td>
</tr>
<tr>
<td>SLD Front Desk</td>
<td>505-383-9000, 505-383-9150</td>
<td>General inquiries and if uncertain whom to call</td>
</tr>
<tr>
<td>Epidemiology and Response Division (ERD)</td>
<td>505-827-0006</td>
<td>Emergency reporting of diseases</td>
</tr>
<tr>
<td>BSB Fax</td>
<td>505-383-9121</td>
<td></td>
</tr>
<tr>
<td>SLD Fax</td>
<td>505-383-9011</td>
<td></td>
</tr>
<tr>
<td>Specimen Receiving Phone</td>
<td>505-383-9068, 505-383-9066</td>
<td>Courier service</td>
</tr>
<tr>
<td>Kit Prep Phone</td>
<td>505-383-9073</td>
<td>Request forms and kits</td>
</tr>
<tr>
<td>Kit Prep Fax</td>
<td>505-383-9062</td>
<td>Request forms and kits</td>
</tr>
<tr>
<td>TITLE</td>
<td>PHONE/FAX</td>
<td>COMMENTS</td>
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</tr>
<tr>
<td>GM Supervisor</td>
<td>505-383-9128</td>
<td>Bacteriology, mycobacteriology, and mycology testing</td>
</tr>
<tr>
<td>GM Line Supervisor</td>
<td>505-383-9127</td>
<td>Bacteriology testing</td>
</tr>
<tr>
<td>TB/Mycology Line Supervisor</td>
<td>505-383-9126</td>
<td>Mycobacteriology and mycology testing</td>
</tr>
<tr>
<td>VS Supervisor</td>
<td>505-383-9124</td>
<td>Virology or serology testing</td>
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<tr>
<td>VS Line Supervisor</td>
<td>505-383-9125</td>
<td>Virology or serology testing</td>
</tr>
<tr>
<td>MB Supervisor</td>
<td>505-383-9130</td>
<td>Molecular testing</td>
</tr>
<tr>
<td>MB Line Supervisor</td>
<td>505-383-9160</td>
<td>Molecular testing</td>
</tr>
<tr>
<td>EM Supervisor</td>
<td>505-383-9129</td>
<td>Food, water, and dairy testing</td>
</tr>
<tr>
<td>EM Line Supervisor</td>
<td>505-383-9104</td>
<td>Food, water, and dairy testing</td>
</tr>
</tbody>
</table>
What is a submitter code?

• Submitter codes are used to determine who the final report is sent to for the requested test. The submitter code is correlated to the submitter name, address, and phone number to ensure the report is sent to the intended recipient.

What is a user code?

• User codes determine who is fiscally responsible for the test requested.

What is an EIP isolate?

• The Emerging Infections Program (EIP) is a collaboration with the CDC to collect isolates that might represent epidemiological patterns from pathogens that cause invasive infections, such as Streptococcus pneumoniae, and Group A & B Streptococcus.
**What is the specimen source?**

- The specimen source identifies the anatomic site from where the specimen originated.
- Examples include blood, BAL, pleural biopsy, NP swab, etc.
- This is critical information to ensure that the specimen submitted is appropriate for the testing requested.

**What is a patient identifier?**

- One of the most important aspects of submitting a specimen is having at least two forms of identification on both the specimen and the Clinical Test Request Form. The patient must be identified and distinguishable from other patients.
- The patient’s name, date of birth, and/or the medical record number are considered identifiers.
- The identifiers on the specimen label **MUST** match those on the Clinical Test Request Form.
Basic Principles:

- Use the SLD Directory of Services (DOS) to obtain information on tests offered, specimen type, collection, handling, transportation, rejection criteria, and special requirements. [http://nmhealth.org/publication/view/general/1496/](http://nmhealth.org/publication/view/general/1496/)
- If possible, collect the specimen in the acute phase of the infection and before antibiotics are administered.
- Select the correct anatomic site for collection of the specimen.
- Collect the specimen using the proper technique and supplies with minimal contamination of normal biota.
- Collect the appropriate quantity of specimen.
- Package the specimen in a container or transport medium designed to maintain the viability of the organism and avoid hazards that result from leakage.
- Label the specimen accurately with the date and time of collection, specific anatomic site (if necessary), and the patient information – name and a unique identification number.
- Transport specimen promptly or make provisions to store in an environment that does not degrade suspected organism(s).
- Notify the laboratory in advance if unusual pathogen or agents of bioterrorism are suspected.
Two Forms of Patient Identifiers on Specimen

