

# National Institute of Arthritis and Musculoskeletal and Skin Diseases

CONGRESSIONAL JUSTIFICATION  
FY 2027

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Department of Health and Human Services  
National Institutes of Health

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DEPARTMENT OF HEALTH AND HUMAN SERVICES  
NATIONAL INSTITUTES OF HEALTH

National Institute of Arthritis and Musculoskeletal and Skin Diseases (NIAMS)

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**General Notes**

1. FY 2026 Enacted levels cited in this document include the effects of the FY 2026 HIV/AIDS transfer
2. Estimates assume reauthorization of the SBIR/STTR program in FY 2026 and FY 2027.
3. Detail in this document may not sum to the subtotals and totals due to rounding.

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## **National Institute of Arthritis and Musculoskeletal and Skin Diseases Overview**

The mission of NIAMS is to support research into the causes, treatment, and prevention of arthritis, musculoskeletal, and skin diseases; the training of basic and clinical scientists to carry out this research; and the dissemination of information on research progress in these diseases.

Most of the diseases covered by the NIAMS mission areas are chronic and many cause lifelong pain and disability. These diseases affect tens of millions of Americans, cause tremendous human suffering, and cost billions in health care and lost productivity.

NIAMS aims both to foster an adaptable research environment that enables investigators to leverage scientific knowledge and powerful technologies, and to stimulate research in new, transformative areas as they arise. Discoveries made through these efforts will, in turn, enable people of any background to live longer and healthier lives.

Fostering collaborations and partnerships is a priority for the Institute. For example, NIAMS participates in the HEAL Initiative, which funds over 1,000 projects nationwide aimed at accelerating scientific solutions to the opioid crisis. NIAMS also collaborates on the Accelerating Medicines Partnership Autoimmune and Immune-Mediated Diseases (AMP AIM) Program which brings together experts to share methodologies, protocols, and discoveries within the network and with the broader biomedical research community. NIAMS provides scientific input to the NIH-wide INvestigation of Co-occurring conditions across the Lifespan to Understand Down syndrome (INCLUDE) Project to improve health outcomes for individuals with Down syndrome. Through INCLUDE, NIAMS-funded researchers are conducting a clinical trial to assess the safety and efficacy of tofacitinib, a drug originally developed through a NIAMS partnership with industry, for treating skin conditions in individuals with Down syndrome.

Storing, managing, standardizing, and publishing the vast amounts of data produced by biomedical research is a critical component to the mission of NIAMS. The institute participates in several large efforts in data management and sharing, including artificial intelligence and machine learning, to cultivate knowledge and improve treatments.

Training and supporting the next generation of basic and clinical scientists is crucial to advancing the NIAMS research mission. NIAMS strives to foster the professional and scientific skills of our future scientific workforce through the laboratories of extramural NIAMS-funded investigators and within the NIAMS intramural research program.

## Major Changes in the 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 detail, and these highlights will not sum to the total change for the FY 2027 President's Budget request for NIAMS, which is \$637.8 million, a decrease of \$49.8 million from the FY 2026 Enacted level. NIAMS continues to place a priority on support to early-stage investigators. Within this funding level, NIAMS will pursue its highest research priorities through strategic investments and careful stewardship of appropriated funds. The FY 2027 President's Budget reflects the policy to limit indirect costs for all research grants to a maximum of 15 percent of the modified total direct cost.

### Research Project Grants (RPGs) (-\$32.6 million; total \$416.6 million):

NIAMS will support a total of 733 Research Project Grant (RPG) awards in FY 2027, a reduction of 118 from the FY 2026 Enacted level. The reduced funding level includes the effects of limiting indirect costs for competing and noncompeting RPG awards to no more than 15 percent of direct costs and the proposed overall NIAMS decrease. Noncompeting awards will decrease by \$88.0 million. Competing RPGs will increase by \$59.1 million, however, the number of awards will decrease by 47 awards. The FY 2027 request includes the NIH policy which will fully fund the outyear commitments of all new RPGs as a part of the initial grant award, which raises the average cost of each new award.

### Research Centers (-\$8.4 million; total \$33.9 million):

NIAMS will support a total of 44 Research Center awards in FY 2027. The reduced funding level includes the effects of limiting indirect costs for competing and noncompeting grant awards to no more than 15 percent of direct costs and the proposed overall NIAMS decrease.

### Other Research (-\$0.4 million; total \$29.8 million):

NIAMS will support a total of 204 Other Research awards in FY 2027. The reduction includes the effects of limiting indirect costs for competing and noncompeting grant awards to no more than 15 percent of direct costs and the proposed overall NIAMS decrease.

### Intramural Research (-\$3.2 million; total \$75.0 million):

NIAMS will decrease funding for intramural research by \$3.2 million or 4.1 percent compared to the FY 2026 Enacted level, reflecting reductions in centrally furnished services and staffing. This budget request aligns with the budget proposal to cap Title 42 salaries.

### Research Management and Support (-\$2.1 million; total \$39.2 million):

NIAMS will decrease funding for Research Management and Support by \$2.1 million or 5.0 percent compared to the FY 2026 Enacted level, reflecting reductions in centrally furnished services and staffing. This budget request aligns with the budget proposal to cap Title 42 salaries and supports the management of NIH and NIAMS infrastructure.

