National Library of Medicine

Improving health through data-driven discovery

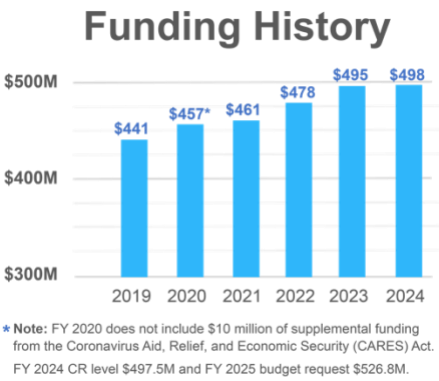
The National Library of Medicine (NLM) is a global leader in biomedical informatics and computational health data science and the world's largest biomedical library. As 1 of the 27 Institutes and Centers at NIH, NLM's research and information services support scientific discovery, health care, and public health.

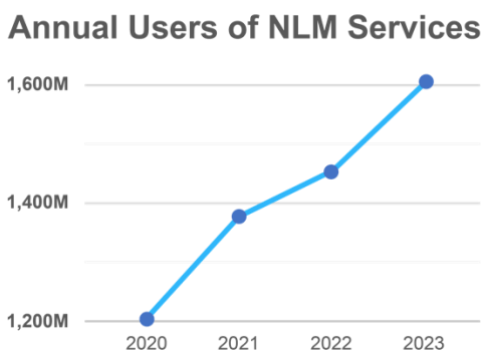
A PLATFORM FOR BIOMEDICAL DISCOVERY

The 2017-2027 NLM strategic plan includes three goals:

1. Accelerate discovery and advance health through data-driven research;
2. Reach more people in more ways through enhanced dissemination and engagement; and
3. Build a workforce for data-driven research and health.

Implementation of the strategic plan enables NLM to support and respond to NIH-wide priorities and support discovery and public health globally.





Stephen Sherry, Ph.D.

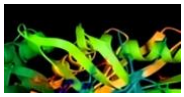
Dr. Sherry became Acting Director of NLM in October 2023. He brings to the position a history of innovation and leadership. Dr. Sherry leads NLM efforts to develop advanced computational solutions for health science information and health care needs and to facilitate open science and scholarship through a growing array of data, literature, and other information offerings and services made available by NLM.

NLM CONDUCTS AND FUNDS RESEARCH

NLM's vibrant intramural research program conducts innovative research and training in computational biology and computational health sciences. NLM's extramural grants support original research projects and advanced training in biomedical informatics and data science.

Intramural Researchers at NLM

Explore novel applications of artificial intelligence that advance interpretation of medical images to detect health issues.



Apply network analysis approaches to protein-protein interactions to predict interactions between individual molecules in human diseases.

Study and assess features that can predict and mitigate bias in clinical data sets and design algorithms to reduce bias in research data sets.

Extramural Researchers Across the Nation

Incorporate machine learning and artificial intelligence into tools and resources that benefit health care providers, scientists, and the public.

Develop approaches to curate biomedical knowledge and data to make data findable and usable for scientific discovery.

Develop informatics tools and approaches to support care delivery and patient self-management.

National Library of Medicine

21st-CENTURY LIBRARY

Every day, millions of scientists, health professionals, and members of the public use NLM's online information resources to translate research results into new treatments, access NLM's collections, develop new products, inform clinical decision-making, and improve public health.

ClinicalTrials.gov The world's largest clinical trial registry and results database, with nearly 470,000 clinical studies and more than 60,000 results summaries.

MedlinePlus NLM's trusted and authoritative source of consumer health information, accessed by nearly 440 million users annually.

PubMed The most heavily used biomedical literature citation database in the world, containing more than 36 million citations.

PMC PubMed Central® Digital archive of more than 9 million freely accessible, full-text biomedical and life sciences journal articles and nearly 14,000 preprint articles featuring NIH-funded research.

Sequence Read Archive The world's largest publicly available repository for high-throughput sequencing data, comprising nearly 70 petabytes of data which are also freely available through commercial cloud services.

Terminology Standards NLM is the central coordinating body within HHS for clinical terminology standards for health data interoperability.

BIOMEDICAL INFORMATICS TRAINING

NLM funds research training programs in biomedical informatics and data science at 18 universities across the country that enroll approximately 200 predoctoral and postdoctoral trainees.

NLM funds 12 institutions under its research experience training program that attracts approximately 120 underrepresented undergraduate, postbaccalaureate, and master's students to bioinformatics and data science doctoral programs and to promote scientific workforce diversity.

NLM provides research training experiences for short-term, summer, and fellowship trainees at the high school, pre- and postbaccalaureate, and pre- and postdoctoral levels to work with its intramural investigators in computational biology or computational health research.

OUTREACH AND ENGAGEMENT

NLM leverages its Network of the National Library of Medicine (NNLM®) of more than 8,800 academic health science libraries, hospital and public libraries, and community organizations to improve access to health information for all. NNLM offers training to support effective use of NLM information resources by librarians, health professionals, researchers, and the public. NNLM currently operates through seven regions across the United States.

FUTURE INITIATIVES

NLM will continue to lead the development of advanced biomedical data and information systems to support research, clinical care, and public health, as well as novel analytical approaches to uncover new patterns and biomedical phenomena from biomedical and health data. NLM will:

Advance biomedical informatics and computational health data science. NLM will expand its research investment in methods to analyze different data types, improve disease detection and diagnosis, enhance discovery from health data, and continue to train the next generation of biomedical informatics and data science researchers.

Support quality and sustainability of biomedical information services. NLM will leverage its expertise in creating high-quality, reliable, and secure databases to make biomedical data and information accessible through innovative information services that engender trust.

Modernize NLM infrastructure and organization. NLM will continue to build a 21st-century digital library that offers literature, data, analytical models, and new approaches to scholarly communication that are accessible, sustainable, and available 24 hours a day, 7 days a week.

Contribute to NIH and government-wide priorities. NLM will continue to provide critical data management and guidance to support NIH- and government-wide efforts and share its scientific knowledge and program expertise in data science, data management, infrastructure, and security to support these efforts.