



**ACCOUNTABILITY & TRANSPARENCY  
FOR RESEARCH INTEGRITY  
VIA COUNTRY REPORT CARDS: U.S.**

Zoë H. Hammatt, JD, MPhil  
Kleinert et al. Symposium  
5<sup>th</sup> WCRI  
31 May 2017

# U.S. and World Population Clock


Tell us what you think >


The United States


The World
New!


May 30, 2017 23:43 UTC (+10)

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## U.S. Population

3 2 5 , 1 4 3 , 7 1 3



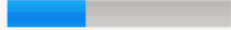


## World Population

7 , 3 9 4 , 1 9 3 , 4 9 7

### COMPONENTS OF POPULATION CHANGE

23:43:30 UTC

- One birth every **8 seconds** 
- One death every **12 seconds** 
- One international migrant (net) every **33 seconds** 

### TOP 10 MOST POPULOUS COUNTRIES

1. China	1,379,302,771	6. Pakistan	204,924,861
2. India	1,281,935,911	7. Nigeria	190,632,261
3. United States	326,625,791	8. Bangladesh	157,826,578
4. Indonesia	260,580,739	9. Russia	142,257,519
5. Brazil	207,252,884	10. Mexico	128,154,288

# ECONOMY 2016

GDP \$18.56 trillion (largest national economy in nominal terms)

Gross expenditure on R&D \$499 billion

\$69 billion nondefense

GDP per capita: \$57,300 (ranked 8<sup>th</sup> highest in world)

<http://data.worldbank.org/indicator/GB.XPD.RSV>

# ACADEMIC INSTITUTIONS (2015)

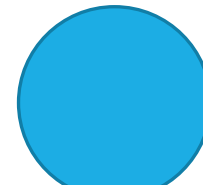
## U.S. Postsecondary Institutions by Degree Level and Program Focus

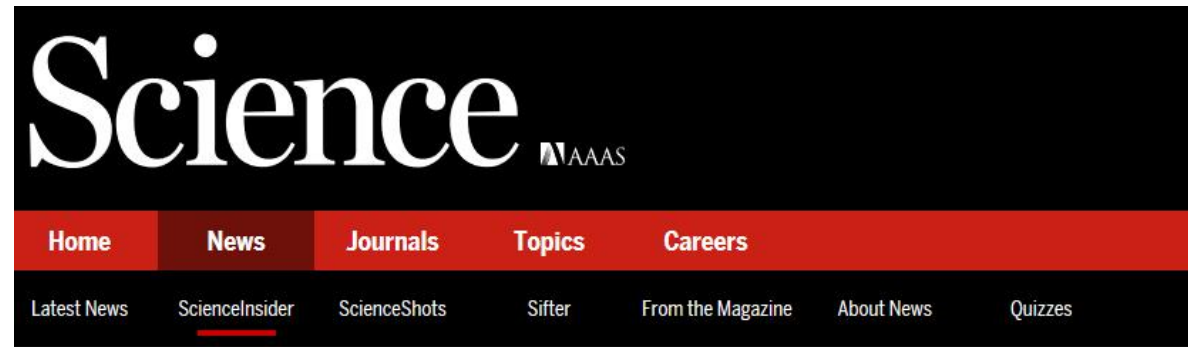
	Institutions		Fall 2014 Enrollment	
	N	%	N	%
Doctoral Universities	335	7%	6,455,622	32%
Master's Colleges and Universities	741	16%	4,422,535	22%
Baccalaureate Colleges	583	13%	999,834	5%
Baccalaureate/Associates	408	9%	1,079,576	5%
Associate's Colleges	1,113	24%	6,524,819	32%
Special Focus: Two-Year	444	10%	204,321	1%
Special Focus: Four Year	1,005	22%	776,979	4%
Tribal Colleges	35	1%	17,929	0.1%
Grand Total	4,664		20,481,615	

Carnegie Classification of Institutions of Higher Education™

<http://carnegieclassifications.iu.edu/downloads/CCIHE2015-FactsFigures-01Feb16.pdf>

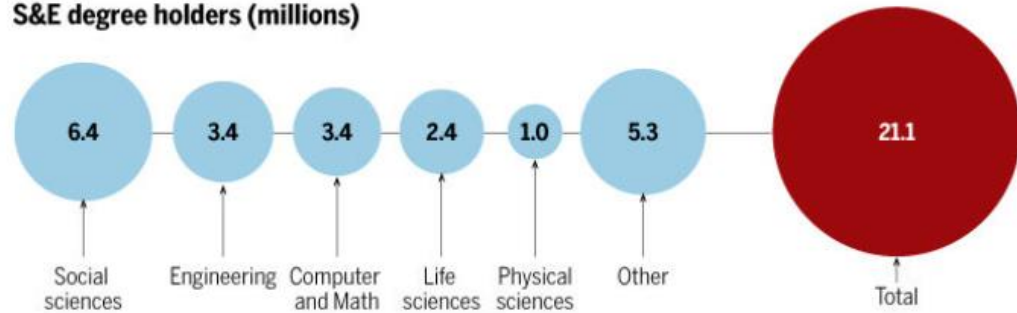
“”