**BUDGET MECHANISM TABLE**

**NATIONAL INSTITUTES OF HEALTH  
National Institute of Arthritis and Musculoskeletal and Skin Diseases**

**Budget Mechanism \***  
(Dollars in Thousands)

Mechanism	FY 2025 Final		FY 2026 Enacted		FY 2027 President's Budget		FY 2027 +/- FY 2026	
	Number	Amount	Number	Amount	Number	Amount	Number	Amount
<b>Research Projects:</b>								
Noncompeting	719	\$321,936	642	\$303,491	574	\$215,492	-68	-\$87,999
Administrative Supplements	<i>(54)</i>	<i>\$3,795</i>	<i>(15)</i>	<i>\$2,960</i>	<i>(5)</i>	<i>\$513</i>	<i>-(10)</i>	<i>-\$2,447</i>
<b>Competing:</b>								
Renewal	23	\$16,114	23	\$18,062	17	\$26,763	-6	\$8,700
New	152	\$93,326	152	\$104,609	111	\$154,997	-41	\$50,388
Supplements	0	\$0	0	\$0	0	\$0	0	\$0
<b>Subtotal, Competing</b>	<b>175</b>	<b>\$109,440</b>	<b>175</b>	<b>\$122,671</b>	<b>128</b>	<b>\$181,760</b>	<b>-47</b>	<b>\$59,089</b>
Subtotal, RPGs	894	\$435,172	817	\$429,122	702	\$397,765	-115	-\$31,357
SBIR/STTR	34	\$20,137	34	\$20,142	31	\$18,875	-3	-\$1,267
Research Project Grants	928	\$455,309	851	\$449,264	733	\$416,640	-118	-\$32,624
<b>Research Centers</b>								
Specialized/Comprehensive	42	\$41,325	44	\$42,224	44	\$33,840	0	-\$8,384
Clinical Research	0	\$0	0	\$0	0	\$0	0	\$0
Biotechnology	0	\$0	0	\$0	0	\$0	0	\$0
Comparative Medicine	0	\$50	0	\$50	0	\$50	0	\$0
Research Centers in Minority Institutions	0	\$0	0	\$0	0	\$0	0	\$0
<b>Research Centers</b>	<b>42</b>	<b>\$41,375</b>	<b>44</b>	<b>\$42,274</b>	<b>44</b>	<b>\$33,890</b>	<b>0</b>	<b>-\$8,384</b>
<b>Other Research:</b>								
Research Careers	182	\$26,700	184	\$26,983	184	\$26,983	0	\$0
Cancer Education	0	\$0	0	\$0	0	\$0	0	\$0
Cooperative Clinical Research	0	\$0	0	\$0	0	\$0	0	\$0
Biomedical Research Support	0	\$0	0	\$0	0	\$0	0	\$0
Other Biomedical Research Support	0	\$273	0	\$273	0	\$273	0	\$0
Other	26	\$2,947	26	\$2,947	20	\$2,563	-6	-\$384
<b>Other Research</b>	<b>208</b>	<b>\$29,919</b>	<b>210</b>	<b>\$30,203</b>	<b>204</b>	<b>\$29,819</b>	<b>-6</b>	<b>-\$384</b>
Total Research Grants	1,178	\$526,603	1,105	\$521,741	981	\$480,349	-124	-\$41,392
<b>Ruth L Kirschstein Training Awards:</b>	<b>FTEPs</b>		<b>FTEPs</b>		<b>FTEPs</b>		<b>FTEPs</b>	
Individual Awards	74	\$3,712	74	\$3,765	74	\$3,765	0	\$0
Institutional Awards	255	\$16,261	255	\$16,489	255	\$16,489	0	\$0
<b>Total Research Training</b>	<b>329</b>	<b>\$19,973</b>	<b>329</b>	<b>\$20,254</b>	<b>329</b>	<b>\$20,254</b>	<b>0</b>	<b>\$0</b>
Research & Develop. Contracts	36	\$23,505	38	\$26,154	34	\$23,000	-4	-\$3,154
<i>SBIR/STTR (non-add)</i>	<i>(0)</i>	<i>(\$396)</i>	<i>(0)</i>	<i>(\$404)</i>	<i>(0)</i>	<i>(\$367)</i>	<i>(0)</i>	<i>-( \$37)</i>
Intramural Research	146	\$76,706	143	\$78,233	146	\$75,035	3	-\$3,199
Res. Management & Support	115	\$40,851	90	\$41,257	89	\$39,181	-1	-\$2,076
<i>SBIR Admin. (non-add)</i>		<i>(\$0)</i>		<i>(\$0)</i>		<i>(\$0)</i>		<i>(\$0)</i>
Construction		\$0		\$0		\$0		\$0
Buildings and Facilities		\$0		\$0		\$0		\$0
<b>Total, NIAMS</b>	<b>261</b>	<b>\$687,639</b>	<b>233</b>	<b>\$687,639</b>	<b>235</b>	<b>\$637,819</b>	<b>2</b>	<b>-\$49,820</b>

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

SUMMARY OF CHANGES

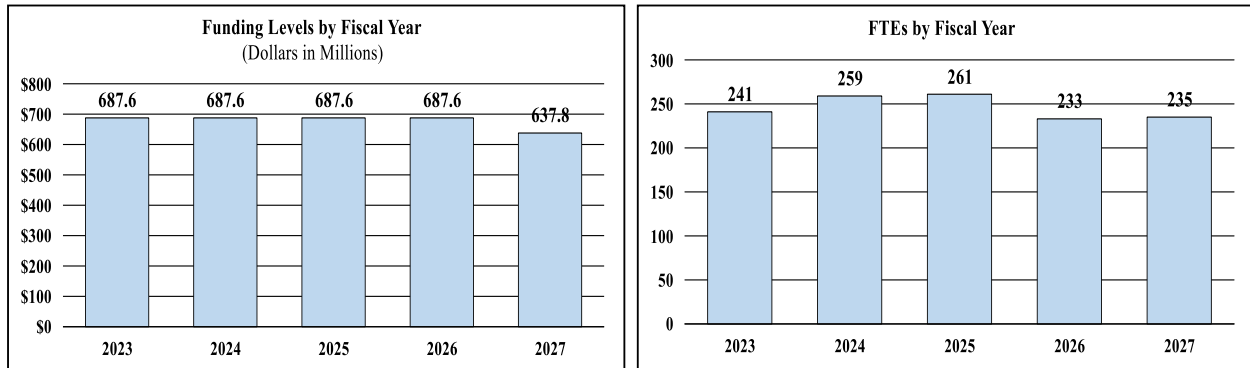
NATIONAL INSTITUTES OF HEALTH  
National Institute of Arthritis and Musculoskeletal and Skin Diseases

