

OFFICE OF AIDS RESEARCH

CONGRESSIONAL JUSTIFICATION
FY 2026

Department of Health and Human Services
National Institutes of Health

[THIS PAGE INTENTIONALLY LEFT BLANK]

DEPARTMENT OF HEALTH AND HUMAN SERVICES

NATIONAL INSTITUTES OF HEALTH

Office of AIDS Research

FY 2026 Budget Table of Contents

Summary.....	3
Budget Authority by Institute, Center, and Office	4
Budget Mechanism Table.....	5
Budget Authority by Research Capacity Goal	6
Justification of Budget Request.....	7

General Notes

1. FY 2025 Enacted levels cited in this document reflect the FY 2025 full-year continuing resolution (Public Law 119-4) and include the effects of the FY 2025 HIV/AIDS transfer.
2. Detail in this document may not sum to the subtotals and totals due to rounding.

[THIS PAGE INTENTIONALLY LEFT BLANK]

Summary

The Office of AIDS Research (OAR) coordinates HIV/AIDS research across the National Institutes of Health (NIH). OAR supports both basic research on HIV/AIDS and research projects testing a variety of implementation strategies to identify the most successful and cost-effective strategies to prevent, diagnose, link to care, and treat HIV.

The vision of OAR is to advance research to end the HIV pandemic and improve health outcomes for people with HIV. In the 1980s, an HIV or AIDS diagnosis was a death sentence. At the peak of the epidemic in the 1990s and early 2000s, nearly two million people were dying annually in the United States. Today, the advances in treatment and prevention have led to a decrease in U.S. HIV-related deaths to fewer than 20,000 annually.

The mission of OAR is to ensure that HIV research funding is directed at the highest priority research areas and to facilitate maximal return on investment. To achieve this mission, OAR convenes, catalyzes, coordinates, and communicates HIV-related research across NIH, the Department of Health and Human Services (HHS), other government agencies, academia, and community organizations through collaborations and partnerships. NIH maintains a comprehensive research portfolio to prevent HIV transmission, maximize the impact of existing interventions, and advance efforts toward a cure.

The FY 2026 budget request for OAR is \$1,910.3 million.

BUDGET AUTHORITY BY INSTITUTE, CENTER, AND OFFICE

Budget Authority by Institute, Center, and Office

**NATIONAL INSTITUTES OF HEALTH
Office of AIDS Research
Budget Authority by Institute, Center, and Office
(Dollars in Thousands)**

Institute, Center, and Office	FY 2024 Final ^{1 2}	FY 2025 Full-Year CR ²	FY 2026 President's Budget	FY 2026 +/- FY 2025
NCI	\$256,734	\$256,734	\$103,773	-\$152,961
NIBS	\$136,527	\$136,527	\$80,205	-\$56,322
NINBR	\$61,380	\$61,380	\$35,771	-\$25,609
NIAID	1,911,364	1,911,364	1,215,628	-695,736
NICWHSDC	155,143	155,143	94,824	-60,319
NIA	28,538	28,538	16,980	-11,558
NIBH	513,836	513,836	283,425	-230,411
NINR	17,375	17,375	—	-17,375
NIGMS	9,639	9,639	8,857	-782
NIMHD	24,982	24,982	—	-24,982
NCCIH	796	796	—	-796
FIC	25,919	25,919	—	-25,919
OD	146,255	146,255	70,808	-75,447
OAR	67,806	67,806	27,860	-39,946
ORIP	78,449	78,449	42,948	-35,501
Subtotal OD	146,255	146,255	70,808	-75,447
TOTAL, NIH	\$3,288,488	\$3,288,488	\$1,910,271	-\$1,378,217

¹ Reflects HIV/AIDS transfers under the authority of Section 213 of the Departments of Labor, Health and Human Services, and Education, and Related Agencies Appropriations Act, 2024.

² Column is comparably adjusted to remove the National Institute for Environmental Health Sciences (NIEHS), since NIEHS is proposed to be transferred elsewhere in HHS in the FY 2026 President's Budget.

