Pathology Core Laboratory General Procedures

1. Introduction

The Pathology Core Laboratory began in 2006 under the direction of Dr. Daniel J. Brat with assistance from Dr. David Jaye, and is operated and managed by Dianne Alexis, MLS,QIHC(ASCP). It serves as a primary resource for Winship Cancer Institute and the Department of Pathology; however, services are offered to outside investigators.

These services include general and complex histological procedures, including paraffin and frozen section histology, special staining, immunohistochemistry, tissue microarray services, and laser capture microdissection. Equipment and technique training as well as consultation services are also available.

The laboratory is located in Winship Cancer Institute (Clinic C), 5th Floor, Entry E, Bench 11/12 on Emory University's main campus.

Contact Dianne Alexis at 404-778-5108 with any questions or to set-up services.

When sending specimens, please either mail or deliver to:
Pathology Core Laboratory
c/o Dianne Alexis
1701 Uppergate Dr.
Building C, 5th Floor, Bays 11/12
Atlanta, GA 30322

2. Facility Resources

a. *General Histology*—The laboratory specializes in general paraffin and frozen section histology. Tissue processing, embedding, sectioning, and H&E staining is performed daily, as well as cryosectioning and staining of frozen tissues. Customized, automated slide printing allows for efficient and legible reading, staining, and filing of slides.

b. *Special Stains*—A wide array of special stains is provided by the laboratory, including common stains, silver stains, and rare stains upon request.

c. *Immunohistochemistry*—Manual and automated (DAKO) immunohistochemistry services are available for established procedures and protocols. Also, antibody protocol development is available for antibodies with unknown protocols and specificities.

d. *Tissue Microarray*—The core laboratory provides multiple services for tissue microarrays. These services include core transfer from existing or identified blocks, utilizing Tissue Procurement Core Services for TMA construction, and complete custom consultation, design, and construction of TMA blocks.

e. *Laser Capture Microdissection*—The laboratory offers services, training, and facility usage utilizing the Molecular Machines & Industries, Inc. Cell Cut laser microdissection system.

3. Specimen Submission

a. *Request Forms*—For submission of tissue or request of services, request forms are provided to insure efficient, organized, and documented flow of workload. Please fill out form completely and legibly. Contact laboratory regarding any questions.

b. *Cassette Submission*—When submitting cassettes for processing please be sure to use correct marking pencil or marker to assure the identification of cassettes does not wash off during processing.
***Sharpie markers should **not** be used.

c. *Fixation procedures*—Upon submission of wet tissue or cassettes, please be sure to label specimen containers as well as document on the request form the fixative of use and time of tissue submersion. Neutral Buffered Formalin 10% is the fixative of choice. However, any fixative may be used, as long as the container and request form are labeled correctly (i.e. EtOH for certain IHC stains or Bouin's fixative for specimens needing PTAH staining).
*****Important**: Be sure the tissue to volume ratio is 1:15 for proper fixation

d. *Embedding Instructions*—Under the heading "special instructions" on the request form, please document special embedding instructions (i.e. as in cassette, cut side down, on end, sagittal, etc.). If no special instructions are listed, tissue will be embedded as seen fit by the laboratory, usually either cut side down or on end for tubular structures.

e. *Special Requests*—For any special requests regarding laboratory services, please contact Dianne Alexis, lab manager.

f. *Shipping Specimens*—When shipping specimens from an outside source, please be sure to follow hazardous shipping protocols, i.e. screw top lids

on formalin containers, clearly labeled and identified hazardous materials, ground shipping, etc.

4. Lab Turnaround

The turnaround time for the laboratory will be dynamic and dependent on the workload/request volume. We will strive to finish projects within 5 working days. However, specialized projects may need longer amounts of time (i.e. TMA construction, antibody protocol development). The lab will work on a first-come-first-serve basis; however, smaller projects may be completed quickly depending on time available. Rush/Priority requests may be billed at a higher rate, dependent on volume.

5. Billing

To insure timely payment, billing will occur via use of primary investigator account number or grant number and will be billed directly to the Core Laboratory upon completion of service. If necessary or desired, invoices will be sent out.

Outside investigators should send either a check to the laboratory made payable to Emory University or we can also charge credit card accounts. Invoices will be sent or faxed to external investigators.

6. Facility Usage

a. *Equipment*—Usage of certain facility equipment is allowed at an hourly rate, under the provision that the user is either experienced or has undergone training with the Core Laboratory. Equipment includes: microtome, cryostat, and laser capture microdissection.

b. *Reservation/Sign-up*—In order to use equipment, please call laboratory for reservation time or sign-up on the reservation list in the laboratory. Be sure to fill out list completely, including your account number and time of use.

c. *Use and Care*—The proper use and care of the equipment is crucial to keeping the lab efficient. Please clean up all equipment after use. If equipment is dirty before use, please let the Core Laboratory know in advance. If there are any questions regarding the instrumentation, don't hesitate to ask.

7. Training/Consultation

a. *General Training*—Training for microtomy, cryosectioning, staining, and other lab services is available at an hourly rate. Training is necessary for inexperienced users before facility usage is allowed. For multiple sessions, a reduced rate will be given.

b. *LCM Training*—Laser Capture Microdissection training will be available and **necessary** in order to use the LCM. Because of the timeliness of this technique, appointments should be arranged with the laboratory in advance.

c. *TMA Consultation*—Customized TMA consultation, design, and construction is available. This will include pulling slides and blocks, pathologist screening and marking, template and database design, and block construction. For this service, please contact lab manager to set-up an appointment.

8. Customized Procedures-Other Services

For services to be customized or not listed, contact lab manager.