Summary of Changes  
(Dollars in Thousands)

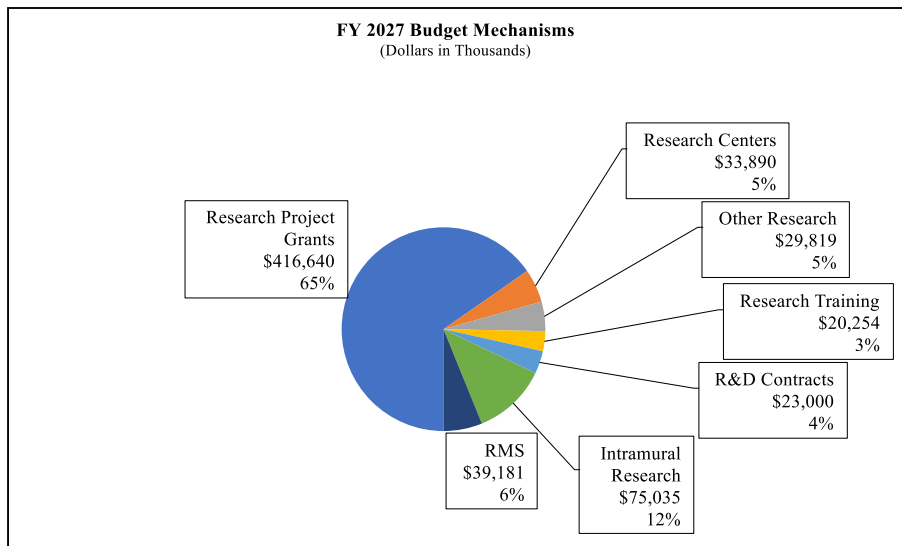
FY 2026 Enacted	\$687,639
FY 2027 President's Budget	\$637,819
Net change	-\$49,820

CHANGES	FY 2026 Enacted		FY 2027 President's Budget		Built-In Change from FY 2026 Enacted	
	FTEs	Budget Authority	FTEs	Budget Authority	FTEs	Budget Authority
<b>A. Built-in:</b>						
1. <u>Intramural Research:</u>						
a. Annualization of FY 2026 pay and benefits increase		\$31,356		\$31,321		\$120
b. FY 2027 pay and benefits increase		\$31,356		\$31,321		\$14
c. Paid days adjustment		\$31,356		\$31,321		\$0
d. Differences attributable to change in FTE		\$31,356		\$31,321		\$658
e. Payment for centrally furnished services		\$12,637		\$11,373		-\$1,264
f. Cost of laboratory supplies, materials, other expenses, and non-recurring costs		\$34,240		\$32,341		-\$1,042
Subtotal						-\$1,513
2. <u>Research Management and Support:</u>						
a. Annualization of FY 2026 pay and benefits increase		\$21,043		\$20,410		\$79
b. FY 2027 pay and benefits increase		\$21,043		\$20,410		\$3
c. Paid days adjustment		\$21,043		\$20,410		\$0
d. Differences attributable to change in FTE		\$21,043		\$20,410		-\$234
e. Payment for centrally furnished services		\$5,903		\$5,313		-\$590
f. Cost of laboratory supplies, materials, other expenses, and non-recurring costs		\$14,311		\$13,458		-\$597
Subtotal						-\$1,340
Subtotal, Built-in						-\$2,852
CHANGES	FY 2026 Enacted		FY 2027 President's Budget		Program Change from FY 2026 Enacted	
	No.	Amount	No.	Amount	No.	Amount
<b>B. Program:</b>						
1. <u>Research Project Grants:</u>						
a. Noncompeting	642	\$306,450	574	\$216,005	-68	-\$90,445
b. Competing	175	\$122,671	128	\$181,760	-47	\$59,089
c. SBIR/STTR	34	\$20,142	31	\$18,875	-3	-\$1,267
Subtotal, RPGs	851	\$449,264	733	\$416,640	-118	-\$32,624
2. Research Centers	44	\$42,274	44	\$33,890	0	-\$8,384
3. Other Research	210	\$30,203	204	\$29,819	-6	-\$384
4. Research Training	329	\$20,254	329	\$20,254	0	\$0
5. Research and development contracts	38	\$26,154	34	\$23,000	-4	-\$3,154
Subtotal, Extramural		\$568,149		\$523,603		-\$44,546
6. Intramural Research	143	\$78,233	146	\$75,035	3	-\$1,686
7. Research Management and Support	90	\$41,257	89	\$39,181	-1	-\$736
8. Construction		\$0		\$0		\$0
9. Buildings and Facilities		\$0		\$0		\$0
Subtotal, program changes						-\$46,968
Total built-in and program changes	233	\$687,639	235	\$637,819	2	-\$49,820

