

Office of Research

# NATIONAL INSTITUTES OF HEALT

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Questions and topics to be addressed in this series:

What is the overall structure of the NIH, and is it different than the NSF?

What types of grants are available?

Whom do I contact at the NIH for help?

What can I ask my program manager?

What has changed at the NIH in the last 18 months?

What are the new NIH review criteria?

What is the NIH looking to fund?

How do I choose the appropriate IC and study section for my submission?

NEI NHLBI NCI **NHGRI** NIAAA NIA NIAMS NIBIB NIAID **NICHD NIDCD NIDCR NIDDK NIEHS NIDA** NIGMS NIMH NIMHD **NINDS NINR** NLM CC CIT **CSR** NCCIH FIC **NCATS** OD

## 27 NIH Institutes and Centers (ICs)

Director budgeting, strategic planning, congressional mandates

Program

portfolio management, concept/RFA writing

Review

proposal review

**Advisory Council** 

strategic planning, concept clearance, final proposal review

## Funding Mechanisms

Research Projects (R01, R03, R21)

Solicited vs. Unsolicited
Generally due three times per year:
Feb 5, June 5 and Oct. 5 for R01
Feb 15, June 15 and Oct 15 for R03 and R21 proposals

Program Projects (P01)

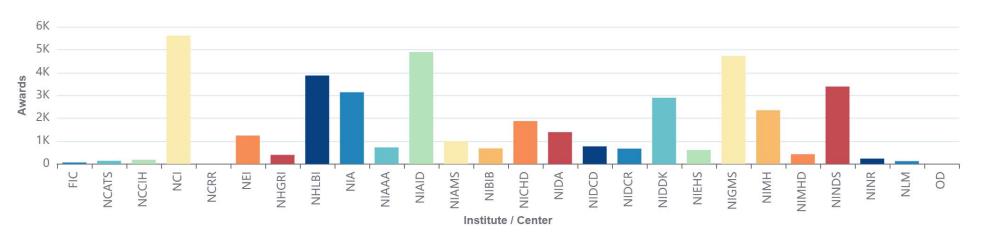
Cooperative Agreements (U01, U19)

F and K awards

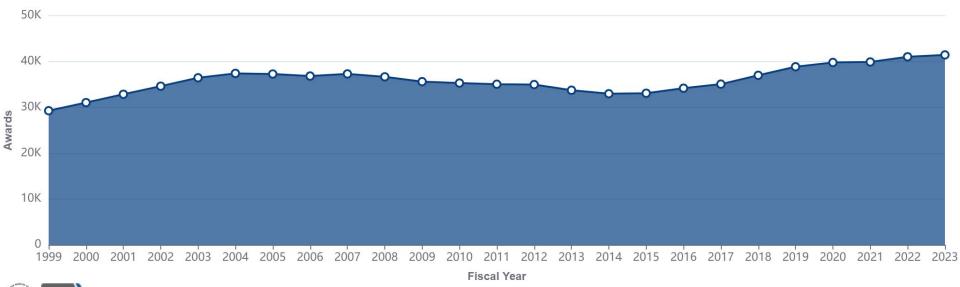
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#### **Research Project Grants: Awards, by Institute / Center**

