

# DRI Research Impact and Metrics

Dr. Kristen Averyt, DRI President  
NSHE Board of Regents Meeting  
June 7-8, 2018

## DRI's People and Research Facilities

- Over **400** scientists, engineers, students, and support staff
- **100** Ph.D. faculty from more than **40** scientific disciplines
- **40** specialized labs operated on **2** research campuses
- Over **300** projects on all seven continents
- **\$31M** in sponsored research grants and contracts annually



# Ranked in the Top 10% of Institutions Nationally

NSF National Ranking (FY16) - Annual expenditures in the environmental sciences.

Atmospheric + Earth Sciences	DRI Peer Institutions
4	U. California, San Diego
9	MIT
10	Arizona State U.
<b>24</b>	<b>Desert Research Institute</b>
27	U. Davis

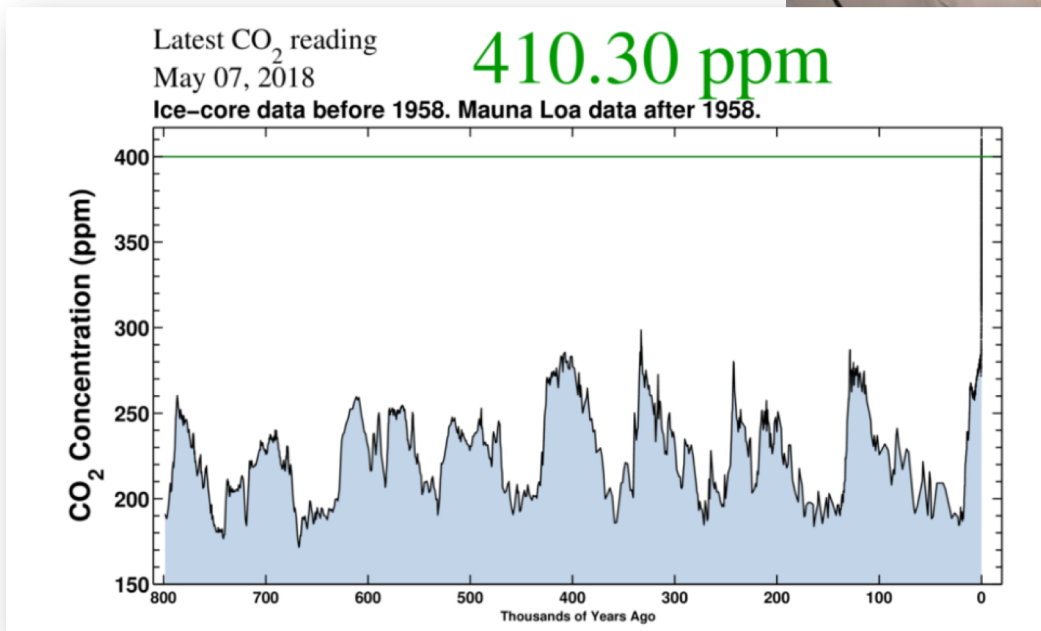
Federal Atmospheric + Earth Sciences	DRI Peer Institutions
7	Arizona State U.
9	MIT
15	U. California, San Diego
<b>23</b>	<b>Desert Research Institute</b>
36	U. Davis

