

# National Institute of Mental Health



National Institute of Mental Health

CONGRESSIONAL JUSTIFICATION FY 2022

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## DEPARTMENT OF HEALTH AND HUMAN SERVICES

## NATIONAL INSTITUTES OF HEALTH

## National Institute of Mental Health (NIMH)

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## **Director's Overview**

The National Institute of Mental Health (NIMH) is the lead federal agency for research on mental illnesses, with a mission to transform the understanding and treatment of mental illnesses through basic and clinical research, paving the way for prevention, recovery, and cure.

In the United States, an estimated 51.5 million adults suffer from a mental illness, which may be significantly impairing and lifethreatening.<sup>1</sup> Mental illnesses are the fifth leading cause of disability in the United States, accounting for 6.6 percent of all disability-adjusted life years.<sup>2</sup> One of the most tragic outcomes of untreated mental illness



Joshua A. Gordon, M.D., Ph.D. *Director of NIMH* 

is suicide. Suicide accounted for the loss of over 47,000 American lives in 2019 alone; it is the second leading cause of death in youth and young adults aged 10-34, and the tenth leading cause of death overall.<sup>3</sup>

NIMH supports a diverse portfolio of basic, translational, and clinical research, with the potential to improve clinical care over the short, medium, and long-term. On May 19, 2020, we published the new NIMH Strategic Plan for Research to optimize our scientific investments across the long arc of mental health research.<sup>4</sup> We use the Strategic Plan to communicate our priorities and help guide mental health research efforts funded by the Institute. We developed the Plan with input from a variety of stakeholders, including researchers, mental health advocates, and individuals with lived experience.<sup>5</sup> The Plan will be updated regularly to keep pace with ever-evolving scientific approaches and research priorities. Key research projects and findings from NIMH and NIMH-funded investigators that advance the Institute's mission will be highlighted on our Research Progress webpage for each research Goal.<sup>6</sup>

#### Answering the call

*Impacts of the COVID-19 Pandemic on Mental Health.* As the coronavirus disease 2019 (COVID-19) pandemic continues to affect us all, NIMH is providing guidance to researchers and resources for individuals managing stress and mental illness. In April 2020, we partnered with three other Institutes to issue a Notice of Special Interest to encourage research proposals to strengthen the mental health response to COVID-19 and future public health emergencies.<sup>7</sup> In addition, we are participating in trans-NIH initiatives supporting research to determine the role and impact of digital health interventions to address secondary health effects of COVID-19<sup>8</sup> and to evaluate the role and impact of community interventions to address the consequences of

<sup>&</sup>lt;sup>1</sup> Substance Abuse and Mental Health Services Administration. (2020). *Key substance use and mental health indicators in the United States: Results from the 2019 National Survey on Drug Use and Health* (HHS Publication No. PEP20-07-01-001, NSDUH Series H-55). Rockville, MD: Center for Behavioral Health Statistics and Quality, Substance Abuse and Mental Health Services Administration. Retrieved from samhsa.gov/data/

<sup>&</sup>lt;sup>2</sup> Institute of Health Metrics and Evaluation. ghdx.healthdata.org/gbd-results-tool accessed March 2021.

<sup>&</sup>lt;sup>3</sup> CDC, NCIPC. WISQARS: cdc.gov/injury/wisqars/index.html accessed March 2021.

<sup>&</sup>lt;sup>4</sup> nimh.nih.gov/about/strategic-planning-reports/index.shtml

<sup>&</sup>lt;sup>5</sup> nimh.nih.gov/about/strategic-planning-reports/strategic-planning-process.shtml

<sup>&</sup>lt;sup>6</sup> nimh.nih.gov/about/strategic-planning-reports/index.shtml#progress

<sup>&</sup>lt;sup>7</sup> grants.nih.gov/grants/guide/notice-files/NOT-MH-20-047.html

<sup>&</sup>lt;sup>8</sup> grants.nih.gov/grants/guide/pa-files/PAR-20-243.html

COVID-19 among health disparity populations and other vulnerable groups.<sup>9</sup> Within these trans-NIH initiatives, NIMH has awarded supplemental funding to numerous existing projects to understand and mitigate the pandemic's impact on suicide, depression, and eating disorders, among other issues. We have also provided strategies and resources for managing fear, anxiety, and stress during this time, through multiple NIMH Director's Messages, press releases, and shareable media.<sup>10, 11, 12</sup>

*Suicide Prevention Research Priorities.* Suicide prevention research remains a top priority for NIMH, with approximately one suicide death every 11 minutes in 2019.<sup>13,14</sup> We are committed to bending the curve of suicide in the United States, and together with the National Action Alliance for Suicide Prevention (NAASP), we pledged to reduce the suicide rate by 20 percent by 2025.<sup>15</sup> This aspirational goal has helped guide our suicide prevention research agenda for the past seven years, emphasizing risk detection, screening, and intervention in health care settings. For example, NIMH-supported researchers aim to improve screening for suicide among vulnerable populations by validating, adapting, and extending the utility of the NIMH-developed Ask Suicide Screening Questions (ASQ) tool.<sup>16</sup> Our suicide Prevention developed by the NAASP that, among its other objectives, seeks to transform health care systems to reduce suicide.<sup>17,18</sup>

*The Opioid Crisis and Mental Health.* NIMH recognizes the urgent need to identify effective approaches to treat people who have an opioid use disorder (OUD) and co-occurring mental health conditions, especially in primary care settings. The Collaborative Care Model is a promising approach to meeting the needs of people in primary care settings who have both OUD and mental illnesses.<sup>19</sup> In the Collaborative Care Model, a team of primary health providers and mental health specialists monitor each individual's progress toward personal treatment goals, and treatments are actively changed if the individual is not improving as expected. As part of the NIH Helping to End Addiction Long-term<sup>SM</sup> Initiative, or NIH HEAL Initiative<sup>SM</sup>, we led an effort to solicit research proposals for effectiveness trials to optimize, implement, scale, and sustain the Collaborative Care Model.<sup>20</sup> To date, NIH has awarded four such projects for a total of \$50 million.

## Closing the gap in health disparities

Addressing Black Youth Suicide. Suicide rates among Black youth more than doubled between 1999 and 2017, and Black youth under 13 years of age are now approximately twice as likely to

<sup>&</sup>lt;sup>9</sup> grants.nih.gov/grants/guide/pa-files/PAR-20-237.html

<sup>&</sup>lt;sup>10</sup> nimh.nih.gov/about/director/messages/2020/coping-with-coronavirus-managing-stress-fear-and-anxiety.shtml

<sup>&</sup>lt;sup>11</sup> nimh.nih.gov/news/science-news/2020/supporting-mental-health-during-the-covid-19-pandemic.shtml

<sup>&</sup>lt;sup>12</sup> nimh.nih.gov/health/education-awareness/shareable-resources-on-coping-with-covid-19.shtml

<sup>&</sup>lt;sup>13</sup> cdc.gov/nchs/data/databriefs/db398-H.pdf

<sup>&</sup>lt;sup>14</sup> cdc.gov/violenceprevention/suicide/fastfact.html

<sup>&</sup>lt;sup>15</sup> nimh.nih.gov/news/science-news/2020/nimh-leadership-describes-suicide-prevention-research-priorities.shtml

<sup>&</sup>lt;sup>16</sup> nimh.nih.gov/research/research-conducted-at-nimh/asq-toolkit-materials/index.shtml

<sup>&</sup>lt;sup>17</sup> hhs.gov/surgeongeneral/reports-and-publications/suicide-prevention/index.html

<sup>&</sup>lt;sup>18</sup> pubmed.ncbi.nlm.nih.gov/32432690/

<sup>&</sup>lt;sup>19</sup> heal.nih.gov/news/stories/collaborative-care

<sup>&</sup>lt;sup>20</sup> grants.nih.gov/grants/guide/rfa-files/RFA-MH-19-525.html

die by suicide as their white counterparts.<sup>21,22</sup> We are funding a number of studies aimed at optimizing suicide risk detection and interventions among Black youth throughout the country.<sup>23,24</sup> We are also acting on a recent report by the Congressional Black Caucus (CBC) on the alarming rise in suicide and suicide-related behaviors among Black youth.<sup>25</sup> On April 21, 2020, the NIMH Office for Disparities Research and Workforce Diversity and the Office of Behavioral Health Equity at the Substance Abuse and Mental Health Services Administration co-hosted a virtual panel to discuss the CBC's report and formulate strategies to engage and care for these vulnerable youth.<sup>26</sup> Additionally, NIMH is interested in supporting research focused on suicide risk and prevention among Black youth and is currently seeking guidance and input from stakeholders to address to crisis of Black youth suicide.<sup>27,28</sup>

*Suicide Prevention in Native American Communities.* American Indian/Alaska Native (AI/AN) communities have the highest rates of suicide of any racial/ethnic group in the United States.<sup>29</sup> NIMH continues to partner with the National Institute on Minority Health and Health Disparities to support three collaborative research hubs which aim to develop and increase the reach of effective, culturally relevant preventive interventions to reduce the burden of suicide and promote resilience among AI/AN youth.<sup>30</sup> We are also supporting a number of intervention studies that are developing, adapting, and testing the effectiveness of health promotion and disease prevention interventions among AI/AN communities.<sup>31,32</sup> Further, NIMH recently announced a funding opportunity that will enable transdisciplinary teams to establish Suicide Prevention Research Centers; these Centers will be dedicated to the rapid development of scalable approaches to identify high-risk individuals and improve continuity of care across healthcare settings.<sup>33</sup> NIMH is encouraging applicants to consider how these Centers could best serve differentially affected groups such as sexual and gender minorities, Black youth, and AI/AN communities.