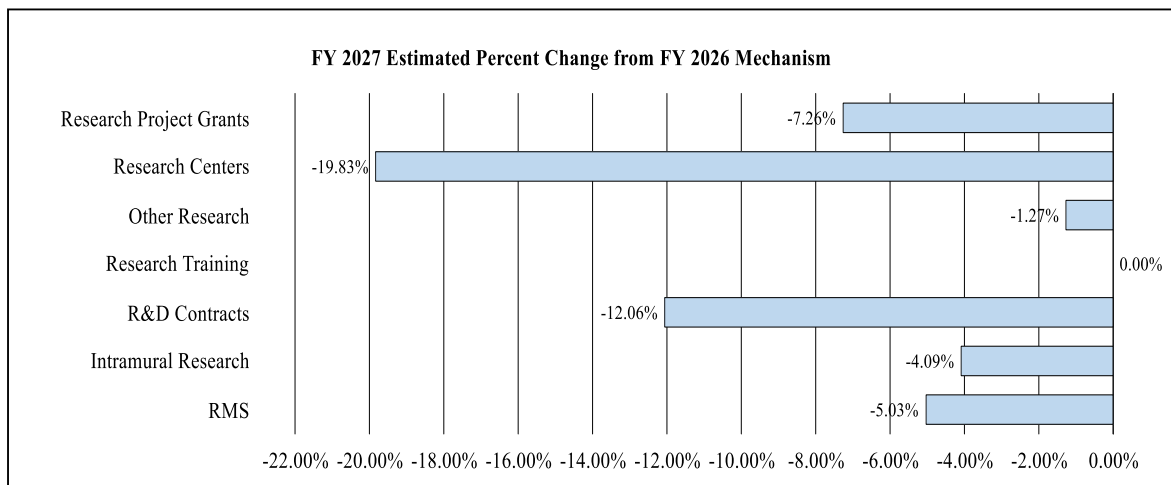
History of Budget Authority and FTEs:



Distribution by Mechanism:



Change by Selected Mechanisms:



**BUDGET AUTHORITY BY ACTIVITY TABLE**

**NATIONAL INSTITUTES OF HEALTH  
National Institute of Arthritis and Musculoskeletal and Skin Diseases**

**Budget Authority by Activity \***  
(Dollars in Thousands)

	FY 2025 Final		FY 2026 Enacted		FY 2027 President's Budget		FY 2027 +/- FY 2026 Enacted	
	<u>FTE</u>	<u>Amount</u>	<u>FTE</u>	<u>Amount</u>	<u>FTE</u>	<u>Amount</u>	<u>FTE</u>	<u>Amount</u>
<b><u>Extramural Research</u></b>								
<u>Detail</u>								
Systemic Rheumatic and Autoimmune Diseases		\$96,778		**		\$88,887		**
Skin Biology and Diseases		\$118,524		**		\$108,860		**
Muscle Biology and Diseases		\$87,467		**		\$80,335		**
Joint Biology, Diseases, and Orthopaedics		\$197,497		**		\$181,395		**
Bone Biology and Diseases		\$69,817		**		\$64,125		**
<b>Subtotal, Extramural</b>		<b>\$570,082</b>		<b>\$568,149</b>		<b>\$523,603</b>		<b>-\$44,546</b>
<b>Intramural Research</b>	<b>146</b>	<b>\$76,706</b>	<b>143</b>	<b>\$78,233</b>	<b>146</b>	<b>\$75,035</b>	<b>3</b>	<b>-\$3,199</b>
<b>Research Management &amp; Support</b>	<b>115</b>	<b>\$40,851</b>	<b>90</b>	<b>\$41,257</b>	<b>89</b>	<b>\$39,181</b>	<b>-1</b>	<b>-\$2,076</b>
<b>TOTAL</b>	<b>261</b>	<b>\$687,639</b>	<b>233</b>	<b>\$687,639</b>	<b>235</b>	<b>\$637,819</b>	<b>2</b>	<b>-\$49,820</b>

\* Includes FTEs whose payroll obligations are supported by the NIH Common Fund.

\*\* For FY 2026 Enacted, funding levels are displayed for statutory and report-directed PPAs. Amounts with an asterisk represent other PPAs as levels have not yet been determined.

**National Institute of Arthritis and Musculoskeletal and Skin Diseases**

Budget Authority (BA):

	FY 2025 Final	FY 2026 Enacted	FY 2027 President's Budget	FY 2027 +/- FY 2026
BA	687,639,000	687,639,000	637,819,000	-49,820,000
FTE	261	233	235	2

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

Overall Budget Policy:

The FY 2027 President’s Budget request for NIAMS is \$637.8 million, a decrease of \$49.8 million or 7.2 percent compared with the FY 2026 Enacted level. This funding level will support basic, translational, and clinical research across all of NIAMS’s mission areas, as described below.

**Program Descriptions and Accomplishments**

The NIAMS extramural and intramural programs support basic, translational, and clinical scientific research and training in the mission areas of NIAMS.