Data Source: NSF HERD Survey FY16

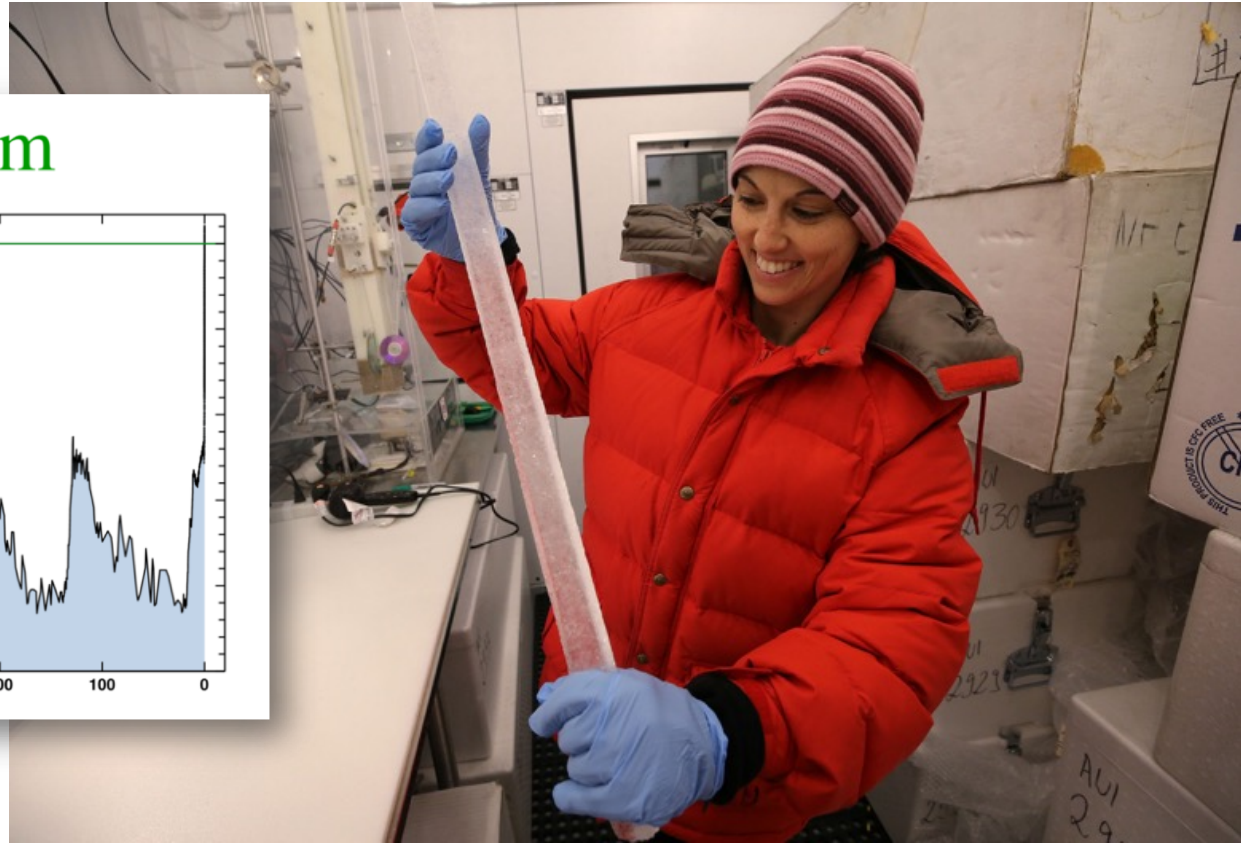


**Problem:** Protect aquatic ecosystems at Lake Tahoe and Lake Mead.

**DRI Solutions:** Stop Quagga Mussel invasion; help guide the Tahoe Shoreline Plan.



Source: Scripps Institution of Oceanography at UC San Diego