Examples:

- Patient name; first and last name count as ONE identifier
- Date of birth
- Patient ID / Hospital number/ Medical Record Number
- Social Security Number
- Requisition number
- Accession number
- Unique random number
Updated SLD Clinical Test Request Forms can be printed from our website: [https://nmhealth.org/about/sld/bib/](https://nmhealth.org/about/sld/bib/)

### Specimen Information
- **Source and date/time of collection**

### Patient Information
- **Must have at least 2 individual identifiers.**
- **Patient gender is required (select one option).**

### CLINICAL TEST REQUEST FORM

All yellow highlighted sections are required and must be completed prior to submission.

- **Submitter information & Clinician name/phone**
- **User code**
- **Analysis (Test) requested**
Please remember to

• Submit a clinical test request form for each sample
• Submit only 1 specimen per form
• Complete all yellow highlighted sections

NOTE: Missing or inaccurate information on the test request form and/or sample will cause a delay in testing and result reporting.

Delayed Testing = Delayed Patient Care
Each specimen is to be maintained and shipped at a specific temperature which is dependent on the type of specimen requirements. These requirements can be found in the SLD BSB Directory of Service (DOS).
Documented training and certification required to ship Category A
## Examples of Category A agents

<table>
<thead>
<tr>
<th>Microorganisms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Machupo virus</td>
</tr>
<tr>
<td>Marburg virus</td>
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<tr>
<td>Monkeypox virus</td>
</tr>
<tr>
<td>Mycobacterium tuberculosis (cultures only)</td>
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<tr>
<td>Nipah virus</td>
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<tr>
<td>Omsk hemorrhagic fever virus</td>
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<tr>
<td>Poliovirus (cultures only)</td>
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<tr>
<td>Rabies virus (cultures only)</td>
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<tr>
<td>Rickettsia prowazekii (cultures only)</td>
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<tr>
<td>Rickettsia rickettsii (cultures only)</td>
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<tr>
<td>Rift valley fever virus (cultures only)</td>
</tr>
<tr>
<td>Russian spring-summer encephalitis virus (cultures only)</td>
</tr>
<tr>
<td>Sabia virus</td>
</tr>
<tr>
<td>Shigella dysenteriae type 1 (cultures only)</td>
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<tr>
<td>Tick-borne encephalitis virus (cultures only)</td>
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<tr>
<td>Variola virus</td>
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<tr>
<td>Venezuelan equine encephalitis virus (cultures only)</td>
</tr>
<tr>
<td>West Nile virus (cultures only)</td>
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<tr>
<td>Yellow fever virus (cultures only)</td>
</tr>
<tr>
<td>Yersinia pestis (cultures only)</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Microorganisms</th>
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</thead>
<tbody>
<tr>
<td>Bacillus anthracis (cultures only)</td>
</tr>
<tr>
<td>Brucella abortus (cultures only)</td>
</tr>
<tr>
<td>Brucella melitensis (cultures only)</td>
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<tr>
<td>Brucella suis (cultures only)</td>
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<tr>
<td>Burkholderia mallei (cultures only)</td>
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<tr>
<td>Chlamydia psittaci – avian strains (cultures only)</td>
</tr>
<tr>
<td>Clostridium botulinum (cultures only)</td>
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<tr>
<td>Coccidiodes immitis (cultures only)</td>
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<tr>
<td>Coxiella burnetti (cultures only)</td>
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<tr>
<td>Crimean-Congo hemorrhagic fever</td>
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<tr>
<td>Dengue virus (cultures only)</td>
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<tr>
<td>Eastern Equine encephalitis virus (cultures only)</td>
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<tr>
<td>Escherichia coli, verotoxigenic (cultures only)</td>
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<tr>
<td>Ebola virus</td>
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<tr>
<td>Flexal virus</td>
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<tr>
<td>Francisella tularensis (cultures only)</td>
</tr>
<tr>
<td>Guanarito virus</td>
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<tr>
<td>Hantaan virus</td>
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<tr>
<td>Hantavirus causing hemorrhagic fever with renal</td>
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<tr>
<td>syndrome</td>
</tr>
<tr>
<td>Hendra virus</td>
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<tr>
<td>Hepatitis B virus (cultures only)</td>
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<tr>
<td>Herpes B virus (cultures only)</td>
</tr>
<tr>
<td>Human immunodeficiency virus (cultures only)</td>
</tr>
<tr>
<td>Highly pathogenic avian influenza virus</td>
</tr>
<tr>
<td>Junin virus</td>
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<tr>
<td>Kyasanur Forest disease virus</td>
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<tr>
<td>Lassa virus</td>
</tr>
</tbody>
</table>
Category B