*Mental Illnesses among People who are Incarcerated*. To address the high rates of mental illnesses among incarcerated individuals,<sup>34</sup> NIMH has awarded more than \$3.5 million in research funding to assess the effectiveness of the Stepping Up Initiative, which aims to reduce the number of people with mental illnesses who are incarcerated by determining common treatment and jail reduction priorities across mental health, jail, probation, parole, and county administration agencies.<sup>35</sup> We also support efforts to reduce suicide among individuals in the

<sup>&</sup>lt;sup>21</sup> cdc.gov/nchs/data/hestat/suicide/rates\_1999\_2017.htm

<sup>&</sup>lt;sup>22</sup> ncbi.nlm.nih.gov/pubmed/29799931

<sup>&</sup>lt;sup>23</sup> projectreporter.nih.gov/project\_info\_description.cfm?aid=9807076&icde=48995342

<sup>&</sup>lt;sup>24</sup> projectreporter.nih.gov/project\_info\_description.cfm?aid=9725522&icde=48624547

<sup>&</sup>lt;sup>25</sup> stevefund.org/wp-content/uploads/2019/12/FULL-TASKFORCE-REPORT.pdf

<sup>&</sup>lt;sup>26</sup> nimh.nih.gov/news/events/announcements/webinar-responding-to-the-alarm-addressing-black-youth-suicide.shtml

<sup>&</sup>lt;sup>27</sup> grants.nih.gov/grants/guide/notice-files/NOT-MH-20-055.html

<sup>&</sup>lt;sup>28</sup> grants.nih.gov/grants/guide/notice-files/NOT-MH-21-035.html

<sup>&</sup>lt;sup>29</sup> cdc.gov/mmwr/volumes/67/wr/mm6708a1.htm

<sup>&</sup>lt;sup>30</sup> grants.nih.gov/grants/guide/rfa-files/RFA-MH-17-350.html

<sup>&</sup>lt;sup>31</sup> projectreporter.nih.gov/project\_info\_description.cfm?aid=9899318&icde=49449843

<sup>&</sup>lt;sup>32</sup> projectreporter.nih.gov/project\_info\_description.cfm?aid=9706932&icde=49449876

<sup>&</sup>lt;sup>33</sup> grants.nih.gov/grants/guide/pa-files/PAR-20-286.html

<sup>&</sup>lt;sup>34</sup> bjs.gov/content/pub/press/imhprpji1112pr.cfm

 $<sup>^{35}\</sup> nimh.nih.gov/news/research-highlights/2020/identifying-practices-for-reducing-incarceration-of-those-with-mental-illnesses-a-study-of-stepping-up.shtml$ 

juvenile justice system, who are at particularly high risk for suicide.<sup>36, 37</sup> Additionally we have partnered with the NIH Office of Behavioral and Social Science Research and the National Institute of Justice to fund the Suicide Prevention for at-Risk Individuals in Transition (SPIRIT) study, a randomized control trial to evaluate the effectiveness of an evidence-based Safety Planning Intervention for reducing suicide events in the year following incarceration.<sup>38,39</sup>

*Children with Autism Spectrum Disorder*. An estimated 1 in 54 eight year old children in the United States have autism spectrum disorder (ASD), a developmental disorder that affects social communication and behavior.<sup>40,41</sup> Reliably detecting ASD in young children is difficult, and delays in diagnosis can have profound and long-lasting effects on children, while early intervention can improve cognitive and behavioral outcomes.<sup>42</sup> Race, culture, socioeconomic status, and the lack of trained providers in the community may also affect the age of ASD diagnosis. NIMH is committed to identifying and addressing disparities in access to screening, diagnosis, and treatment services among ethnic and racial minority children at risk for ASD. Recognizing the need for effective and widely adoptable tools for early screening and diagnosis of ASD, we have partnered with the *Eunice Kennedy Shriver* National Institute of Child Health and Human Development, the National Institute of Neurological Disorders to support seven projects that seek to develop screening tools that can be implemented in community settings to detect signs of ASD in the first year of life.<sup>43</sup>

## Capitalizing on foundational investments and beyond

*Piecing Together the Genetic Puzzle of Schizophrenia.* NIMH is committed to supporting research focused on understanding the complex mechanisms linking genetic risk factors to the development of schizophrenia, in order to develop more effective preventions and interventions for this illness. Between 2014 and 2020, NIMH-funded investigators and collaborators compiled large genetic datasets, representing nearly 70,000 individuals with schizophrenia and more than 235,000 individuals without the disorder. By comparing data from these two groups, researchers have identified over 270 places in the genome where common DNA changes with small effects contribute to overall risk for schizophrenia.<sup>44,45</sup> In another NIMH-funded study involving sequencing nearly 25,000 individuals with and 100,000 without schizophrenia, researchers discovered 10 specific genes with large effects on schizophrenia risk.<sup>46</sup> These big data efforts in genetics, combined with changes observed in an NIMH-supported collection of over 2,000 donated brains, are pointing to novel biological mechanisms of this illness.<sup>47</sup> Our investments in genetics have produced advances such as these that may lead to new ways to identify at-risk individuals and to develop treatments for individuals.

<sup>&</sup>lt;sup>36</sup> projectreporter.nih.gov/project\_info\_description.cfm?aid=9768575

<sup>&</sup>lt;sup>37</sup> ojjdp.ojp.gov/sites/g/files/xyckuh176/files/pubs/243891.pdf

<sup>&</sup>lt;sup>38</sup> nimh.nih.gov/news/science-news/2015/embracing-the-spirit-of-reducing-suicide.shtml

<sup>&</sup>lt;sup>39</sup> projectreporter.nih.gov/project\_info\_description.cfm?aid=9312313&icde=37376732

<sup>&</sup>lt;sup>40</sup> nimh.nih.gov/health/statistics/autism-spectrum-disorder-asd.shtml

<sup>&</sup>lt;sup>41</sup> nimh.nih.gov/health/topics/autism-spectrum-disorders-asd/index.shtml

<sup>&</sup>lt;sup>42</sup> pubmed.ncbi.nlm.nih.gov/18349708/

<sup>&</sup>lt;sup>43</sup> nimh.nih.gov/news/science-news/2019/nih-awards-funding-for-early-autism-screening.shtml

<sup>&</sup>lt;sup>44</sup> nimh.nih.gov/about/director/messages/2020/piecing-together-the-genetic-puzzle-of-schizophrenia.shtml

<sup>&</sup>lt;sup>45</sup> medrxiv.org/content/10.1101/2020.09.12.20192922v1

<sup>&</sup>lt;sup>46</sup> medrxiv.org/content/10.1101/2020.09.18.20192815v1

<sup>&</sup>lt;sup>47</sup> nimh.nih.gov/news/science-news/2018/2-000-human-brains-yield-clues-to-how-genes-raise-risk-for-mental-illnesses.shtml

Brain Research through Advancing Innovative Neurotechnologies Initiative® Highlights. To support the development of new tools and technologies to revolutionize our understanding of the brain, NIMH partners with NINDS to co-lead the NIH Brain Research through Advancing Innovative Neurotechnologies (BRAIN) Initiative®.<sup>48</sup> Since the launch of the BRAIN Initiative in 2013, we have supported the development of incredible technologies to characterize all cell types in the brain, map connected neurons in circuits and systems, and measure and modulate the activity of specific circuits. Multiple BRAIN Initiative reports have called for a data infrastructure to enable the research community to access tools to analyze and visualize these rich data.<sup>49,50</sup> Therefore, we have invested in a data infrastructure with three components: data archives, data standards, and software for data integration and analysis. We will continue to support this infrastructure, which provides a basis for implementing the BRAIN Initiative data sharing policy and for enabling secondary analyses of these massive data sets.<sup>51,52</sup>

*Machine Learning to Predict Individual Responses to Depression Treatments*. Advances in new computational modelling tools like machine learning, coupled with the ever-increasing availability of aggregated, harmonized data sets, are revolutionizing the efficiency with which researchers turn data into knowledge. NIMH invests in research to translate this knowledge into improvements in mental health outcomes. For example, NIMH-supported researchers developed a machine learning algorithm to identify patterns in electroencephalogram recordings made available through the NIMH Data Archive,<sup>53</sup> which enabled them to reliably predict how individuals with major depression responded to the antidepressant sertraline.<sup>54</sup> Advances like this may optimize the treatment of mental illnesses by helping healthcare providers select the most effective treatments for their patients.