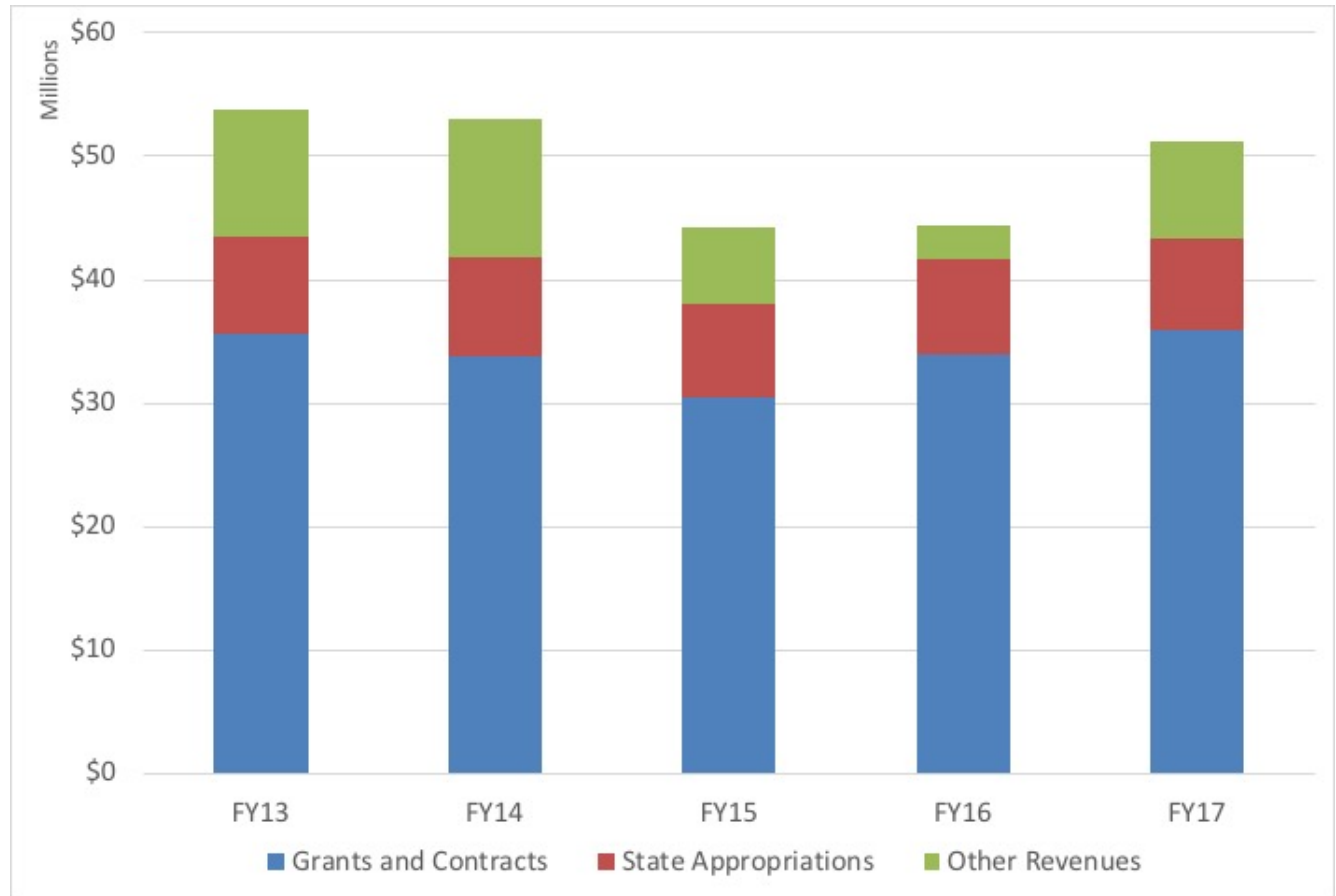


**Problem:** Minimize risks to society and natural resources by improving prediction of changes in the climate.

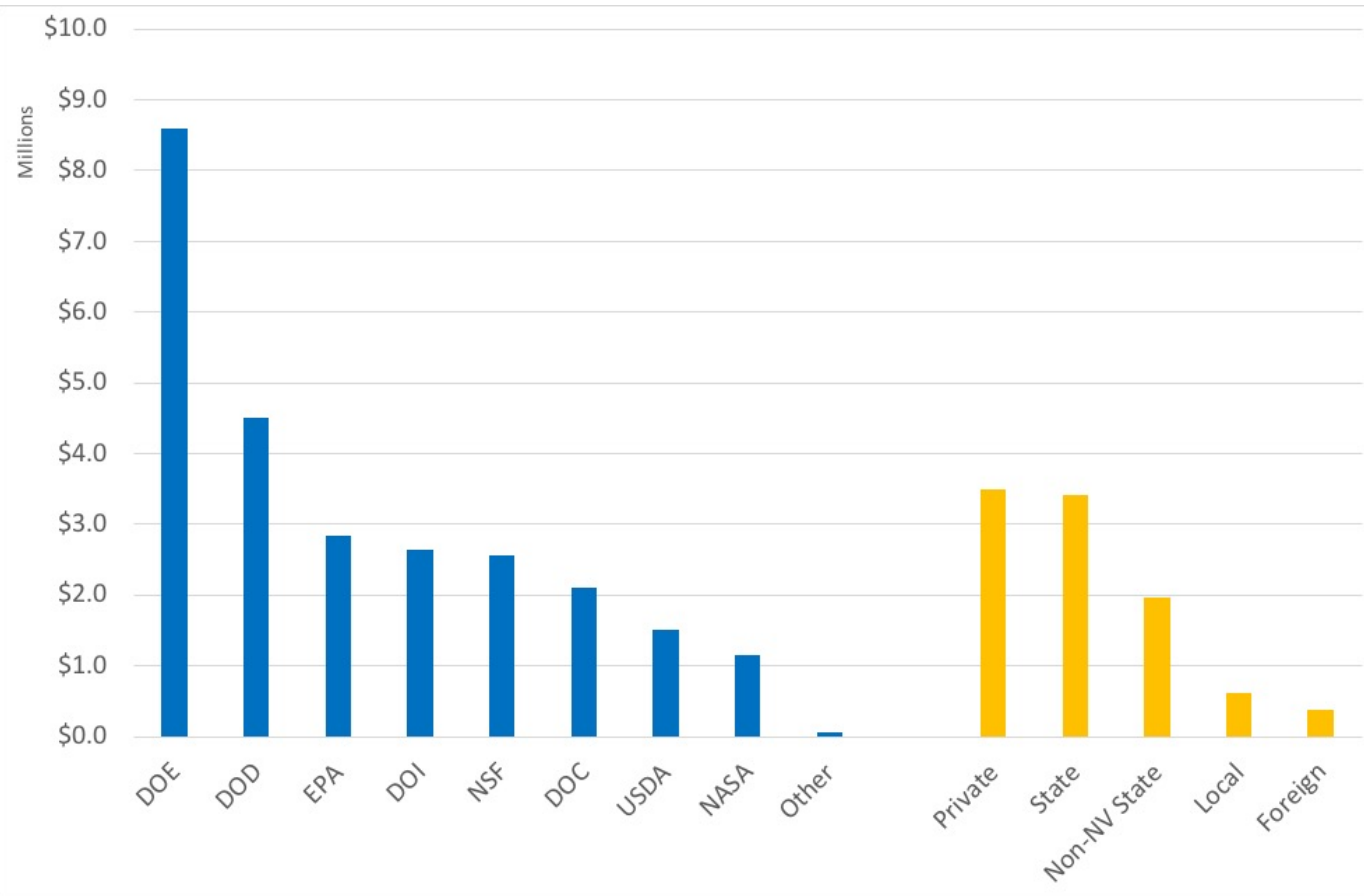
**DRI Solution:** Extract greenhouse gas records by melting ancient ice-cores to understand past climates.

