Reviewer's Expertise Form (REF) of National Library of Medicine (NLM), NIH

Notes:
(1) The Form will be kept in the NLM Reviewer Database for making review assignments and future recruitment.
(2) Part 1 is about your basic info.
(3) Part 2 (A & B) is your expertise in biomedical informatics (in NLM research programs, R01s, G08, or Ks).
(4) It may take about 15 minutes to complete the Form.
(5) It is optional to complete this Form - you can skip any parts of the survey as you wish.

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PART 1. BASIC INFORMATION

Basic Information	Your Basic Information
Employment and Basic Information Name (First, middle, Last) and Degrees Primary Titles Department School/College University or Company /Organization. Street/City/State/Zip Email, Phone and/or Cell 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** (which may put you in conflict with applications from those organizations).
Race/Ethnicity: 1-Am Indian or Alaskan, 2-Asian, 3-African American, 4-Native Hawaiian or Pacific Islander, 5-Whte, 6-Hispanic or Latino, 7-Other mix ethnicities, 8-Intentionally withheld.	**Gender:** 1-Male, 2-Female, 3-others or 4 intentionally withheld.
Federal Funding (with NIH, CDC, NSF, DOD, AHRQ, et al)	**Federal Peer Review**
	Your Professional Background, Education & Training
BS (Major)	
Master's degree (Major)	
Ph.D. or Equivalent (Major)	
Postdoctoral Training (Major)	
MD and Medical Specialties	
Other degrees or Certificates	
	Your 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 8 Major Portfolios/Expertise In Biomedical Informatics (and examples)	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 (EXAMPLES OF SPECIFIC AREAS IN 8 AREAS)

	Specific Expertise in Biomedical Informatics and Data Science (Examples)	Expertise 1=PRIMARY 2=SOME 3=NONE	Explanation (if needed)
1	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		
2	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		
3.0	TRANSLATIONAL INFORMATICS		
	3.1. Cellular signals of diseases (Cancers, diabetes, CVD, Alzheimer's, et al)		

	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, et al)		
4	**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, & 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,		
5	**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		
6	**PUBLIC HEALTH INFORMATICS**		
	6.1. Epidemiology, observational data, longitudinal study, study design		
	6.6. 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)		
7	**Medical Library Science, Information Science**		
	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		
8	**Training, mentoring, and career development grants**		
	8.1. Recipient of the NIH training and or career awards.		
	8.2. Mentoring experience for junior faculties or above level		
Plus	**Anything else not mentioned above**		

Disclaimer for Expertise (Informatics): "8 major Informatics Areas" listed above are based on the NLM grant portfolio analysis categories. The Specific Informatics Focuses listed 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, but to help NLM Scientific Review Officers (SROs) to make proper review assignments.