BUDGET MECHANISM TABLE

NATIONAL INSTITUTES OF HEALTH Office of AIDS Research Budget Mechanism - AIDS ¹ (Dollars in Thousands)

Mechanism	FY 2024 Final ³		FY 2025 Full Year C.R. ³		FY 2026 President's Budget		FY 2026 +/- FY 2025	
	No.	Amount	No.	Amount	No.	Amount	No.	Amount
<u>Research Projects:</u>								
Noncompeting	1,409	\$1,491,912	1,354	\$1,457,106	784	\$768,071	-570	-\$689,035
Administrative Supplements	143	61,774	58	40,158	8	1,760	-50	-38,398
Competing	469	286,127	396	441,640	323	293,022	-73	-148,618
Subtotal, RPGs	1,878	\$1,839,813	1,750	\$1,938,904	1,107	\$1,062,853	-643	-\$876,051
SBIR/STTR	15	11,663	13	10,502	12	10,442	-1	-60
Research Project Grants	1,893	\$1,851,476	1,763	\$1,949,406	1,119	\$1,073,295	-644	-\$876,111
<u>Research Centers:</u>								
Specialized/Comprehensive	60	\$154,060	49	\$129,409	35	\$76,387	-14	-\$53,022
Clinical Research	0	0	0	0	0	0	0	\$0
Biotechnology	0	0	0	0	0	0	0	\$0
Comparative Medicine	19	68,781	19	67,486	11	40,149	-8	-\$27,337
Research Centers in Minority Institutions	0	0	0	981	0	0	0	-\$981
Research Centers	79	\$222,841	68	\$197,876	46	\$116,536	-22	-\$81,340
<u>Other Research:</u>								
Research Careers	257	\$44,039	247	\$42,404	156	\$28,089	-91	-\$14,315
Cancer Education	0	0	0	0	0	0	0	\$0
Cooperative Clinical Research	19	13,043	17	9,494	9	3,756	-8	-\$5,738
Biomedical Research Support	0	2,510	0	4,232	12	500	12	-\$3,732
Minority Biomedical Research Support	0	0	0	0	0	0	0	\$0
Other	115	55,235	114	55,014	22	20,877	-92	-\$34,137
Other Research	391	\$114,827	378	\$111,144	199	\$53,222	-179	-\$57,922
Total Research Grants	2,363	\$2,189,144	2,209	\$2,258,426	1,364	\$1,243,053	-845	-\$1,015,373
<u>Ruth L. Kirschstein Training Awards:</u>	FTTPs		FTTPs		FTTPs		FTTPs	
Individual Awards	79	\$3,921	68	\$3,395	47	\$2,223	-21	-\$1,172
Institutional Awards	230	\$15,409	216	\$16,043	189	\$12,420	-27	-\$3,623
Total Research Training	309	\$19,330	284	\$19,438	236	\$14,643	-48	-\$4,795
Research & Develop. Contracts	82	\$467,078	108	\$391,988	58	\$231,242	-50	-\$160,746
(SBIR/STTR) (non-add)	14	9,251	7	8,594	7	7,594	0	-\$1,000
Intramural Research		\$356,408		\$358,440		\$253,672		-\$104,768
Res. Management and Support		188,722		192,390		139,801		-\$52,589
Res. Management & Support (SBIR Admin) (non-add)		0		0		0		\$0
Office of the Director - Appropriation ²		146,255		146,255		70,808	0	-\$75,447
Office of the Director - Other		67,806		67,806		27,860	0	-\$39,946
ORIP (non-add) ²		78,449		78,449		42,948		-\$35,501
Total, NIH Discretionary B.A.		\$3,288,488		\$3,288,488		\$1,910,271		-\$1,378,217

¹ All items in italics and brackets are non-add entries.

² Number of grants and dollars for the ORIP component of OD are distributed by mechanism and are noted here as a non-add. Office of the Director - Appropriation is the non-add total of these amounts and the funds accounted for under OD - Other.

³ Column is comparably adjusted to remove the National Institute for Environmental Health Sciences (NIEHS), since NIEHS is proposed to be transferred elsewhere in HHS in the FY 2026 President's Budget.

