Equipment and Procedures Overview
COCVD COBRE Pathology Core

Revised 4/6/17

Purpose

- To inform you of equipment available for common use and for services provided by the Core.
- To review protocols for use
- To inform you that use of these pieces of equipment and/or services requires that you cite COBRE grant P20 GM103527 in publishing data that was obtained using any this equipment

How can you help?

- Notify Wendy (wkatz@uky.edu) of use of common-use equipment by requesting SharePoint reservations (important for maintenance contracts and for general monitoring of equipment)
- Receive training on equipment prior to use to assure that equipment is kept in good operating condition
- Keep things clean
- Be regular monitors yourselves, if you don't like something you see, tell the person using the equipment
- Cite the COBRE grant P20 GM103527 when publishing your exciting findings

To reserve time on shared equipment (microscopes, microtome)

- Check availability by going to the master list of equipment calendars at https://cocvd.med.uky.edu/node/58187
- To access a calendar, log in with your LinkBlue ID, which must be in the MC domain.
- Please notify Wendy of use even if you see something available and jump in at the last minute. Our usage logs help us plan and justify maintenance.
- When you find an available time that works for you, email wkatz@uky.edu to request a reservation. Please state:
  - The equipment you want to use
  - The start time you want
  - The end time you want
  - Your PI's name

Turnaround time

- Because our Core is currently funded by the COBRE grant, projects from COBRE investigators are given first priority.
- Other projects are performed as time permits.
- If a project requires that we cut a very large number of slides, we will alternate between the very long project and small projects so as to keep things moving.

Processing tissues for paraffin embedding

- A Microm STP120 programmable tissue processor and Leica EG1160 Embedding Center are operated by Core personnel.
- Fixed samples stored in 70% ethanol may be submitted for processing and embedding (see “Preparing and submitting samples for processing,” downloadable from this web page).
- Please submit along with a Core request form, downloadable from the website (https://cocvd.med.uky.edu/sites/default/files/Pathology%20Core%20Request%20form%202016_0.pdf) or emailed to you (request from wkatz@uky.edu)
- Please note that your IACUC protocol number must be entered on the form.

Paraffin Sectioning by Core personnel

A Microm HM355S electronic rotary microtome is maintained for use by Core personnel to section your paraffin embedded samples.

- Please indicate on your request form:
  - IACUC protocol number
  - Number of slides desired
  - Desired thickness (5 microns is standard)
  - Number of sections per slide (2 is standard)

Note: if your project requires more than 100 slides, please provide slides and storage boxes for slides in excess of 100.

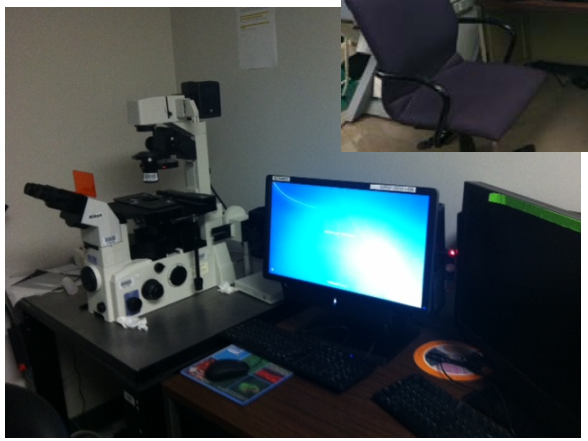
Microtomes available for shared use

A Shandon Finesse and Shandon Finesse ME microtome are available for use by approved researchers. Please contact wkatz@uky.edu for training and reservations.

5th floor Wethington microscopes

General Policies:

- Each microscope has filter controls, etc. in slightly different places. The newer Nikons have a special flip-down or slide-in lens for the 4x objective.
- If you are using a particular microscope for the first time, ask Wendy for an orientation (wkatz@uky.edu).
- Please contact Wendy for maintenance, technical or software concerns.



General microscope policies, cont'd

- Please cite COBRE grant P20 GM103527 when publishing data and images obtained using these microscopes.
- Please move the objective to 4X to insert slides and remove slides from the stage.
- Please do not remove objectives from the microscopes.
- If you use an oil objective (100x or 60x) do NOT use the 20 or 40X objectives afterward as the oil will fog the objectives.
- Use alcohol or Nikon cleaning solution to remove oil. Do not use Windex or any ammonia based cleaner!
- If you aren't sure ASK…..

