

NLM Reviewer's Expertise Form (REF)
(For Both Informatics and Medical History, Last updated Feb 8, 2024)
(Approval by OMB #0925-0766, Expiration Date: 09/2026)

Notes:

- (1) The Form will be kept in the NLM Reviewer Database for making review assignments and future recruitment.
- (2) Please provide your basic information in Part 1 of this form.
- (3) Please provide your expertise in biomedical informatics in Part 2, indicating involvement in NLM research programs, R01s, G08, or K awards.
- (4) Part 3 is for expertise in historical, philosophical or other humane science fields. You may skip this if it is not relevant to you.
- (5) It may take about 15 minutes to complete this form.
- (6) It is optional to complete this form. You may skip any parts of the survey as you wish.

OMB Control Number: 0925-0766 (Expiration Date: 09/2026): The public reporting burden for this collection of information is estimated to average 15 minutes per response, including the time for reviewing instructions and completing and submitting the information. If you have any issues with this, please send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to NIH, Project Clearance Branch, 6705 Rockledge Drive, MSC 7974, Bethesda, MD 20892-7974; ATTN: PRA (0925-0766).

Upon completion, please return this form via email to the NLM review staff/official who sent this form to you or to ReviewerExpertiseForm@nlm.nih.gov.

Part 1. Basic Information	
Full Name and Degrees	
Primary Titles	
Department	
School/College	
University or Company/Organization	
Street/City/State/Zip	
Email	
Phone	
eRA Commons ID (if available) https://www.era.nih.gov/	
ORCID ID (if available) https://orcid.org/	
Recent 3-Year Employment, Adjunct Positions or affiliations (Declarations in this field may put you in conflict with applications from those organizations.)	

Ethnicity 1-American Indian or Alaskan, 2-Asian, 3-African American, 4-Native Hawaiian or Pacific Islander, 5-White, 6-Hispanic or Latino, 7-Other/Mixed ethnicities, 8-Intentionally withheld	
Gender 1-Male, 2-Female, 3-Other, 4-Intentionally withheld	
Federal Funding (E.g. funding received from NIH, CDC, NSF, DOD, AHRQ, etc.)	
Federal Peer Review Experience	
Professional Background, Education & Training	
Bachelor of Science (Undergraduate Major)	
Master's degree	
Ph.D. or Equivalent	
Postdoctoral Training	
MD and/or Medical Specialties	
Other degrees or Certificates	
Expertise	
Primary Expertise (from education, training, completion of degrees or received certificates or licenses, or from experience in clinical, research & teaching work or publications)	
Secondary Expertise (from your teaching, interest, reading or volunteer work)	

Part 2-A. Expertise in Informatics (NLM Extramural Funding Portfolio Areas)			
NLM Portfolio Area		Expertise 1=PRIMARY 2=SOME 3=NONE	Explanation (if needed)
1	Data Science		
2	Bioinformatics		

3	Translational Informatics		
4	Clinical & Clinical Research Informatics		
5	Personal (Consumer) Health Informatics		
6	Public Health Informatics		
7	Medical Library Science, Information Science		
8	Training, Mentoring, and Career Development Grants		

Part 2-B. Expertise in Informatics (Specific expertise in each NLM Extramural Funding Portfolio Area)			
Specific Examples in Biomedical Informatics and Data Science		Expertise 1=PRIMARY 2=SOME 3=NONE	Explanation (if needed)
DATA SCIENCE (IN BIOMEDICAL FIELDS)			
1.1	Computer science, software, programming, engineering		
1.2	Mathematics, mathematic models, algorithms, artificial intelligence (AI)		
1.3	Statistics, biostatistics, statistical methods, algorithms, mega-analysis		
1.4	Machine learning (ML), deep learning (DL), neural network, Bayesian modeling		
1.5	Natural language processing (NLP), EHR, literature and text mining		
1.6	Data visualization, image analysis, semantic data analysis, semantic web		
1.7	Data integration, interoperability, management, & data mining in biomedical/health data		
1.8	Blockchain technology, data security, and privacy		
1.9	Knowledge extraction, knowledge discovery, and hypothesis from big data		
1.10	Large language models (LLMs) and generative AI methodologies		
1.11	Data bias or fairness in the digital age		
1.12	Cloud computing		
BIOINFORMATICS			
2.1	Molecular biology, biochemistry		
2.2	DNA, sequencing, mutations, DNA methylation, mitochondrial DNA		

