

NIAID

Fiscal Year 2015 Fact Book

National Institute of Allergy and Infectious Diseases



U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
National Institutes of Health
National Institute of Allergy and Infectious Diseases



NIAID Mission

The mission of the National Institute of Allergy and Infectious Diseases is to conduct and support basic and applied research to better understand, treat, and ultimately prevent infectious, immunologic, and allergic diseases.

(Cover) Colorized scanning electron micrograph of Ebola virus particles (red) in extracellular space between infected African green monkey kidney cells.

All images are courtesy of the National Institute of Allergy and Infectious Diseases.

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Allergy and
Infectious Diseases

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Letter From the Director

The National Institute of Allergy and Infectious Diseases (NIAID) conducts and supports research to better understand, diagnose, treat, and ultimately prevent infectious, immunologic, and allergic diseases. NIAID supports research ranging from studies of the fundamental mechanisms of infectious and immunologic diseases to applied studies aimed at developing and testing new diagnostics, therapeutics, and vaccines. The *Fiscal Year 2015 Fact Book* focuses on a highly productive year. NIAID accomplishments promise to improve public health while advancing the fundamental scientific discoveries that are the foundation for future progress.

NIAID's long-term investment in HIV/AIDS research continues to lead us closer to an "AIDS-free generation," in which new HIV infections, as well as illness and death due to AIDS, are rare. A decade of well-designed studies of antiretroviral therapy (ART) regimens culminated this year, with the release of results from the major international Strategic Timing of Antiretroviral Treatment (START) study. The study showed that when individuals with HIV initiated ART as soon as they were diagnosed, their overall risk of developing AIDS and other serious illnesses was reduced considerably compared to those who delayed therapy. In light of these data, the World Health Organization (WHO) recommended that all HIV-infected persons be treated immediately to improve their health and prevent transmission of the virus to others. To end the HIV pandemic, however, both a cure for HIV and a vaccine that provides durable protection against infection are essential. An HIV cure will involve strategies that either eradicate the virus completely or, more likely, suppress the virus to the point where an individual can suspend ART without the virus rebounding. With this goal in mind, NIAID is supporting research to learn more about persistent hiding places or "reservoirs" of HIV and how antiretroviral therapies affect these sites. In the quest for an HIV vaccine, NIAID is building on the results of the RV144 HIV vaccine trial, which was the first to show modest protection against HIV.

Vaccines are critical tools in protecting the public against other infectious diseases, including emerging and re-emerging infections. One of



NIAID Director Anthony S. Fauci, M.D. Credit: NIAID

NIAID's top priorities is to improve the efficacy of influenza vaccines and ultimately to develop a "universal" influenza vaccine that can protect against diverse influenza strains. In 2015, NIAID scientists reported the development of an experimental nanoparticle vaccine incorporating an influenza virus component that varies little among different viral strains—research that is bringing us closer to the development of a universal flu vaccine. Vaccines also are a vital part of our global health efforts.

With increasing movement of people and goods, many infectious diseases are spreading across the globe. Ongoing NIAID research on a variety of emerging infections, such as those caused by the chikungunya, dengue, and Zika viruses, provides the foundation for developing effective medical countermeasures and strategies and enables swift research responses to disease outbreaks. This capacity came into dramatic focus with the unprecedented Ebola outbreak in West Africa. NIAID scientists working with international partners—including health ministries in Liberia, Guinea, and Sierra Leone—have traveled repeatedly to Africa to advance critical research toward possible treatments, develop and test vaccines, and strengthen diagnostic capability in the field to help staunch the spread of the deadly Ebola virus disease (EVD). To stem the outbreak, NIAID launched a clinical research partnership between the United States and Liberia known as the Partnership for Research on Ebola Vaccines

in Liberia (PREVAIL). In PREVAIL I, scientists working with pharmaceutical companies showed that two experimental vaccines developed with NIAID support are safe and capable of inducing a significant immune response against the virus. In the PREVAIL II study, scientists compared the safety and efficacy of optimized standard of care alone to optimized standard of care coupled with the candidate Ebola therapy, ZMapp. A first look at results from PREVAIL II showed that the treatment is well tolerated and suggests it may hold some promise as an Ebola treatment, although not enough patients were enrolled to provide a definitive answer. PREVAIL III is an observational study focusing on EVD survivors and their contacts. Study investigators hope to gain insights into the long-term health consequences of EVD, learn whether survivors are protected from future Ebola infection, determine how long the virus may persist within certain protected sites within the body such as the genitourinary system, and observe whether sexual transmission of EVD can occur.

In 2015, the growing problem posed by antibiotic-resistant pathogens received attention from the highest levels of the U.S. government when the White House released its *National Action Plan for Combating Antibiotic-Resistant Bacteria*. NIAID plays a key role in advancing the goals of the White House initiative through research to understand how microbes develop resistance and studies to identify novel ways to combat them; translation of laboratory findings into potential treatments, vaccines, and new diagnostic tests; clinical validation of diagnostic tests; and clinical trials to evaluate vaccines and new and existing therapies against drug-resistant microbes. In an exciting discovery this year, NIAID-supported researchers used an innovative screening method to discover a novel antibiotic called teixobactin in soil. Teixobactin appears to be a potent killer of a broad range of bacteria, including *Staphylococcus aureus*, *Streptococcus pneumoniae*, and *Mycobacterium tuberculosis*, and NIAID is supporting work to develop this molecule into a novel therapeutic. The research that unearthed teixobactin also may lead to the identification of additional antibiotics that can avoid the development of resistance.

NIAID is committed to improving treatment and prevention of immune-mediated disorders, including asthma, allergic diseases, autoimmunity, and rejection of transplanted organs, tissues, and cells. Immune-mediated disorders result in significant chronic disease and disability and can impose large social and financial burdens on patients and their families. By conducting basic and clinical research, the Institute is working to further delineate the mechanisms of immune function and to develop and test novel approaches to suppress aberrant immune responses or enhance beneficial ones. For example, peanut allergy is an increasing global health problem affecting between 1 and 3 percent of children in many westernized countries. This year, the NIAID Immune Tolerance Network (ITN) released clinical trial results that transformed our understanding of peanut allergy prevention. ITN researchers showed that introducing peanut-containing foods into the diets of high-risk infants at an early age was safe and reduced their risk of developing peanut allergy by 81 percent by age 5. Based on this research, NIAID is convening an expert panel to develop an addendum to the 2010 *Guidelines for the Diagnosis and Management of Food Allergy in the United States*, which will be published in 2016. This addendum will address prevention of peanut allergy through early peanut introduction.

The *Fiscal Year 2015 Fact Book* summarizes the financial policies and mechanisms that enable the Institute to support research and training activities critical to advancing the NIAID mission. Through basic, applied, and clinical research, the Institute will continue to advance the development of vaccines, therapeutics, and diagnostics to improve health and save millions of lives throughout the world.

