

# The University of Tennessee College of Veterinary Medicine

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*For immediate release*

(photos available)

## **Veterinary College Broadens Scope**

(Knoxville) When first-year veterinary student Lisa Grupka wants to study a histology slide, she no longer has to have access to a student microscope. Instead, she turns on a computer and opens a program called Virtual Microscope, a new way of viewing microscopic slides.

Grupka says she was hesitant to try the program but has found the new technology to be very helpful, "This system is very user-friendly and it's just like using a microscope. Even though I'm not computer savvy, I was able to use this right away."

The UT College of Veterinary Medicine, one of only two veterinary colleges in the country offering the program, is taking the lead in developing this resource of virtual slides. Bacus Laboratories, the company that developed the technology, digitizes glass slides submitted by the faculty. The slides are then made available to students on the college's intranet with a personal computer taking the place of the microscope. The digital slides have a quality and resolution that are equivalent to viewing the original glass slide on a microscope.

Students access the slides from the college's server using a web browser such as Internet Explorer or a special browser developed by Bacus Labs called Webslide Browser. This browser lets students simultaneously view low and high magnification of the same slide. Students can "move the slide" by clicking and dragging the image to a new location. This is comparable to moving a glass slide on the stage of a microscope. When an image is viewed at 40x, the thumb-wheel on the mouse can be used to fine-focus the image to any of nine different planes without sacrificing image resolution. The Virtual Microscope can be used from a home computer.

Dr. Charmi Mendishandagama first adopted the Virtual Microscope for use in the first-year histology course. With the assistance of a digital projector, she uses the program in the laboratory to show students how to best identify and analyze specimens. Drs. Terry Schultz, Diane Hendrix, Keith Hnilica and Bob Donnell will likewise be incorporating the Virtual Microscope into their courses in histology, ophthalmology, dermatology and pathology respectively.

Dr. Michael Sims, professor and director of Instructional Resources, says the Virtual Microscope has found good initial acceptance among professors who teach in courses that rely on microscopic examination of tissues. Sims said, "One of the complaints from professors who have used computer-based still digital images for laboratories is that students inadvertently memorize those single images due to repeated use. Because the Virtual Microscope functions exactly like a microscope, this mode of use encourages students to study the entire content of slides at different objectives rather than single images."

Grupka agrees that the system makes a difference, "You can't memorize images, and you really have to look at the whole slide to get an understanding of the tissue." She believes the new system, which wasn't available last semester, helps her with her studies, "When I had to take the time to set up a microscope, it was easy to talk myself out of studying slides. But this is more convenient. Even if I only have five minutes and want to look at slides, I can do it by just sitting down at a computer."

Since the Virtual Microscope uses stored digital files, it provides the basis for instructors sharing their slides with those who teach similar courses elsewhere. Sims has already contacted other veterinary colleges in an effort to build a more comprehensive teaching set. The addition of specimens from other colleges would save preparation costs and result in a more extensive collection for the veterinary students at Tennessee.