



TUBA CITY, Ariz. — Pools and springs on the surface of Yellowstone National Park have always been a matter of interest for scientists who believe in the presence of microbes in that zone, especially bacteria that are heat-loving and can consume minerals in hot underground water.

Professor Shazia Tabassum Hakim, a Tuba City-based professor at Diné College's School of Technology, Engineering and Mathematics, is one of the co-investigators of the team that recently secured a Los Angeles-based W.M. Keck Foundation Grant for the next three years.

The \$1 million grant will help a team of researchers from Diné College, the New Mexico Institute of Mining and Technology, Salish Kootenai College and other institutions to find answers for the questions about microbial life in the sub-surface of Yellowstone National Park.

The Keck grant supports three years of research by the interdisciplinary research team, of which Hakim is a part, and serves to fund the design and construction of a specialized instrument triggered by earthquakes to collect samples from existing boreholes. The research links biology and geology to determine how the Earth's natural processes impact microbial life.

Boyd, the lead investigator of the team, said that Yellowstone's seismic activity is at the heart of the interplay of geologic processes that sustain heat-loving microbes known as thermophiles in the subsurface of Yellowstone, and now this research team will try to prove it.

A thermophile is an organism that thrives at relatively high temperatures, between 41 and 122 degrees Centigrade (106 and 252 degrees Fahrenheit).

The project is based at Montana State University. The W. M. Keck Foundation was established in 1954 by the late W. M. Keck, founder of the Superior Oil Company.

The award is made in memory of W.M. Keck's granddaughter Tammis A. Day of Sula, Montana, a poet, playwright, actress and horsewoman.