Budget Authority by Research Capacity Goal

**NATIONAL INSTITUTES OF HEALTH
Office of AIDS Research
Budget Authority by Research Capacity Goal
(Dollars in Thousands)**

Research Capacity Goal	FY 2024 Final ^{1 2}	FY 2025 Full-Year CR^{1 2}	FY 2026 President's Budget	FY 2026 +/- FY 2025
Enhance Discovery and Advance HIV Science Through Fundamental Research	\$1,151,520	\$1,153,823	\$670,556	-\$483,267
Advance the Development and Assessment of Novel Intervention for HIV Prevention, Treatment, and Cure	1,622,798	1,620,049	957,142	-662,907
Optimize Public Health Impact of HIV Discoveries Through Translation, Dissemination, and Implementation of Research Findings	50,853	50,094	29,118	-20,976
Build Research Workforce and Infrastructure Capacity to Enhance Sustainability of HIV Scientific Discovery	463,317	464,522	253,455	-211,067
Total	\$3,288,488	\$3,288,488	\$1,910,271	-\$1,378,217

¹ Reflects effects of Secretary's transfer

² Column is comparably adjusted to remove the National Institute for Environmental Health Sciences (NIEHS), since NIEHS is proposed to be transferred elsewhere in HHS in the FY 2026 President's Budget.

JUSTIFICATION OF BUDGET REQUEST

Office of AIDS Research

Budget Authority (BA):

	<u>FY 2024 Final</u>	<u>FY 2025 Enacted</u>	<u>FY 2026 President's Budget</u>	<u>FY 2026 +/- FY 2025</u>
BA	\$3,294,000,000	\$3,294,000,000	\$1,910,271,000	-\$1,383,729,000

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

Overall Budget Policy: The FY 2026 President’s Budget request for OAR is \$1,910.3 million. This level of funding will support the research and capacity goals of the NIH HIV research agenda as described below, namely to enhance discovery and advance HIV science through fundamental research; develop and assess novel interventions for HIV prevention, treatment, cure, and co-occurring conditions; optimize the impact of HIV-related research through implementation science and dissemination of research findings; and build HIV research capacity by strengthening the research workforce and infrastructure.

Program Descriptions and Accomplishments

Fundamental Research—Understanding the Biological and Behavioral Underpinnings of HIV

Fundamental research seeks to expand the understanding of the biological, physiological, epidemiologic, interpersonal, and social-structural mechanisms of HIV—i.e., how it operates as a virus at the basic level and as an infectious disease.

Understanding the HIV Capsid

The new antiviral drug, lenacapavir, is the first in a new class of HIV antiretrovirals (ARV) medications, called capsid inhibitors. Lenacapavir can be used twice a year to treat or prevent acquisition of HIV. The convenience of twice-yearly injections addresses a key practical concern for many who cannot use daily antivirals due to logistics, finances, stigma, discrimination, side-effects, or other concerns. The efficacy of lenacapavir, even when HIV has mutated to resist other antivirals, reflects the fact that it interferes with multiple steps in the HIV life cycle.

The story of lenacapavir relies on decades of NIH investment aimed at understanding the three-dimensional (3D) structure of viral proteins and their interactions within infected cells. Indeed, it was structure-based design studies, by NIH funded-scientists in the 1980s and 1990s that led to the development of earlier ARV medications, including reverse transcriptase, protease, and integrase inhibitors. Continued support of structural studies at NIH, followed by support of the Centers for HIV Structural Biology in the early 2000s, enabled scientists to integrate techniques

from structural biology, biochemistry, and cell biology to capture in unprecedented detail the 3D structures of HIV proteins and nucleic acids and their interactions with cellular components. This information helped clarify how the different components interact and revealed new approaches for disrupting those interactions.

Extensive studies demonstrated that the CA proteins arrange themselves into regular shapes made of six (hexamers) or five (pentamers) CA proteins. Approximately 250 hexamers and exactly 12 pentamers assemble to create the capsid lattice. Understanding the shape and structure of the capsid was an essential step in creating capsid inhibitors. Lenacapavir binds two of these CA protein groups creating a structural change that prevent the virus' genetic material from entering the nucleus and producing new virus particles.

Studies in the basic sciences can take years to translate into effective prevention strategies or therapies, yet the development of lenacapavir exemplifies the latest example of how basic science leads to breakthroughs that have a profound impact on global public health.