#### Awards for 2023



#### **Awards Trend NIH Total**



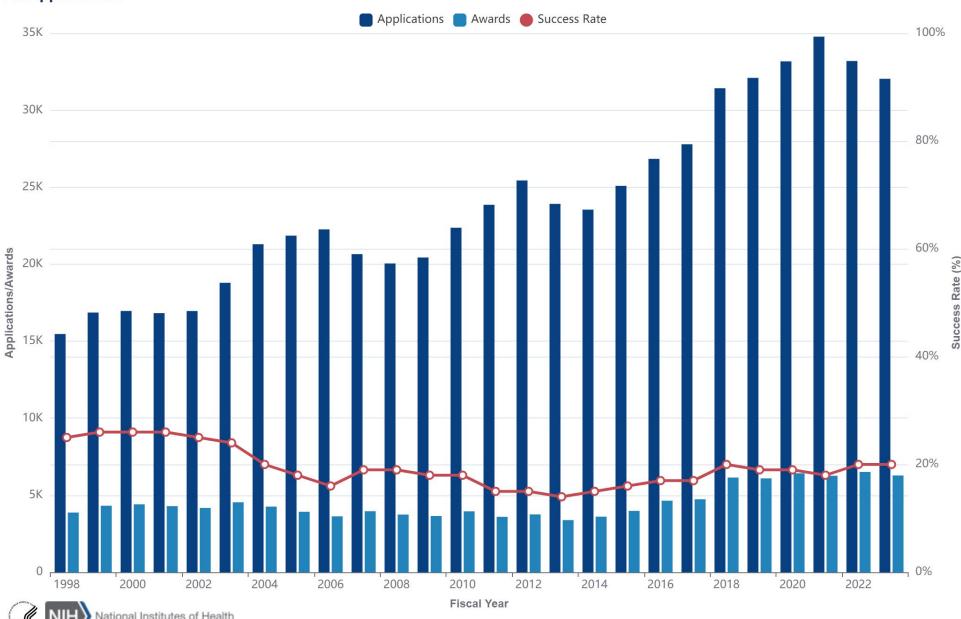
NIH Institutes / Centers	Activity Code	Number of Applications Reviewed	Number of Applications Awarded	Success Rate <sup>3</sup>	Total Funding <sup>4</sup>
NCI	R03	727	104	14.3%	\$9,120,722
NHLBI	R03	30	16	53.3%	\$1,343,723
NIDCR	R03	137	24	17.5%	\$3,492,387
NIDDK	R03	75	35	46.7%	\$2,733,896
NINDS	R03	158	35	22.2%	\$2,720,297
NIAID	R03	265	37	14.0%	\$2,912,279
NICHD	R03	367	84	22.9%	\$6,797,678
NIEHS	R03	78	7	9.0%	\$532,921
NIA	R03	205	43	21.0%	\$4,236,302
NIAMS	R03	6	3	50.0%	\$247,589
NIDCD	R03	3	0	0.0%	\$0
NIMH	R03	125	15	12.0%	\$1,185,329
NIDA	R03	142	32	22.5%	\$4,091,055
NIAAA	R03	49	7	14.3%	\$564,364
NHGRI	R03	8	2	25.0%	\$157,000
NIBIB	R03	129	23	17.8%	\$2,056,985
NIMHD	R03	35	9	25.7%	\$747,577
FIC	R03	2	0	0.0%	\$0
FY2017					

NIH Institutes / Centers	Activity Code	Number of Applications Reviewed	Number of Applications Awarded	Success Rate <sup>3</sup>	Total Funding <sup>4</sup>
NCI	R21	1,901	153	8.0%	\$30,515,060
NHLBI	R21	333	35	10.5%	\$5,483,504
NIDCR	R21	220	22	10.0%	\$4,973,237
NIDDK	R21	407	30	7.4%	\$6,810,635
NINDS	R21	1,344	188	14.0%	\$44,525,922
NIAID	R21	2,550	408	16.0%	\$92,462,775
NIGMS	R21	3	3	100.0%	\$549,332
NICHD	R21	1,194	152	12.7%	\$34,694,103
NEI	R21	323	49	15.2%	\$11,260,172
NIEHS	R21	336	37	11.0%	\$8,696,641
NIA	R21	865	186	21.5%	\$43,408,922
NIAMS	R21	570	79	13.9%	\$15,852,639
NIDCD	R21	266	56	21.1%	\$11,150,098
NIMH	R21	678	120	17.7%	\$27,124,729
NIDA	R21	539	109	20.2%	\$24,411,427
NIAAA	R21	275	46	16.7%	\$9,847,715
NINR	R21	253	10	4.0%	\$2,359,940
NHGRI	R21	83	14	16.9%	\$3,617,712
NIBIB	R21	860	73	8.5%	\$15,822,295
NCCIH	R21	64	4	6.3%	\$647,308
NIMHD	R21	139	18	12.9%	\$4,232,327
FIC	R21	158	13	8.2%	\$2,570,409
NLM	R21	46	6	13.0%	
NCATS	R21	11	4	36.4%	\$927,852
FY2017					