Documentation of training recommended

* The proper shipping names "Biological Substance, Category B"; "Clinical Specimen"; and "Diagnostic Specimen" are authorized until December 31, 2006. From January 1, 2007 only the proper shipping name "Biological Substance, Category B" will be authorized.

† If multiple fragile primary receptacles are placed in a single secondary packaging they must be either individually wrapped or separated to prevent contact.

Note: Follow package manufacturer’s closure instructions
Submitter code
Writing your submitter code on the box will ensure return of shipping box.

Courier form

To and from address Label
If using DMC as the courier this information can be included on the DMC courier form.

DOT Required Labeling Information:
First and last name of individual preparing the shipment/emergency contact
Emergency contact phone number
UN3373 Labeling
Shipping with Dry Ice

When shipping with dry ice, the UN1845 label is required per DOT.

- Affix new no-line label
- Ensure box or label says DRY ICE and UN1845
- Write quantity of dry ice used
- Maximum quantity = 2.5 kg
Compromised Specimen

- Leaking container
- Broken container
- Incorrect shipping temperature
- Errors with specimen
- Incorrect holding time
- Incorrect volume

Improperly labeled specimen

- No identifier
- Only one identifier
- Specimen identifier does not match form

SPECIFIC REJECTION CRITERIA CAN BE LOCATED UNDER EACH TEST IN THE DIRECTORY OF SERVICES
**Specimen**
- Refrigerated/Frozen NP swab

**Collection**
- Rayon, Dacron®, flocked swabs
- Inoculate swab per kit instructions
- Return swab to original tube

**Handling**
- Ambient ≤ 4 hrs.
- Refrigerated ≤ 2 days
- Frozen ≤ 2 weeks

**Shipping**
- Ship with -20°C (-4°F) cold packs following DOT/IATA regulations.

**Specific Rejection Criteria**
- Calcium-alginate swabs (shown to inhibit PCR)
- Respiratory aspirates or Nasal swabs
- Swabs in transport medium
**Specimen**

- NP, nasal, or throat swab
- Nasal aspirate
- Nasal wash
- Dual NP/throat swab
- BAL – Culture only, NOT RT-PCR
- Bronchial wash
- Tracheal aspirate
- Sputum
- Lung tissue
- *For Collection info see Directory of Services*

**Handling**

- Delivery to lab ≤ 72 hrs. = 2-8°C (35 – 46°F)
- Delivery > 72 hrs. = -70°C (-94°F) or on dry ice
- Do not freeze at -20°C (-4°F), such as in a household type freezer.
SLD Virus Isolation Kit

Clinical Request Form
Specimen bag with outer sleeve
Viral transport medium
2 swabs
Gauze pad
Break off the plastic shaft so swab fits within tube. Cap tightly, seal with parafilm, and refrigerate.

Place the sealed specimen with the absorbent material into a zip-lock biohazard bag. Only 1 specimen per bag.

Place form in outer sleeve of bag to separate it from specimen, in case of leakage.

