

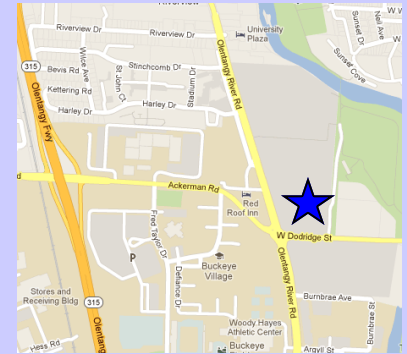
A Water Luncheon Seminar



▶ Presented by:
The Water Management Association of Ohio
and
The Ohio Water Resources Center

October 15, 2014; 11:30 a.m. - 1:00 p.m.

Wilma H. Schiermeier Olentangy River Wetland Research Park,
The Heffner Building, 352 Dodridge St. Columbus, OH 43202



Removing microcystins from our water, a study to identify toxin-degrading bacteria in Ohio lakes

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An increasing number of freshwater lakes in Ohio and worldwide are invaded by cyanobacterial harmful blooms (CyanoHABs). One important harmful effect of CyanoHABs is the production and releasing of dangerous doses of cyanotoxins, mainly microcystins. Microcystins are highly hepatotoxic and have been reported to cause acute and chronic liver cell damage in livestock and human. In this past summer (August 2014), residents of City Toledo and some Michigan cities have received drinking water alert, due to detection of microcystins in public water systems. Development of practical and environmental friendly approaches for microcystin bioremediation is of urgent need. However, little is yet known on natural processes that lead to microcystin degradation. Filling in this important knowledge gap is one of the research focuses in Mou Lab at the Kent State University.

Due to its cyclic structure, microcystins are chemically stable under the environmental range of pH, light radiation and temperature. The removal of this toxin in natural environments is believed to be mainly through biological processes, especially microbially mediated degradation. In the past four years, a number of projects have been done by Mou and her colleagues to identify and culture indigenous bacteria that are involved in microcystins degradation in Lake Erie and the Grand Lake St Marys. Recent results show that Ohio bacteria may use an alternative pathway to transform and degrade microcystins than previously know mlrA gene mediated cleavage.

Please register by October 8, 2014. Late or on-site registrations cost \$5 extra and are not guaranteed a meal. For registered engineers who need Professional Development Hours (PDHs), this presentation offers 1 PDH.

[] WMAO Member (\$15) [] Nonmember (\$18) [] Student (\$7) Special meal? _____

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Please send form and check to: WMAO-Luncheon, 8440 E. Washington St. #206, Chagrin Falls OH 44023.

OR, register online with a credit card at: www.wmao.org.