



Important: mandatory meetings for users of the ARL Zeiss confocal

Users of the ARL Zeiss confocal microscope (LSN 410) are required to attend one of the upcoming user's meetings. Failure to attend one of the meetings or to schedule a private meeting with the facility manager (Barb Carolus) will result in loss of access to the instrument. Users of the instrument who have Doug Cromey as their principal operator do not need to attend. Meetings are scheduled for 2pm on Wednesday August 9, 2006 and 10am on Tuesday August 15, 2006 in room 452 of Life Sciences North.

3 Megapixel digital camera added to TEM

The ARL Imaging Facility's Phillips CM-12 transmission electron microscope, located in LSN 410, has been upgraded to allow it to capture digital images. The software is easy to use and saves the images as standard TIFF files. If needed, the digital images can be printed using a 1200dpi laser or a high-end inkjet printer. The transmission electron microscope can still capture images using EM film if needed. Interested users should contact Dr. David Elliot of Cell Biology & Anatomy for training.

Zeiss Confocal – easier and faster ways to transfer and backup files

File transfers on the Zeiss LSM510 confocal microscope have been considerably sped up thanks in part to several upgrades to the confocal microscope's computer. Barb Carolus (ARL confocal facility manager) and Doug Cromey worked with Zeiss service and now the confocal has USB 2.0, Firewire 400, and Gigabit ethernet. USB 2.0 is forty times faster than the old USB connection. This will greatly speed up file transfers to USB flash memory sticks or external USB hard disk drives. Firewire will allow users to connect their Macintosh laptops or an external firewire hard drive directly to the confocal. Gigabit Ethernet will significantly speed up network file transfers (*actual transfer speeds will now be dependent on the speed of the user's network connection in their department*).

Zeiss service also replaced the malfunctioning CD drive on the confocal computer with a new Plextor 750A DVD±R drive. This upgrade now allows users to create DVDs of their data (4.7GB/disk), storing over 6 ½ times the amount of data that can be stored on a CD-R. This drive can also read/write to CD-RW and DVD±RW disks.

Zeiss Confocal – new Image Browser version

Carl Zeiss has released version 4.0 of the free Image Browser software used to view files acquired on the LSM510 confocal microscope. A new feature in this version is the ability to create 3D projections of confocal image stacks, then to rotate the projection, and finally to save the rotation as an AVI movie. Information about installing and using this new software version will be on the Core's website shortly.

New Tissue Processor

This month the Histology Service Lab (Cell Biology & Anatomy) will be receiving a Sakura VIP5 tissue processor. The funding for this state-of-the-art processor came from one of Dr. Patricia Hoyer's grants. Dr. Hoyer's lab is an extensive user of the Histology Service Lab. This fully automated processor will allow the lab to process more tissues at once and more importantly will allow for improved infiltration of the tissues, leading to better quality sections.

Rapidly acquire images of entire microscope slides at 20x

The Department of Pathology has a DMetrix slide scanner that is available for use. The instrument uses an array of small lenses to scan the slide and capture the image of an entire tissue section in 1-2 minutes. The scan is done with the equivalent of a 20x objective lens and can create very large files (100MB to over 500MB, depending on the size of the tissue section). The files are saved in a proprietary file format, but can be exported to TIF using a free viewer program that runs in MS Windows. The instrument is for capturing brightfield images of stained sections or cells attached to a standard microscope slide with a coverslip. With the free viewer, users can zoom out to the equivalent of 0.5x, all the way up to selected areas at 20x. The instrument was developed by Dr. Weinstein (Head, Pathology) and colleagues in the University's College of Optical Sciences.

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