From Labs to Lives

How Research Funding Solves Real-World Problems

NSF-Funded Research Exploring Life in Earth's Harshest Places

Microbes in Antarctica are helping scientists unlock the secrets to how life survives in extreme environments. At UC Davis, Dawn Sumner investigates how life and our planet have evolved together over billions of years. Her NSF- and DOE-funded team studies microbial ecosystems in frozen Antarctic lakes, where life endures four months of total darkness each year. Their discoveries help explain how early life thrived on Earth and offer clues to where life might exist on other planets.

Helping Humanity

Sumner's research doesn't just expand our knowledge of the past but creates an open data resource that advances breakthroughs in clean energy, sustainable chemistry and biomedical innovation. But without continued federal funding, a missed research season could erase years of progress. Continued investment ensures this high-impact science continues, supports cutting-edge discovery and provides opportunities for early career scientists.

> ***We're collecting samples that will be part of publicly available databases. For example, big data mining for new molecules might provide insights into how to prepare sustainable fuels or possibly molecules that may be important in biomedical applications." — Dawn Sumner, Ph.D.***

Dawn Sumner, Ph.D.

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