/Anthony S. Fauci/

Anthony S. Fauci, M.D.
Director, National Institute of Allergy and Infectious Diseases
National Institutes of Health

Organizational Overview

National Institute of Allergy and Infectious Diseases



NIAID—A Year in Review

NIAID was appropriated \$4.4 billion in FY 2015, a period that spanned October 1, 2014 to September 30, 2015. The appropriation enabled continuing research efforts to better understand, identify, treat, and ultimately prevent infectious, immunologic, and allergic diseases and to develop new therapies, vaccines, and diagnostic tests.

NIAID's primary commitment is to scientific studies proposed by researchers (considered investigator-initiated or unsolicited research) who work in universities, medical schools, and other research institutions across the United States and abroad, with an appropriate balance for NIAID research areas identified as high priority by NIAID.

The *Fact Book* summarizes how FY 2015 funding was distributed among NIAID research programs and funding mechanisms, provides comparisons with prior year allocations, and outlines the funding policies influencing grant awards.

Budget Highlights

- NIAID received \$4.4 billion in appropriated funds, an increase of \$16 million over FY 2014. This excludes the emergency Ebola funding of \$238 million in FY 2015.
- NIAID distributed funds similarly across the three mission areas: Biodefense and Emerging Infectious Diseases (BioD), 36.5 percent; HIV/AIDS, 35.9 percent; and Infectious and Immunologic Diseases (IID), 27.6 percent.
- Approximately 82 percent of the total NIAID budget was awarded to the extramural research community. This includes 58.8 percent to Research Project Grants (RPGs), 19.3 percent to Research and Development (R&D) contracts, and 3.4 percent to research centers, training, and other research.
- NIAID increased funding for RPGs by \$52.7 million over FY 2014, allowing the Institute to fund a total of 4,027 RPGs in FY 2015.
- The average cost per competing RPG remained relatively unchanged from an

adjusted level of \$458,000 in FY 2014 to \$454,000 in FY 2015.

- Approximately 25 percent of competing R01 awards were made to new investigators, defined as principal investigators (PIs) who have not previously competed successfully as a PI for a significant NIH independent research award.
- NIAID was able to maintain a success rate of 21.4 percent for competing RPG applications, a rate higher than the overall NIH success rate of approximately 18.3 percent.
- The Institute's intramural research program comprised 12 percent of the total NIAID budget.
- NIAID supported 782 international projects in 111 countries, totaling approximately \$437 million.

Financial Management Plan

Pursuant to NIH budget policy:

- **Renewal Grants:** Capped at 20 percent—applicants could request up to 20 percent more than the funding level of the previous grant.
- **Noncompeting Awards:** Funded at fully committed levels.
- **Competing Applications:** Awarded without any programmatic reductions.

Traditionally, NIAID sets aside funds for selective pay and Bridge awards:

- **Selective pay:** NIAID set aside \$9 million (\$3 million for each extramural program division). Note: Investigators could not apply for selective pay funding but had to be nominated by NIAID program officers.
- **R56 Bridge awards:** NIAID set aside \$18 million (\$6 million for each extramural division). Note: Investigators could not apply for R56 Bridge awards but rather had to be nominated by NIAID program officers.

NIAID Appropriations History

NIAID Appropriations History: FY 2006 – FY 2015

Funding

Dollars in Thousands

| Fiscal Year | President's Budget to Congress | Appropriation ¹ |
|-------------|--------------------------------|----------------------------|
| 2006 | \$ 4,459,395 ² | \$ 4,414,801 ³ |
| 2007 | 4,395,496 ² | 4,417,208 ³ |
| 2008 | 4,592,482 ⁴ | 4,583,344 ⁵ |
| 2009 | 4,568,778 ⁴ | 4,702,572 ⁴ |
| 2010 | 4,760,295 ⁴ | 4,818,275 ⁴ |
| 2011 | 4,977,070 ⁶ | 4,775,968 ⁶ |
| 2012 | 4,915,970 | 4,490,711 |
| 2013 | 4,495,307 | 4,256,327 |
| 2014 | 4,578,813 | 4,401,196 ⁷ |
| 2015 | 4,423,357 | 4,417,558 ⁷ |

Excludes Recovery Act funds (FYs 2009 and 2010) and emergency Ebola funding of \$238 million in FY 2015.

¹ Equals "adjusted appropriation" as documented in the Congressional Justification except where noted.

² Includes \$100 million for the Global Fund to Fight AIDS, Tuberculosis and Malaria.

³ Includes \$99 million for the Global Fund to Fight AIDS, Tuberculosis and Malaria.

⁴ Includes \$300 million for the Global Fund to Fight AIDS, Tuberculosis and Malaria.

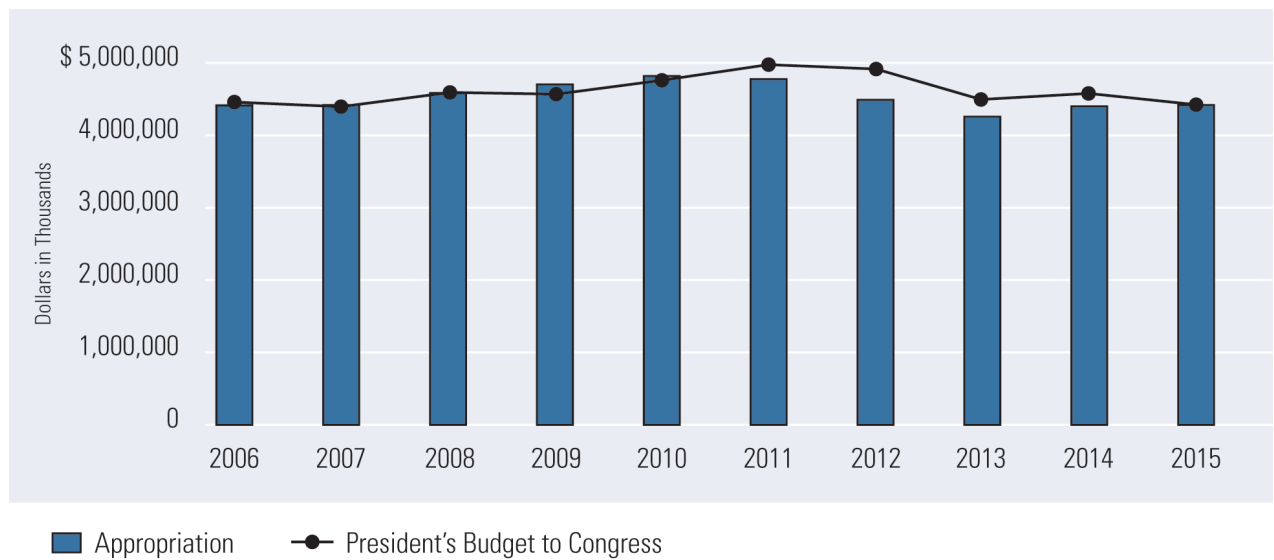
⁵ Includes \$295 million for the Global Fund to Fight AIDS, Tuberculosis and Malaria.

