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## UT's new lab promises quicker, more accurate water testing

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**BY BLADE STAFF**

Toledo area municipalities will soon be able to test the safety of the drinking water supply quickly and easily, a University of Toledo spokesman announced.

That's due to a \$500,000 state grant, which paid for the new technology and renovations for the laboratory in the UT College of Engineering, university spokesman Meghan Cunningham said in a media release.

UT will hold a ribbon cutting at 10 a.m. Tuesday in North Engineering Room 1600 to celebrate the new Drinking Water Research Lab funds administered through the State of Ohio Community Capital Program.

The new lab eliminates concerns of cross contamination from other samples and improves testing accuracy, she said.

Dr. Youngwoo Seo, associate professor in UT's civil and environmental engineering and chemical engineering departments, said a host of emerging algal toxins and contaminants from emerging micro pollutants — such as pharmaceutical products or micro plastics in their source waters — offer new challenges for water treatment plants in Ohio.

“By engaging with the lab, the municipalities can get early warning signs of new and emerging algal toxins, as well as quantification of existing toxins during cases of concern,” he said.

The lab's technology includes a liquid chromatography mass spectrometer system and a flow cytometer. They will be used to detect various cyanotoxins — such as microcystin from the toxic algal blooms in Lake Erie — and assimilable organic carbon, which is used by harmful microorganisms.

“Many water utilities have difficulties in continuously analyzing samples [because of] high costs and limited time,” said Dr. Joseph G. Lawrence, UT research professor and director of the Center for Materials and Sensor Characterization. “They will now have access to the lab on a regular basis for monitoring contaminants in treated water, as well as samples from different points in the treatment process.”

“A water utility could, for example, send water samples every week during the algal bloom to track the concentration of toxins in source water and treated water so that they can make informed decisions on the type of treatment,” he said.

Ms. Cunningham said UT has \$12.5 million underway in active grants for water quality research. It includes studies of algal blooms, invasive species such as Asian carp, and pollutants.

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