Place the bagged specimen in shipping container on ice packs to keep specimen cold until arrival at SLD. If >72 hrs., ship on enough dry ice to keep frozen.
Specific Rejection Criteria

• Specimens older than 72 hrs. and not frozen
• Calcium Alginate swab for RT-PCR
• Cotton swabs and/or swabs with wooden shafts for RT-PCR & Virus Isolation

Special Requirements

• Place specimen in viral transport medium.
• Do not freeze at -20°C (-4°F), such as in a household type freezer.
• Patient ID number **must** be provided on the clinical test request form.
## Specimen Types Accepted by SLD

<table>
<thead>
<tr>
<th>Specimen Type</th>
<th>Instructions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sputum</strong></td>
<td>• Instruct patient on importance of good quality sputum.</td>
</tr>
<tr>
<td></td>
<td>• 3-10 ml of sample in a 50 ml tube supplied by SLD kit prep.</td>
</tr>
<tr>
<td><strong>Gastric Lavage</strong></td>
<td>• Neutralize specimen before sending.</td>
</tr>
<tr>
<td></td>
<td>• Notify SLD before collection.</td>
</tr>
<tr>
<td><strong>Stool/Feces</strong></td>
<td>• Notify SLD before sending.</td>
</tr>
<tr>
<td><strong>Urine</strong></td>
<td>• 3-5 daily, consecutive collections of first morning urine. Each sample should be ≥ 24 hrs. apart.</td>
</tr>
<tr>
<td></td>
<td>• Avoid pooled, midstream, or 24 hr. collections.</td>
</tr>
<tr>
<td><strong>Tissue</strong></td>
<td>• Collect aseptically and submit in 5 ml sterile saline.</td>
</tr>
<tr>
<td><strong>CSF/other sterile body fluids</strong></td>
<td>• Collect aseptically in sterile screw cap tube.</td>
</tr>
<tr>
<td></td>
<td>• Submit 5-50 ml to increase chance of detection.</td>
</tr>
<tr>
<td></td>
<td>• DO NOT SEND BLOOD.</td>
</tr>
</tbody>
</table>
Sputum Collection Schedule

Baseline
• 3 consecutive, 8-24 hrs. apart.
• ≥ 1 in morning.

Initial positive
• 1/week until smear conversion = 3 consecutive AFB smear negative.

Smear conversion
• ≥ 1 per month until 2 consecutive negative in culture.

MDR-TB
• Monthly through course of treatment.
Collection

- See Directory of Services for additional information.
- For questions about sputum collection contact the TB Control Program helpline at (505) 827-2471.

Handling

- Refrigerate samples after collection.

Shipping

- Ship samples as they are collected. DO NOT BATCH.
- Send cold on ice pack. DO NOT FREEZE.
Specific Rejection Criteria

- Broken or leaking tubes
- Specimen in preservative (formalin)
- Inadequate specimen volume
- Received on a swab, in a swab transport device, in gauze, paper towel etc.
- Sputum specimens collected < 8 hrs. apart, urine collected < 24 hrs. apart, specimens > 7 days old upon receipt
- Improper temperature
- Evidence of improper handling

Special Requirements

- Use sterile 50 ml centrifuge tubes supplied in the collection kit.
- NO collection cups
- Legible, completed clinical test request form
Description

- New Mexico Emerging Infections Program (EIP) bacterial isolates requested for Epidemiological Investigation as part of a CDC collaborative study.
- The EIP user code and the test requested are independent of one another.

Specimen

- Isolates of *Streptococcus pneumoniae*, Group B Streptococcus, or Group A Streptococcus isolated from sterile sites including blood, CSF, pleural fluid, peritoneal fluid, joint, bone, muscle, and internal body sites.
- Send on appropriate media.
- If specimen is not from sterile site, mark Gram negative or positive ID.

Shipping

- Cold, on ice pack, or room temperature. DO NOT FREEZE.

Special Requirements

- On Clinical Test Request Form: Select “EIP Group A Streptococcus”, “EIP Group B Streptococcus”, or “EIP S. pneumoniae isolate”
Description

• Carbapenem Resistant *Enterobacteriaceae* (CRE), Carbapenem Resistant *Pseudomonas aeruginosa* (CRPa) and/or Carbapenemase producing bacteria
• Contact GM Supervisor 383-9128 or GM Line Supervisor 383-9127

Specimen

• Send isolate on culture medium - nutrient agar slants or MAC agar plates.
• Carbapenemase producing *Enterobacteriaceae* plasmids are not stable. Keep isolate refrigerated until shipment.
• Avoid multiple passes / sub-culture.

