New Collaboration Makes Finding Campus Research Equipment Easier

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Need to get a closer look at material for your research project but not sure how to get your hands on a specific type of microscope? The Microscopy Alliance[1], a new collaborative group on campus, can help.

The Microscopy Alliance website serves as a digital inventory of campus microscopes available for student and employee research and for use by off-campus organizations.

The service is the result of multiple efforts in past years to gather information from colleges and departments regarding their research equipment inventories, said Doug Cromey, associate scientific investigator for the Department of Cellular and Molecular Medicine[2] and member of the Microscopy Alliance's steering committee.

Cromey said he hopes the website will save researchers the time and effort of hunting down the equipment they need and let them instead focus on making new research discoveries. He added that storing the information in a single place allows researchers to access microscopes being used in other disciplines that they might not have realized were available.

"The hardest thing with any group of instruments is how to make it easy for people to find them," Cromey said. "The problem we have on campus is we're a big place. It can be hard to find particular information and if it's not your field of expertise, where do you go?"

Not only does the Microscopy Alliance website make it easier for researchers to find equipment, it also protects the UA's investment in high-end tools.

"Even the University does not always know what equipment it has," Cromey said. "What has happened in the past is that we have ended up with multiples of the same thing."

Several different types of microscopes are included, such as transmitted light, fluorescence, electron and atomic force. Most microscopes are available on a fee-for-service basis, although a few of them are available for use at no charge.

Each piece of equipment is listed on the website with contact information for the person who has it, making it easy to connect with the right contact from the start. There are now 24 microscopes cataloged, although Cromey said that number will grow as other facilities submit information about their equipment through a contact form on the website.

The site is mobile-friendly, search word capable and even includes a map function to locate the equipment on campus.

Currently, publicly accessible microscopes are the only equipment included in the inventory, although Cromey said the Office of the Senior Vice President of Research[3] has long-term plans to create a Web-based research gateway that will include centralized information about all different types of campus research facilities.

The Microscopy Alliance also creates a network between colleagues.

"This gives them all one place to go. Also, some of these facilities didn't even have their own webpages, or they're buried," he said. "This in a sense gave them all a home."

A current highlight of the website is a super-resolution optical microscope[4] that is on loan to the Department of Cellular and Molecular Medicine through Jan. 3. This microscope allows for up to twice the optical resolution of existing light microscopes, providing a closer look at research samples than ever before.

"For probably about 100 years, they haven't been able to get past a certain resolution with optical microscopes," Cromey said. "In the last five or 10 years, some really smart people have found ways to tap dance around the laws of physics and have come up with ways to get more resolution out of a light microscope."

The super resolution microscope will be on campus for demonstrations and trials as part of a $600,000 National Institutes of Health Shared Instrument proposal to secure the device at the UA.

"We see it as something that would really serve the people that need that kind of resolution and it takes us further forward with a cutting-edge instrument," Cromey said. "For some people, this is a really big jump."

So far, Cromey says feedback he's received regarding the website has been extremely positive and the convenience of the digital inventory has appealed to his colleagues.

"Basically, anybody I've told about it or showed it to has said 'Wow, this is great,'” he said. “They all know it's hard to find this information, so it's nice that it's in one spot."