Virology and Immunology Research

A deeper understanding of HIV biology and virology is crucial to continue developing better interventions to control the HIV pandemic. To replicate, retroviruses like HIV take over a cell's ability to express genetic material. This occurs within the cell nucleus, which can only be accessed through very selective nuclear pores. Recent studies have shown that the HIV capsid—which encapsulates the HIV genetic material and shields it from antiviral sensors in cells—serves as a nuclear transporter, passing through the nuclear pore, despite its size. Further studies suggest that the elasticity of the cone-shaped capsid enables it to squeeze through the pore, underscoring the importance of the capsid as a therapeutic target.

At first, HIV vaccine candidates aimed to produce a better immune response by stimulating T cells. Studies of people who control HIV without antiretroviral therapy (ART) revealed that their immune systems produce broadly neutralizing antibodies (bNAbs) that can prevent HIV infection. Vaccine research now focuses on creating these bNAbs. A recent study comparing the immune cells in past HIV vaccine recipients and in people whose immune system controlled HIV with bNAbs confirmed the current opinion that an effective vaccine will need to stimulate both T cell-mediated protection and bNAbs.

The persistence of HIV affects the whole body, not only increasing the likelihood of infection by other pathogens but also causing many comorbidities and complications such as accelerated aging. Recent NIH-funded research shows that shifts in the sugars, called glycans, that attached to antibodies not only correlate with but also cause some of the changes associated with aging. Glycans could therefore serve as biomarkers of accelerated aging to enable earlier detection of aging-related complications. Furthermore, engineering antibodies to mimic the glycan signatures in younger people could be a new therapeutic approach. Building on research conducted predominantly in men, recent studies of women with HIV showed that accelerated aging could be detected using measures of physical function such as walking speed or balance. This suggests approaches that could address functional deficits.

Epidemiologic Research

Epidemiologic research can identify who is affected by HIV and how, and thereby help understand how HIV affects the body. For example, people with HIV have a higher overall risk of chronic disease than people without HIV, including double the risk of major adverse cardiovascular events. People who acquired HIV at or around birth experience a lifetime exposure to HIV and ART, which can lead to additional complications. Indeed, a recent study of young adults with HIV acquired around the time of birth showed that by age 30, about 1 in 5 had diabetes, 1 in 2 had high triglycerides, 1 in 4 had hypertension, and 1 in 4 had chronic kidney disease. These rates are much higher than young adults in the general population or even than people with HIV. Differences by sex were prevalent, with men having a higher incidence of chronic kidney disease. These studies suggest that people with perinatally acquired HIV might need to be screened for these chronic conditions at a younger age to better prevent or treat these chronic conditions.

Basic Behavioral and Social Sciences Research

Fundamental research also examines the behavioral, interpersonal, and social (including structural) factors, processes, dynamics, and contexts that influence and are influenced by HIV. For example, pre-exposure prophylaxis (PrEP) remains disproportionately underutilized in many communities due to factors ranging from access to stigma. Understanding the factors that influence people along the whole continuum of care is crucial for effectively implementing PrEP interventions in differing communities. Furthermore, the complexity of access to a health provider or a pharmacy often limited adherence to an ongoing PrEP regimen. This barrier was mitigated when clinics offered extra resources, such as facilitating travel or grouping health care services.

Applied Research—Developing and Evaluating Interventions for Prevention, Treatment, and Cure

NIH supports preclinical and clinical research to develop and evaluate interventions for HIV prevention, treatment, and cure. Current developments include injections of continuously released ART every two or six months and anti-HIV antibody infusions. These innovations aim to simplify treatment regimens, enhance adherence, and address drug resistance, which affects about 10 percent of people on ART. New treatments under study show promise in suppressing viral replication and potentially reversing immune system weakening. In addition to long-acting prevention strategies, NIH is also exploring multipurpose prevention technologies, interventions that can prevent both HIV and other sexually transmitted infections or pregnancy and may facilitate use of preventive interventions.

Preclinical Research

HIV mutates rapidly and evades the immune response, posing challenges for development of a preventive vaccine. To prevent or control HIV, a vaccine would need to elicit the production of bNAbs, which bind to parts of the virus that remain constant even when it mutates. Several classes of HIV-specific bNAbs have been identified, each binding to a different section of proteins on the surface of the virus. This year, NIH scientists showed that a human bNAb called VRC34.01, which targets the fusion peptide on HIV's surface, protected monkeys from acquiring simian immunodeficiency virus—the HIV primate equivalent—in a proof-of-concept study that is informing human vaccine design. This team and other NIH-supported researchers

are using a technique called germline targeting to guide new B cells—a type of immune cell—to develop into mature B cells that can produce bNAbs. Using this approach, researchers are making progress toward eliciting several classes of bNAbs in human and animal studies.

