

National Advisory Council for Human Genome Research
September 19, 2022
Concept Clearance for PAR

Entry-Level Training Modules (ELM) for the Genomics Research Workforce

Purpose: The NIH Research Education Program (R25) supports research education activities in the mission areas of the NIH. Utilizing this mechanism, the purpose of this PAR is twofold: 1) develop, implement, and evaluate modules of genomics-related curriculum for the diverse entry-level genomics research workforce by supporting lead sites teamed with partner institutions, such as community, technical, or tribal colleges; and 2) enhance diversity in genomics by supporting entry-level trainees at partner institutions. The training modules will be made freely available, at no cost to the broader community.

The entry-level genomics research workforce includes positions that do not require a bachelor's degree, but often require dedicated training and specific skills, such as medical, nursing, research, and laboratory assistants. Currently, the NHGRI training portfolio does not include programs targeting this segment of the workforce. However, they are an integral part of laboratories and clinics conducting genomics research and could benefit from additional genomic-specific training. This FOA will support the development of modules of genomics-related curriculum at institutions that will be lead sites; these curricula will then be incorporated into existing programs at partner institutions that train the entry-level genomics research workforce, such as academic institutions, vocational programs, or continuing education programs.

Modules will be stand-alone units of genomics-related curriculum intended to supplement existing training and could include online coursework, lesson plans for in-person classes, suggested readings, and/or activities to reinforce lesson objectives. Lead sites will collaborate with 3-5 partner institutions to understand their genomic training needs, create modules to meet those needs, provide training and guidance to the partner institutions to support implementation, provide tuition and education costs to trainees, and evaluate and refine the curriculum. Training topics could include basic genomic concepts; genomic testing strategies or methodologies; and ethical, legal, and social implications of genomic research.

The entry-level workforce includes individuals that are more underrepresented in the research workforce than in the graduate, post-doctoral, or senior research positions typically targeted by NHGRI research training. By providing exposure to and training in genomics to entry-level workers who may later advance to higher levels, NHGRI can attract a more diverse workforce into genomics. To help reduce barriers to entry and increase enrollment, lead sites will be expected to support tuition and education costs to trainees who participate in the modules.

New or renewal/modified initiative: New initiative

Mechanism of Support: R25, Courses for Skills Development

Award Budget and Project Period: For each application, the budget is limited to \$210K direct costs/yr for the first two years, during which the curriculum will be developed, piloted, and disseminated; and \$130K direct costs in the third year to implement, evaluate, and refine the curriculum. The total project period may not exceed 3 years. Three awards are anticipated, for a total cost of \$680K/yr in FY24-25 and \$421K in FY26 (\$1.8M total costs). Indirect costs are reimbursed at 8% of modified total direct costs.