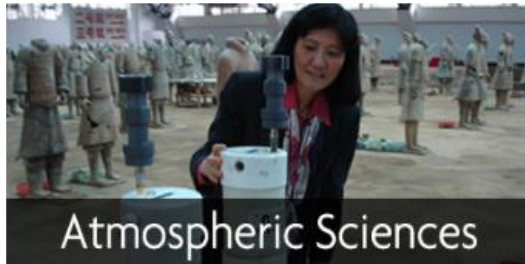
# DRI Revenue By Source

Five-Year Trend  
(FY13- FY17)



# Sponsored Research Grants & Contracts by Source (FY17)



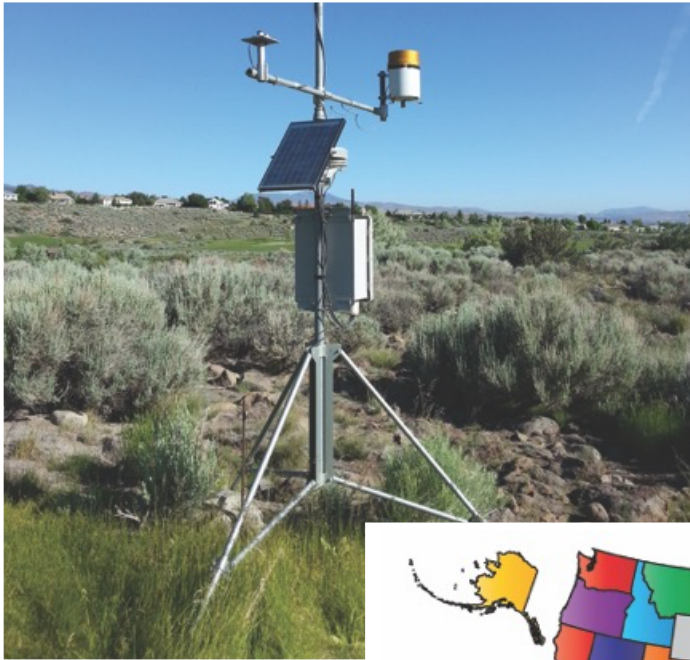


DRI's reputation is built on our expertise in air, water, Earth, and ecosystem sciences and our diverse faculty work in more than **40 scientific fields**.

DRI's has additional expertise **addressing new challenges** facing society.







Western Regional  
Climate Center

**Problem:** Availability of timely, relevant, and trustworthy information to ensure preparedness for weather and climate related hazards.

**DRI Solution:** Tailor research to meet the public need and deliver information through climate services, products, and knowledge.



*Drought*

*Climate & Weather*

*Agriculture*

*Pre & Post Fire*

# Climate Engine

enables users to process, visualize, download, and share climate and remote sensing data using only the Internet, overcoming big data barriers.

[ClimateEngine.org](http://ClimateEngine.org)

**Problem:** Real-time access to high-resolution weather and climate data to support decision making and resource management.