**Systemic Rheumatic and Autoimmune Diseases**

This program focuses on the causes of rheumatic and systemic autoimmune diseases, such as scleroderma, rheumatoid arthritis, and systemic lupus erythematosus (SLE). NIAMS’ support for research in rheumatic and autoimmune diseases yields important discoveries from uncovering disease mechanisms to developing novel therapies. Highlights of this research include:

**Uncovering the role of bacteria:** NIAMS-funded research has highlighted the crucial roles of bacteria in maintaining health and contributing to disease. For example, NIAMS-supported investigators identified a causal relationship between SLE and unstable gut microbiota, as well as potential pathogenic properties of the microbiota in people who have disease flares and lupus-associated kidney disease.<sup>1</sup>

**Understanding the role of circadian rhythms:** Rheumatoid arthritis and other inflammatory diseases exhibit diurnal fluctuations in inflammatory markers and symptom severity, with symptom flares typically peaking in the morning. NIAMS-supported researchers developed a

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<sup>1</sup> [pubmed.ncbi.nlm.nih.gov/40216660/](https://pubmed.ncbi.nlm.nih.gov/40216660/)

therapy using a model system that has the potential to be used for circadian medicine – or the delivery of therapeutic interventions based on an individual’s daily rhythms.<sup>2</sup>

**Budget Policy:**

The FY 2027 President’s Budget request for this program is \$88.9 million. Looking to the future, NIAMS will continue support for Rheumatic Diseases Research Resource-based Centers, which provide critical resources for research infrastructure, shared facilities, and services to groups of investigators conducting research on rheumatic diseases, promoting independent research as well as collaborative team science in this field. In FY 2027, NIAMS also will continue to advance knowledge in systemic rheumatic and autoimmune diseases by leveraging data and infrastructure developed through NIAMS’ long-standing investment in the AMP AIM Program.

**Skin Biology and Diseases**

The Skin Biology and Diseases program fosters research on the properties and functions of healthy skin, the causes of skin diseases, and approaches for skin disease prevention and treatment. Research highlights include:

**Understanding inflammation in skin disease:** NIAMS-funded research demonstrated that itch and inflammation in allergic skin reactions are closely linked. Studies using animal models showed that mice lacking itch-sensing neurons exhibited reduced skin inflammation. These findings provide insights into the cell types and pathways involved in inflammatory allergic skin reactions.<sup>3</sup> Another NIAMS funded project found that circulating white blood cells recruited to the skin after exposure to inflammatory agents worsen local tissue damage and impede wound healing.<sup>4</sup> Taken together, these reports highlight the role of the inflammatory response in skin reaction and wound healing and suggest potential opportunities for harnessing them to improve skin inflammation and aid wound healing.

**Laying the foundation for a new treatment for patients:** Patients with severe recessive dystrophic epidermolysis bullosa (RDEB) have extremely fragile skin. Even with minimal contact, these patients experience painful, non-healing wounds. NIAMS-funded research provided fundamental knowledge about the genetic cause of the disease. As a result, in 2025, the U.S. Food and Drug Administration approved the first cell-based gene therapy for the treatment of wounds in adults and children with RDEB that uses genetically engineered skin grafts from the patient’s own skin to heal their wounds.

**Budget Policy:**

The FY 2027 President’s Budget request for this program is \$108.9 million. For the foreseeable future, the program is committed to continuing its support for robust research into the basic molecular, cellular, and developmental biology of skin. It also will focus on advancing knowledge of skin health and disease by promoting research and accelerating the translation of fundamental findings into diagnostic tools, and disease management strategies including therapeutics.

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<sup>2</sup> [pubmed.ncbi.nlm.nih.gov/39920119/](https://pubmed.ncbi.nlm.nih.gov/39920119/)

<sup>3</sup> [nih.gov/news-events/nih-research-matters/scratching-allergic-skin-inflammation](https://nih.gov/news-events/nih-research-matters/scratching-allergic-skin-inflammation)

<sup>4</sup> [pubmed.ncbi.nlm.nih.gov/39639015/](https://pubmed.ncbi.nlm.nih.gov/39639015/)

## **Muscle Biology and Diseases**

The NIAMS Muscle Biology and Diseases program supports research into basic muscle biology in both healthy and non-healthy states, leading to potential treatments and strategies for the prevention of skeletal muscle disorders. Research highlights include:

**Improving the monitoring of muscular dystrophies:** Significant advances have been made in treating muscular dystrophies, which are a group of over 30 genetic disorders characterized by progressive muscle degeneration and multi-organ involvement. NIAMS-supported research identified the genetic causes of many forms of muscular dystrophy. Notably, NIAMS-funded investigators showed that physical activity levels measured using wearable devices have the potential to be used as a biomarker of skeletal muscle health and progression of Duchenne Muscular Dystrophy (DMD).<sup>5</sup> MRI has been validated as a noninvasive tool to monitor DMD progression, and other recent NIAMS-sponsored studies further demonstrate its utility in linking muscle structure in health and disease.

NIAMS' broad spectrum of muscle research continues to lead to advances in understanding and treating muscle disorders, and to better outcomes for patients.

### **Budget Policy:**

The FY 2027 President's Budget request for this program is \$80.3 million. Plans for FY 2027 include continued support for the Paul D. Wellstone Muscular Dystrophy Research Centers, which promote collaborative basic, translational, and clinical research, and provide important resources for muscular dystrophy researchers nationwide. NIAMS is currently collaborating with other NIH components and Federal agencies to update the Action Plan for the Muscular Dystrophies. Looking forward, NIAMS and its partners will support the implementation of this new plan.

## **Joint Biology, Diseases, and Orthopaedics**

The NIAMS Joint Biology, Diseases, and Orthopaedics program funds basic, translational, and clinical research focused on the interplay among the body's muscles, bones, and connective tissues and includes regenerative medicine efforts, preclinical testing, and development of orthopaedic implants to support damaged joints. Highlights of this research include:

**Improving joint repair:** Total hip arthroplasty is an example of an orthopaedic surgical procedure commonly performed to replace a joint damaged by conditions such as osteoarthritis. Repairing joint damage can postpone total joint replacement. Researchers funded by NIAMS recently investigated whether human stem cells can be differentiated into cells capable of cartilage repair. Their results suggest that human induced pluripotent stem cells derived from bone cells hold significant potential as a cell-based therapy for cartilage repair.<sup>6</sup> When joint repair is required, it is important to protect the patient from periprosthetic joint infections (PJI), an infection around a joint that has been surgically replaced with a prosthetic. To prevent PJI, researchers investigated adding antibiotics to a material that lines the surface of the implant. They found that the release of antibiotics from only a small surface of the implant offered

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<sup>5</sup> [pubmed.ncbi.nlm.nih.gov/39719383/](https://pubmed.ncbi.nlm.nih.gov/39719383/)

<sup>6</sup> [pubmed.ncbi.nlm.nih.gov/38433390/](https://pubmed.ncbi.nlm.nih.gov/38433390/)

significant protection against infection.<sup>7</sup> This work could help patients by significantly reducing implant revision surgeries.

