

Careless disposal of antibiotics can create aquatic superbugs

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A wastewater treatment plant can provide the perfect mating ground for carelessly disposed of antibiotics to form superbugs that are eventually discharged into streams and lakes, says a University of Michigan researcher.

It's not the fault of the wastewater treatment plants, says Chuanwu Xi, assistant professor at the U-M School of Public Health. His research team sampled water at five sites in and near Ann Arbor's Waste [Water Treatment Plant](#) and found that the water contained the [superbug](#) Acinetobacter, a multidrug-resistant bacterium. The results were first reported by Xi's group in 2009, and the research is ongoing.

Treatment plants across the country face the same problem due to the overuse of antibiotics and because people improperly flush them down the toilet, whereby the drugs enter the wastewater treatment systems where they can breed, Xi says.

"When we monitored the survival of these bugs in the Huron River, the downstream level dropped quickly to the level of upstream," Xi said. "More robust risk-assessment research is needed to assess the exact risk. This study, along with many other studies, alerts us to proper use and handling of antibiotics."

The Ann Arbor [wastewater plant](#) recently installed technology that enhances the removal of bio-solids from the water, which in turn, will help prevent superbugs from forming. People with unused antibiotics

should not flush them down the toilet but should dispose of them properly, Xi says.

Provided by University of Michigan

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