*Mobile Health Technology*. The use of mobile, wireless, and sensor technologies for health, collectively referred to as mobile health (mHealth), offers unprecedented opportunities to help consumers, clinicians, and researchers measure, manage, and improve health. mHealth also has the potential to reduce health disparities by increasing access to care and medical monitoring and enhancing population-based health research. NIMH currently supports several initiatives to further the development and evaluation of mHealth interventions for mental health, with an emphasis on using minimally intrusive digital technologies to enhance assessment, detection, and prevention of mental illnesses, accessibility and deliverability of mental health services, adherence to treatment, and efficiency and clinical impact of existing mental health services. <sup>55, 56, 57, 58</sup>

<sup>&</sup>lt;sup>48</sup> braininitiative.nih.gov/

<sup>&</sup>lt;sup>49</sup> braininitiative.nih.gov/strategic-planning/brain-2025-report

<sup>&</sup>lt;sup>50</sup> braininitiative.nih.gov/strategic-planning/acd-working-groups/brain-initiative-20-cells-circuits-toward-cures

<sup>&</sup>lt;sup>51</sup> grants.nih.gov/grants/guide/notice-files/NOT-MH-19-010.html

<sup>&</sup>lt;sup>52</sup> grants.nih.gov/grants/guide/rfa-files/rfa-mh-20-120.html

<sup>&</sup>lt;sup>53</sup> nda.nih.gov/edit\_collection.html?id=2199

<sup>&</sup>lt;sup>54</sup> ncbi.nlm.nih.gov/pmc/articles/PMC7145761/

<sup>&</sup>lt;sup>55</sup> grants.nih.gov/grants/guide/pa-files/PAR-19-376.html

<sup>&</sup>lt;sup>56</sup> grants.nih.gov/grants/guide/pa-files/PA-18-579.html

<sup>&</sup>lt;sup>57</sup> grants.nih.gov/grants/guide/pa-files/PA-18-566.html

<sup>&</sup>lt;sup>58</sup> grants.nih.gov/grants/guide/notice-files/not-mh-18-031.html

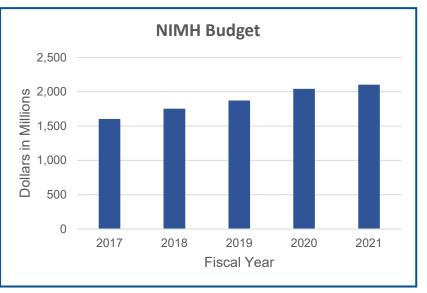
<u>Overall Budget Policy</u>: The FY 2022 President's Budget request is \$2,213.6 million, an increase of \$107.7 million or 5.1 percent compared to the FY 2021 Enacted level. The request includes an increase of \$26.0 million for the BRAIN Initiative, as authorized by the 21st Century Cures Act. It also includes \$25.0 million in funding to increase research on the impact of the COVID-19 pandemic on mental health. This will be done in part by utilizing participants in existing cohort studies, who will be surveyed on the effect of the pandemic and various mitigation measures on their physical and mental health.



# National Institute of Mental Health

# Transforming the understanding and treatment of mental illnesses.

The **National Institute of Mental Health (NIMH)** is the lead federal agency for research on mental disorders. **NIMH's mission** is to transform the understanding and treatment of mental illnesses through basic and clinical research, paving the way for prevention, recovery, and cure. NIMH conducts and supports biomedical and behavioral research, health services research, research training, and health information dissemination with respect to the causes, diagnosis, treatment, management, and prevention of mental illnesses.



The graph above shows the NIMH budget in final allocated dollars. The FY 2022 PB request is \$2,213.6 million.

The **NIMH Strategic Plan for Research** forms a roadmap for the Institute's research priorities, spanning fundamental science to public health impact.





Joshua A. Gordon, M.D., Ph.D. Director of NIMH

## **NIMH Quick Facts**

- NIMH annually supports more than 3,000 research grants and contracts at universities, academic health centers, and other research institutions across the country and around the world.
- NIMH awarded 607 new and competing research project grants in FY 2020, with an application success rate of approximately 24 percent.
- In FY 2020, NIMH awarded grants to 99 unique earlystage investigators and 183 investigators with no other National Institute of Health (NIH) research funding.
- The NIMH Intramural Research Program (IRP) supports approximately 600 scientists, the majority of whom work on the NIH campus in Bethesda, Maryland.



## Achievements: New Treatments and Interventions Based on NIMH Research

- While typical antidepressants may take weeks to work, ketamine dramatically reduces depressive symptoms within hours. Based on technology developed by NIMH's intramural research patent portfolio, esketamine nasal spray medication for treatment-resistant depression received FDA approval in 2019.
- Postpartum depression impacts 1 in 9 women in the United States. In 2019, the FDA approved brexanolone intravenous infusion, the first-ever drug specifically designed to treat postpartum depression. The formulation of this breakthrough therapy was made possible by decades of NIMH-supported basic, translational, and clinical research.
- NIMH's Recovery After an Initial Schizophrenia Episode (RAISE) project demonstrated that early intervention improves clinical outcomes among youth with first episode psychosis and that coordinated specialty care (CSC) is a feasible and cost-effective approach. Through collaborations with other federal agencies, CSC is now the standard of care for early psychosis, with over 280 CSC programs across the country.

# Future Directions: Accelerating Medicines Partnership for Schizophrenia

To generate tools that will improve success in developing early-stage interventions for patients who are at risk of developing schizophrenia, the Foundation for NIH and NIMH launched the Accelerating Medicines Partnership for Schizophrenia (AMP SCZ), a public-private partnership between the NIH, the Food and Drug Administration, and public and private organizations. Core components of AMP SCZ include establishing a research network with U.S. and international sites and a data processing, analysis, and coordination center. The research network will focus on individuals at clinical high risk (CHR) for schizophrenia, identifying biological markers, clinical endpoints, and other measures that predict disease trajectory and outcomes. AMP SCZ data and analyses will be made available to the broad biomedical community through the NIMH Data Archive. Findings from AMP SCZ studies will enable researchers to develop algorithms that predict the course of illness for CHR individuals, allowing for early intervention and testing of treatments that may prevent the development of schizophrenia and reduce the impact of CHR.

## 5)

Action Steps for Helping Someone in Emotional Pain





#### H National Institute of Mental Health

## www.nimh.nih.gov/suicideprevention

## Major Changes in the Fiscal Year 2022 President's Budget Request

Major changes by budget mechanism and/or budget activity detail are briefly described below. Note that there may be overlap between budget mechanism and activity details and these highlights will not sum to the total change for the FY 2022 President's Budget request for NIMH. The FY 2022 President's Budget request is \$2,213.6 million, an increase of \$107.7 million compared to the FY 2021 Enacted level.

## Research Project Grants (\$83.5 million; total \$1,545.6 million)

NIMH expects to increase funding for non-competing Research Project Grants by \$31.4 million to fund projects receiving competing awards in prior years. Competing Research Project Grants are expected to increase by 29 grants or \$47.4 million. This increase is distributed across all programmatic areas and basic, translational or clinical research.

## Research Centers (\$10.0 million; total \$88.2 million)

NIMH expects to increase funding for Research Centers by \$10.0 million or two Research Center grants.

## Intramural Research Programs (\$5.6 million; total \$218.9 million)

NIMH expects to increase Intramural Research by \$5.6 million, funding pay raises and inflation, and will continue to fund innovative research studies conducted by the Institute's intramural scientists.