⁶ Includes \$297 million for the Global Fund to Fight AIDS, Tuberculosis and Malaria.

⁷ Includes OAR HIV/AIDS (FY 2014 = \$39,826; FY 2015 = \$58,717) and National Children's Study (FY 2014 = \$14,326) transfers.

NIAID Appropriations History: FY 2006 – FY 2015

Funding



NIAID Mission Areas

Funding for NIAID falls into three mission areas:

- Biodefense and Emerging Infectious Diseases (BioD)
- HIV/AIDS
- Infectious and Immunologic Diseases (IID)

NIAID Actual Obligations by Mission Area: FY 2006 – FY 2015

Funding

Dollars in Thousands

| Fiscal Year | Mission Area | | | Total ¹ |
|-------------------|--------------|--------------|--------------|--------------------|
| | BioD | HIV/AIDS | IID | |
| 2006 ² | \$ 1,646,702 | \$ 1,488,377 | \$ 1,276,689 | \$ 4,411,768 |
| 2007 ² | 1,596,565 | 1,490,089 | 1,276,380 | 4,363,034 |
| 2008 ² | 1,602,353 | 1,497,722 | 1,481,135 | 4,581,210 |
| 2009 ² | 1,640,728 | 1,541,074 | 1,519,654 | 4,701,456 |
| 2010 ² | 1,679,215 | 1,577,322 | 1,559,518 | 4,816,055 |
| 2011 ² | 1,664,854 | 1,563,349 | 1,539,978 | 4,768,181 |
| 2012 | 1,665,546 | 1,572,973 | 1,247,950 | 4,486,469 |
| 2013 | 1,572,008 | 1,481,621 | 1,181,465 | 4,235,094 |
| 2014 | 1,614,295 | 1,563,878 | 1,223,012 | 4,401,185 |
| 2015 | 1,610,560 | 1,586,804 | 1,220,165 | 4,417,529 |

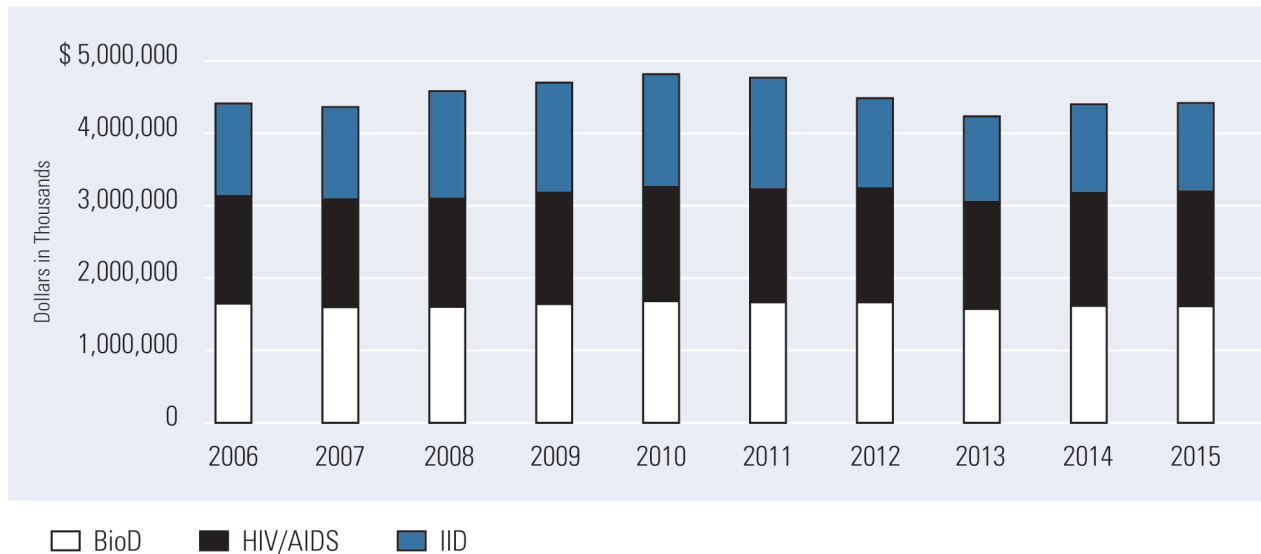
Excludes Recovery Act funds (FYs 2009 and 2010) and emergency Ebola funding of \$238 million in FY 2015.

¹ NIAID obligations shown above differ from Fiscal Year Appropriations due to mandated transfers documented in the Congressional Justification.

² Includes Global Fund to Fight AIDS, Tuberculosis and Malaria.

NIAID Mission Areas: FY 2006 – FY 2015

Funding



NIAID Funding by Budget Mechanism

NIAID Funding by Budget Mechanism: FY 2014 and FY 2015

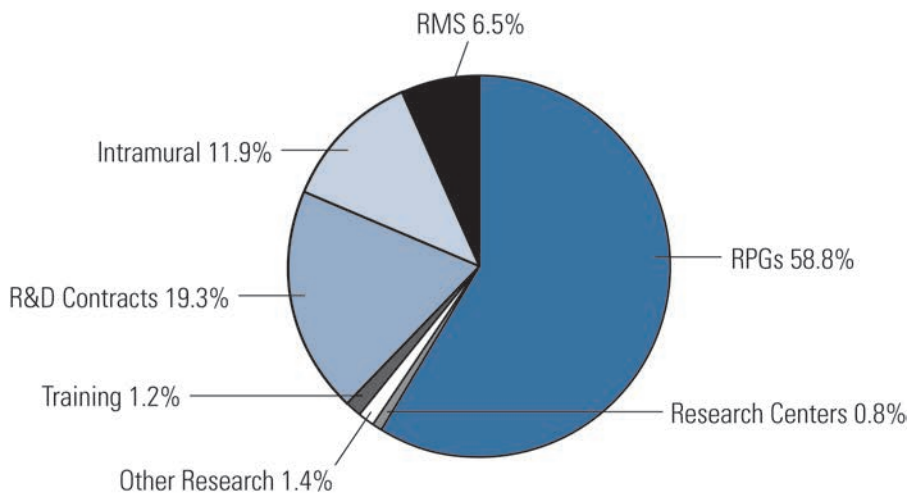
Dollars in Thousands

| | FY 2014 | % of Total | FY 2015 | % of Total |
|---------------------------------------|---------------------|---------------|---------------------|---------------|
| Extramural Research Activities | | | | |
| Research Project Grants (RPGs) | | | | |
| Noncompeting | \$ 1,441,745 | | \$ 1,897,799 | |
| Competing | 979,422 | | 577,371 | |
| Subtotal, RPGs | \$ 2,421,167 | | \$ 2,475,170 | |
| SBIR/STTR ¹ | 122,253 | | 120,915 | |
| Total Funding for RPGs | \$ 2,543,420 | 57.8% | \$ 2,596,085 | 58.8% |
| Research Centers | 39,235 | 0.9 | 36,453 | 0.8 |
| Other Research | 53,313 | 1.2 | 60,313 | 1.4 |
| Training | 54,029 | 1.2 | 54,809 | 1.2 |
| R&D Contracts | 914,867 | 20.8 | 854,744 | 19.3 |
| Subtotal, Extramural | \$ 3,604,864 | 81.9% | \$ 3,602,404 | 81.5% |
| Intramural | 521,726 | 11.9 | 527,037 | 11.9 |
| Research Management and Support (RMS) | 274,595 | 6.2 | 288,088 | 6.5 |
| NIAID Total | \$ 4,401,185 | 100.0% | \$ 4,417,529 | 100.0% |

Reflects actual obligations.