NIH Institutes / Centers	Activity Code	Number of Applications Reviewed	Number of Applications Awarded	Success Rate <sup>3</sup>	Total Funding <sup>4</sup>	
NCI	R01	5,572	694	12.5%	\$318,146,726	
NHLBI	R01	3,229	738	22.9%	\$405,816,910	
NIDCR	R01	412	77	18.7%	\$34,326,692	
NIDDK	R01	2,570	432	16.8%	\$197,648,443	
NINDS	R01	2,305	374	16.2%	\$161,675,480	
NIAID	R01	2,897	555	19.2%	\$308,499,044	
NIGMS	R01	2,948	833	28.3%	\$305,420,554	
NICHD	R01	1,533	257	16.8%	\$132,329,594	
NEI	R01	868	251	28.9%	\$105,304,878	
NIEHS	R01	601	86	14.3%	\$37,914,602	
NIA	R01	1,646	343	20.8%	\$228,255,505	
NIAMS	R01	931	165	17.7%	\$68,996,909	
NIDCD	R01	471	115	24.4%	\$51,171,456	
NIMH	R01	1,477	305	20.6%	\$176,235,079	
NIDA	R01	1,104	191	17.3%	\$105,807,496	
NIAAA	R01	443	81	18.3%	\$33,127,171	
NINR	R01	280	34	12.1%	\$17,092,569	
NHGRI	R01	180	41	22.8%	\$25,306,424	
NIBIB	R01	458	88	19.2%	\$40,991,237	
NCCIH	R01	85	15	17.6%	\$7,117,5 18	
NIMHD	R01	227	59	26.0%	\$38,621,990	
FIC	R01	35	8	22.9%	\$1,668,105	
NLM	R01	79	17	21.5%	\$7,034,546	
OD Common Fund	R01	143	11	7.7%	\$7,614,035	
FY2017						

R01-Equivalent Grants, New (Type 1): Competing Applications, Awards, and Success Rates, by Career Stage of Investigator