Preclinical studies are also essential to improve therapeutic and cure approaches. While ART prevents HIV from replicating, the virus remains in protected reservoirs in the brain, liver, and lymph nodes. The brain is a particularly challenging organ due to the blood-brain barrier, which hinders entry to the brain of both pathogens and treatments such as ART. Extensive studies have shown that HIV infection in the brain targets specific macrophages. Recently, NIH-funded researchers explored a new therapeutic targeting these macrophages in a primate model. They found that using small molecules that pass the blood-brain barrier and inhibit macrophages could clear HIV from the brain without causing any major toxicity. These results suggest a new strategy to augment existing ART.

Recent Clinical Findings

NIH clinical trials explore the safety and efficacy of new interventions in multiple populations, including those historically underrepresented in research, such as pregnant women. People are more likely to acquire HIV through sexual intercourse during pregnancy, highlighting the need for comprehensive and highly effective PrEP options as part of sexual and reproductive health. Recent results from an NIH-funded trial showed that women could safely start using either the monthly dapivirine vaginal ring or daily oral PrEP starting in their second trimester of pregnancy to prevent HIV transmission. This year, results of another study showed that a more recent and long-acting form of PrEP, cabotegravir—which is injected every two months—was safe and well tolerated before and during pregnancy.

For babies with perinatally acquired HIV, recent studies have shown that ART initiation immediately after birth is safe and effective at suppressing HIV. An NIH-funded group launched a clinical trial to explore whether this treatment strategy could lead to an HIV cure. Six infants born with HIV were treated with ART within 48 hours of birth. The results were announced last year: When ART was interrupted at age 5, 4 of the 6 children remained without detectable HIV for over 48 weeks. These findings suggest that early ART initiation could be a viable option for treating newborns with HIV. Further studies will explore the differences underlying the varying effectiveness of early treatment.

NIH also collaborates with academic and industry scientists to develop and evaluate new interventions. For example, after discovering the capsid's role in the HIV life cycle, NIH and its grantees collaborated with Gilead Science, Inc., which developed lenacapavir. Gilead launched two multi-country trials, which showed that lenacapavir prevents HIV acquisition in men and women. Continuing the partnership, NIH's HIV Prevention Trials Network is implementing two Gilead-sponsored trials of lenacapavir for PrEP in women and in people who inject drugs in the United States. Ongoing research will continue to inform future drug development and clinical research. NIH-funded scientists are conducting research to investigate lenacapavir activity in the body, understand resistance to capsid inhibitors, and develop a method for analyzing lenacapavir drug levels.

NIH clinical research studies examine and address complications and comorbidities associated with HIV. HIV increases the risk of a type of liver disease that independently increases the risk of cardiovascular disease and death. An NIH-supported trial recently showed that semaglutide, a medication approved for treating type 2 diabetes, reduced the severity of liver disease in people with HIV. These promising early results suggest that semaglutide could improve quality of life and decrease mortality for people with liver disease and HIV.

NIH is implementing clinical research models that better address the needs of the community. For example, noninferiority trials—trials that assess whether a new intervention is as good as an existing one—and choice trials—where participants experience different interventions, then choose their favorite—are particularly useful for assessing interventions with varying access, usability, or convenience. These new clinical trial models facilitate the evaluation of interventions in practical, real-world contexts while preserving scientific and ethical standards. For instance, an NIH-supported noninferiority study recently showed that, compared to standard quarterly HIV testing and PrEP prescription, a six-month prescription for PrEP and home-based HIV self-testing prevented HIV acquisition and reduced clinic visits by half without affecting HIV testing, retention, or adherence. These findings indicate that less frequent contact, which may not be as burdensome to individuals, can be equally effective.