¹ SBIR/STTR programs are congressionally mandated.

NIAID Funding by Budget Mechanism: FY 2015



NIAID Research Project Grants

Research Project Grants (RPGs) are awards made for investigator-initiated research proposals and/or in response to a funding or program announcement. Several types of awards are made in this category, including those in the R (single grant), P (multi-project grant), and U (cooperative agreements) series. RPGs are awarded to organizations of all types, including universities, colleges, and small businesses, for-profit, foreign, and domestic. For more information on RPGs, visit <http://grants.nih.gov/grants/funding/r01.htm>.

NIAID Research Project Grants: FY 2014 and FY 2015

Dollars in Thousands

| | FY 2014 Number of Awards | FY 2014 Amount | FY 2015 Number of Awards | FY 2015 Amount |
|--|--------------------------------|---------------------|--------------------------------|---------------------|
| Research Project Grants | | | | |
| Noncompeting | 2,453 | \$ 1,441,745 | 2,525 | \$ 1,897,799 |
| Competing | 1,257 | 979,422 | 1,272 | 577,371 |
| Subtotal, RPGs | 3,710 | \$ 2,421,167 | 3,797 | \$ 2,475,170 |
| SBIR/STTR ¹ | 235 | 122,253 | 230 | 120,915 |
| Total Funding for RPGs | 3,945 | \$ 2,543,420 | 4,027 | \$ 2,596,085 |
| For Competing Grants | | | | |
| Grants within paylines: | | | | |
| Traditional R01 | 280 | \$ 128,468 | 351 | \$ 167,235 |
| Non-R01 | 336 | 82,059 | 524 | 122,672 |
| Program Projects (P01) | 9 | 17,740 | 11 | 21,106 |
| Subtotal, Grants Within Paylines | 625 | \$ 228,267 | 886 | \$ 311,013 |
| Discretionary ² | 377 | 174,844 | 272 | 105,428 |
| RFA Grants | 255 | 576,311 | 114 | 160,930 |
| Total, Competing Grants | 1,257 | \$ 979,422 | 1,272 | \$ 577,371 |
| Funding success rate | 21.9% | | 21.4% | |
| Percentile funding for R01 grants | 10.0 | | 12.0 | |
| Percentile funding for new investigators | 14.0 | | 16.0 | |
| Average cost—competing RPGs ³ | \$ 779 | | \$ 454 | |

¹ The SBIR/STTR programs are congressionally mandated.

² Discretionary includes administrative supplements, bridge pool, division discretionary pool, end-of-year, and selective pay.

³ The average FY 2014 cost of \$779K per grant includes large grant awards such as the AIDS Clinical Trial Network and awards that were previously competed as contracts or Center grants such as the Centers of Excellence for Translational Research. Excluding those awards the average cost was \$458K per grant in FY 2014.

Breakout of Total RPG Funds: FY 2015 Total \$2,596,085

| RPG | Percent of Total |
|-----------|------------------|
| P01 | 4.7 |
| R01 | 39.4 |
| R03 | 0.3 |
| R21 | 7.6 |
| R33 | 1.1 |
| R56 | 1.8 |
| U01 | 4.8 |
| U19 | 13.3 |
| UM1 | 15.5 |
| SBIR/STTR | 4.7 |
| Other* | 6.9 |

* Other (DP1, DP2, DP5, R00, R15, R34, R37, UC7, UH2, UM2 awards)

Competing and Noncompeting RPG Awards: FY 2006 – FY 2015

Dollars in Thousands

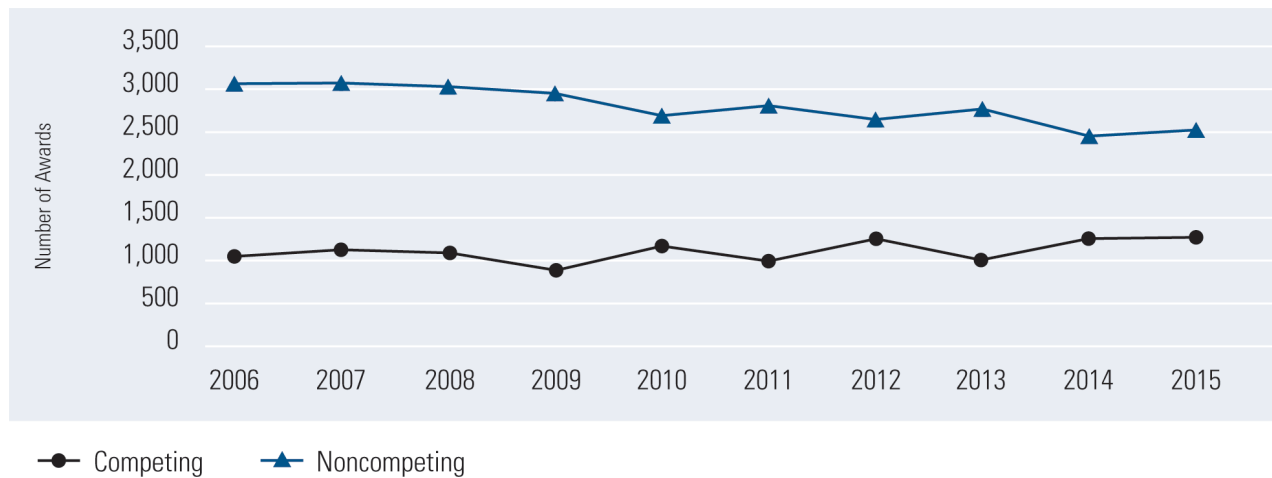
| Fiscal Year | Competing ¹ | | Noncompeting ² | |
|-------------|------------------------|----------------------|---------------------------|--------------|
| | Number of Awards | Dollars | Number of Awards | Dollars |
| 2006 | 1,049 | \$ 597,730 | 3,065 | \$ 1,578,340 |
| 2007 | 1,127 | 503,873 | 3,073 | 1,741,237 |
| 2008 | 1,090 | 438,740 | 3,031 | 1,844,475 |
| 2009 | 887 | 527,753 | 2,952 | 1,815,598 |
| 2010 | 1,170 | 507,381 | 2,692 | 1,851,271 |
| 2011 | 994 | 475,996 | 2,809 | 1,867,093 |
| 2012 | 1,255 | 525,810 | 2,647 | 1,827,964 |
| 2013 | 1,007 | 415,414 | 2,770 | 1,726,701 |
| 2014 | 1,257 | 979,422 ³ | 2,453 | 1,441,745 |
| 2015 | 1,272 | 577,371 | 2,525 | 1,897,799 |

¹ Competing grants include new, renewal, or resubmission applications that must undergo initial peer review before being funded.