**DRI Solution:** On-demand processing of complex satellite and climate data at user-defined scales via a web-based application.

## DRI scientists discover hazardous chemicals in flavored e-cigarette vapor



Healthy **NV** Project<sup>SM</sup>

**Renown**<sup>®</sup>  
INSTITUTE FOR  
HEALTH INNOVATION

POWERED BY  
 **Helix**

**Problem:** Improve public health.

**DRI Solutions:** Assess the health hazards associated with e-cigarettes; integrate environmental data with population health and genetics research.

The DRI  
Business  
Model

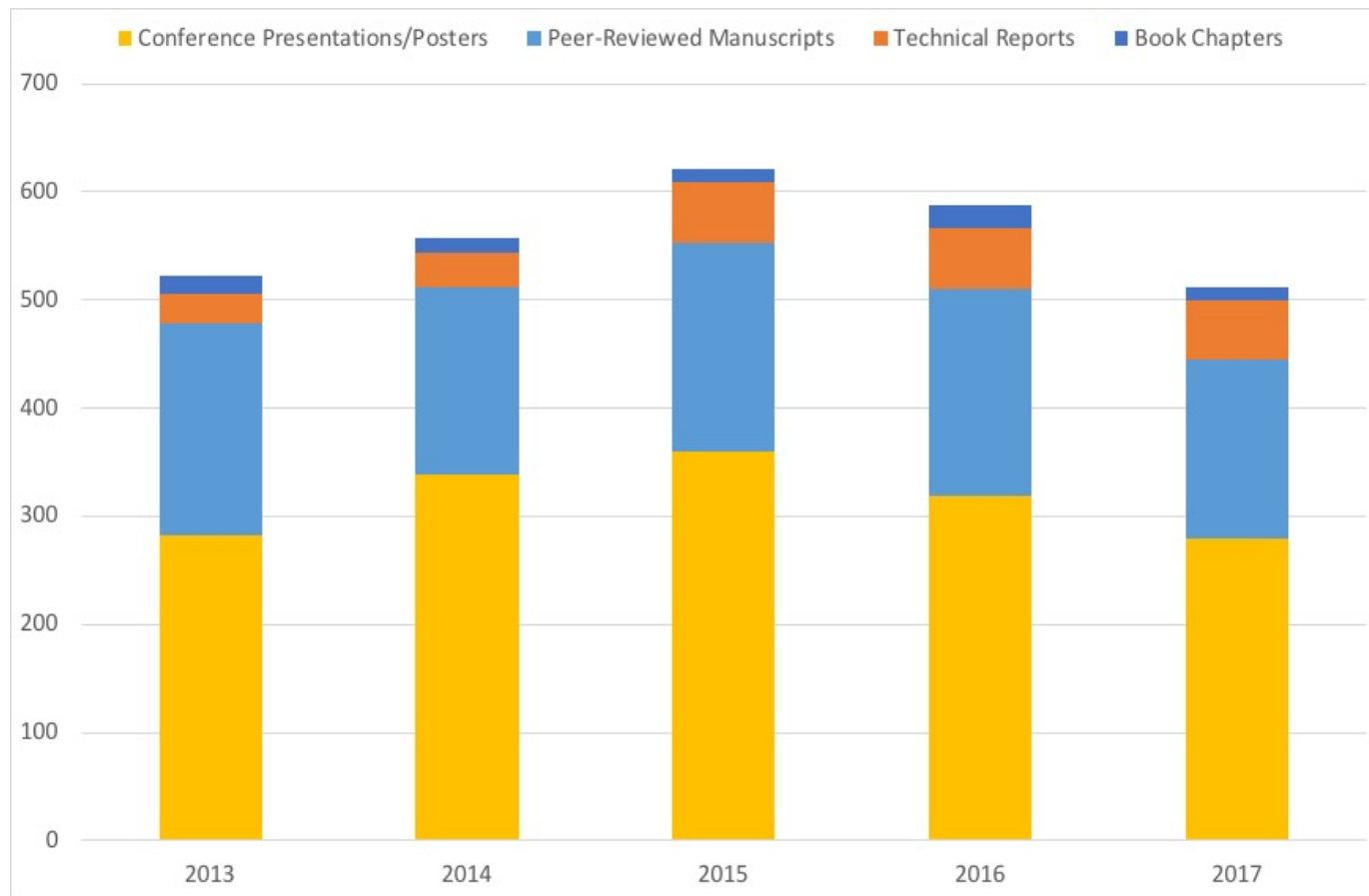
# Indirect Cost Recovery (ICR)



