UNIVERSITY OF LOUISIANA AT MONROE—COLLEGE OF PHARMACY

DEPARTMENT OF TOXICOLOGY

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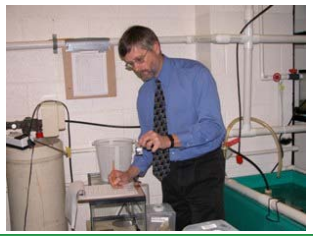
Toxicology Alumni Newsletter

ULM professor to monitor potential pollutants in Louisiana's waterways



Dr. Kevin N. Baer, Head

ULM Department of Toxicology

State and federal agencies recently awarded the University of Louisiana Monroe more than $400,000 in grant funding to monitor water quality and educate the public about ways to reduce non-point source pollution, according to Kevin N. Baer Ph.D., head of ULM's Department of Toxicology.

Non-point source pollution (NPS), unlike pollution from industrial and sewage treatment plants, comes from many widespread sources, and is caused by rainfall moving over and through the ground. As the runoff moves, it picks up and carries away natural and human-made pollutants, finally depositing them in bayous, rivers, lakes, wetlands, coastal waters, and even underground sources of drinking water. "They are a major problem in the environment and hard to control," said Baer.

Toxicology undergraduate and graduate students will participate in the grant-funded programs provided by the U.S. Environmental Protection Agency and the Louisiana Department of Environmental Quality.

LDEQ officials approved close to $84,000 for Baer and his students to determine what is contributing to the unacceptable water quality in the Big Creek area of Grant Parish, near Alexandria. They will monitor along the Big Creek watershed to identify potential sources of contamination.

"Unacceptable water quality has already been observed by officials, and because Big Creek is a drinking water source and an outstanding natural resource, we'll want to determine what is contributing to the problem as quickly as possible," said Baer.

A second grant, approved by both the U.S. Environmental Protection Agency and Louisiana Department of Environmental Quality, provided combined funding of $328,029 over a 42-month period to identify and reduce non-point source pollutants to Bayou DeSiard in the Ouachita River Basin.

Baer said residential areas along Bayou DeSiard provide nonpoint source pollutant loading, primarily due to storm water runoff and the use of agricultural chemicals. Grease and oil runoff from Monroe's city streets and other paved areas are another source, he said.

Activities for the project will involve targeted water quality monitoring during rain events, known as a "first flush," which generally contains the highest level of pollutants, to identify the major categories of NPS pollution and locations.

Once those categories are identified, best management practices may be implemented, including infrastructure improvements, according to Baer. The project will track water quality improvement to determine if the programs have been successful.

Structural improvements could include vegetated practices, such as basin landscaping and parking lot planting areas, or asphalt paving that literally soaks up the rainfall and helps the city

to avoid areas of runoff. Building pervious parking lots around businesses and waterfront yards in residential areas will increase awareness of successful best management practices implementation, according to Baer.

Other educational programs will address nutrient and pesticide management for home and golf courses, sediment and erosion control practices for construction sites, and public awareness on the impact of fecal coliform bacteria to area water bodies.

In addition, storm drain marking programs will educate the public about how storm water runoff enters drains. Surveys will also be developed to measure the performance of education programs impacting Bayou DeSiard, said Baer.

However, a Quality Assurance Project Plan must be submitted to officials for review before any monitoring can begin.

"This is a detailed and lengthy process," acknowledged Baer.

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ULM News

Office of University Relations

Media Relations

Laura Harris, Director of Media Relations

Tau Omicron Chi Activities

Tau Omicron Chi has been involved in numerous activities during the Fall 2008 semester. Throughout the semester, members from the club participated in various events to help educate students about the Toxicology Program and inform them of the importance it plays in our society today. Some of these events included the freshman FRYS panels in which Toxicology students visited freshman orientation classes to discuss and answer questions about toxicology, the Major's Fair, and Browse on the Bayou, two of our high school recruiting events on campus.

The TOX club was involved in a community service project with the Louisiana Purchase Gardens and Zoo in Monroe, in which club members cleaned up debris on and around the train tracks in the hopes of getting the zoo train working again. In addition, the club members participated in the homecoming banner design contest, winning second place overall, and organized a Halloween treat bag sale, resulting in $200 in profits that will be used to support the club's future events.

TOX movie night and the annual TOX Thanksgiving dinner were a huge success. Students also recently attended a Ouachita Parish Drinking Water Protection meeting and they plan to volunteer in the Spring to help clean up the portion of Bayou DeSiard that runs through our campus.

We are looking forward to the Spring 2009 Crawfish Boil and other activities to come!

Congratulations

Mary Ellen Mai, Spring 2008 Toxicology graduate, was accepted into the University of Alabama at Birmingham Master's Program. She began her studies in Fall 2008. Congratulations and best wishes to Mary Ellen.

"Good education, Good Times, Bright Future"

Toxicology Undergraduate Program

Giving Back

There are many ways to give back to the Toxicology Program. We have established several Foundation Accounts that target certain areas and activities specifically for the undergraduate students.

Toxicology Program Support Fund

Funds are used for classroom and general laboratory instruction, such as supplies, equipment, reagents, etc. In addition, funds are used to support field trips to local industrial or research laboratories.

Toxicology Internship Fund

Since the summer of 1995, the department has funded internship positions at local industries (Angus, Graphic Packaging), consulting firms (PPM Consultants, Inc., Environ), and governmental agencies (LDEQ). Most of the positions are paid by departmental funds and the number of positions is limited by available funds. These opportunities provide tremendous experience for our students.

Toxicology Professional Development

Funds are used for scholarships, travel awards to regional and national scientific meetings, and training workshops.

Checks can be made out to ULM Foundation with a note indicating the specific account. These checks should be sent to Dr. Kevin Baer, ULM Department of Toxicology, 700 University Ave., SUGR -256, Monroe, LA 71209-0495.

Paracelsus Society

The Paracelsus Society is in the process of being formed in order to provide special recognition to those donors to the Toxicology Program who are willing to make a 10 year commitment at a certain level of giving. This recognition will be in the form of a large and highly visible display case in the hallway near the Toxicology offices and classrooms. More information will be coming in the future.

New Addition

Melissa (Watts) and Landon Perry along with big brother, Garrison, welcomed Audrey Amelia Perry on February 12, 2008 at 11:30 a.m.

Audrey weighed 8 pounds, 5 ounces and was 21 inches long.

Congratulations to Melissa, Landon and Garrison!

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