Room 551: Nikon Eclipse 80i Upright with fluorescence

12 MP color camera.

Objectives:

- 4X Plan Fluor
- 10X Plan Fluor
- 20X Plan Apo
- 40X Plan Apo
- 60X*, 100X*

*by prior arrangement

Motorized stage with image stitching software

Additional objectives for Eclipse 80i

- 60X Plan Apo
- 100X Plan Fluor

(both oil objectives)

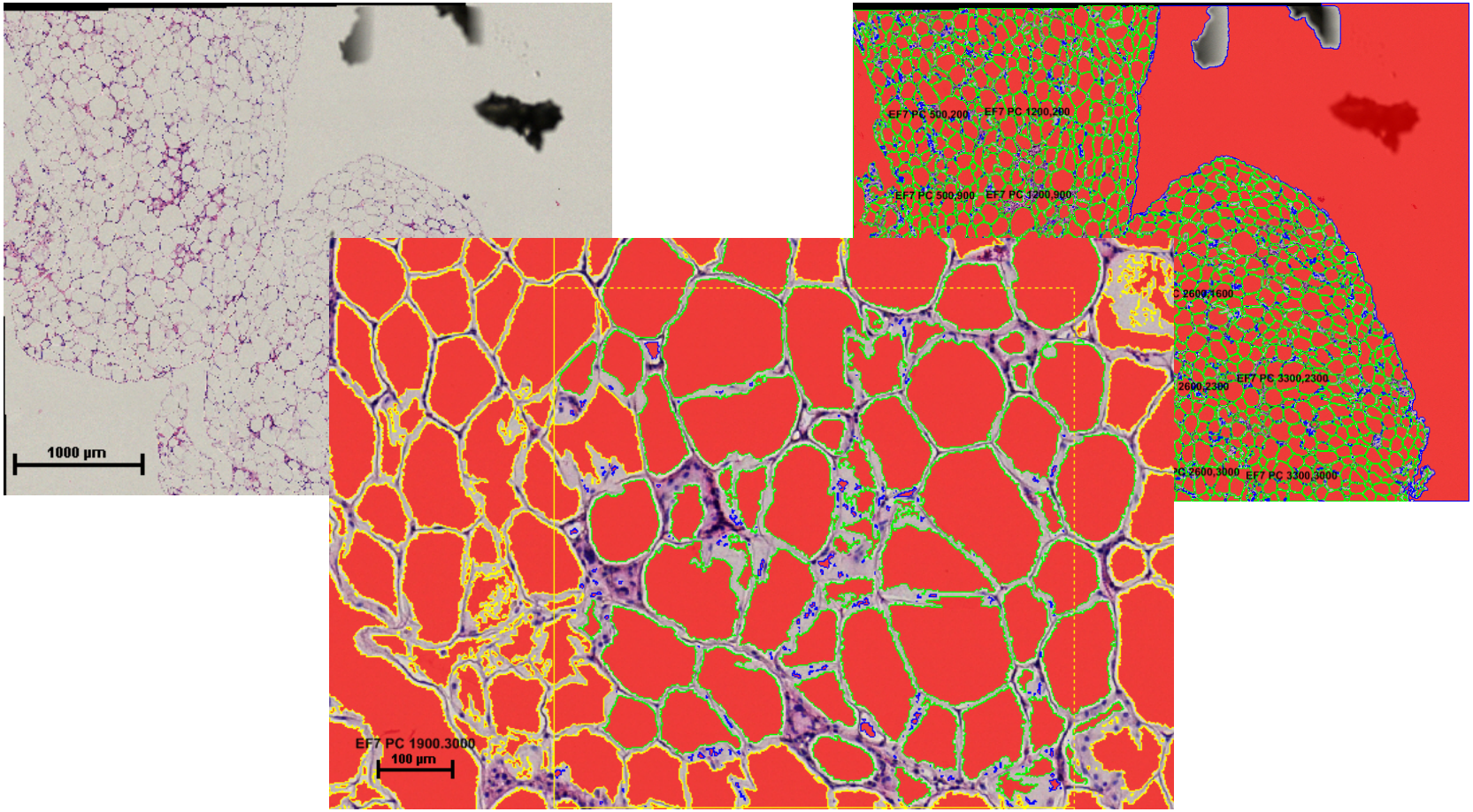
- For use on *upright*

(Eclipse 80i) microscope

- **If you use oil on your slide do NOT use the 20 or 40X objectives afterward** as the oil will fog the objectives.
- Use alcohol or Nikon cleaning solution to remove oil from objectives. **Do not use Windex or any ammonia based cleaner**!
- Wendy has them in a locked cabinet. To use them, make arrangements with Wendy at least 24 hrs in advance

