



## ***Deltavision – system upgrades and the move to MRB***

The Deltavision deconvolution microscope has been moved out of Life Sciences North and into room 330M of the Medical Research Building.

After the instrument was moved, it received a significant upgrade by the vendor. This included the addition of a new and faster CCD camera, improved XYZ stage positioning high-precision motors, new fluorescence filters & high speed filter wheel, replacement fiber optics, an environmental chamber, as well as new computer hardware and software. This upgrade should allow the system to be used for more live cell imaging work than had been done previously. In addition, there will now be two available SGI workstations for mathematically deconvolving the image stacks (*one at MRB 330M and the other in LSN 429*).

Because of the upgrade, existing users will need to take a refresher training class. For training and additional information about the instrument, please contact Dr. David Elliott at 626-7870 or [elliott@arizona.edu](mailto:elliott@arizona.edu). Please note that until the MRB officially opens, users must be escorted into the building to access the instrument. Dr. Elliott is now the primary contact for this instrument.

## ***High-speed confocal microscopes***

There are a number of investigators at AHSC who have expressed an interest in obtaining a high-speed confocal microscope. Many biological processes happen very quickly and the ability to capture crisp images at high frame rates, in 3 dimensions, with multiple fluorescence wavelengths is valuable when trying to understand these processes as they happen.

Currently all the confocal microscopes on campus are what are called point-scanning confocals. The maximum frame rate for the best of these instruments is on the order of 4 frames per second (*at reduced resolution*). This is because every point in the image is interrogated one-at-a-time to create the image.

High speed confocal microscopes use one of two different techniques; either a spinning disc (*with an array of pinholes*) matched with a high-sensitivity CCD camera, or a technique which scans and images an entire line of the image frame at one time (*line-scanners*). These types of instruments can achieve frame rates of over 100 frames per second, or higher (*depending on resolution*).

If you have a research interest that might be served by a high-speed confocal microscope, please contact Dr. David Elliott at 626-7870 or [elliott@arizona.edu](mailto:elliott@arizona.edu).

## ***Congratulations***

Andrea Grantham, of the CBA Histology Service Lab, was elected to a two year term as the director of NSH region seven (*covering AZ, UT, CO, ID, WY, MT*) and will serve as a representative to the council of the National Society for Histotechnology. Andrea was also part of the local organizing committee for the NSH national meeting held in Phoenix during September of 2006 (*>14,000 attendees*).

## ***Presentations***

In September Doug Cromey gave a three hour workshop at the National Society for Histotechnology meeting entitled "A Histotech's guide to Digital Microscopy".

Doug Cromey was an invited speaker at the "Statistics, Images, and Perceptions of Truth: Detecting Research Bias and Misconduct" conference held in Birmingham, Alabama on September 14-15. The conference was jointly sponsored by the University of Alabama at Birmingham's Center for Ethics & Values in the Sciences, and the HHS Office of Research Integrity. His presentation was entitled "Falsifying Molecular Methods Data: Inappropriate Image Manipulation".