## Research Management and Support (\$2.3 million; total \$99.0 million)

NIMH expects to increase funding for Research Management and Support by \$2.3 million and will continue to support the oversight and management of scientific programs critical to fulfilling the Institute's mission.

#### Budget Mechanism - Total<sup>1,2</sup>

#### (Dollars in Thousands)

MECHANISM	FY 2020 Final <sup>3</sup>		FY 2021 Enacted			President's udget	FY 2022 +/- FY 2021 Enacted	
	No.	Amount	No.	Amount	No.	Amount	No.	Amount
Research Projects:								
Noncompeting	1,620	\$910,612	1,555	\$954,289		-		\$31,365
Administrative Supplements	(133)	16,180	(156)	18,952	(161)	20,000	(5)	1,048
Competing:								
Renewal	57	41,843	63	42,965				4,983
New	549	394,236	526	380,316	552	· ·		42,309
Supplements	1	848	1	871	1	972	0	101
Subtotal, Competing	607	\$436,927	590	\$424,151	619			\$47,393
Subtotal, RPGs	2,227	\$1,363,719	2,145	\$1,397,392	2,213	\$1,477,199	68	\$79,806
SBIR/STTR	87	62,752	90	64,646	91	68,364	1	3,718
Research Project Grants	2,314	\$1,426,471	2,235	\$1,462,039	2,304	\$1,545,563	69	\$83,524
Research Centers:								
Specialized/Comprehensive	36	\$66,924	40	\$78,201	42	\$88,185	2	\$9,984
Clinical Research	0	0	0	0	0	0	0	C
Biotechnology	0	50	0	50			0	C
Comparative Medicine	0	275	0	0		0		C
Research Centers in Minority Institutions	0	0	0	0	0	0	0	C
Research Centers	36	\$67,249	40	\$78,251	42	\$88,235	2	\$9,984
Other Research:		<b>.</b>						<b>*</b> •• <b>*</b>
Research Careers	366	\$61,858	375	\$63,385				\$972
Cancer Education	0	0	0	0	-	-	-	C
Cooperative Clinical Research	0	0	0	0		0		C
Biomedical Research Support	2	1,200	0	0	-	0	-	C
Minority Biomedical Research Support	0	0	0	0	-	0	-	C
Other	59	46,516	55	44,447		,		-4,555
Other Research	427	\$109,574	430	\$107,832	435	\$104,249		-\$3,583
Total Research Grants	2,777	\$1,603,294	2,705	\$1,648,121	2,781	\$1,738,046	76	\$89,925
Ruth L Kirschstein Training Awards:	<u>FTTPs</u>		FTTPs		<u>FTTPs</u>		FTTPs	
Individual Awards	229	\$10,850	249	\$11,983	249	\$12,803	0	\$820
Institutional Awards	503	32,731	528	34,885	529	36,957	1	2,072
Total Research Training	732	\$43,581	777	\$46,869	778	\$49,760	1	\$2,892
Research & Develop. Contracts	133	\$90,441	134	\$100,794	134	\$107,790	0	\$6,996
		-		5100,794 (689)				-
(SBIR/STTR) (non-add)	(0)	(748)	(0)	(089)	(0)	(717)	(0)	(28)
Intramural Research	279	210,828	296	213,372	300	218,934	4	5,562
Res. Management & Support	269	94,823	281	96,746		-		2,298
SBIR Admin. (non-add)	(0)	(62)	(0)	(135)		(138)	(0)	(3)
Construction		0		0		0		C
Buildings and Facilities		0		0		0		
Total, NIMH	548	0 \$2,042,966	577	\$2,105,902		\$2,213,574		\$107,672

All items in italics and brackets are non-add entries.
 Of which \$70.0 million in FY 2020, \$50.0 million in FY 2021, and \$76.0 million in FY 2022 is derived by transfer from the NIH Innovation Account under the 21st Century Cures Act.

<sup>3</sup> Includes 21st Century Cures Act funding not obligated in FY 2020 and carried over into FY 2021.

For carrying out section 301 and title IV of the PHS Act with respect to mental health, [\$2,053,708,000]*\$2,137,574,000*.

## NIH INNOVATION ACCOUNT, CURES ACT (INCLUDING TRANSFER OF FUNDS)

For necessary expenses to carry out the purposes described in section 1001(b)(4) of the 21st Century Cures Act, in addition to amounts available for such purposes in the appropriations provided to the NIH in this Act, [\$404,000,000]*\$496,000,000*, to remain available until expended: Provided, That such amounts are appropriated pursuant to section 1001(b)(3) of such Act, are to be derived from amounts transferred under section 1001(b)(2)(A) of such Act, and may be transferred by the Director of the National Institutes of Health to other accounts of the National Institutes of Health solely for the purposes provided in such Act: Provided further, That upon a determination by the Director that funds transferred pursuant to the previous proviso are not necessary for the purposes provided, such amounts may be transferred back to the Account: Provided further, That the transfer authority provided under this heading is in addition to any other transfer authority provided by law.

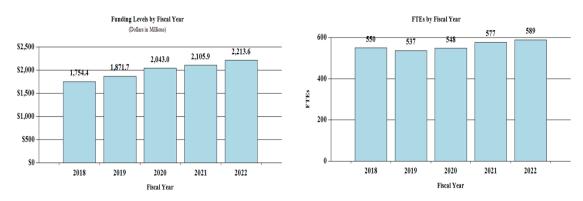
#### **Summary of Changes**

(Dollars in Thousands)

FY 2021 Enacted FY 2022 President's Budget				\$2,105,902 \$2,213,574		
Net change				\$107,672		
	FY2021 Enacted		FY 2022 President's Budget		from F	Change TY 2021 Icted
CHANGES	FTEs	Budget Authority	FTEs	Budget Authority	FTEs	Budget Authority
A. Built-in:						
1. Intramural Research:						
a. Annualization of January 2021 pay increase & benefits		\$70,121		\$70,373		\$185
<ul> <li>b. January FY 2022 pay increase &amp; benefits</li> </ul>		70,121		70,373		1,903
c. Paid days adjustment		70,121		70,373		0
d. Differences attributable to change in FTE		70,121		70,373		728
e. Payment for centrally furnished services		35,091		36,392		1,301
f. Cost of laboratory supplies, materials, other expenses, and non-recurring costs		108,159		112,168		2,286
Subtotal						\$6,402
2. Research Management and Support:						
a. Annualization of January 2021 pay increase & benefits		\$47,369		\$49,542		\$125
b. January FY 2022 pay increase & benefits		47,369		49,542		1,293
c. Paid days adjustment		47,369		49,542		0
d. Differences attributable to change in FTE		47,369		49,542		1,585
e. Payment for centrally furnished services		9,452		9,476		24
f. Cost of laboratory supplies, materials, other expenses, and non-recurring costs		39,924		40,025		905
Subtotal						\$3,931
Subtotal, Built-in						\$10,334
			EV 2022	President's	Program	n Change
	FY2021	Enacted		idget		Y 2021
CHANGES	No.	Amount	No.	Amount	Ena No.	icted Amount
B. Program:	110.	Amount	110.	Amount	110.	Amount
1. Research Project Grants:						
a. Noncompeting	1,555	\$973,242	1,594	\$1,005,654	39	\$32,413
b. Competing	590	424,151	619	471,544	29	47,393
c. SBIR/STTR	90	64,646	91	68,364	1	3,718
Subtotal, RPGs	2,235	\$1,462,039	2,304	\$1,545,563	69	\$83,524
2. Research Centers	40	\$78,251	42	\$88,235	2	\$9,984
3. Other Research	430	107,832	435	104,249	5	-3,583
4. Research Training					1	
4. Research framing	777	46,869	778	49,760	1	2,892
5. Research and development contracts	134	100,794	134	107,790	0	6,996
Subtotal, Extramural		\$1,795,784		\$1,895,597	_	\$99,813
6 Intromural Dasaarah	FTEs 206	¢010.000	FTEs 200	¢210.024	<u>FTEs</u>	0041
6. Intramural Research	296	\$213,372	300	\$218,934	4	-\$841
7. Research Management and Support	281	96,746	289	99,044	8	-1,634
8. Construction		0		0		0
9. Buildings and Facilities		0		0		0
Subtotal, Program	577	\$2,105,902	589	\$2,213,574	12	\$97,338
Total built-in and program changes						\$107,672

