Call for Applications
NINDS Training Grant -- Training in the Development of Novel Interventions for the Treatment of Neurological and Neurobehavioral Disorders

Applications are now being accepted from pre-doctoral and post-doctoral/clinical fellows for a 2-year position on the NINDS-funded T32 training grant entitled "Training in the Development of Novel Interventions for the Treatment of Neurological and Neurobehavioral Disorders." The objective of the training program is to provide one pre-doctoral and one postdoctoral/clinical fellow per year with formal education in the translational processes needed for moving basic science discoveries to clinical practice. The program will capitalize on strong translational training opportunities already available at the University of Utah and will complement those opportunities with new programming. Specifically, trainees will benefit from: 1) a series of monthly workshops on the process of moving pharmaceutics, devices, and apps from discovery to clinical use; 2) ongoing training in rigorous experimental design and statistical analysis; 3) substantive experiences in clinics, in which patients with disorders of relevance to the trainee's research are seen and with whom the trainee will engage in the clinic and in patient support groups to gain greater insight into the needs of patients; and 4) an internship to gain first-hand knowledge of the regulatory requirements and practices required to move products through to clinical use (**See attached description)**. Trainees will be required to conduct their primary research under the direction of a translational supervisory team consisting of a basic scientist, a clinician/clinical scientist, and a researcher with experience in translating basic research discoveries into the clinic. In consultation with this mentoring team, the trainee will design and conduct preclinical research using best practices for enhancing the translational potential of their work. These experiences will develop burgeoning "professional translators" poised to promote the translation of basic research findings to improved therapeutic outcomes in patients.

Applications for pre-doctoral fellows are open to PhD students at the University of Utah who have been advanced to PhD candidacy and who will be starting their third year of graduate school in Fall 2021. Applications for post-doctoral/clinical fellows are open to fellows who would be coming to the University of Utah for a post-doctoral fellowship or who are in the first year of their post-doctoral fellowship at the University of Utah.

For further information or to discuss this opportunity, please e-mail the Program Director, Dr. Kristen Keefe (k.keefe@utah.edu). Dr. Keefe also will be available for an Informational Zoom Meeting at 9:00 AM May 5th:

Deadline for applications is **May 31, 2021**. Appointment will begin on July 1, 2021 and last for two years, pending successful completion of the first year.The application should include:

◆Cover letter expressing interest in participating in the program, and description of the applicant's career goals, and description of how participation on the T32 Training Grant will support the applicant in their pursuit of those career goals.

◆List of three mentors (one basic scientist, one clinician/clinician-scientist, and one scientist/clinician with translational experience; **see attached list of training faculty; applicants should contact the PD, Dr. Keefe (k.keefe@utah.edu) prior to submitting the application, if they would like to have other faculty fulfilling these roles**).

◆Letters of support from each of the three proposed mentors with stated commitment to train the student and participate actively in the program activities.

◆CV/resume

◆ Copy of undergraduate and graduate transcripts and GRE scores (predoctoral applicants only; GRE scores if available)

◆ Research proposal for the applicant's research project (NRSA-format; *i.e.*, 1-page Specific Aims page, 6-page Research Strategy)

Please send all required application materials in a single PDF file in the order provided above, with the exception of the letters of support, to Ms. Melaney Mckellar (Melaney.mckellar@pharm.utah.edu). Letters of support should be sent directly to Ms. Mckellar by the individual writing the letter. *All materials must be received by close of business, May 31, 2021.*

Two-Year Training Program

Year 1 (Fall)
- Regulatory Affairs (BME 5110)
- Biostatistics for Basic Science (MDCRC 6050)
- Scoping/Systematic review of preclinical research
- Statistics meetings & discussions
- Monthly T32 workshops
- Research

Year 1 (Spring)
- Professional Skills (PHTX 7690)
- Clinical shadowing
- Statistics meetings & discussions
- Monthly T32 workshops
- Research
- Presentation at Translational Neuroscience Social Hour

Summer
- Externship
- Research
- Presentation to External Advisory Board

Year 2 (Fall & Spring)
- Submit fellowship application (NRSA, foundation)
- Lassonde New Venture Development Program
- Monthly T32 workshops
- Research
- Attend & present at national translational meeting
- Final presentation to External Advisory Board

Completion of scoping/systematic review of preclinical research. The trainees funded on this T32 program will complete a scoping/systematic review of the preclinical research on which their hypothesis and project is based in collaboration with the Evidence Synthesis Services group at the Eccles Health Sciences library.