# NUMBER OF RESEARCHERS?

S&E degree holders (millions)



SHARE



123



60



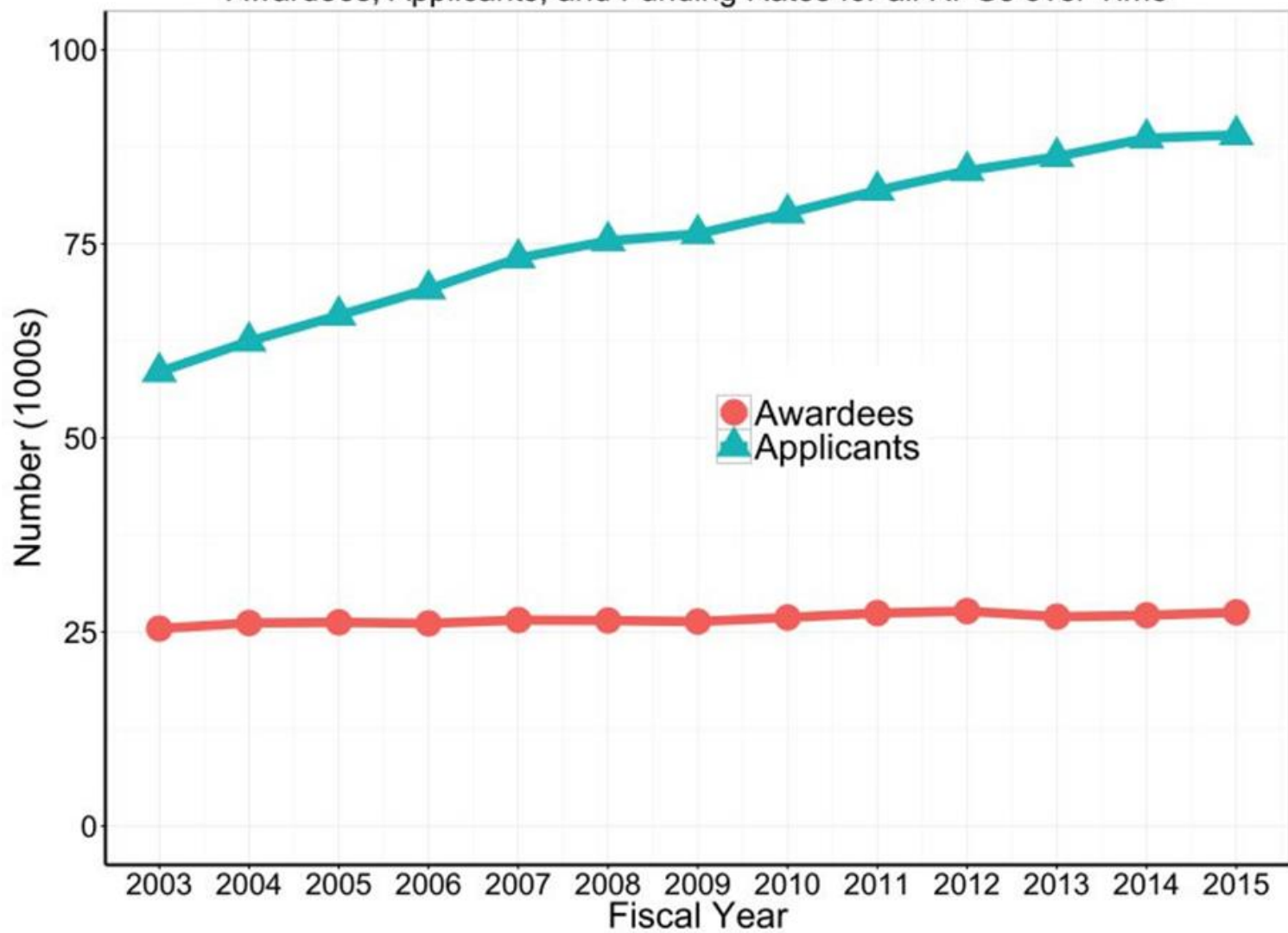
Demonstrators rally for science near the AAAS annual meeting in Boston in February.

Lindzi Wessel

What if every scientist and engineer in the U.S. marched? How many would that be?