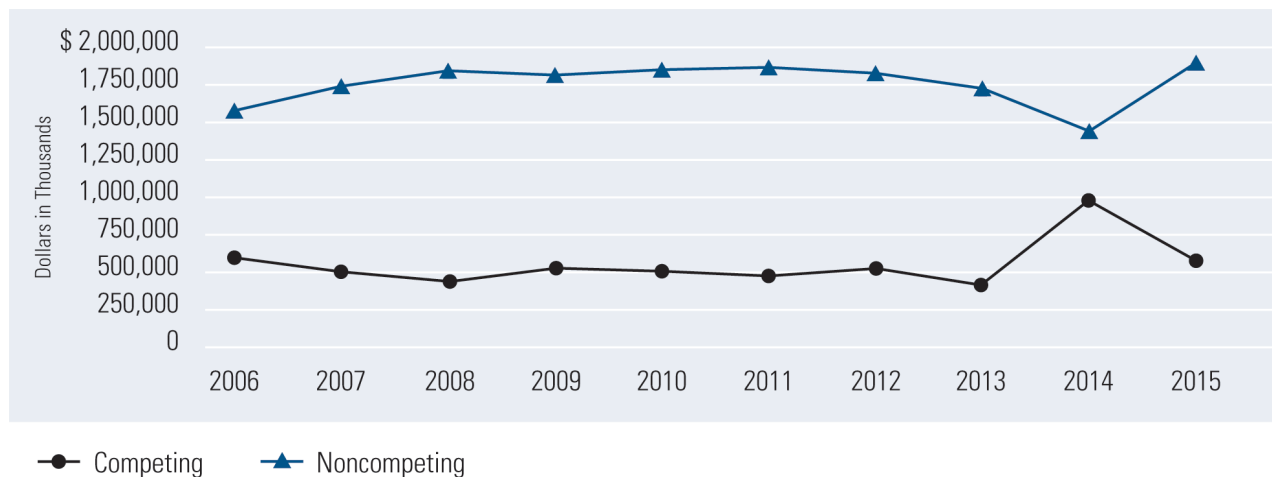
² Noncompeting grants are outyear commitments from prior-year competing awards.

³ Recompetition of the AIDS Clinical Trials Networks.

Competing and Noncompeting RPG Awards: Number of Awards FY 2006 – FY 2015



Competing and Noncompeting RPG Awards: Funding FY 2006 – FY 2015



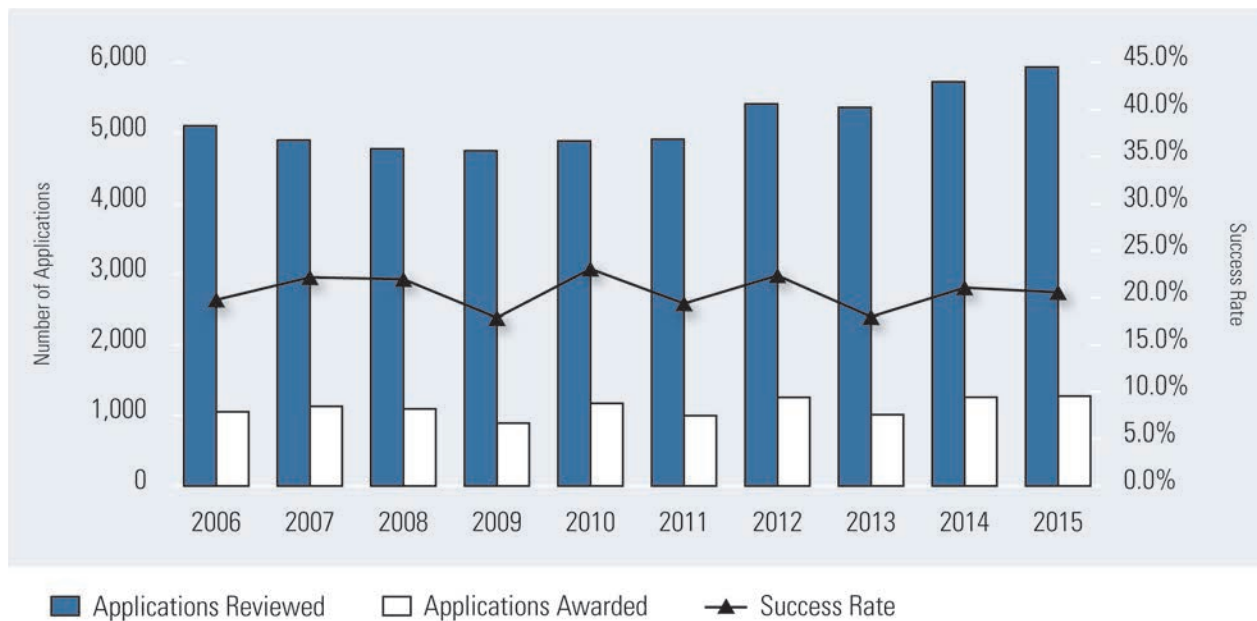
NIAID RPG Application Success Rate: FY 2006 – FY 2015

| Fiscal Year | Applications Reviewed | Applications Awarded | Success Rate ¹ |
|-------------|-----------------------|----------------------|---------------------------|
| 2006 | 5,104 | 1,049 | 20.6% |
| 2007 | 4,900 | 1,127 | 23.0% |
| 2008 | 4,776 | 1,090 | 22.8% |
| 2009 | 4,749 | 887 | 18.7% |
| 2010 | 4,889 | 1,170 | 23.9% |
| 2011 | 4,914 | 994 | 20.2% |
| 2012 | 5,416 | 1,255 | 23.2% |
| 2013 | 5,367 | 1,007 | 18.8% |
| 2014 | 5,731 | 1,257 | 21.9% |
| 2015 | 5,932 | 1,272 | 21.4% |

¹ Success rates are defined as the percentage of reviewed grant applications that receive funding. They are computed on a fiscal year basis and include applications that are peer reviewed and either scored or un-scored by an Initial Review Group.

For more information, visit http://report.nih.gov/success_rates.

NIAID RPG Application Success Rate: FY 2006 – FY 2015



NIAID Research Project Grant Applications Per Percentile

NIAID fosters innovation by using paylines and selective pay awards to fund the best projects while maintaining portfolio balance and flexibility.

Below is a histogram of the investigator-initiated R01 applications received in FY 2015 sorted by percentile score. Blue shaded bars represent the applications that were awarded, orange bars represent the applications that were not funded, and yellow bars represent R56 Bridge awards. These groups are separated by a solid black line representing NIAID's established investigator payline at the 12th percentile. All applications that scored within the payline were funded except for those that were canceled for issues such as concerns over human subjects or principal investigator (PI) retirements.