**Understanding the burden of back and joint pain:** There is currently a lack of validated measures for patient reporting of back pain. NIAMS-supported researchers are developing a digital health platform to provide data driven metrics that will enable a more integrated approach to clinical evaluation and treatment for back pain. Pain management has unfortunately been a driver of the opioid crisis, but opioids remain the most potent drugs for certain types of pain management. A group of researchers supported by NIAMS reported that a hydrogel that was administered as an intra-articular injection in the osteoarthritis knee joint provided localized, nonaddictive pain management.<sup>8</sup>

### **Budget Policy:**

The FY 2027 President's Budget request for this program is \$181.4 million. The Institute will continue supporting research examining the dynamics among the body's muscles, bones, and connective tissues. NIAMS will also continue the Infrastructure for Musculoskeletal Pediatric Acute Care Clinical Trials (IMPACCT), a grant to develop the infrastructure necessary for multicenter randomized clinical trials in pediatric fractures. This framework will help guide clinical decision-making for managing these injuries.

### **Bone Biology and Diseases**

The Bone Biology and Diseases program at NIAMS supports research areas ranging from rare and common bone diseases to fundamental bone biology and its translational applications. A highlight of research in this area includes:

**Aiding earlier detection and treatment of osteoporosis:** Osteoporosis is characterized by a loss of bone density and mass, which leads to weak and brittle bones. Unfortunately, these changes often remain undetected until fractures occur. Early identification remains challenging and costly. The FNIH-managed Study to Advance Bone Mineral Density (BMD) as a Regulatory Endpoint (SABRE) and long-term NIAMS-funded research on BMD helped enable the FDA acceptance of BMD over bone fractures as an accepted endpoint in clinical trials of anti-osteoporosis drugs in post-menopausal women at risk for osteoporotic fractures.<sup>9</sup> This will drastically reduce the complexity, cost, and duration of future studies. This is the first surrogate endpoint to receive qualification through the FDA's Biomarker Qualification Program (BQP), and will accelerate innovation in osteoporosis therapies by reducing trial costs through the use of a surrogate endpoint. Additionally, NIAMS-funded researchers recently identified genetic risk factors that have the potential to aid healthcare professionals in earlier detection and prevention of osteoporosis.<sup>10</sup> Other NIAMS supported researchers studied a particular molecular signaling pathway involved in osteoporosis (Wnt pathway). They determined that enhancement of Wnt signaling leads to increased bone density in postmenopausal women receiving therapy for osteoporosis.<sup>11</sup>

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<sup>7</sup> [pubmed.ncbi.nlm.nih.gov/38095273/](https://pubmed.ncbi.nlm.nih.gov/38095273/)

<sup>8</sup> [pubmed.ncbi.nlm.nih.gov/38413029/](https://pubmed.ncbi.nlm.nih.gov/38413029/)

<sup>9</sup> [fniih.org/press-release/fda-qualification-first-surrogate-endpoint-osteoporosis-clinical-trials/](https://fniih.org/press-release/fda-qualification-first-surrogate-endpoint-osteoporosis-clinical-trials/)

<sup>10</sup> [pubmed.ncbi.nlm.nih.gov/38484114/](https://pubmed.ncbi.nlm.nih.gov/38484114/)

<sup>11</sup> [pubmed.ncbi.nlm.nih.gov/39445778/](https://pubmed.ncbi.nlm.nih.gov/39445778/)

**Budget Policy:**

The FY 2027 President's Budget request for this program is \$64.1 million. Program plans for FY 2027 include continued support for project applications targeting rare and common bone diseases. In addition, NIAMS will continue support for bone biology-focused Centers of Research Translation and Resource-based Centers, which are designed to accelerate future bone-related research by creating the infrastructure necessary to address cutting-edge research needs. Finally, NIAMS will continue to lead the NIH's efforts to achieve the goals outlined by the FY 2019 Pathways to Prevention workshop on Appropriate Use of Drug Therapies for Osteoporotic Fracture Prevention. This support includes continued funding through FY 2027 for several research projects, including studies that use data-driven approaches to identify effective long-term osteoporosis therapies and others that aim to improve mechanistic understanding of potential side effects associated with the prolonged use of osteoporosis drugs.

**Intramural Research Program (IRP)**

Investigators and trainees in the NIAMS Intramural Research Program (IRP) conduct research and clinical trials on the immune system, bones, joints, muscles, and skin. They develop novel diagnostic tools to analyze these systems and treatments for the diseases that affect them.

Research highlights include:

**Offering insights into the mechanisms of disease:** In a recent study, IRP scientists identified a pathway linking cardiovascular disease markers and disease activity in systemic lupus—findings that may eventually lead to therapeutic strategies.<sup>12</sup> Another project utilized advanced sequencing techniques to identify gene variants associated with cold-induced hives and immune dysfunction.<sup>13</sup> The novel approach utilized in this study may be applicable to and help improve understanding of other genetic immune disorders.