## Fiscal Year 2022 Budget Graphs

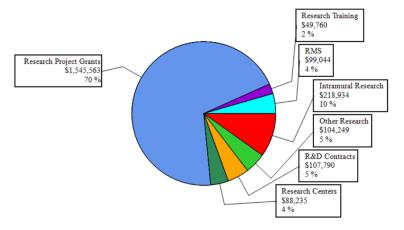
## History of Budget Authority and FTEs:



Distribution by Mechanism:

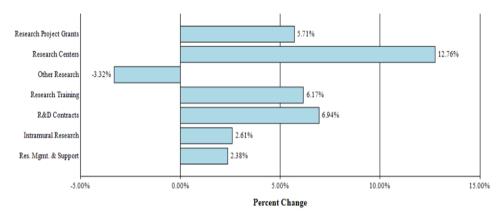
#### FY 2022 Budget Mechanisms

(Dollars in Thousands)



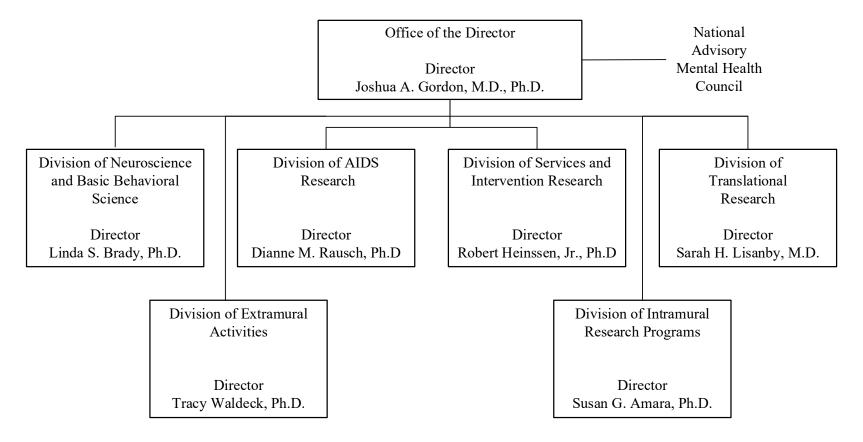
## Change by Selected Mechanism:





## **DEPARTMENT OF HEALTH AND HUMAN SERVICES**

## National Institutes of Health National Institute of Mental Health



## Budget Authority by Activity<sup>1</sup> (Dollars in Thousands)

	FY 2020 Final		FY 2021 Enacted			President's dget	FY 2022 +/- FY 2021 Enacted	
Extramural Research	<u>FTE</u>	<u>Amount</u>	FTE	<u>Amount</u>	FTE	<u>Amount</u>	FTE	<u>Amount</u>
<u>Detail</u>								
Neuroscience & Basic Behavioral Science		\$826,881		\$846,928		\$909,998		\$63,069
Services & Intervention Research		175,918		185,145		193,838		8,692
Translational Research		520,646		547,631		573,667		26,036
AIDS Research		173,487		173,598		173,598		0
Office of the Director		40,384		42,481		44,496		2,015
Subtotal, Extramural		\$1,737,316		\$1,795,784		\$1,895,597		\$99,813
Intramural Research	279	\$210,828	296	\$213,372	300	\$218,934	4	\$5,562
Research Management & Support	269	\$94,823	281	\$96,746	289	\$99,044	8	\$2,298
TOTAL	548	\$2,042,966	577	\$2,105,902	589	\$2,213,574	12	\$107,672

<sup>1</sup> Includes FTEs whose payroll obligations are supported by the NIH Common Fund.

## **Justification of Budget Request**

## National Institute of Mental Health

Authorizing Legislation: Section 301 and title IV of the Public Health Service Act, as amended.

Budget Authority (BA):

			FY 2022	
		FY 2021	President's	FY 2022 +/-
	FY 2020 Final	Enacted	Budget	FY 2021
BA	\$2,042,966,000	\$2,105,902,000	\$2,213,574,000	\$107,672,000
FTE	548	577	589	12

Program funds are allocated as follows: Competitive Grants/Cooperative Agreements; Contracts; Direct Federal/Intramural and Other.

## **Program Descriptions**

#### OD Program Portrait: Mental Health Research Awards for Innovative New Scientists in Lowand Middle-Income Countries

Investigators from low- and middle-income countries (LMICs) are underrepresented in mental health research. This limits NIMH's ability to support mental health research that is relevant across diverse populations and settings, and to partner with other countries in research on shared priorities. The NIMH Research Awards for Innovative New Scientists in LMICs program will support basic, translational, clinical, or services research by outstanding scientists who are in the early stages of a career in mental health research.<sup>59</sup> Through these awards, NIMH aims to assist such individuals in launching innovative, high impact, independent research programs. In addition, these awards will encourage collaborative science while preserving the leadership role of new or early stage investigators in LMICs. This award program aims to support the next generation of scientists dedicated to producing the scientific knowledge that will help to prevent, treat, and ultimately cure mental illnesses across diverse populations.

## **Office of the Director**

The NIMH Office of the Director (OD) leads the Institute in carrying out the NIMH mission to transform the understanding and treatment of mental illnesses. The OD provides scientific leadership, sets programmatic priorities, coordinates cross-cutting programs, determines Institute policies, directly funds several research projects, and provides overall administrative and operational coordination for the Institute. The OD houses nine offices: Office on AIDS: Office of Autism Research Coordination; Office of Clinical Research; Office of Genomics Research Coordination: Office for Disparities Research and Workforce Diversity; Office of Management; Office of Rural Mental Health Research; Office of Science Policy, Planning, and Communications; and, Office of Technology Development and Coordination. Each of the

 $<sup>^{59}</sup> nimh.nih.gov/funding/grant-writing-and-application-process/concept-clearances/2020/mental-health-research-awards-for-innovative-new-scientists-in-low-and-middle-income-countries-lmics.shtml$ 

offices within the OD play an important role in supporting the Institute.

As an example of research that OD funds, NIMH is planning to launch an initiative supporting projects aimed at implementing and sustaining evidence-based mental health practices in low-resource settings to achieve equity in outcomes for underserved communities.<sup>60</sup> Limited capital and human resources can create barriers to care delivery. The initiative would encourage innovative approaches to remediate barriers to provision, receipt, and/or benefit from evidence-

based practices. Studies may also generate new information about factors integral to achieving equity in mental health outcomes, with due consideration for the needs of individuals across the life span. The ultimate goal of the initiative will be to improve mental health outcomes for underserved populations and reduce or eliminate health disparities.

<u>Budget Policy</u>: The FY 2022 President's Budget request is \$44.5 million, an increase of \$2.0 million or 4.7 percent compared with the FY 2021 Enacted level.

## Neuroscience and Basic Behavioral Science

The Division of Neuroscience and Basic Behavioral Science (DNBBS) supports research in the areas of basic neuroscience, genetics, integrative neuroscience, research training, resource development, and drug discovery. In cooperation with other NIMH programs and the wider research community, this Division ensures that relevant basic scientific knowledge is generated and

## DNBBS Program Portrait: Discovery of Chemical Probes for Novel Brain Targets

Recognizing that the psychiatric drug development pipeline has slowed, NIMH seeks to accelerate the discovery and validation of new biological targets for treating brain disorders. NIMH recently announced its intent to support initiatives focused on the discovery of chemical probes for the nervous system - that is, small molecules that bind to and impact the function of biological targets in the nervous system, such as ion channels. Research projects will aim to discover novel chemical probes for use in studying biological processes relevant to the mission of NIMH and to identify novel biological targets that will inform studies of brain disease mechanisms. These initiatives will complement other NIMH-supported activities to support research at multiple stages in the drug development pipeline, including assay development and screening, optimization and early preclinical discovery, and the transition from early discovery to Phase I Clinical Trials. Newly discovered chemical probes could also be used as starting points for further development as potential therapeutic drugs through the Blueprint Neurotherapeutics program or small business development initiatives. Results from these research initiatives may provide new insight into important disease-related biological targets and biological processes.

used in pursuit of improved methods that, in the long term, could be used to diagnose, treat, and prevent mental illnesses.

