UCI researchers to help find clues about past climate conditions in Antarctica’s oldest ice

Initiative will create paths for first-generation and underrepresented students
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Murat Aydin, UCI associate researcher in Earth system science, works with an ice core in Antarctica. He is part of the COLDEX project, recently funded by the NSF, to learn about Earth’s climate in the distant past by analyzing Antarctica’s oldest ice.

Picture Credit:
Mike Lucibella / NSF

To help find answers to questions about Earth's climate as far back as 1.5 million years in the past, researchers in UCI's Department of Earth System Science have joined a new national effort to hunt for clues in Antarctica's frozen expanse. Through the Center for Oldest Ice Exploration, or COLDEX, project, which recently was awarded $25 million in National Science Foundation funding, the UCI scientists will work with collaborators from 13 other U.S. research institutions, including Oregon State University, which is leading the initiative. "UCI will contribute to the chemical analysis of trace gases and ions in the ice cores collected by COLDEX," said Eric Saltzman, UCI professor of Earth system science and chemistry. "These chemicals tell the story of how the composition of the atmosphere and climate have changed on very long timescales." The Earth science community currently has access to an Antarctic ice record dating back about 800,000 years, but COLDEX researchers think there is a lot more knowledge to be gained by nearly doubling that timeline. "Very old ice cores will tell us about links between greenhouse gases and climate under conditions we haven't been able to study yet," said Saltzman. As a major, public, minority serving institution, UCI is offering some extra qualities to the COLDEX project, according to Saltzman. "As a large MSI with a very strong program in Earth system science, UCI will serve as a pipeline for entraining first-generation and underrepresented students into COLDEX activities, with the goal of making climate scientists as diverse as the nation as a whole," Saltzman said.

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