

UMass researchers get \$3.1 million

By **PATRICK JOHNSON**

Staff writer

AMHERST - The U.S. Department of Energy has awarded a \$3.1 million grant to a research team led by a University of Massachusetts professor to study whether certain microorganisms can help clean up environmental contamination.

The grant will fund research into the genetic makeup of naturally occurring microorganisms that seem able to remove pollutants from contaminated ground-

water, said professor Derek R. Lovely, microbiology department.

Lovely said he was notified last week that his team had been selected for the grant. He said the federal funding helps pay for a significant portion of his research.

Lovely said that by understanding the DNA of microorganisms, the team will be able to identify how and why they do what they do.

"We've known for some time that specialized microorganisms may be helpful in removing pollution from groundwater, and now,

by studying the complete DNA sequence of one of these organisms, we will be able to better use it for environmental restoration," he said.

The Department of Energy is not interested in putting genetically engineered microorganisms in the environment, Lovely said.

The focus instead, he said, will be "to see if we can make natural elements to make the natural microorganisms work faster."

He said the team may be able to identify materials that could trigger the microorganisms to function more rapidly.

The microorganisms, known as anaerobes because they can survive without oxygen, are among the simplest and oldest forms of life on Earth. They occur naturally, he said.

Scientists recently discovered that anaerobes are capable of removing pollutants from round-water contaminated by leas from underground fuel tanks or landfills. Other types of microorganisms are capable of cleaning up toxic and inorganic materials, such as uranium.

The basic research could eventually be applied to cleanup efforts at contamination sites, he said.