Direct Project Support

Build in an additional 65%  
for Research Admin and  
Reinvestment

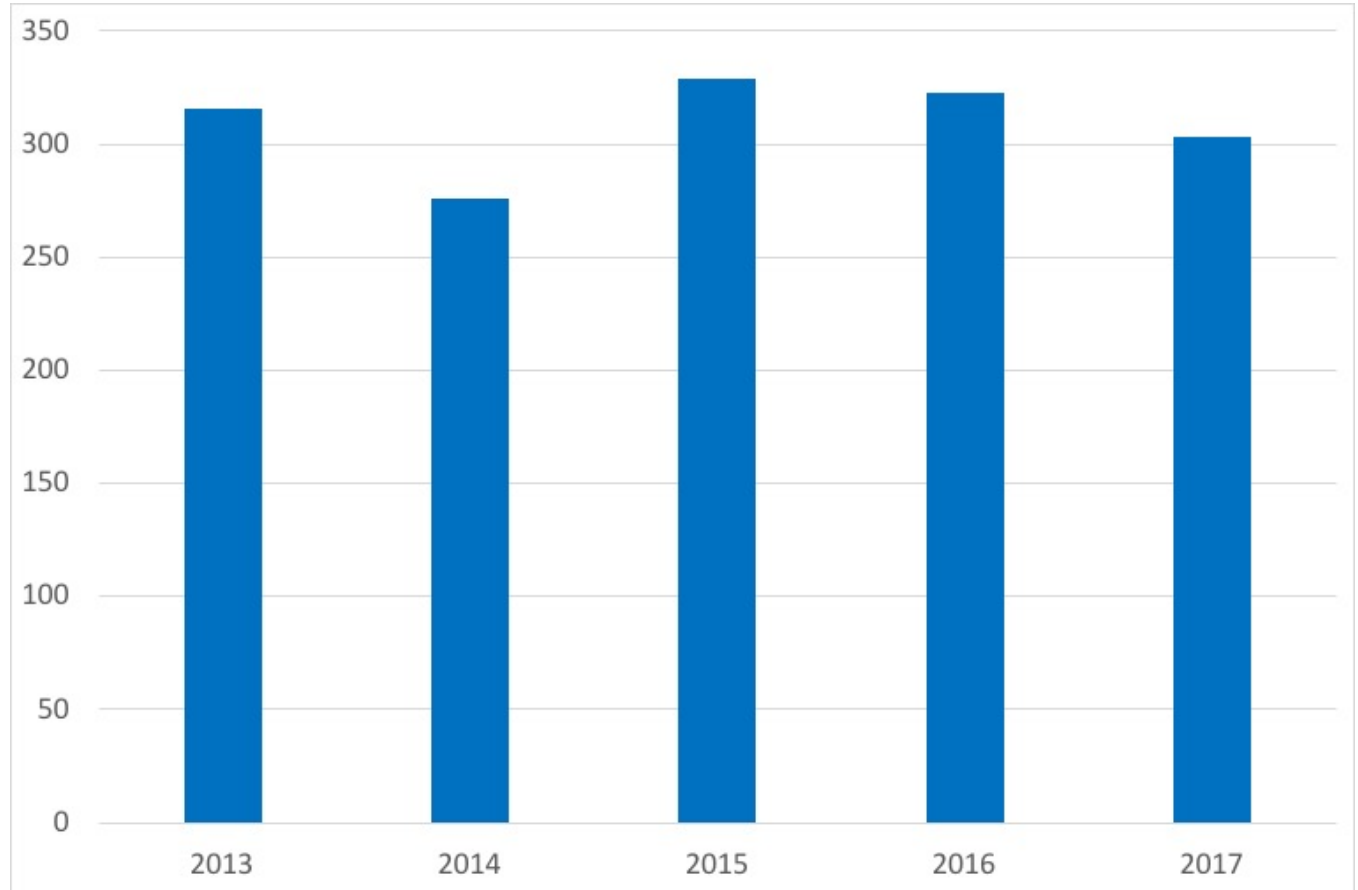
# DRI Faculty Research Output

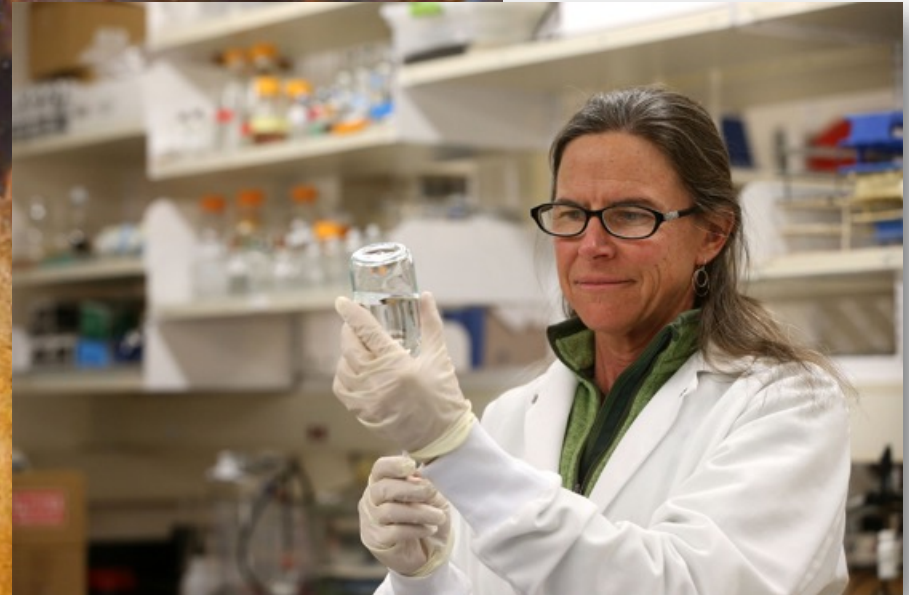


# DRI Faculty Proposal Production

Number of Proposals  
Submitted by ~100 Ph.D.  
Research Faculty

Five-year Trend  
(2013-2017)





*Photo: Antarctic marine ascidians (sea squirts) on the sea floor, 70ft from where Palmerolide natural products with Anticancer activity have been isolated. (photo credit: Bill Baker)*

**Problem:** Skin cancer.

**DRI Solution:** Search for skin cancer cure in the genes of Antarctic sea-squirts.



**Problem:** Monitor the environment at the Nevada National Security Site and preserve the historic records of our history.