2.3	RNAs, gene expression, gene splicing, gene regulatory network, transcriptomics		
2.4	Proteins, protein-protein interaction, proteomics		
2.5	Single-cells, single-cell omics, biological experiment		
2.6	Computational biology, system biology		
2.7	Genetics, genomics, genomic data, phenotyping, genotyping		
2.8	Evolutionary and comparative biology or medicine		
TRANSLATIONAL INFORMATICS			
3.1	Cellular signals of diseases (cancers, diabetes, CVD, Alzheimer's, etc.)		
3.2	Multi-omic mega-data analysis and trans-omic disease models		
3.3	Precision medicine, prediction of risk factors, disease and treatment outcomes		
3.4	Causal inference or causality, temporal reasoning, knowledge representation		
3.5	Microbial systems or proteins and human diseases		
3.6	Imaging analysis, medical imaging processing (facial, dental, radiology, pathology, etc.)		
CLINICAL AND CLINICAL RESEARCH INFORMATICS			
4.1	Electronic health record (EHR) or medical record (EMR) data		
4.2	Clinical decision support, clinical practice guidelines		
4.3	The systematic review, evidence-based medicine		
4.4	Medical errors, pharmacovigilance, adverse drug effects, drug repurposing and drug discovery		
4.5	Clinical trials, clinical research, clinical trials design, patient recruitment and privacy		
4.6	Telemedicine, robots, or informatics tools for virtual clinical practice or services		
4.7	Emergency room workflow and clinical information system		
4.8	Patient engagement, patient-centered design		
PERSONAL (CONSUMER) HEALTH INFORMATICS			
5.1	Health literacy, health promotion, health education, game		

5.2	Social media, social media mining		
5.3	Personal health record, personal health library, family history		
5.4	Wearable devices and mobile applications for home care or research data collection		
PUBLIC HEALTH INFORMATICS			
6.1	Epidemiology, observational data, longitudinal study, study design		
6.2	Infectious disease surveillance, disaster response		
6.3	Health disparities, health equity, social economic status, social determinants of health		
6.4	Population health, community outreach, community engagement		
6.5	Healthcare infrastructure, health delivery, healthcare utilization (claim)		
MEDICAL LIBRARY SCIENCE, INFORMATION SCIEN			
7.1	Digital curation, digital library, bio-medical literature mining		
7.2	Automated and electronic curation, data curation		
7.3	Ontologies and knowledge graphs, terminology standards		
TRAINING, MENTORING AND CAREER DEVELOPM			
8.1	Recipient of the NIH training and or career awards.		
8.2	Mentoring experience for junior faculties or above level		
ADDITIONAL EXPERTISE			
	Any relevant areas not mentioned above		

Disclaimer: The areas and examples listed above are based on the NLM grant portfolio analysis categories. They are only examples of the frequently appearing topics from the applications submitted to the NLM programs in recent years. The list is not all-inclusive, nor reflects any research priority, nor solicits future applications. It is designed to help NLM Scientific Review Officers (SROs) to make proper review assignments.

Part 3. Expertise in Historical or Philosophical Works (if relevant)			
Expertise (Historical or Philosophical Works)		Expertise 1=PRIMAR Y 2=SOME 3=NONE	Explanation (if needed)
1	Medicine in North America (the 19 th to 20 th centuries)		
2	Medicine outside North America (the 19 th to 20 th centuries)		
3	Medicine in the early modern period		

4	Medicine in the Ancient and Medieval Periods		
5	Life science		
6	Philosophy and medicine		
7	Ethics, religions, laws, and medicine		
8	Race, ethnicity, and medicine		
9	Gender, woman & and child health, and reproductive health		
10	Alternative medicine (Native American, herb, etc.)		
11	Military medicine or war (WWI, WWII, Civil wars, etc.)		
12	Psychiatric, neurological, or mental disorders		
13	Environmental health, public health and epidemiology		
14	Diseases (infectious diseases, chronic diseases, etc.)		
15	Dental, surgical procedures, technology & instruments		
16	Nursing		
17	Healthcare and healthcare policies in America		
18	Medical professions, societies, specialties, or their organizations		
10	International or federal health organizations (NIH, FDA, WHO, et al)		
20	Biomedical informatics, computational biology, health IT, health library		
21	Any relevant areas not mentioned above		

Disclaimer: The categories or examples listed above are only some examples of topics from the applications submitted to the NLM G13 program over the two past decades, related to historical and philosophical studies (two of the three arms of the G13 program). The other arm of the G13, critical reviews on any topics related to the NIH mission, is not included here as there are too many topics to include. Finally, the list is not all-inclusive, nor reflects any research priority, nor solicits future applications. It is designed for peer review management and review assignment.