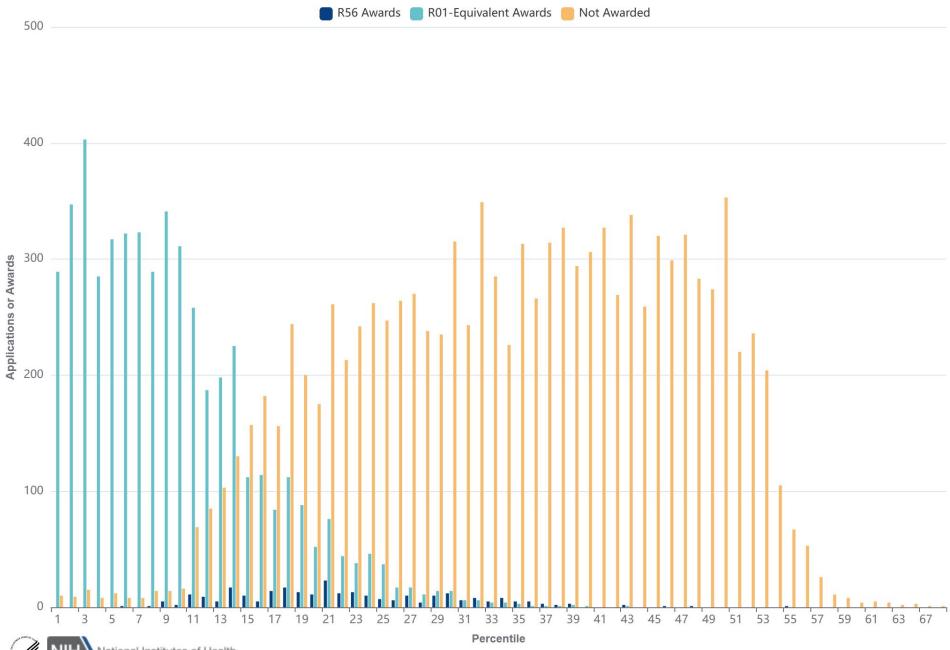
#### **All Applications**



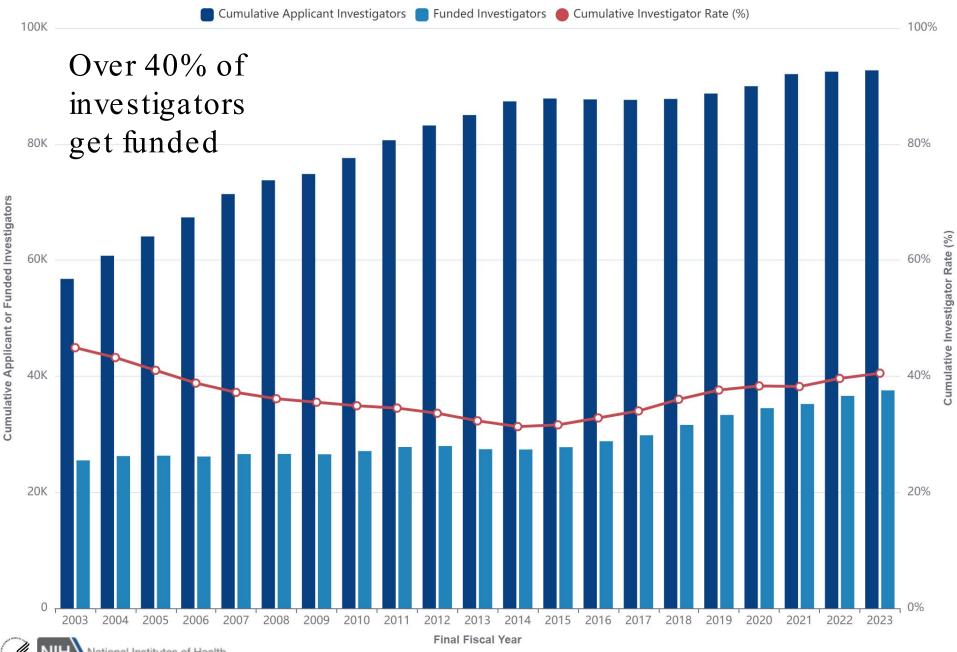
Research/Disease Areas (Dollars in millions and rounded)	2014	2015	2016	2017 \$	2018 \$	2019	2020 \$	2021 💠	2022 Estimated	2023 Estimated
Clinical Research	<u>\$11,087</u>	<u>\$11,366</u>	<u>\$12,176</u>	<u>\$12,695</u>	<u>\$13,870</u>	<u>\$15,868</u>	<u>\$17,610</u>	<u>\$17,681</u>	\$18,405	\$18,383
Genetics	<u>\$7,324</u>	<u>\$7,480</u>	<u>\$8,070</u>	<u>\$8,501</u>	<u>\$9,105</u>	<u>\$9,864</u>	<u>\$10,544</u>	<u>\$11,010</u>	\$11,480	\$11,425
Prevention	<u>\$6,858</u>	\$7,027	<u>\$7,566</u>	\$8,052	<u>\$8,757</u>	<u>\$9,485</u>	<u>\$10,482</u>	\$10,553	\$10,973	\$10,910
Biotechnology	\$5,889	\$6,018	<u>\$6,433</u>	<u>\$6,556</u>	\$6,923	<u>\$7,219</u>	<u>\$7,767</u>	<u>\$7,847</u>	\$8,142	\$8,014
Neurosciences	\$5,580	\$5,742	\$6,460	<u>\$7,317</u>	\$8,224	<u>\$9,468</u>	<u>\$10,122</u>	<u>\$10,716</u>	\$11,163	\$11,468
Cancer	\$5,392	\$5,389	<u>\$5,589</u>	\$5,980	\$6,335	\$6,520	\$7,035	<u>\$7,362</u>	\$7,644	\$7,459
Infectious Diseases	\$5,002	\$5,032	<u>\$5,518</u>	<u>\$5,684</u>	\$6,024	\$6,313	\$8,301	\$8,212	\$8,324	\$8,031
Women's Health <sup>8</sup>	<u>\$3,935</u>	\$3,989	<u>\$4,540</u>	\$4,769	\$5,048	<u>\$4,469</u>	\$4,466	<u>\$4,610</u>	\$4,861	\$4,926
Brain Disorders	\$3,894	\$3,916	\$4,577	<u>\$5,156</u>	\$5,882	\$6,954	<u>\$7,565</u>	\$7,963	\$8,313	\$8,382
Behavioral and Social Science	\$3,688	\$3,762	<u>\$4,137</u>	<u>\$4,547</u>	\$5,096	\$6,499	\$7,040	<u>\$7,329</u>	\$7,650	\$7,781
Rare Diseases	\$3,639	\$3,679	<u>\$4,342</u>	<u>\$4,613</u>	\$5,227	<u>\$5,655</u>	\$5,947	<u>\$6,191</u>	\$6,482	\$6,355
Pediatric	\$3,486	\$3,632	<u>\$3,959</u>	<u>\$4,176</u>	<u>\$4,499</u>	\$4,922	\$5,347	<u>\$5,465</u>	\$5,752	\$5,707
Bioengineering	\$3,329	\$3,540	<u>\$3,841</u>	<u>\$4,106</u>	<u>\$4,592</u>	<u>\$5,091</u>	\$5,646	\$5,720	\$5,866	\$5,998
Clinical Trials and Supportive Activities $\frac{17}{}$	\$3,221	<u>\$3,136</u>	<u>\$3,476</u>	<u>\$3,775</u>	\$5,207	\$6,058	\$6,637	\$6,480	\$6,832	\$6,825
HIV/AIDS 9	<u>\$2,978</u>	\$3,000	\$3,000	\$3,000	<u>\$2,995</u>	\$3,037	\$3,076	\$3,082	\$3,194	\$3,100
Health Disparities 30	<u>\$2,734</u>	<u>\$2,825</u>	\$3,093	<u>\$3,168</u>	<u>\$3,178</u>	<u>\$3,381</u>	<u>\$3,484</u>	<u>\$4,362</u>	\$4,566	\$4,963
Human Genome	<u>\$2,701</u>	\$2,891	\$3,200	\$3,274	\$3,626	\$3,895	\$4,340	\$4,293	\$4,477	\$4,450
Aaina	\$2.556	\$2.698	\$3.150	\$3.572	\$4.084	\$4.653	\$5.276	\$5.657	\$6.069	\$5.838