**DRI Solution:** Over 40 years of service to the U.S. DOE and significant scientific and cultural contributions to nearly all the DOE Nevada Field Office's programs.



## NSHE Collaborations

- 43** UNR and UNLV Grad Students with DRI Faculty as Primary Advisors

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- 36** UNR and UNLV Graduate Students Supported by DRI

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- 26** NSHE classes taught by DRI faculty

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- 80** DRI faculty involved in teaching and advising

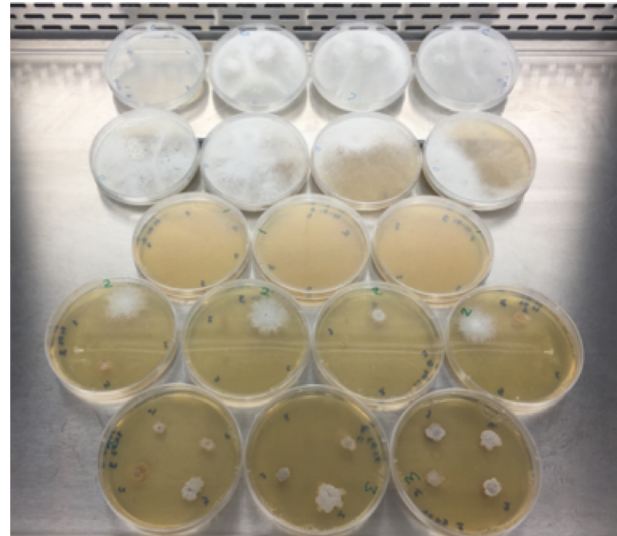


# Tū Biomics

Extracting natural fungicides  
from microbial communities



DESERT RESEARCH  
CORPORATION



Desert Research Corporation: Connecting DRI Innovations with Industry through Commercialization



Microlan



Abbyss



Apana



Echologics



Syrinix Ltd.