By David Malakoff | Apr. 21, 2017, 3:15 PM

Awardees, Applicants, and Funding Rates for all RPGs over Time



<https://nexus.od.nih.gov/all/2016/05/31/how-many-researchers>

# NATIONAL REGULATIONS FOR RESEARCH INTEGRITY

**Office of Science and Technology Policy definition of FFP, processes differ**

Office of Research Integrity

National Science Foundation, Office of the Inspector General

Office of Laboratory Animal Welfare

Office for Human Research Protections

Veteran's Administration

Department of Agriculture

Department of Defense

Environmental Protection Agency ... etc.

**NO National Charter or Code**

# U.S. OFFICE OF RESEARCH INTEGRITY (1992)

**~4,000 institutions** with assurances (~400 non-U.S.)

**~400 queries and allegations** per year

**~35-40 research misconduct cases opened** per year

**~10 public findings** of research misconduct per year

*(Fabrication, Falsification, Plagiarism in proposing, performing, reviewing or reporting research funding by the U.S. Public Health Service, ... 42 CFR 93; 2005)*

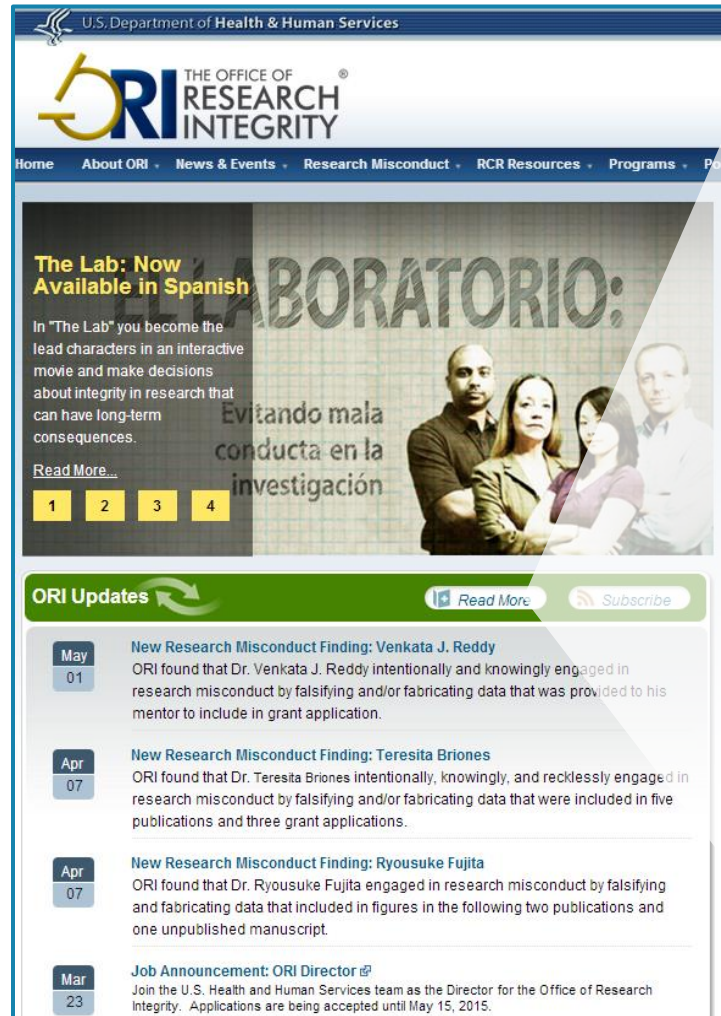
Intentional, knowing, reckless

Preponderance of the evidence

Significant departure from accepted practices



# ORI RESEARCH MISCONDUCT FINDINGS ARE PUBLIC



U.S. Department of Health & Human Services

**ORI** THE OFFICE OF RESEARCH INTEGRITY

Home About ORI News & Events Research Misconduct RCR Resources Programs

**The Lab: Now Available in Spanish**

**LABORATORIO:**

In "The Lab" you become the lead characters in an interactive movie and make decisions about integrity in research that can have long-term consequences.

Evitando mala conducta en la investigación

Read More...


1 2 3 4

**ORI Updates** [Read More](#) [Subscribe](#)

**May 01** **New Research Misconduct Finding: Venkata J. Reddy**  
ORI found that Dr. Venkata J. Reddy intentionally and knowingly engaged in research misconduct by falsifying and/or fabricating data that was provided to his mentor to include in grant application.

**Apr 07** **New Research Misconduct Finding: Teresita Briones**  
ORI found that Dr. Teresita Briones intentionally, knowingly, and recklessly engaged in research misconduct by falsifying and/or fabricating data that were included in five publications and three grant applications.

**Apr 07** **New Research Misconduct Finding: Ryouzuke Fujita**  
ORI found that Dr. Ryouzuke Fujita engaged in research misconduct by falsifying and fabricating data that included in figures in the following two publications and one unpublished manuscript.