Monthly T32 workshops. These workshops will focus on critical issues of translational science with reference to therapeutic development in the neurosciences. Day-long monthly workshops will be held during the academic year (i.e., once per month September-April), with each day broken into two parts. During the morning, a visiting expert, along with faculty from the training program and other offices on campus (e.g., Center for Technology and Venture Commercialization, Center for Medical Innovation, Drug Discovery Core, The Cell Therapy and Regenerative Medicine core), will present on the designated topic. Small group sessions with facilitators will be used to reinforce the concepts presented and so that the trainees actively engage with the material presented and apply the concepts to their research projects or design of future studies necessary to move their basic research toward clinical application. In the afternoons trainees and their advisory committees will participate in presentations and brainstorming sessions with the visiting presenters. Trainees will give presentations of their research, focusing on points relevant to the topic of the workshop to ensure that they receive advice and input from additional scientists well versed in the drug discovery and development process.

Clinical Shadowing. The clinical shadowing experience will be arranged through the clinician serving on the trainee's advisory committee to allow the trainee the opportunity to speak with and learn from patients with the condition(s) to which the trainee's research relates. The intent of these experiences will be to enhance the trainee's understanding of disease pathology and impact on the patient, help the trainee identify the significant unmet needs in terms of therapeutic development, and improve the trainee's ability to communicate their research and goals to patients and patient advocacy groups. Students will shadow in the clinic 8-10 hours/month in the spring of the first year.

Externship. Students will complete externships in companies/programs engaged in various aspects of translational drug development to gain real-world understanding of translational science principles and to expose them further to diverse scientific tools and approaches to therapeutic discovery and development in neuroscience. Students will work full time (40 hrs/week) at the internship site for 7 weeks.

Statistics Meetings and Discussions. Once per month (8 times/year), the program trainees and mentors will come together in the early evening for a journal-club like session in which the methods, results, and discussion of a trainee's work or a published translational neuroscience paper is reviewed. For each of these, a trainee will be assigned and will work with the statistician to prepare the evaluation of the experimental design and statistical analysis, as well as the presentation for the session. Trainees and committee members are expected to attend these sessions.

T32-Affiliated Training Faculty

Faculty member	Department/Division	Expertise
Barrios, Amy	Medicinal Chemistry	Basic
Bonkowsky, Joshua	Pediatric Neurology	Basic, Clinical, Translational
Bortolato, Marco	Pharmacology and Toxicology	Basic, Clinical, Translational
Brennan, K.C.	Neurology	Basic, Clinical
Butson, Christopher	Biomedical Engineering	Basic, Translational
Clark, Gregory	Biomedical Engineering	Basic, Translational
Coon, Hilary	Psychiatry	Basic
de Havenon, Adam	Neurology	Basic, Clinical, Translational
Duff, Kevin	Neurology	Clinical
Floyd, Candace	Physical Medicine and Rehabilitation	Basic, Translational
Foster, Norman	Neurology	Basic, Clinical, Translational
Furse, Cynthia	Electrical and Computer Engineering	Basic, Translational
Krizaj, David	Opthalmology & Visual Science	Basic
Kubanek, Jan	Biomedical Engineering	Basic
Light, Alan	Anesthesiology	Basic
Love, Tiffany	Psychiatry	Basic
Majersik, Jennifer	Neurology	Clinical, Translational
McIntosh, J. Michael	Psychiatry	Basic, Clinical, Translational
Olivera, Baldomero	Biology	Basic, Translational
Park, Sungjin	Neurobiology and Anatomy	Basic
Peterson, Randall	Pharmacology and Toxicology	Basic, Translational
Pulst, Stefan	Neurology	Basic, Clinical, Translational
Reilly, Christopher	Pharmacology and Toxicology	Basic, Translational
Rolston, John	Neurosurgery	Basic, Clinical, Translational
Rothenfluh, Adrian	Psychiatry	Basic
Schmidt, Eric	Medicinal Chemistry	Basic, Translational
Schober, Michelle	Pediatrics	Basic, Clinical
Scoles, Daniel	Neurology	Basic, Translational
Shcheglovitov, Oleksandr (Alex)	Neurobiology and Anatomy	Basic
Shepherd, Jason	Neurobiology and Anatomy	Basic, Translational
Singleton, John	Neurology	Clinical, Translational
Solzbacher, Florian	Electrical and Computer Engineering	Basic, Translational
Vetter, Monica	Neurobiology and Anatomy	Basic
Walker, Ross	Electrical and Computer Engineering	Basic
Watt, Kevin	Pediatrics	Basic, Clinical, Translational
Wilcox, Karen	Pharmacology and Toxicology	Basic, Translational
Zelikowsky, Moriel	Neurobiology and Anatomy	Basic