**Highlighting fundamental research across all health and disease areas:** NIAMS IRP researchers also study how various proteins and enzymes repair and protect DNA from damaging events. Cells undergo tens of thousands of DNA-damaging events each day. Defects in repairing a certain type of damage (double-stranded breaks) can lead to genomic instability, contributing to cancer, genetic disorders, immunological diseases, and developmental defects. A protein complex called cohesin assists in preventing incorrect repair of the broken DNA strands. Recently, researchers found that the cohesin complex was modified (phosphorylated) upon DNA damage leading to enhanced repair speed, suggesting a more direct role for cohesin in DNA repair.<sup>14</sup>

**Budget Policy:**

The FY 2027 President's Budget request for this program is \$75.0 million, a decrease of \$3.2 million or 4.1 percent compared with the FY 2026 Enacted level. Program plans for FY 2027 include continuing studies of basic, translational, and clinical research on the immune system, bones, joints, muscles, and skin. The program will continue long-term, high-risk research into the genetics and pathophysiology of human disease and the development of therapies for several

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<sup>12</sup> [pubmed.ncbi.nlm.nih.gov/38949522/](https://pubmed.ncbi.nlm.nih.gov/38949522/)

<sup>13</sup> [pubmed.ncbi.nlm.nih.gov/39667583/](https://pubmed.ncbi.nlm.nih.gov/39667583/)

<sup>14</sup> [pubmed.ncbi.nlm.nih.gov/39833168/](https://pubmed.ncbi.nlm.nih.gov/39833168/)

serious disorders for which satisfactory treatments previously did not exist. The NIAMS IRP also is committed to its longstanding culture of mentoring trainees and providing a resource-rich environment for training physician-scientists.

### **Research Management and Support (RMS)**

Since the Institute's inception, the RMS budget has supported the scientific, administrative management, and information technology activities associated with NIAMS' day-to-day operations. For example, expansion of a pilot NIAMS AI chat tool was launched in FY 2024. Through RMS, NIAMS remains committed to advancing innovative research and supporting investigators through their portfolio supporting research in the areas of arthritis and rheumatic diseases, muscle and bone diseases, joint biology diseases and orthopedics, and skin diseases.

### **Budget Policy:**

The FY 2027 President's Budget request for this program is \$39.2 million, a decrease of \$2.1 million or 5.0 percent compared with the FY 2026 Enacted level. Activities for FY 2027 include implementing and evaluating progress toward supporting the institute's 10 articulated priorities from its Strategic Plan. Additionally, NIAMS intends to expand an FY 2024-2025 pilot effort exploring how AI can improve the efficiency of its business operations.

**NATIONAL INSTITUTES OF HEALTH**  
**National Institute of Arthritis and Musculoskeletal and Skin Diseases**

**Appropriations History**

<b>Fiscal Year</b>	<b>Budget Estimate to Congress <sup>1</sup></b>	<b>House Allowance <sup>2</sup></b>	<b>Senate Allowance</b>	<b>Appropriation</b>
2018	\$417,898,000	\$566,515,000	\$576,178,000	\$586,661,000
Rescission				\$0
2019	\$545,494,000	\$593,663,000	\$605,383,000	\$605,065,000
Rescission				\$0
2020	\$520,829,000	\$634,637,000	\$637,097,000	\$624,889,000
Rescission				\$0
2021	\$568,480,000	\$635,263,000	\$645,237,000	\$634,292,000
Rescission				\$0
2022	\$680,186,000	\$679,410,000	\$675,106,000	\$655,699,000
Rescission				\$0
2023	\$676,254,000	\$676,395,000	\$686,025,000	\$685,465,000
Rescission				\$0
2024	\$687,639,000	\$685,465,000	\$685,465,000	\$685,465,000
Rescission				\$0
2025	\$689,697,000		\$685,465,000	\$685,465,000
Rescission				\$0
2026		\$685,465,000	\$685,465,000	\$685,465,000
Rescission				\$0
2027	\$637,819,000			

<sup>1</sup> The FY 2026 President's Budget proposed consolidating the 27 NIH Institutes and Centers into an 8-Institute structure, while maintaining the Office of the Director and the Building and Facilities account.

<sup>2</sup> The FY 2025 House bill proposed consolidating the 27 NIH Institutes and Centers into a 12-Institute structure, while maintaining the Office of the Director and the Building and Facilities account.