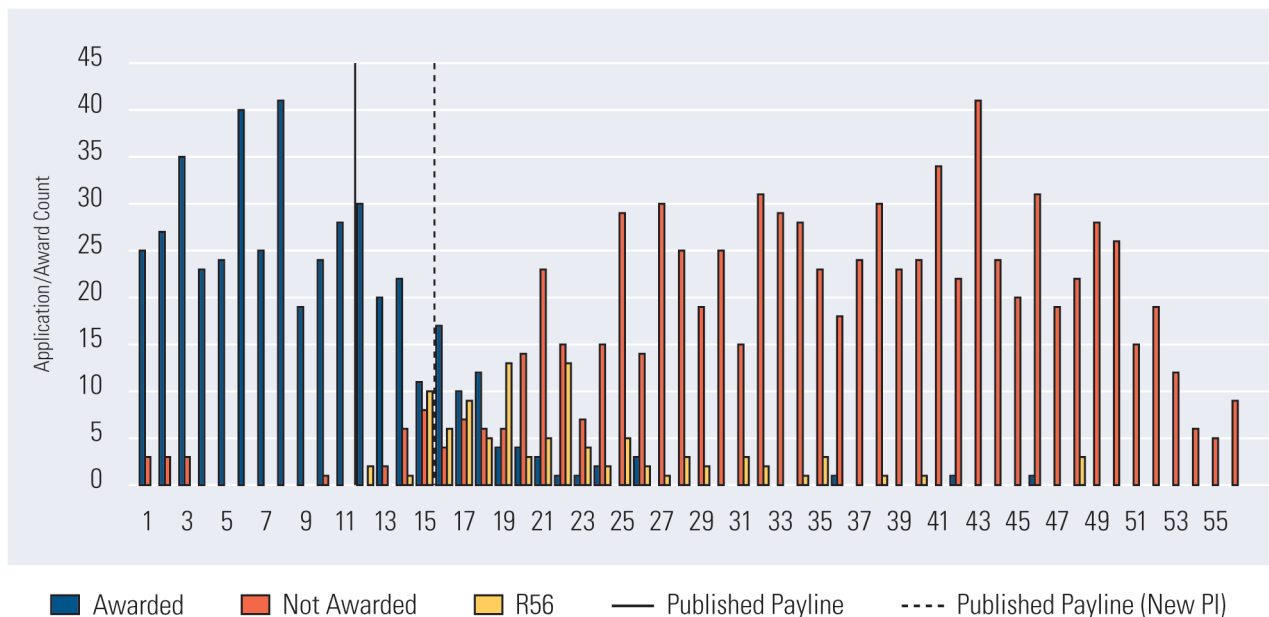
Many applications that fell outside the payline were still awarded. Approximately one-third of these were applications submitted by new investigators, who benefited from an R01 payline set higher for new PIs, which is represented by the dotted black line at the 16th percentile.

The chart includes Method to Extend Research in Time (MERIT) Awards (R37), which provide 5 years of funding to outstanding R01 grantees. NIAID funds approximately 15 MERIT awards each year.

Another discretionary option NIAID uses to direct its research portfolio is the R56 Bridge Award, depicted in yellow. NIAID chooses promising R01 applications that scored outside the payline to fund for 1 year; awardees are encouraged to improve and resubmit their R01 application during this 1-year period. NIAID funds as many as 150 R56 Bridge awards each year.

For more information, visit <https://www.niaid.nih.gov/researchfunding/newsletter/2016/Pages/0323.aspx#>.

FY 2015 Applications Per Percentile: Unsolicited R01/R37/R56



NIAID-Supported National Research Service Awards

The Ruth L. Kirschstein National Research Service Award (NRSA) is the primary mechanism for providing long-term, stable support for a wide range of promising scientists and research clinicians.

NIAID-Supported National Research Service Awards: FY 2006 – FY 2015

| Trainees | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Predoctoral | 652 | 609 | 598 | 637 | 687 | 654 | 605 | 537 | 619 | 590 |
| Postdoctoral | 607 | 593 | 571 | 573 | 589 | 577 | 576 | 516 | 521 | 468 |
| Total | 1,259 | 1,202 | 1,169 | 1,210 | 1,276 | 1,231 | 1,181 | 1,053 | 1,140 | 1,058 |

NIAID-Supported National Research Service Awards: FY 2006 – FY 2015



■ Predoctoral □ Postdoctoral



NIAID Training and Career Development Awards

NIAID has many opportunities to support scientists through specific training (T), fellowship (F), and career development (K) awards. The number of positions supported by the T, F, and K awards is listed in the table below. There are other mechanisms used to train scientists, including RPGs, for which data are not available.

NIAID Training and Career Development Awards by Mechanism: FY 2006-FY 2015

Dollars in Thousands

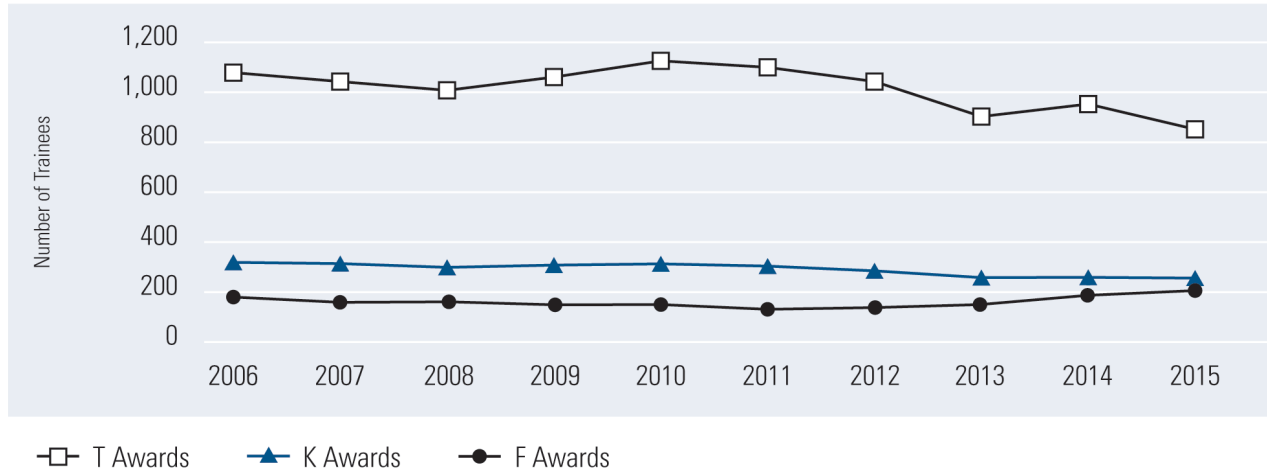
| Fiscal Year | T Awards | | K Awards | | F Awards | |
|-------------|---------------------------|-----------|------------------|-----------|---------------------------|----------|
| | Number Training Positions | Dollars | Number of Awards | Dollars | Number Training Positions | Dollars |
| 2006 | 1,079 | \$ 48,128 | 319 | \$ 39,470 | 180 | \$ 7,998 |
| 2007 | 1,043 | 48,299 | 314 | 39,073 | 159 | 7,341 |
| 2008 | 1,008 | 47,523 | 299 | 37,388 | 161 | 7,395 |
| 2009 | 1,061 | 49,857 | 308 | 39,587 | 149 | 6,674 |
| 2010 | 1,126 | 51,365 | 313 | 40,763 | 150 | 6,635 |
| 2011 | 1,100 | 50,738 | 304 | 39,707 | 131 | 6,059 |
| 2012 | 1,043 | 49,748 | 285 | 37,453 | 138 | 6,602 |
| 2013 | 903 | 45,928 | 258 | 35,322 | 150 | 7,251 |
| 2014 | 953 | 45,507 | 259 | 37,071 | 187 | 8,522 |
| 2015 | 852 | 45,768 | 256 | 38,594 | 206 | 9,041 |