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Cancer	<u>\$5,392</u>	\$5,389	<u>\$5,589</u>	<u>\$5,980</u>	\$6,335	\$6,520	<u>\$7,035</u>	<u>\$7,362</u>	\$7,644	\$7,459
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Aging	<u>\$2,556</u>	\$2,698	<u>\$3,150</u>	<u>\$3,572</u>	\$4,084	<u>\$4,653</u>	\$5,276	\$5,657	\$6,069	\$5,838
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Emerging Infectious Diseases	<u>\$1,930</u>	\$2,053	\$2,336	<u>\$2,591</u>	\$2,767	\$2,950	\$4,867	\$4,666	\$4,614	\$4,319
Women's Health <sup>8</sup>	<u>\$3,935</u>	\$3,989	<u>\$4,540</u>	\$4,769	\$5,048	\$4,469	\$4,466	\$4,610	\$4,861	\$4,926
Neurodegenerative	\$1,743	<u>\$1,662</u>	\$2,058	\$2,554	\$3,085	\$3,578	\$4,021	<u>\$4,463</u>	\$4,803	\$4,594
Health Disparities 30	\$2.734	\$2.825	\$3,093	\$3.168	\$3.178	\$3.381	\$3.484	\$4.362	\$4.566	\$4.963

# Funding Patterns by Institute or Center (IC) ALL NIH, 2024



## Cumulative Investigator Rate: Research Project Grants, R21, P01, or R01-Equivalents Research Project Grants



# What has changed at the NIH in the last 18 months?

Review criteria (and, thus, how to write for the review)

How the reviews are done

What they are and are not looking to fund

How awards are made and disbursed (e.g. multi-year funding, reduced success rates [NCI at 4%, NIAID at 10%,16%, NINDS 8%,16%])

Budget? Reorganization?

### What are the new NIH review criteria?

## Five regulatory criteria reorganized into three factors

For due dates before Jan 25, 2025

(all considered in overall impact score)

- Significance scored
- Investigator(s) scored
- Innovation scored
- Approach scored
- Environment scored

For due dates on/after Jan 25, 2025

- Factor 1 : Importance of the Research
  - Significance, Innovation
  - Scored 1 9
- Factor 2: Rigor and Feasibility
  - Approach (also includes Inclusion and Clinical Trial (CT) Study Timeline)
  - o Scored 1 9
- Factor 3 : Expertise and Resources
  - o Investigators, Environment
  - Evaluated as appropriate or gaps identified; gaps require explanation
  - Considered in overall impact;
     no individual score

#### Factor 1:

"How will this move the field forward?", and "Should this be done?"

Factor 2:
"Can this work be done well?"

Factor 3: Unacceptable or acceptable

## Considering the new NIH review criteria:

#### Factor 1:

Do not use the old headers Significance and Innovation, and add a lot more narrative concerning the importance of the work.

What are the short-and long-term impacts?

Refer to the rigor of the hypothesis and background work more.

