



**Brian Cooke**  
Financial Advisor  
CA Insurance #OD63585  
LPL Financial

UNCERTAIN ABOUT YOUR  
**FINANCIAL FUTURE?**  
MAYBE IT'S TIME FOR A  
**SECOND OPINION.**

**831-476-7283**  
brianm.cooke@lpl.com  
www.lpl.com/brianm.cooke  
Member FINRA/SIPC

# Santa Cruz Sentinel NEWS

Weather Traffic [Subscribe](#)

Search

[Autos](#) | [Real Estate](#) | [Jobs](#)

[News](#) ▾ [Sports](#) ▾ [Business](#) ▾ [Entertainment](#) ▾ [Lifestyle](#) ▾ [Opinion](#) ▾ [Obituaries](#) ▾ [Places](#) ▾ [Marketplace](#) ▾ [Tools](#) ▾

## \$1 million grant will help UC Santa Cruz researcher explore beneath the sea floor

By JANE PALMER

POSTED: 03/15/10, 12:01 AM PDT | UPDATED: ON 03/15/2010 [# COMMENTS](#)

SANTA CRUZ -- A boost in funding will help a UC Santa Cruz scientist's mission to understand the vast plumbing system deep beneath the ocean floor.

The National Science Foundation awarded a \$25 million grant to a group of scientists from five institutions to form a new science and technology center and explore the hidden world underneath the seafloor. Andrew Fisher, a hydrogeologist at UCSC who leads the university's participation in the center, will receive about \$1 million.

"We are thrilled," Fisher said. "There were 240 initial proposals to this program, and they funded five."

Fisher aims to use most of the money for a grant program that will encourage collaboration with other researchers.

"In essence what we are creating is a structure which will hopefully work to promote research on the deep biosphere," Fisher said.

Fisher's research explores how water moves in and out of the earth's oceanic crust. This summer, he will venture on an expedition to the Juan de Fuca Ridge off British Columbia, where he has conducted his fieldwork since the early 1990s.

On previous expeditions, Fisher and his collaborators drilled three holes hundreds of meters deep through the seafloor sediments into the rocks of the upper oceanic crust. The researchers then capped these holes with towering structures called "CORKs," which stand about two stories high on the ocean floor.

This summer, Fisher aims to install three more of these CORKs and conduct a long-term pumping experiment where scientists will pump into one borehole and monitor the other boreholes around it. It is an experiment that will give insight into the complicated hydrologic network that exists below the ocean floor, he said.

"It is like what they do in oilfields or in groundwater aquifers, but it has never been done on the seafloor before," Fisher said.

Fisher also plans to pump tracers into the water and monitor where the water turns up and how long it takes to reach its destination.

"That is going to tell us how fast the water is moving and in what direction," Fisher said.

The research will help determine whether the earth's crust is an appropriate place to try and sequester carbon dioxide, Fisher said.

The research also will give scientists an insight into how aquifers are connected across long distances above the earth's crust.

"These are questions that we can't test very easily on land but ironically they are easier to test below the seafloor because it is one giant aquifer down there," Fisher said.

The amount of water in the oceanic crust is about the same quantity as all the water in the ice caps and glaciers on earth, Fisher said. Moreover, the amount of water that circulates through the crust is equivalent to the combined flows of all the rivers that flow off the continents, he said.

## MOST POPULAR

[DAY](#) [WEEK](#) [NEWS](#) [SPORTS](#) [BIZ](#) [A&E](#) [EMAIL](#) [LIFE](#)

Coroner: Head of dismembered toddler found in Chicago lagoon

Air Force wants owners to give up Nevada bombing range site

Courting unions on Labor Day, Obama pushes paid sick leave

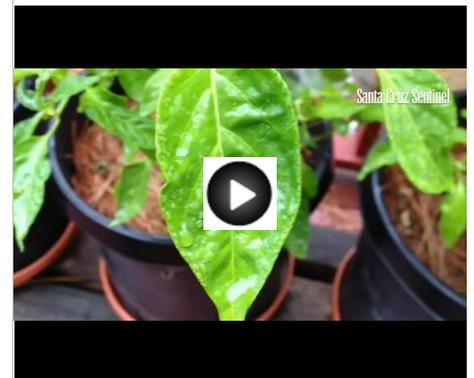
'War Room,' Spanish language cartoon stand out at box office

### Santa Cruz Videos



**Jondi Gumz**

Is this #rain? #scsnews



Reply



**Andrew Matheson**

SLV running back Brighton Hart recon visiting Homestead. #scscore #scsfb

## Highest Female



Mariss

Some of the applications of Fisher's research are even more esoteric, Fisher said. For scientists who are interested in life on other planets or who are interested in what life was like four billion years ago, the ocean crust is like a natural laboratory, he said.

"Every time people explore new parts of the earth they make discoveries about new organisms and new processes," Fisher said.

Fisher believes that ultimately his work will contribute to an understanding about new kinds of life and the mechanisms life uses to survive.

"There are a lot of people who are interested in life on Europa or Mars who will be looking at our results," Fisher said. "It is not exactly the same thing but is similar -- it is a model."

## FROM AROUND THE WEB

selected for you by a sponsor



**iPhone 6 Plus's Being Sold for Next to Nothing**

*LifeFactopia*



**10 Best Cars of 2015 Drive Across the Spectrum**

*Kelley Blue Book*



**Meet Taylor Lianne: Michael Phelps' Transgender Girlfriend**

*Radar Online - Photos*



**The US Navy Is Developing Electrically Powered Superguns**

*The Economist*

## MORE FROM THE WEB

**Steven Seagal's Cattle Ranch in California**

*HGTV*

**Celebs you didn't know passed away: #17 is Shocking**

*Your Daily Dish*

**You Have To See These Hilarious Wedding Photos**

*Inside Grind*

**Tom Hanks Reveals Startling Health News**

*Lifescript*

**Here's Why You Should Stop 'Googling' Names**

*BeenVerified.com*

**DNA Testing Solves Mystery of Young Girl Who...**

*Ancestry*

## YOU MIGHT ALSO LIKE

**Bank robbery suspect identified in Santa Cruz**

**Cops and Courts: Sept. 1, 2015: Pair arrested in bust...**

**Santa Cruz County Stories: Craftsman Om Anand's road...**

**Cops and Courts: Sept. 11, 2015: Man arrested, pot...**

**Bay Area unlikely to follow San Francisco's footsteps...**

**Mavericks invitee Shawn Dollar hospitalized after...**

Recommended by **Outbrain**

## TOP STORIES



**Search on for 3rd day in Chicago dismembered-toddler case**



**Coroner: Head of dismembered toddler found in Chicago lagoon**



**Air Force wants owners to give up Nevada bombing range site**



**Courting unions on Labor Day, Obama pushes paid sick leave**



Yahoo!

Total Compensati



Presented By



## Santa Cruz Local Guide

Featured Businesses

- [Lumber Liquidators](#)
- [AdvantaCare Health, Inc.](#)
- [El Palomar](#)
- [Holcomb Corporation](#)
- [Mid County Seniors](#)



Search for a business

Search by keyword or Zip

[Add your business here +](#)



## This Week's Circulars



HOVER FOR CIRCULAR



HOVER FOR CIRCULAR



HOVER FOR CIRCULAR



## JOIN THE CONVERSATION

[View comments](#)

# The Wall Street Journal

Official Site. 72 Editions for \$12. Less Than 17¢ an Edition. Join Now!



## Santa Cruz Sentinel