For additional information on training, career development, and fellowship awards, visit <http://grants.nih.gov/training/extramural.htm>.

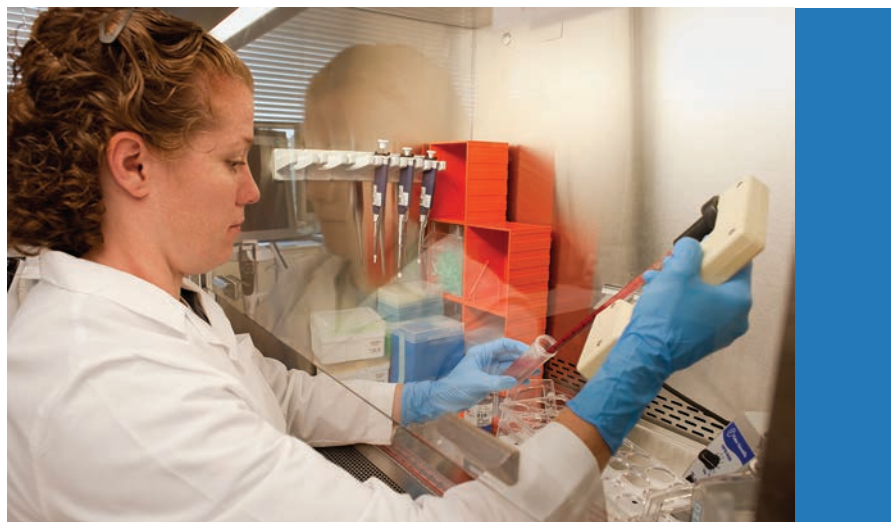
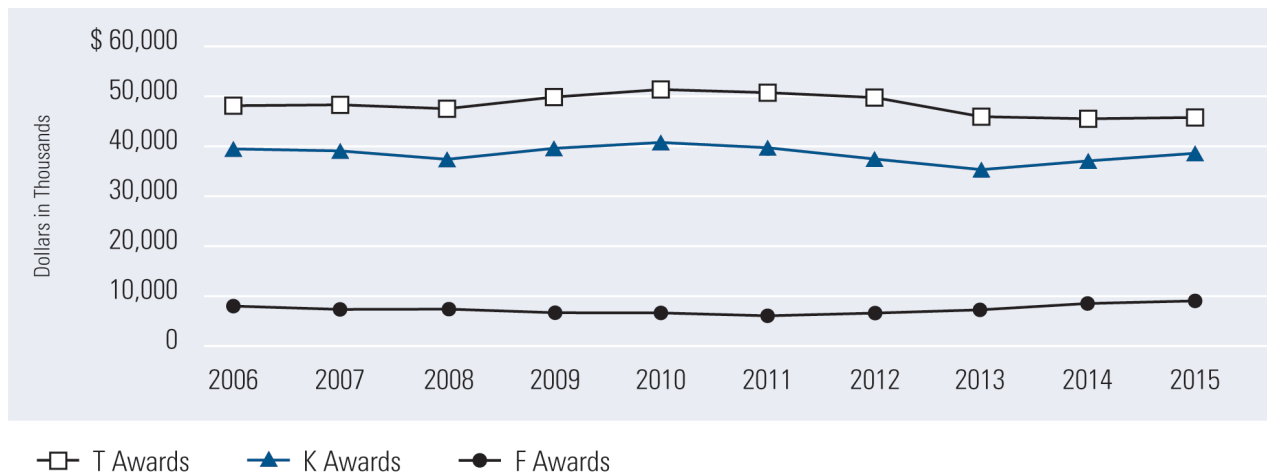


NIAID Training and Career Development Awards

NIAID Training and Career Development Awards by Mechanism: Number of Trainees FY 2006 – FY 2015



NIAID Training and Career Development Awards by Mechanism: Funding FY 2006 – FY 2015



NIAID Funding for Selected Pathogens, Diseases, and Conditions

NIAID FY 2015 Funding

Dollars in Thousands

| Pathogen, Disease, or Condition | |
|---------------------------------|-----------|
| Allergic Rhinitis* | \$ 3,425 |
| Allergy | 82,944 |
| Anaphylaxis | 7,327 |
| Anthrax* | 45,364 |
| Arthritis* | 20,181 |
| Asthma* | 80,541 |
| Autoimmune Disease* | 176,846 |
| Cholera | 16,642 |
| Dengue | 65,174 |
| Diabetes* | 20,510 |
| Diarrheal Diseases | 139,814 |
| Digestive Diseases* | 321,265 |
| Ebola** | 77,594 |
| Emerging Infectious Diseases* | 1,639,003 |
| Food Allergy* | 32,718 |
| Fungal diseases | 76,069 |
| Hepatitis* | 119,069 |
| Hepatitis C* | 36,570 |
| HIV/AIDS* | 1,586,804 |

| Other Research | |
|--------------------------------------|------------|
| Antimicrobial Resistance* | \$ 243,278 |
| Biodefense* | 1,610,560 |
| Antibiotics/Antiviral | 417,769 |
| Basic Research | 790,445 |
| Diagnostics | 69,170 |
| Vaccines | 333,176 |
| Chemical Countermeasures Research*** | 46,752 |

| Pathogen, Disease, or Condition | |
|--|--------------|
| Infectious Diseases, including HIV/AIDS* | \$ 3,167,866 |
| Inflammatory Bowel Disease* | 19,983 |
| Influenza* | 239,741 |
| Lupus* | 33,377 |
| Lyme Disease* | 22,270 |
| Malaria* | 137,036 |
| Multiple Sclerosis* | 25,108 |
| Parasitic Diseases | 282,141 |
| Pediatric AIDS* | 35,403 |
| Pediatric Research* | 254,892 |
| Pneumonia and Influenza* | 310,215 |
| Primary Immune Deficiency Diseases | 38,110 |
| Respiratory Diseases, Infectious | 449,743 |
| Sexually Transmitted Diseases/Herpes* | 117,126 |
| Staphylococcus aureus | 69,187 |
| Tropical Medicine | 534,224 |
| Tuberculosis* | 199,798 |
| Vector-Borne Diseases* | 368,490 |

| Other Research | |
|----------------------------------|-----------|
| Radiological/Nuclear Research*** | \$ 45,346 |
| Immune Tolerance | 149,883 |
| Prevention* | 1,609,399 |
| Stem Cell Research* | 58,065 |
| Topical Microbicides* | 94,680 |
| Transplantation* | 160,036 |
| Vaccine related (AIDS)* | 472,854 |

* Represents topics and funding levels reported using NIH Research, Condition, and Disease Categorization (RCDC) process.