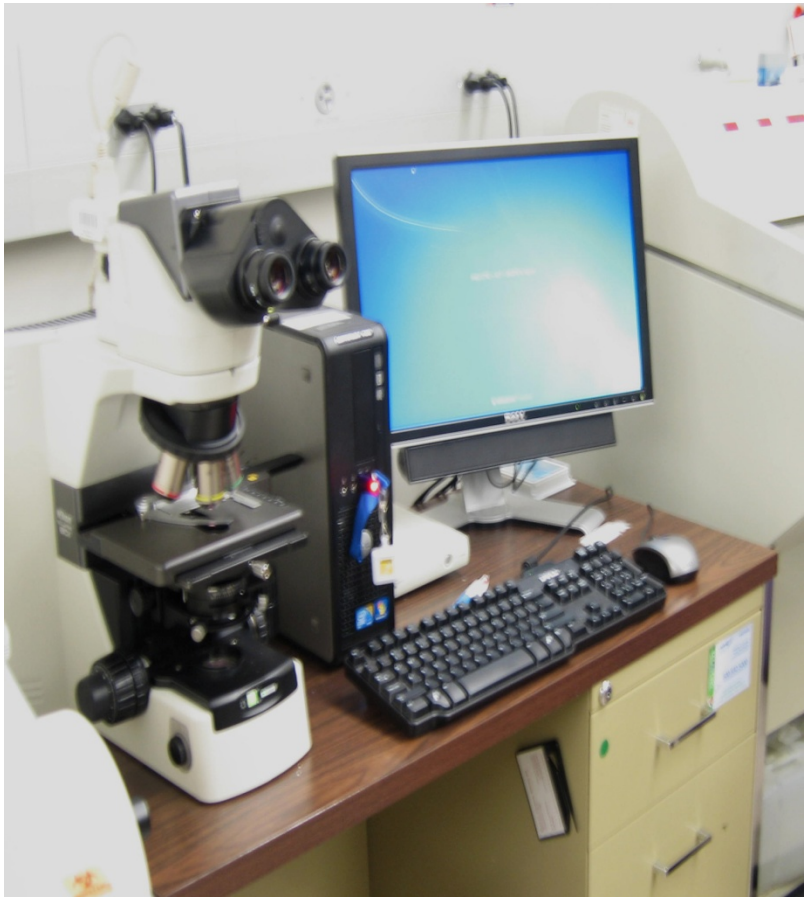
Motorized stage on Nikon 80i in 551

- Joystick control
- Rapid navigation options in software
- Permits automated stitching of multiple fields
- Please contact Wendy for training and technical issues



Room 564 Nikon Eclipse 80*i*

Located to the left of the cryostat



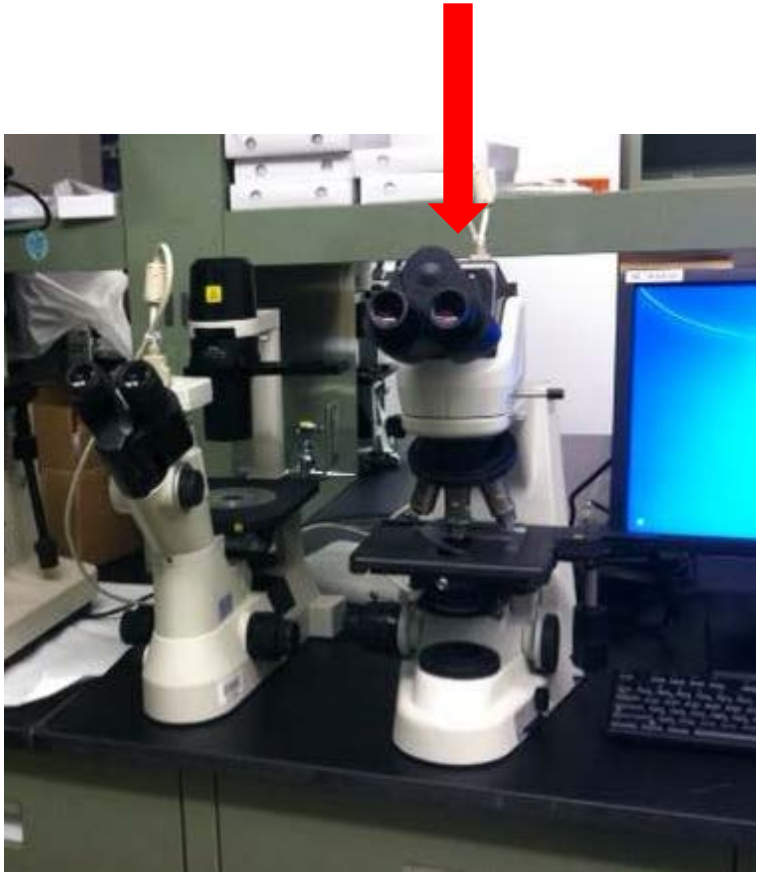
- Color camera
- Objectives:
  - 4X Plan Fluor
  - 10X plan Fluor
  - 20X Plan Fluor
  - 40X Plan Fluor

Room 564: Nikon Eclipse 55iUpright

Located between embedding center and microtome.

12 MP Color camera.

Objectives:
- 4X Plan
- 10X Plan
- 20X Plan
- 40X Plan
- 100X Plan (Oil)



If you use oil on your slide do NOT use the 20 or 40X objectives afterward as the oil will fog the objectives.
Use alcohol or Nikon cleaning solution to remove oil from objectives. **Do not use Windex or any ammonia based cleaner**!

Room 564: Nikon TS100 Inverted microscope

Located between embedding center and microtome.

Color camera.

Objectives:

- 2X Plan
- 4X Plan Fluor Phase
- 10X Plan Fluor Phase
- 20X Plan Fluor Phase
- 40X Plan Fluor Phase

564 TS100 Inverted Microscope (cont'd)

- Please note that there is a slider having different positions (marked on the slider) for the different powers of phase contrast objectives
- This microscope is unique among all of ours in having a knob (on the right, below the binoc) to control whether the slide is visible through the eyepieces, or through the camera.