

Utah State to study Great Salt Lake bacteria

Last updated August 14, 2008 3:30 p.m. PT

THE ASSOCIATED PRESS

LOGAN, Utah -- A Utah State University microbiologist will study bacteria in the Great Salt Lake that could uncover a solution to global climate change.

The Department of Energy Joint Genome Institute recently approved a \$4.5 million grant for the study.

Bart Weimer, director of Utah State's Center for Integrated BioSystems, says the lake contains more than 1,000 different kinds of bacteria. The salt water favors types that are similar to plants, absorbing carbon dioxide and generating oxygen.

Those bacteria could be used to reduce carbon dioxide in the atmosphere and slow climate change.

"What we're trying to do is take a natural resource in the state and direct it toward something that is a global issue," Weimer said.

If the method proves effective, he said the bacteria could be cultivated elsewhere in the world in salty man-made lakes.

There are few places better to start the research than the Great Salt Lake, the saltiest lake on the planet that can support life. On average, the lake is about four times saltier than the ocean and, in the northern section, up to 20 times saltier.

Many of its tiniest lifeforms have never been studied extensively because less than 1 percent can be grown in laboratories.

Weimer said his research gets around that obstacle by examining bacteria DNA that's collected from the water and soil.

Researchers think the lake's extreme environments might provide clues about life on other planets.

"We have sent a proposal to NASA to see if the Great Salt Lake would be a model for other lifeforms," Weimer said.

He said he expects the research to uncover new enzymes and expand the number of known species at the lake.

"The diversity is a lot greater than people had anticipated," he said.

Weimer said he's also hoping the investigation will find ways to lower man-made contaminants in the water.

The research will include other scientists from Utah State, the University of Utah, the U.S. Geological Survey and the Utah Division of Water Quality.