** Excludes emergency Ebola funding of \$238 million in FY 2015.

*** NIAID coordinates/manages these programs on behalf of NIH.

For more information on RCDC funding, visit http://report.nih.gov/categorical_spending.aspx.

NIAID Extramural Research Funding by State

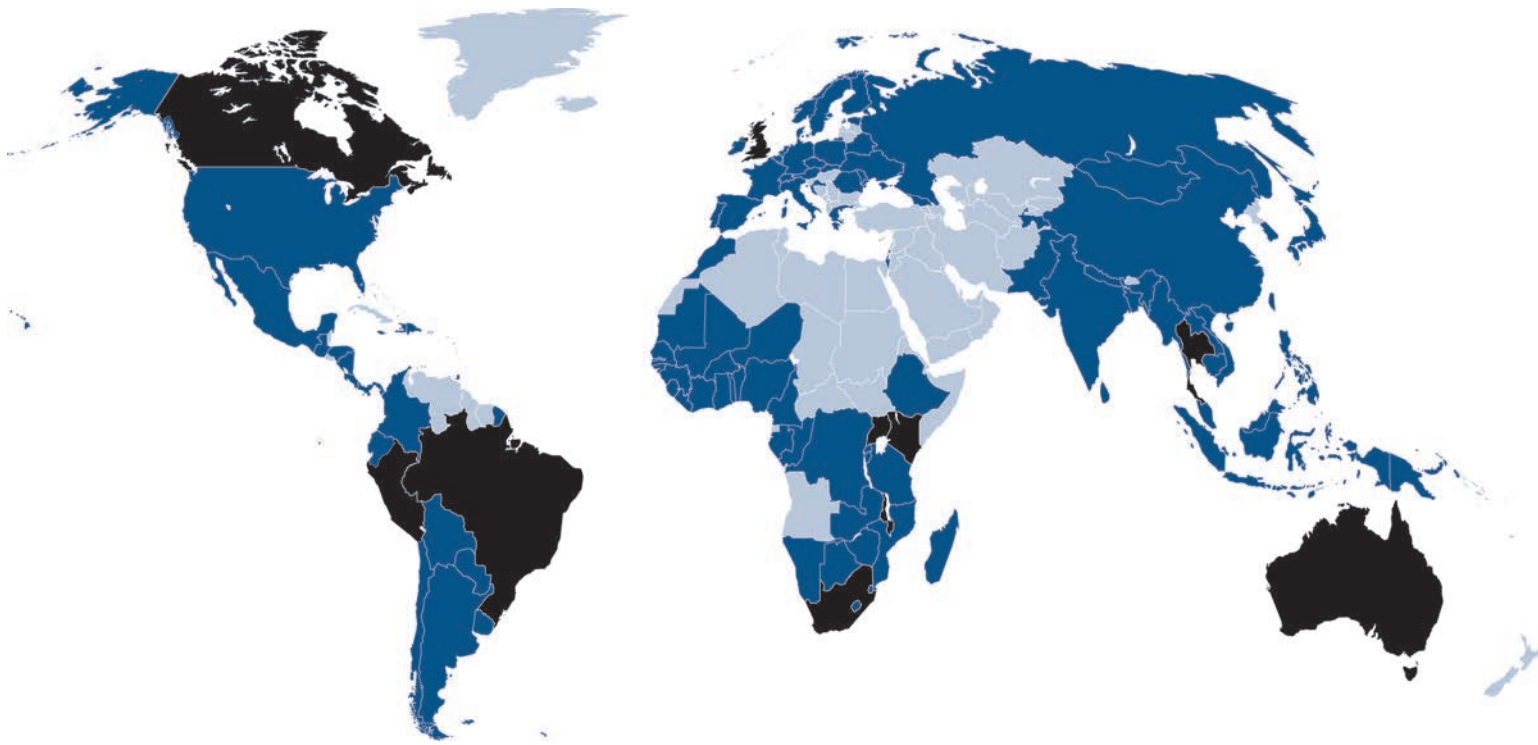
Approximately 83.7 percent of NIAID's total budget supported research at institutions in the United States, including the District of Columbia and Puerto Rico.

NIAID Extramural Research Funding by State: FY 2015

Dollars in Thousands

| State | | State | |
|---------------------------|-----------|----------------|----------|
| Alabama | \$ 53,344 | Montana | \$ 3,593 |
| Alaska | — | Nebraska | 7,022 |
| Arizona | 9,680 | Nevada | 2,971 |
| Arkansas | 2,063 | New Hampshire | 14,542 |
| California | 465,349 | New Jersey | 36,139 |
| Colorado | 48,594 | New Mexico | 12,959 |
| Connecticut | 54,447 | New York | 285,718 |
| Delaware | 827 | North Carolina | 238,371 |
| District of Columbia | 15,775 | North Dakota | 651 |
| Florida | 49,555 | Ohio | 76,592 |
| Georgia | 118,040 | Oklahoma | 12,000 |
| Hawaii | 6,142 | Oregon | 35,237 |
| Idaho | 214 | Pennsylvania | 206,784 |
| Illinois | 94,611 | Puerto Rico | 1,181 |
| Indiana | 30,527 | Rhode Island | 8,006 |
| Iowa | 18,928 | South Carolina | 8,402 |
| Kansas | 8,773 | South Dakota | 629 |
| Kentucky | 14,647 | Tennessee | 63,061 |
| Louisiana | 25,468 | Texas | 124,563 |
| Maine | 499 | Utah | 15,011 |
| Maryland | 539,170 | Vermont | 2,866 |
| Massachusetts | 422,772 | Virginia | 76,948 |
| Michigan | 41,706 | Washington | 253,215 |
| Minnesota | 69,433 | West Virginia | 362 |
| Mississippi | 883 | Wisconsin | 56,682 |
| Missouri | 61,435 | Wyoming | 629 |
| TOTAL \$ 3,697,016 | | | |

Global Health Research at NIAID



- Countries with NIAID-funded activities (111 countries)
- Top 10 foreign countries receiving NIAID research support

| NIAID-Funded Research: Top 10 Foreign Countries |
|--|
| South Africa |
| Uganda |
| Australia |
| United Kingdom |
| Kenya |
| Peru |
| Canada |
| Brazil |
| Malawi |
| Thailand |



National Institute of
Allergy and
Infectious Diseases