Dissemination and Implementation Research—Translating Research Findings into the Community

As NIH research has demonstrated the efficacy of HIV prevention, treatment, and cure interventions over the years, effective information sharing through community partnerships, research collaborations, and dissemination activities remains vital to amplify research impact and mitigate health disparities. Implementation research plays a pivotal role in translating research to practice by examining strategies to integrate evidence-based health interventions into clinical and community settings, increase adoption and improve population health. For example, a recent study evaluated various strategies to enhance the uptake of, and adherence to HIV prevention methods among adolescents aged 12-24 with certain risk factors. Automated text messaging combined with peer support and coaching significantly improved PrEP use, while the other interventions showed limited effects. The findings demonstrate the potential for technology and peer support to enhance HIV prevention among young people.

NIH efforts support the HHS *Ending the Epidemic in the U.S.* (EHE) initiative. Since the EHE initiative was announced in 2019, NIH has contributed by supporting implementation science projects through multiple networks of HIV research centers. In addition to the projects awarded through these networks, NIH supports eight implementation science hubs that offer topic-based support for EHE projects and one coordinating center. This infrastructure facilitates the development of implementation research and the scale-up of innovative service delivery strategies. By creating platforms for EHE projects to connect, discuss, and share insights, the coordinating center enhances information sharing across various contexts, expands opportunities for rigorous strategy testing, and promotes the development of broadly applicable implementation strategies. NIH EHE projects enable academic institutions to partner with state and local leaders as well as grassroots community groups to jointly translate implementation research findings into improved delivery of HIV testing, prevention, treatment, and response services for populations and locations most affected by HIV. The research will leverage

collaborations and scientific advances in HIV prevention, diagnosis, treatment, and outbreak response to tailor and sustain evidence-based interventions in communities most affected by HIV.

HIV Research Capacity—Strengthening Research Workforce, Infrastructure, and Novel Methodologies

Bringing research from the laboratory to the clinic and ultimately to the community requires continued support for a strong and innovative research workforce, reliable research infrastructure, and investment in development of new research tools and resources.

Research Workforce and Infrastructure

NIH has long supported training and career development awards to support the next generation of biomedical, behavioral, and social science professionals, including many opportunities specifically for those conducting HIV research. Pervasive HIV-related health disparities underscore the need to cultivate a robust workforce representative of communities most affected by HIV. Accordingly, several NIH-funded Centers for AIDS Research include pathway or capacity programs that provide funding, mentorship, and networking opportunities for the HIV research community.

In 2024, NIH organized a third annual workshop for early career investigators in HIV research. The workshop offered valuable resources to early career investigators, including advice and presentations from other early career researchers, mentors, and NIH staff. The workshop exemplified NIH's commitment to supporting the next generation of researchers by equipping them with the knowledge, tools, and networking necessary for success in their path forward in their career.

Progress in HIV science relies on robust support for research facilities, tools and instrumentation, resources, and data infrastructure. NIH will continue to support development and improvement of research tools to support HIV research. Broadening access to such research resources will benefit the HIV research workforce.

Novel Methods and Technologies

Artificial intelligence and machine learning (AI/ML) techniques and applications are leading scientific breakthroughs in health and medicine by leveraging real-world data-driven insights for science, policy, and practice. Opportunities for AI/ML to address HIV prevention, care, and treatment needs have yet to be fully realized. Accordingly, NIH is encouraging research that generates cutting-edge synthetic datasets and applies privacy-conscious AI/ML approaches to expand capacity to address the evolving HIV pandemic. More widespread use of advanced data science approaches, including AI/ML and deep learning, can help identify the critical factors—including individual, interpersonal, community, social, structural, mental and other health challenges—that contribute to HIV outcomes, enabling focused prevention efforts and optimized treatment decisions.

HIV detection shortly after exposure enables the rapid initiation of treatment, limiting further transmission and improving health outcomes. NIH is encouraging the development of diagnostic technologies to enable rapid HIV self-testing or point-of-care testing and viral load monitoring

using both Small Business Innovation Research contracts and the expanded Rapid Acceleration of Diagnostics (RADx) program. Technologies currently under development, such as user-friendly, smartphone-based devices for HIV self-testing and viral load monitoring, could allow people to determine their HIV status in the privacy of their homes, and enable people with HIV to monitor their viral loads over time, letting them take action if their viral load is no longer undetectable. These tools can support engagement in and adherence to HIV prevention and care.