 $<sup>^{60}\</sup> nimh.nih.gov/funding/grant-writing-and-application-process/concept-clearances/2019/effectiveness-of-implementing-sustainable-evidence-based-mental-health-practices-in-low-resource-settings-to-achieve-equity-in-outcomes-for-traditionally-underserved-populations.shtml$ 

DNBBS funds grants across a range of research topics to enhance understanding of the basic neurobiology underlying mental illnesses. In FY 2022, DNBBS plans to expand research into the brain subsystems that mediate anhedonia, the inability to feel pleasure – a core symptom of major depression as well as other major mental illnesses. In addition, DNBBS will expand

## DTR and DSIR Program Portrait: Women's Mental Health

Perinatal depression, or depression that develops during pregnancy or after childbirth, is one of the most common complications of pregnancy and the postpartum period. It affects as many as one in seven pregnant women and can result in negative short- and long-term consequences for mother and baby. NIMH is committed to identifying women at increased risk for perinatal depression and determining ways to improve intervention delivery, particularly for underserved populations. NIMH encourages research that includes: strategies for identifying women at risk for perinatal depression; evidencebased, service-ready, and scalable treatments and preventive interventions; and strategies that support the delivery of interventions with fidelity in the healthcare setting or other settings where women receive mental health services in the community. Further, NIMH is interested in studies conducted in real-world settings that leverage patient information from electronic health record data to determine which interventions are predicted to work best for which individuals. Identifying risk factors and developing appropriate screening, treatment, and preventive interventions has the potential to optimize care and improve public health outcomes.

The menopause transition (MT) is also a window of vulnerability for the development of mood and psychotic symptoms, and the mechanisms underlying this vulnerability are largely unknown. NIMH encourages comprehensive interdisciplinary research to identify biological, genetic, and environmental factors that could be used to identify women at risk of new or recurring mood and psychotic disorders during the MT, and to better understand the mechanistic links between the MT and these disorders. By supporting such research, NIMH ultimately aims to improve women's health outcomes by identifying therapeutic targets for future development of novel treatment interventions. research using artificial intelligence to understand neural circuitry underlying cognitive and social function with a focus on techniques to clarify the critical factors that drive the computer models and might ultimately be used to modulate brain function.

<u>Budget Policy</u>: The FY 2022 President's Budget request is \$910.0 million, an increase of \$63.1 million or 7.4 percent compared with the FY 2021 Enacted level.

## **Translational Research**

The Division of Translational Research (DTR) supports integrative, multidisciplinary research and training programs that translate findings from basic science to discover the causes, mechanisms, and trajectories of mental illnesses, and to develop effective interventions for individuals across the lifespan. DTR supports research using innovative forms of scientific analysis, including computational psychiatry and machine learning, to elucidate the characteristics of, and risk factors for, mental illnesses; the neurobehavioral mechanisms of psychopathology; the trajectories of risk and resilience based on the interactive influences of genetics, brain development, environment, and experience; and, the design and testing of innovative treatments and interventions. As such, DTR-supported research efforts may have intermediate-term impact and pave the way towards effective treatment and prevention for mental illnesses.

One area of high priority for DTR is to improve outcomes for individuals at clinical high risk (CHR) for psychosis. A major gap in knowledge has been the lack of a means to reliably predict which individuals with CHR will develop schizophrenia or other adverse outcomes, which would enable the implementation of effective prevention strategies. To address this gap, NIMH and the Foundation for NIH launched a major public-private partnership to develop the tools that are needed to develop early therapeutic interventions for people at risk of developing schizophrenia. The Accelerating Medicines Partnership for Schizophrenia (AMP SCZ)<sup>61</sup> brings together NIH, the Food and Drug Administration, and numerous private and non-profit organizations to join forces in this unprecedented effort to prevent schizophrenia and other outcomes of CHR. AMP SCZ seeks to achieve this goal by developing a set of validated biomarkers that can identify individuals at risk for schizophrenia, and identify novel targets for treatment development. In addition, DTR, in collaboration with the Department of Defense, private foundations, and industry, supports the Advancing Understanding of RecOvery afteR traumA (AURORA) Study,<sup>62</sup> a landmark study to understand the consequences of trauma, as well as research using advanced digital techniques, including natural language processing, 63 machine learning, and predictive coding, 64 that aim to predict mental health outcomes, such as risk for suicide. DTR also supports work harnessing the latest advances in artificial intelligence to advance mechanistic understanding of how circuits in the brain shape behavior.65

<u>Budget Policy</u>: The FY 2022 President's Budget request is \$573.7 million, an increase of \$26.0 million or 4.8 percent increase compared with the FY 2021 Enacted level.

## **Services and Intervention Research**

The Division of Services and Intervention Research (DSIR) supports research that evaluates the effectiveness of psychosocial, pharmacological, somatic, rehabilitative, and combined interventions to prevent or treat mental illnesses. DSIR refines and evaluates treatment and preventive interventions for children, adolescents, and adults, focusing on acute and long-term symptom reduction, remission, and improved community functioning. DSIR also supports mental health services research, including interventions to improve the quality and outcomes of care; organization- and system-level interventions to enhance service delivery; and, strategies for widespread dissemination and implementation of evidence-based treatments into routine care settings. DSIR funds studies that are designed to have near-term impact, targeted at improving care for individuals currently suffering from mental illnesses.

DSIR initiatives encourage practice-based research with near-term potential for improving intervention effectiveness and service delivery, as illustrated by the Advanced Laboratories for Accelerating the Reach and Impact of Treatments for Youth and Adults with Mental Illness (ALACRITY) Research Centers program.<sup>68,69</sup> These centers incorporate a variety of

<sup>&</sup>lt;sup>61</sup> nih.gov/news-events/news-releases/nih-public-private-partnership-advance-early-interventions-schizophrenia

<sup>62</sup> projectreporter.nih.gov/project\_info\_description.cfm?aid=9756462

<sup>&</sup>lt;sup>63</sup> pubmed.ncbi.nlm.nih.gov/30710497/

<sup>&</sup>lt;sup>64</sup> ncbi.nlm.nih.gov/pubmed/30389840

<sup>&</sup>lt;sup>65</sup> grants.nih.gov/grants/guide/pa-files/PAR-19-344.html

<sup>&</sup>lt;sup>66</sup> nimh.nih.gov/funding/grant-writing-and-application-process/concept-clearances/2020/prevention-of-perinatal-depressionimproving-intervention-delivery-for-at-risk-individuals.shtml

<sup>&</sup>lt;sup>67</sup> nimh.nih.gov/funding/grant-writing-and-application-process/concept-clearances/2020/mood-and-psychosis-symptoms-during-the-menopause-transition.shtml

<sup>&</sup>lt;sup>68</sup> grants.nih.gov/grants/guide/pa-files/PAR-16-354.html

<sup>&</sup>lt;sup>69</sup> grants.nih.gov/grants/guide/pa-files/PAR-18-701.html

transdisciplinary collaborations and prioritize a deployment-focused approach to yield interventions and service strategies that are relevant and can be rapidly integrated into practice. Many of the centers capitalize digital health platforms and data science methods to learn about mental illness onset and progression in clinical populations, improve diagnosis, and deliver targeted interventions via smart communication technologies. The centers also account for the perspectives of a variety of stakeholders, including patients, families, and providers. The currently funded ALACRITY Centers span a variety of key populations and practice settings and cover a range of science, spanning intervention refinement and optimization through implementation and services research.

<u>Budget Policy</u>: The FY 2022 President's Budget request is \$193.8 million, an increase of \$8.7 million or 4.7 percent compared with the FY 2021 Enacted level.

## **AIDS Research**

The Division of AIDS Research (DAR) supports research and research training that addresses the priority areas outlined in the NIH Strategic Plan for HIV and HIV-Related Research<sup>70</sup> and the HHS National HIV/AIDS Strategy.<sup>71</sup> DAR-supported research includes behavioral and social science studies aimed at reducing HIV/AIDS incidence through the development, testing, and implementation of new and improved prevention strategies, improving health outcomes of those living with HIV through improved linkage to care, and adherence to effective treatments. DAR also supports research to understand, prevent, and treat the neurological and mental health conditions associated with living with HIV. DAR is participating in cure research by supporting studies to eradicate or silence HIV from biological reservoirs in the central nervous system (CNS), where the virus may evade detection and treatment. HIV latency in the CNS is critically important to consider in studies of eradication and reactivation. Many drugs designed to eradicate the virus are unable to penetrate the CNS, because the CNS acts as a protective reservoir for HIV. This work may also inform methods to prevent or treat the neurological comorbidities of HIV, such as cognitive and behavioral impairments, with targeted research to understand HIV-induced neurological pathology, and emphasis on long-term antiretroviral therapy.

DAR research also places special emphasis on World Health Organization-defined key populations, health disparities, and the impact of mental illnesses that may increase the risk for contracting HIV or negatively impact the health outcomes of those living with HIV. Additionally, DAR ensures effective integration of biomedical approaches and multidisciplinary expertise are considered in NIH-wide planning efforts, to help achieve an AIDS-free generation.