The score on this section sets the standard for the overall impact score

#### Factor 2:

"Can this work be done well?"

Factor 2 score cannot be better than the score for factor 1, i.e. factor 2 cannot help your score, but it can hurt it.

#### Factor 3:

Unacceptable or acceptable

Do not address the strength of the team per se. Let the biosketches state your case

## Considering the new NIH review criteria:

## Efficiency reviews

Study section scores and reviews are being utilized as guidelines for the next round of "efficiency reviews". While these reviews have always been done, they were carried out by the IC staff to ensure programmatic priorities, budgetary issues, and potential conflicts were dealth with.

The new type of efficiency reviews are being carried out by appointees to ensure that the awarded proposals meet the priorities set out by the administration.

Faculty are being advised to write the public-facing sections of the proposal to a 9<sup>th</sup> grader. This is primarily the abstract and the public health relevance statement. However, when possible, simplify the language and terms used in the proposal itself.

Justify models! In fact, justify everything that might be misinterpreted or misunderstood.

## What other NIH updates?

- NIH will only accept six new, renewal, resubmission, or revision applications from an individual Principal Investigator/Program Director or Multiple Principal Investigator for all council rounds in a calendar year.
- NIH is establishing a new award structure that will prohibit foreign subawards from being nested under a parent grant.
- Plans for Enhancing Diverse Perspectives (PEDP)
  - PEDP requirements have been removed from funding opportunities.
  - PEDP plans included in applications under review will not be evaluated or considered in funding decisions.
- NIH will not consider applications that are either substantially developed by AI, or contain sections substantially developed by AI, to be original ideas of applicants.

### What are the new NIH updates?

- Both the House and Senate Appropriations Committees have approved their versions of the FY 2026 Appropriations Act for the Departments of Labor, Health and Human Services, Education, and Related Agencies. As part of these bills, both House and Senate appropriators rejected proposed cuts to the National Institutes of Health (NIH) proposed in the President's budget request, as well as the proposed reorganization of the agency. The Senate Appropriations Committee approved a \$400 million increase for NIH above the FY 2025 funding level, while the House Appropriations Committee approved and NIH increase of \$99 million over current levels.
- The Brain Research through Advancing Innovative Neurotechnologies
- (BRAIN) Initiative receives \$195 million, split evenly between the National Institute of Mental Health (NIMH) and the National Institute of Neurological Disorders and Stroke (NINDS)).

# **Highlighted topics** (https://grants.nih.gov/funding/find-a-fit-for-your-research/highlighted-topics):

National Institute of General Medical Sciences (NIGMS)

NIGMS prioritizes the discovery of generalizable principles related to the interaction of microbes with the human-built environment in the context of model systems and surrogate microbes rather than actual infectious agents. Areas of interest include but are not limited to:

Characterization of microbes interacting with the built environment (e.g., identities, numbers, interactions with other microbes)

Investigation of the physical and chemical principles governing interactions, release, and viability of microbes on/in solids, liquids and gases related to the built environment

Investigation of modes of interaction between humans/other model hosts and microbes in the built environment

Technology development/improvement for microbe detection, sampling, and culturing

Applications from multidisciplinary teams including architects, engineers, epidemiologists, microbiologists, physicists, chemists, data scientists, and physicians will also be a higher priority for funding.

- Research on the Transition from Pediatric to Adult Health Care
- Advancing Prevention and Treatment of Bacterial Sexually Transmitted Infections in HIV-Affected Populations
- Understanding the Impact of Immune Function on Neurocognition and Substance Use Disorder Risk Across the Lifespan (IMMUNE-LIFESPAN)
- Sleep, Circadian Rhythms, and Substance Use Disorders
- Research on Drowning Prevention
- Effects of Contraception as Treatment for Gynecologic Disorders
- School Mental and Behavioral Health: Expanding Access to Evidence-Based Interventions and Services
- Understanding and Combating Chronic Disease Burden: The Role of Trauma
- Priority Research Questions in Fundamental Cellular and Molecular Neuroscience
- Research on Short-Lived and Long-Lived Plasma Cells in Humans
- Accelerating Research in Celiac Disease
- <u>Technology Development for Genomics</u>
- Advancing the Use of Genomic Information Into Clinical Care
- Leveraging New Approach Methodologies and Non-Animal Technologies to Accelerate Osteoarthritis Research
- Supporting Research on Microbes and the Built Environment