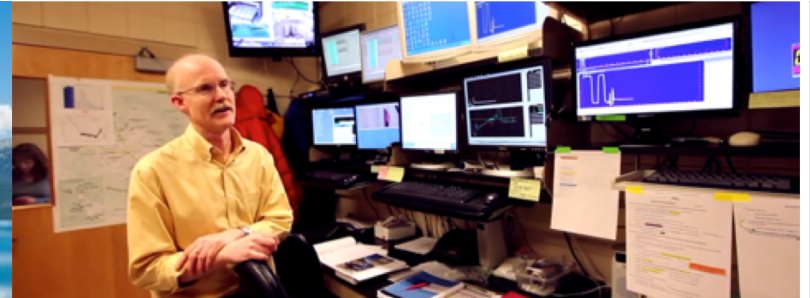


STAR Water Solutions



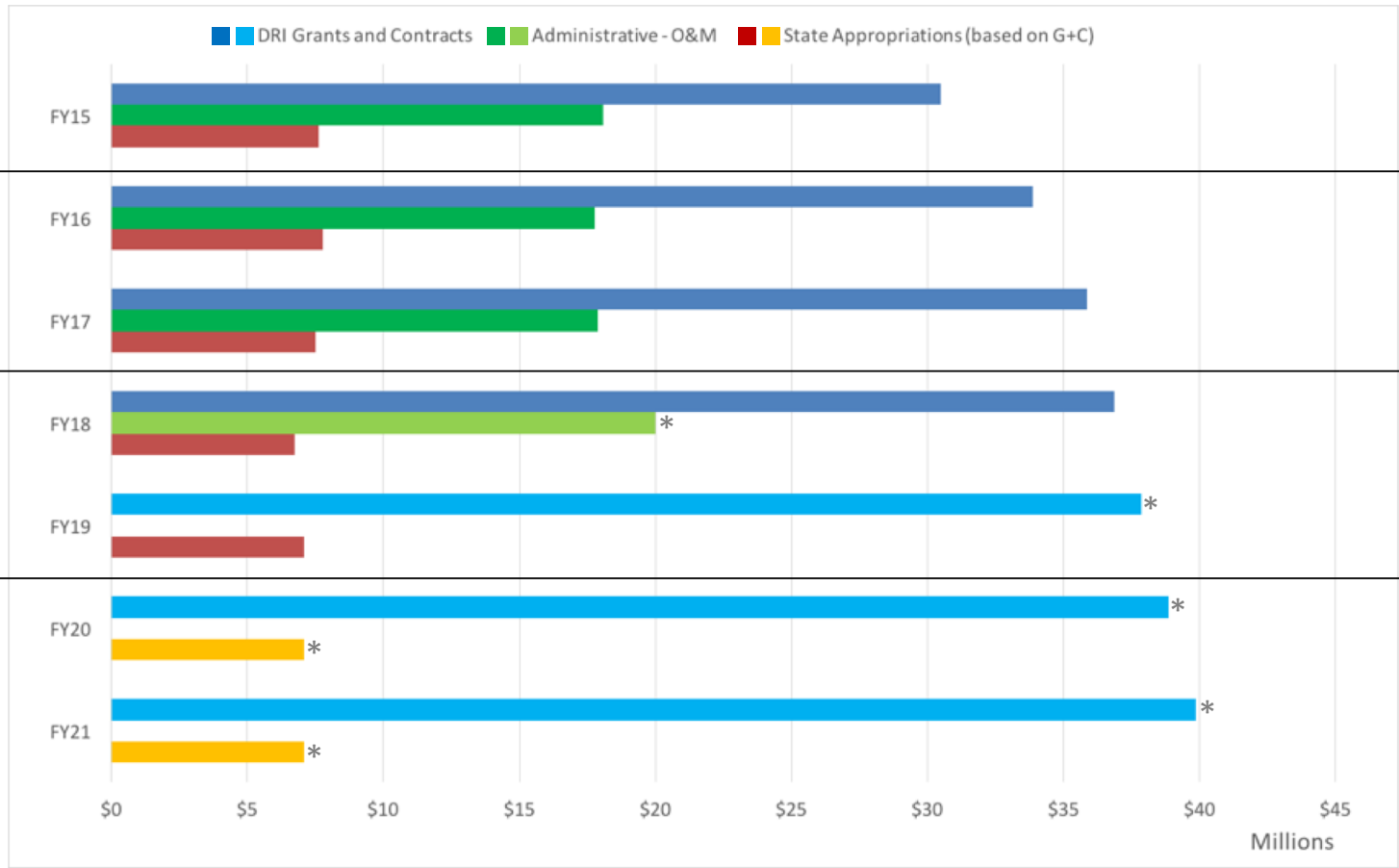
DRI's Waterstart: Connecting Research with Industry to Solve Nevada's Water Resource Challenges

“to promote the general welfare of the State of Nevada and its citizens through the development of educational and scientific research”



Questions?

# DRI's Funding Formula



*\*Forecast Amounts*