Shipping

• Cold, on ice pack. DO NOT FREEZE

Special Requirements

• Include a copy of the susceptibility report and the SLD Clinical Test Request Form.
• Test Request Form: Under General Microbiology select “CRE Panel” and indicate the organism genus and species.
Please submit isolates with an SLD Clinical Test Request form and a copy of your susceptibility results for:

Any *Enterobacteriaceae* where the
- MIC is $\geq 4\mu g/mL$ for Meropenem, Imipenem, or Doripenem; or $\geq 2\mu g/mL$ Ertapenem
- Disk diffusion zone $\leq 19$ mm for Meropenem, Imipenem or Doripenem; or $\leq 18$ mm Ertapenem

Any *Pseudomonas aeruginosa* or *Enterobacteriaceae* that demonstrates carbapenemase production by:
- Positive PCR (KPC, NDM, VIM, IMP, OXA-48)
- Other method (such as Carba NP, mCIM, Modified Hodge test)

Any *Pseudomonas aeruginosa* where the
- MIC is $\geq 8\mu g/mL$ for Meropenem, Imipenem, or Doripenem
- Disk diffusion zone $\leq 15$ mm for Meropenem, Imipenem or Doripenem
Description

- Sin Nombre Virus (SNV) IgM – used to detect IgM antibodies to SNV and to diagnose acute infections with hantaviruses.
- Testing must be approved by the Epidemiology and Response Division 505-827-0006
- Test Request Form: Under the Serology section select “SNV Hantavirus”

Specimen

- Serum – centrifuge and aliquot the serum into a separate container
- Refrigerate after serum is separated

Shipping

- Ship on cold packs if specimen arrives within 5 days
- Freeze at ≤-20°C and ship on dry ice if greater than 5 days

Specific Rejection Criteria

- Specimens older than 5 days and not frozen
- Serum specimens not separated from the clot
Notifiable conditions in New Mexico

• The list is located at http://nmhealth.org/publication/view/regulation/372/

• Examples include anthrax, plague, listeria, salmonella, etc.

• ERD must be notified either immediately or routinely at 505-827-0006

• Suspect or confirmed cases of Tuberculosis or Nontuberculosis mycobacteria must be reported to the Tuberculosis Program at 505-827-2473

• Certain isolates/clinical specimens need to be submitted to SLD. See link above for a complete list.
Organisms that cannot be ruled out as an agent of bioterrorism must be sent to the Scientific Laboratory Division for confirmatory testing.

Contact a General Microbiology supervisor at 505-383-9128, or -9127 during business hours, or after hours at 505-228-4480.

For training, contact SLD's Bioterrorism Readiness Coordinator at 505-383-9006.
Specimens

- Correct media/collection container for specimen
- Labeled with two identifiers that correspond with the SLD Clinical Test Request Form
- Lids are tightly sealed
- Stored at the appropriate conditions

Clinical Request Form

- Check appropriate User Code
- Write in your Submitter Code, Submitter name, address, and phone number
- Clinician Name
- Write in patient name, gender, complete date of birth, and patient ID (MRN#)
- Check the appropriate Specimen Source box
- Enter date & time of collection (military time)
- Select the analysis requested
- Place Clinical Test Request Form in OUTER sleeve of biohazard bag
- Any questions contact SLD

Packaging and Shipping

- Store at required temperature until DMC pick up
- Call DMC Courier for next day pick-up (1-800-825-7274)
- Place specimen/s in Styrofoam cooler with appropriate shipping requirement, i.e. cold pack, dry ice, or room temperature
- Place cooler in cardboard box with correct labeling (UN3373 Biological Substance Category B, and dry ice sticker if used)
- Fill out Packing List
- Fill out DMC Courier Form
- Write return address, submitter code, emergency contact name and phone number on box

Any questions contact SLD