**Mar 23** **Job Announcement: ORI Director**   
Join the U.S. Health and Human Services team as the Director for the Office of Research Integrity. Applications are being accepted until May 15, 2015.

## Case Summary: Reddy, Venkata J.

AGENCY: Office of the Secretary, HHS.

ACTION: Notice.

SUMMARY: Notice is hereby given that the Office of Research Integrity (ORI) has taken final action in the following case:

Venkata J. Reddy, University of Minnesota: Based upon the evidence and findings of an investigation report by the University of Minnesota (UMN), an investigation conducted by another Federal agency, and additional information obtained by the Office of Research Integrity (ORI) during its oversight review of the UMN investigation, ORI found that Mr. Venkata J. Reddy, former Graduate Student, Department of Chemistry, UMN, engaged in research misconduct in research that was included in grant application R01 GM095559-01A1, submitted to the National Institute of General Medical Sciences (NIGMS), National Institutes of Health (NIH).

ORI found by a preponderance of the evidence that the Respondent intentionally and knowingly engaged in research misconduct by falsifying and/or fabricating data that was provided to his mentor to include in grant application R01 GM095559-01A1 submitted to NIGMS, NIH, to obtain U.S. Public Health Service (PHS) funds. Specifically, ORI found that the Respondent falsified data included in Figures 4, 9, 11, 15, and 25 in R01 GM095559-01A1 for enantiomeric excess ("ee") to falsely show a high degree of selectivity for one enantiomer over another by a cut-and-paste method and manipulation of the instrument to give the desired result. Respondent also falsified the underlying nuclear magnetic resonance spectroscopy (NMR) data for Compound 22 reported in Figure 15 in R01 GM095559-01A1 by a cut-and-paste method to manipulate the NMR spectra and give the desired result.

Dr. Reddy has been debarred by the Federal agency with joint jurisdiction for a period of five (5) years, ending on August 26, 2018. ORI has implemented the following administrative action to coincide with the government-wide debarment:

(1) Respondent is prohibited from serving in any advisory capacity to PHS including, but not limited to, service on any PHS advisory committee, board, and/or peer review committee, or as a consultant.

Last Updated on Mon, 2015-05-04 11:38.

# SCIENTIFIC STRATEGY

NSF Strategic Plan for 2014-2018

NIH Strategic Plan 2016-2020

Healthy People 2020, ... etc.



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## A STRATEGY FOR AMERICAN INNOVATION

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National Economic Council  
and  
Office of Science and Technology Policy

October 2015



# RCR EDUCATION

ORI regulation mandates that “institutions must foster an environment that promotes the responsible conduct of research” (42 C.F.R. Part 93)

NSF Implementation of America COMPETES Act, 2009

NIH training grant requirements, 2009 (NOT-OD-10-019)

RCR is NOT mandatory for everyone

Various resources and approaches to meeting training requirements

# RESOURCES FROM ORI

## Interactive Videos



## Video Case Studies



### 5 WAYS SUPERVISORS CAN PROMOTE RESEARCH INTEGRITY

Are you a principal investigator, research coordinator, academic advisor, or mentor? Roles such as these place you in a unique position to cultivate exceptional research practices among the next generation of researchers.

- 1 BE AVAILABLE & APPROACHABLE**  
Your team wants to learn from YOU!
- 2 REVIEW RAW DATA**  
You are responsible for the integrity of your team's data.
- 3 COMMUNICATE EXPECTATIONS**  
Prevent misunderstandings by making sure everyone is on the same page.
- 4 PROVIDE TRAINING and GUIDANCE**  
Avoid making assumptions about anyone's skills or knowledge.
- 5 KNOW YOUR RESEARCH INTEGRITY OFFICER**  
Be prepared in case you ever suspect research misconduct.

Find out more: [ori.hhs.gov](http://ori.hhs.gov) @HHS\_ORI #ORIEDU

## Infographics

# U.S. INFLUENCE ON GLOBAL RESEARCH INTEGRITY

U.S. ORI involvement in WCRI since inception

Other countries request guidance on handling allegations of FFP

Over 1,000,000 visits to ORI website per year

~1,000 Research Integrity Officers → Association of Research Integrity Officers

NIH, NSF, NAS, AAAS, etc.

# GAPS

Assessment of RCR training

Rigor of research on research integrity

Degree of institutional cooperation

Degree of federal cooperation

Protection of whistleblowers

Incentives

Research integrity in quality assessment and ranking





# 5th World Conference on Research Integrity

May 28 - 31, 2017  
Amsterdam  
The Netherlands



A background image of a sunset or sunrise sky with a rainbow and palm trees. The sky is a mix of blue, purple, and orange, with a faint rainbow visible. The bottom of the image shows the silhouettes of palm trees against the horizon.

Thank you & acknowledgments:

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