**BUDGET AUTHORITY BY OBJECT CLASS**

**NATIONAL INSTITUTES OF HEALTH  
National Institute of Arthritis and Musculoskeletal and Skin Diseases**

**Budget Authority by Object Class<sup>1</sup>**  
(Dollars in Thousands)

	<b>FY 2026 Enacted</b>	<b>FY 2027 President's Budget</b>	<b>FY 2027 +/- FY 2026</b>
<b>Total compensable workyears:</b>			
Full-time equivalent	233	235	2
Full-time equivalent of overtime and holiday hours	1	1	0
Average ES salary	\$228	\$228	\$0
Average GM/GS grade	13.0	13.0	0.0
Average GM/GS salary	\$149	\$149	\$1
Average salary, Commissioned Corps (42 U.S.C. 207)	\$135	\$140	\$5
Average salary of ungraded positions	\$168	\$155	-\$13
<b>OBJECT CLASSES</b>	<b>FY 2026 Enacted</b>	<b>FY 2027 President's Budget</b>	<b>FY 2027 +/- FY 2026</b>
Personnel Compensation			
11.1 Full-Time Permanent	\$20,950	\$20,072	-\$878
11.3 Other Than Full-Time Permanent	\$12,335	\$12,599	\$264
11.5 Other Personnel Compensation	\$1,765	\$1,806	\$41
11.7 Military Personnel	\$746	\$773	\$27
11.8 Special Personnel Services Payments	\$2,777	\$2,784	\$7
<b>11.9 Subtotal Personnel Compensation</b>	<b>\$38,573</b>	<b>\$38,034</b>	<b>-\$539</b>
12.1 Civilian Personnel Benefits	\$13,214	\$13,080	-\$134
12.2 Military Personnel Benefits	\$125	\$130	\$5
13.0 Benefits to Former Personnel	\$487	\$487	\$0
<b>Subtotal Pay Costs</b>	<b>\$52,399</b>	<b>\$51,731</b>	<b>-\$668</b>
21.0 Travel & Transportation of Persons	\$418	\$405	-\$12
22.0 Transportation of Things	\$176	\$170	-\$6
23.1 Rental Payments to GSA	\$0	\$0	\$0
23.2 Rental Payments to Others	\$0	\$0	\$0
23.3 Communications, Utilities & Misc. Charges	\$24	\$23	-\$1
24.0 Printing & Reproduction	\$0	\$0	\$0
25.1 Consulting Services	\$22,289	\$20,224	-\$2,066
25.2 Other Services	\$7,079	\$6,737	-\$342
25.3 Purchase of Goods and Services from Government Accounts	\$50,740	\$46,698	-\$4,042
25.4 Operation & Maintenance of Facilities	\$21	\$21	\$0
25.5 R&D Contracts	\$5,951	\$5,008	-\$943
25.6 Medical Care	\$212	\$208	-\$4
25.7 Operation & Maintenance of Equipment	\$3,460	\$3,367	-\$93
25.8 Subsistence & Support of Persons	\$0	\$0	\$0
<b>25.0 Subtotal Other Contractual Services</b>	<b>\$89,752</b>	<b>\$82,262</b>	<b>-\$7,490</b>
26.0 Supplies & Materials	\$6,158	\$5,945	-\$214
31.0 Equipment	\$1,120	\$1,088	-\$32
32.0 Land and Structures	\$0	\$0	\$0
33.0 Investments & Loans	\$0	\$0	\$0
41.0 Grants, Subsidies & Contributions	\$537,590	\$496,192	-\$41,397
42.0 Insurance Claims & Indemnities	\$0	\$0	\$0
43.0 Interest & Dividends	\$2	\$2	\$0
44.0 Refunds	\$0	\$0	\$0
94.0 Financial Transfers	\$0	\$0	\$0
<b>Subtotal Non-Pay Costs</b>	<b>\$635,240</b>	<b>\$586,088</b>	<b>-\$49,152</b>
<b>Total Budget Authority by Object Class</b>	<b>\$687,639</b>	<b>\$637,819</b>	<b>-\$49,820</b>

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

**DETAIL OF FULL-TIME EQUIVALENT EMPLOYMENT (FTE)**

**NATIONAL INSTITUTES OF HEALTH  
National Institute of Arthritis and Musculoskeletal and Skin Diseases**

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

Office	FY 2025 Final			FY 2026 Enacted			FY 2027 President's Budget		
	Civilian	Military	Total	Civilian	Military	Total	Civilian	Military	Total
Division of Extramural Activities									
Direct:	30	-	30	23	-	23	22	-	22
Total:	30	-	30	23	-	23	22	-	22
Office of the Director									
Direct:	58	-	58	40	-	40	40	-	40
Total:	58	-	58	40	-	40	40	-	40
Division of Extramural Research									
Direct:	26	1	27	26	1	27	26	1	27
Total:	26	1	27	26	1	27	26	1	27
Intramural Research Program									
Direct:	143	3	146	140	3	143	143	3	146
Total:	143	3	146	140	3	143	143	3	146
<b>Total</b>	<b>257</b>	<b>4</b>	<b>261</b>	<b>229</b>	<b>4</b>	<b>233</b>	<b>231</b>	<b>4</b>	<b>235</b>
Includes FTEs whose payroll obligations are supported by the NIH Common Fund.									
FTEs supported by funds from Cooperative Research and Development Agreements.	0	0	0	0	0	0	0	0	0

DETAIL OF POSITIONS

NATIONAL INSTITUTES OF HEALTH  
National Institute of Arthritis and Musculoskeletal and Skin Diseases

Detail of Positions <sup>1</sup>

GRADE	FY 2025 Final	FY 2026 Enacted	FY 2027 President's Budget
Total, ES Positions	1	1	1
Total, ES Salary	\$225,700	\$228,000	\$228,000
General Schedule			
GM/GS-15	24	22	22
GM/GS-14	33	30	30
GM/GS-13	64	61	61
GS-12	17	19	19
GS-11	14	13	13
GS-10	0	0	0
GS-9	1	0	0
GS-8	1	1	1
GS-7	3	4	4
GS-6	0	0	0
GS-5	0	0	0
GS-4	0	0	0
GS-3	0	0	0
GS-2	0	0	0
GS-1	0	0	0
Subtotal	157	150	150
Commissioned Corps (42 U.S.C. 207)			
Assistant Surgeon General	0	0	0
Director Grade	1	1	1
Senior Grade	2	2	2
Full Grade	1	1	1
Senior Assistant Grade	0	0	0
Assistant Grade	0	0	0
Junior Assistant	0	0	0
Subtotal	4	4	4
Ungraded	74	81	81
Total permanent positions	162	155	155
Total positions, end of year	236	236	236
Total full-time equivalent (FTE) employment, end of year	261	233	235
Average ES salary	\$225,700	\$228,000	\$228,000
Average GM/GS grade	13.1	13.0	13.0
Average GM/GS salary	\$148,000	\$148,824	\$149,480

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