

Postdoctoral Fellowships in Environmental Health Sciences

Funded by NIEHS grant T32-ES11564

Faculty mentors participating in our NIEHS T32-ES11564 environmental health sciences training grant are invited to submit nominations for post-doctoral fellowships. Self-nominations from individuals interested in the postdoctoral program also are invited and should include preferred faculty mentor(s). Nominees who are or will be carrying out a research project with a defined focus in environmental health sciences research (as defined in NIEHS Strategic Plans accessible on the [T32 training program website](#)) will be a priority. Stipend levels for the selected candidates are set by NIH based on years of experience (available [online](#)). Teams of mentors (basic and clinical scientists or basic and population-based scientists) that emphasize the importance of multidisciplinary training and translation of basic science findings to the patient and/or community are encouraged. Postdoctoral trainees will enter with a variety of different backgrounds and may or may not matriculate into one of the MS graduate programs. Postdoctoral fellows currently supported by the training grant are invited to apply for a reappointment, but appointments are not expected to extend beyond two years. In addition to traditional PhD scientists, physician scientists also may be nominated for postdoctoral training. The T32 program is integrated with the P42 NIEHS Superfund Program and T32 trainees will be expected to participate in integrated activities.

These fellowship appointments are made for one year with reappointment based on satisfactory progress. The fellowships provide:

- 1) Annual stipend based on years of prior experience (see above)
- 2) Payment of tuition and fees
- 3) Annual research-related travel up to \$1000
- 4) The fellowship supports a trainee NOT an employee appointment.
- 5) The fellowship provides health insurance but DOES NOT provide retirement benefits

Letters of nomination should include:

- 1) Nominee's curriculum vitae, including degrees and previous research experience
- 2) A description of the research project and an outline of how the research is related to environmental health sciences
- 3) A description of how the nominee's research is or will be funded
- 4) Description of the mentor's training record
- 5) Projected postdoctoral training completion date
- 6) A copy of the nominee's individual development plan (IDP)

There are several core courses that are required for T32 trainees (both pre- and postdoctoral). These courses have been designed specifically for this training program to facilitate the trainees' expertise in the foundation of environmental health sciences. In response to our trainees' evaluative comments, we have adjusted the requirements to allow more options in toxicology and have replaced the previous risk assessment course with a risk assessment boot camp, which provides the necessary content in a more compressed time frame. The required courses now include: Responsible Conduct of Research: Survival Skills and Research Ethics, Scientific Writing, Risk Assessment and at least one course in Toxicology (Table IV). The first two courses incorporate grantsmanship skills and project/laboratory management skills into the required curriculum of postdoctoral trainees. All trainees will be required to be fully knowledgeable about the responsible conduct of research using human subjects or animals. Trainees will complete all the required HIPAA and IRB training. Trainees will be also expected to complete the Research Cycle learning modules that are offered in the online Elsevier Researcher Academy. This free e-learning platform offers modules in 1) Research Preparation focused on funding, research data management and research collaborations; 2) Writing for Research focused on fundamentals of manuscript preparation, writing skills, technical writing skills and book writing; 3) the Publication Process focused on fundamentals of publishing, finding the right journal, ethics and open science; 4) Navigating Peer Review focused on fundamentals of peer review, becoming a peer reviewer, and going through peer review, and with a certified peer reviewer course; and 4) Communicating One's Research focused

on social impact and ensuring visibility. Students will obtain certificates confirming their completion of this training and provide them to their committees and the T32 leadership.

Table IV. Courses required by T32 Trainees

Title	Credit Hours	Description
Toxicology	3	All trainees will be required to take at least 3 credits of coursework in Toxicology selected from 1 of the following 3 team-taught courses presented within the context of organ systems pathology: 1) Toxicology I*, directed by John Pierce Wise, Sr., the multi-PI of this T32 program, which presents emerging knowledge on the impact of toxicants on molecular and cellular processes focusing on environmental toxicants; 2) Toxicology II*, directed by Geoff Clark, Ph.D. a member of our training faculty, which presents emerging knowledge in applied toxicology; and 3) Molecular Toxicology, co-directed by J. Christopher States, Ph.D. member of our training faculty and our IAC and Carolyn Klinge also a member of our training faculty, which presents emerging knowledge emphasizing the central role of how chemical exposures alter normal cellular processes. These courses emphasize training in oral presentation skills and teaching.
Scientific Writing	2	This course is directed by Dr. La Creis Kidd, a member of the training faculty. The topics covered in this course will focus on the writing of scientific papers and grant proposals, and the ability to accurately and clearly disseminate scientific ideas and findings to the field. The course is composed of didactic lectures on the topics, coupled with related workshops/presentations by the students. Classes on the basic format and tricks/tips in writing scientific papers and grant proposals , and the review process are included. Students draft major sections of an F31 grant proposal. A major emphasis is placed on student involvement in presenting and critiquing. A mock study-section in which the student review grants gives them hand-on experience in the grant review process.
Risk Assessment	2	This Dose-Response Assessment Boot Camp course is presented by TERA (Toxicology Excellence for Risk Assessment) in our neighboring city of Cincinnati. It introduces students to the historical underpinnings of risk assessment, to methods, policies and procedures used by risk assessors in today's governmental bodies. At the conclusion of the course, students understand how to critically analyze data, and understand how toxicokinetic data are used in mode of action (MOA) and developing risk values, how to incorporate uncertainty factors and how to develop interspecies oral dose adjustments for non-cancer and cancer assessment. Dr. John Wise will coordinate the course.
Responsible Conduct in Research: Survival Skills and Research Ethics	1	This is a team-taught course which utilizes a variety of participating faculty for didactic and workshop interactions. The course covers HIPAA and human subject certification requirements, conflicts of interest, research integrity, publication rights and conflicts, data management, biological research requirement, IACUC certification and education requirements, career development and other topics.

Postdoctoral trainees also will be expected to complete a lab management course and submit an independent research proposal before completing their fellowship. The mentoring process will be aimed at that result. In addition to the formal course work, trainees will be expected to participate actively in the seminars, lecture series, Grand Rounds, journal clubs and other research meetings held each week. All trainees will be instructed in methods to enhance data reproducibility annually within the seminar program.

Program is open to all eligible students regardless of race, color, national origin, sex, disability, or age.

The NIH training grant program stipulates that trainees must be a citizen or noncitizen national of the United States or have been lawfully admitted for permanent residence at the time of appointment. A noncitizen national is a person who, although not a citizen of the United States, owes permanent allegiance to the United States. They are generally persons born in lands which are not States, but which are under U.S. sovereignty, jurisdiction, or administration (e.g., American Samoa). Individuals on temporary or student visas are not eligible.

The NRSA legislation requires Postdoctoral recipients of support to “pay back” the U.S. Government by engaging in health-related biomedical or behavioral research. This includes direct administration or review of health-related research, health-related teaching, or any combination of these activities. Postdoctoral trainees and fellows are required to begin engaging in acceptable payback activities within two years of their termination. Postdoctoral trainees and fellows who cannot engage in payback service can request to pay back their debt financially. Extensions of time to initiate payback service, as well as payback deferrals and waivers, are granted under certain situations and circumstances. Further information from NIH is available [online](#).

Postdoctoral fellowships are anticipated to be available beginning September 16, 2023

For full consideration, nominations are due by September 1, 2023 as a single electronic document to: David W. Hein, Program Director d.hein@louisville.edu