<u>Budget Policy</u>: The FY 2022 President's Budget request is \$173.6 million, unchanged from the FY 2021 Enacted level.

<sup>&</sup>lt;sup>70</sup> oar.nih.gov/hiv-policy-and-research/strategic-plan

<sup>&</sup>lt;sup>71</sup> hiv.gov/blog/hhs-and-the-national-hivaids-strategy

## **Intramural Research Programs**

The Division of Intramural Research Programs (IRP) is the internal research component of NIMH, complementing the Institute's extramural grant funding program. IRP scientists investigate basic, translational, and clinical aspects of brain function and behavior, conducting state-of-the-art research using unique NIH resources. In addition, the IRP provides an excellent environment for training the next generation of basic and clinical scientists.

IRP researchers are developing new and improved methods in functional magnetic resonance imaging (fMRI) and exploring advanced computational methods to evaluate brain function and mental illnesses. Many IRP researchers use fMRI and behavioral tasks to investigate differences in brain circuitry underlying key brain functions such as learning, perception, and attention, which are affected in mental illnesses. IRP scientists are also exploring novel medications and other treatments for depression in adults, including ketamine and other experimental fast-acting antidepressant medications, transcranial magnetic stimulation (TMS), and next generation seizure therapy. Using clinical assessments, brain imaging, and sleep studies, they aim to better understand suicide.<sup>72</sup> IRP researchers have also developed the Ask Suicide-Screening Ouestions (ASQ) tool<sup>73</sup> for use among both youth and adults in various medical settings, and they are now collaborating with the Indian Health Service (IHS) to implement the ASQ in all 170 IHS medical facilities. Physician scientists are working to identify causes, treatments for, and predictors of risk for reproductive endocrine-related mood disorders, recently creating an *in vitro* model of perimenopausal depression (PMD),<sup>74</sup> which pointed to expression of genes that could contribute to vulnerability to PMD. IRP researchers are currently investigating how the circadian clock and light affect mood and behavior. For example, one study found a link between levels of outdoor light exposure and sleep and mental health in teens.<sup>75</sup> To understand the biology of childhoodonset mental illnesses, IRP scientists are collecting extensive clinical, genetic, and anatomical data to investigate the effects of gene expression and sex differences on brain structure.<sup>76</sup>

<u>Budget Policy</u>: The FY 2022 President's Budget request is \$218.9 million, an increase of \$5.6 million or 2.6 percent compared with the FY 2021 Enacted level.

## **Research Management and Support**

Research Management and Support (RMS) activities provide administrative, budgetary, logistical, and scientific support in the review, award, and monitoring of research and training grants, and research and development contracts. RMS functions include strategic planning, coordination, and evaluation of NIMH programs, regulatory compliance, coordination of global mental health efforts, and liaising with other Federal agencies, Congress, and the public. Through RMS activities, NIMH continues to provide accountability and administrative support for meritorious basic, clinical, and translational research and continues to promote health information dissemination, education, and outreach activities.

 $<sup>^{72}\</sup> clinical trials.gov/ct2/show/NCT02543983? term=Neurobiology+of+Suicide\&draw=2\&rank=1$ 

<sup>&</sup>lt;sup>73</sup> nimh.nih.gov/research/research-conducted-at-nimh/asq-toolkit-materials/index.shtml

<sup>74</sup> pubmed.ncbi.nlm.nih.gov/32788687/

<sup>&</sup>lt;sup>75</sup> nimh.nih.gov/news/science-news/2020/outdoor-light-linked-with-teens-sleep-and-mental-health.shtml

<sup>&</sup>lt;sup>76</sup> nimh.nih.gov/news/science-news/2020/study-shows-highly-reproducible-sex-differences-in-aspects-of-human-brainanatomy.shtml

<u>Budget Policy</u>: The FY 2022 President's Budget request is \$99.0 million, an increase of \$2.3 million or 2.4 percent compared with the FY 2021 Enacted level.

## **Appropriations History**

Fiscal Year	Budget Estimate to Congress	House Allowance	Senate Allowance	Appropriation
2013	\$1,479,204,000		\$1,483,687,000	\$1,480,265,001
Rescission				\$2,960,530
Sequestration				(\$74,299,124)
2014	\$1,465,782,000		\$1,456,041,000	\$1,446,172,000
Rescission				\$0
2015	\$1,440,076,000			\$1,463,036,000
Rescission				\$0
2016	\$1,489,417,000	\$1,512,401,000	\$1,520,260,000	\$1,548,390,000
Rescission				\$0
20171	\$1,518,673,000	\$1,599,747,000	\$1,619,537,000	\$1,601,931,000
Rescission	· ) )- · - )- · ·	• )	• ) ) )	\$0
2018 <sup>2</sup>	\$1,244,901,000	\$1,668,461,000	\$1,724,568,000	\$1,754,775,000
Rescission	<i><i><i>w</i>1,<i>2</i>1,<i>y</i>0,<i>y</i>0,<i>y</i>0,<i>y</i>0,<i>y</i>0,<i>y</i>0,<i>y</i>0,<i>y</i>0</i></i>	\$1,000,101,000	<i>Q1,721,00000000000000</i>	\$0
2019 <sup>2</sup>	\$1,612,192,000	\$1,790,231,000	\$1,871,250,000	\$1,870,296,000
Rescission	\$1,012,192,000	ψ1,790,251,000	\$1,071,220,000	\$0
$2020^{2}$	\$1,630,422,000	\$1,961,704,000	\$2,076,244,000	\$2,038,374,000
Rescission	\$1,030,422,000	\$1,901,704,000	\$2,070,244,000	\$2,038,374,000
2				
2021 <sup>2</sup> Rescission	\$1,844,865,000	\$2,060,303,000	\$2,139,491,000	\$2,103,708,000 \$0
176201221011				20
$2022^{2}$	\$2,213,574,000			

<sup>1</sup> Budget Estimate to Congress includes mandatory financing.

<sup>2</sup> Includes funds derived by transfer from the NIH Innovation Account under the 21st Century Cures Act.

### Authorizing Legislation

	PHS Act/ Other Citation	U.S. Code Citation	2021 Amount Authorized	FY 2021 Enacted	2022 Amount Authorized	FY 2022 President's Budget
Research and Investigation	Section 301	42§241	Indefinite		Indefinite	
			>	\$2,105,902,000	>	\$2,213,574,000
National Institute of Mental Health	Section 401(a)	42§281	Indefinite		Indefinite	
Total, Budget Authority				\$2,105,902,000		\$2,213,574,000

#### Amounts Available for Obligation<sup>1</sup>

(Dollars in Thousands)

Source of Funding	FY 2020 Final	FY 2021 Enacted	FY 2022 President's Budget
Appropriation <sup>2</sup>	\$2,038,374	\$2,103,708	\$2,213,574
Secretary's Transfer	0	0	0
Subtotal, adjusted appropriation	\$2,038,374	\$2,103,708	\$2,213,574
OAR HIV/AIDS Transfers	4,592	2,194	0
Subtotal, adjusted budget authority	\$2,042,966	\$2,105,902	\$2,213,574
Unobligated balance, start of year <sup>3</sup>	2,022	2,022	0
Unobligated balance, recovery of prior year obligations <sup>3</sup>	1,944	0	0
Unobligated balance, end of year <sup>3</sup>	-2,022	0	0
Subtotal, adjusted budget authority	\$2,044,910	\$2,107,924	\$2,213,574
Unobligated balance lapsing	-58	0	0
Total obligations	\$2,044,852	\$2,107,924	\$2,213,574

<sup>1</sup> Excludes the following amounts (in thousands) for reimbursable activities carried out by this account:

FY 2020 - \$8,775 FY 2021 - \$10,050 FY 2022 - \$10,050

<sup>2</sup> Of which \$70.0 million in FY 2020, \$50.0 million in FY 2021, and \$76.0 million in FY 2022 is derived by transfer from the NIH Innovation Account under the 21st Century Cures Act. <sup>3</sup> Reflects 21st Century Cures Act funding not obligated in previous years and carried over into FY 2021.

## Budget Authority by Object Class<sup>1</sup>

(Dollars in Thousands)

		FY 2021 Enacted	FY 2022 President's Budget	FY 2022 +/- FY 2021 Enacted
Total con	mpensable workyears:			112021 20000
	Full-time equivalent	577	589	1
	Full-time equivalent of overtime and holiday hours	0	0	
	Average ES salary	\$202	\$208	\$
	Average GM/GS grade	12.8	12.8	0.
	Average GM/GS salary	\$124	\$128	\$
	Average salary, Commissioned Corps (42 U.S.C.		-	
	207)	\$0	\$0	\$
	Average salary of ungraded positions	\$148	\$151	\$
	OBJECT CLASSES	FY 2021 Enacted	FY 2022 President's Budget	FY 2022 +/-
	Demonstration		8	FY 2021
11.1	Personnel Compensation	10.000	51 700	1 0 1
11.1	Full-Time Permanent	49,886	51,702	1,81
11.3	Other Than Full-Time Permanent	24,821	24,897	7
11.5	Other Personnel Compensation	2,585	2,610	2
11.7	Military Personnel	0	0	25
11.8	Special Personnel Services Payments	12,761	13,013	25
11.9	Subtotal Personnel Compensation Civilian Personnel Benefits	<b>\$90,053</b>	\$92,223	\$2,17
12.1		27,438	27,693	25
12.2	Military Personnel Benefits	0	0	
13.0	Benefits to Former Personnel	0	0	£2.42
21.0	Subtotal Pay Costs	\$117,491	\$119,916	\$2,42
21.0	Travel & Transportation of Persons	1,500	1,541	4
22.0 23.1	Transportation of Things	113	117 0	
23.1	Rental Payments to GSA	0	0	
	Rental Payments to Others	*	°	
23.3 24.0	Communications, Utilities & Misc. Charges	910	932	2
	Printing & Reproduction	72,400	4	2 00
25.1 25.2	Consulting Services	72,400	75,394	2,99
23.2	Other Services	28,664	29,207	54
25.3	Purchase of goods and services from government accounts	134,676	140,961	6,28
25.4	Operation & Maintenance of Facilities	514	531	1
25.5	R&D Contracts	18,515	19,781	1,26
25.6	Medical Care	55	57	-,*
25.7	Operation & Maintenance of Equipment	6,288	6,487	19
25.8	Subsistence & Support of Persons	0	0,107	.,
25.0	Subtotal Other Contractual Services	\$261,112	\$272,418	\$11,30
26.0	Supplies & Materials	5,406	5,606	20
31.0	Equipment	22,958	23,762	80
32.0	Land and Structures	1,419	1,471	5
33.0	Investments & Loans	0	0	c.
41.0	Grants, Subsidies & Contributions	1,694,990	1,787,807	92,81
42.0	Insurance Claims & Indemnities	1,05 1,550	1,707,007	,2,01
43.0	Interest & Dividends	1	1	
44.0	Refunds	0	0	
17.0	Subtotal Non-Pay Costs	\$1,988,411	\$2,093,658	\$105,24
	Total Budget Authority by Object Class	\$2,105,902	\$2,005,038	\$103,24

<sup>1</sup> Includes FTEs whose payroll obligations are supported by the NIH Common Fund.

## Salaries and Expenses (Dollars in Thousands)

OBJECT CLASSES	FY 2021 Enacted	FY 2022 President's Budget	FY 2022 +/- FY 2021	
Personnel Compensation				
Full-Time Permanent (11.1)	\$49,886	\$51,702	\$1,816	
Other Than Full-Time Permanent (11.3)	24,821	24,897	76	
Other Personnel Compensation (11.5)	2,585	2,610	26	
Military Personnel (11.7)	0	0	(	
Special Personnel Services Payments (11.8)	12,761	13,013	252	
Subtotal Personnel Compensation (11.9)	\$90,053	\$92,223	\$2,170	
Civilian Personnel Benefits (12.1)	\$27,438	\$27,693	\$255	
Military Personnel Benefits (12.2)	0	0	(	
Benefits to Former Personnel (13.0)	0	0	(	
Subtotal Pay Costs	\$117,491	\$119,916	\$2,42	
Travel & Transportation of Persons (21.0)	\$1,500	\$1,541	\$41	
Transportation of Things (22.0)	113	117	4	
Rental Payments to Others (23.2)	0	0	(	
Communications, Utilities & Misc. Charges (23.3)	910	932	22	
Printing & Reproduction (24.0)	4	4	(	
Other Contractual Services:				
Consultant Services (25.1)	50,869	52,369	1,500	
Other Services (25.2)	28,664	29,207	543	
Purchases from government accounts (25.3)	82,696	87,170	4,474	
Operation & Maintenance of Facilities (25.4)	514	531	11	
Operation & Maintenance of Equipment (25.7)	6,288	6,487	193	
Subsistence & Support of Persons (25.8)	0	0	(	
Subtotal Other Contractual Services	\$169,031	\$175,764	\$6,73	
Supplies & Materials (26.0)	\$5,406	\$5,606	\$200	
Subtotal Non-Pay Costs	\$176,963	\$183,964	\$7,001	
Total Administrative Costs	\$294,454	\$303,880	\$9,42	

#### Detail of Full-Time Equivalent Employment (FTE)

	]	FY 2020 Final	l	F	Y 2021 Enact	ed	FY 202	2 President's	Budget
OFFICE/DIVISION	Civilian	Military	Total	Civilian	Military	Total	Civilian	Military	Total
Division of AIDS Research	1.5		1.5	1.5		1.5	1.5		1.5
Direct:	15	-	15	15	-	15	15	-	15
Reimbursable:		-	-	-	-	-	-	-	-
Total:	15	-	15	15	-	15	15	-	15
Division of Extramural Activities									
Direct:	41	-	41	41	-	41	41	-	41
Reimbursable:	-	-	-	-	-	-	-	-	-
Total:	41	-	41	41	-	41	41	-	41
Division of Intramural Research Programs									
Direct:	271	-	271	296	-	296	300	-	300
Reimbursable:	8	-	8	7	-	7	7	-	7
Total:	279	-	279	303	-	303	307	-	307
Division of Neuroscience and Basic Behavioral Science									
Direct:	26		26	26		26	26		26
Reimbursable:	20	-	20	20	-	20	20	-	20
Total:	26	-	26	26	-	26	26	-	26
Total:	20	-	20	20	-	20	20	-	20
Division of Services and Intervention Research									
Direct:	14	-	14	14	-	14	14	-	14
Reimbursable:	-	-	-	-	-	-	-	-	-
Total:	14	-	14	14	-	14	14	-	14
Division of Translational Research									
Direct:	30	-	30	30	-	30	30	-	30
Reimbursable:	-	-	-	-	-	-	-	-	-
Total:	30	-	30	30	-	30	30	-	30
Office of the Director									
Direct:	131		131	136		136	144		144
Reimbursable:	12		12	12		12	12		12
Total:	143	-	143	148	-	148	156	-	156
T 4 1	548		548	577		577	589		589
Total		-	548	3//	-	577	589	-	589
Includes FTEs whose payroll obligations are supported by	the NIH Comm	non Fund.							
FTEs supported by funds from Cooperative Research and	0	0	0	0	0	0	0	0	0
Development Agreements.									
FISCAL YEAR				Av	erage GS Gra	ide			
2018	12.7								
2019	12.8								
2020	12.8								
2021		12.8							
2022					12.8				

GRADE	FY 2020 Final	FY 2021 Enacted	FY 2022 President's Budget
Total, ES Positions	1	1	1
Total, ES Salary	197,300	201,513	208,398
General Schedule			
GM/GS-15	72	72	72
GM/GS-14	73	73	73
GM/GS-13	114	117	129
GS-12	81	81	81
GS-11	33	33	33
GS-10	0	0	0
GS-9	13	13	13
GS-8	6	6	6
GS-7	5	5	5
GS-6	0	0	0
GS-5	0	0	0
GS-4	3	3	3
GS-3	1	1	1
GS-2	1	1	1
GS-1	0	0	0
Subtotal	402	405	417
Commissioned Corps (42 U.S.C. 207)			
Assistant Surgeon General	0	0	0
Director Grade	0	0	0
Senior Grade	0	0	0
Full Grade	0	0	0
Senior Assistant Grade	0	0	0
Assistant Grade	0	0	0
Subtotal	0	0	0
Ungraded	172	172	172
Total permanent positions	404	404	404
Total positions, end of year	575	578	590
Total full-time equivalent (FTE) employment, end of year	548	577	589
Average ES salary	197,300	201,513	208,398
Average GM/GS grade	12.8	12.8	12.8
Average GM/GS salary	121,974	124,115	128,356

### **Detail of Positions**<sup>1</sup>

<sup>1</sup> Includes FTEs whose payroll obligations are supported by the NIH Common Fund.