Cincinnati Children's Hospital Medical Center

Department of Patient Services

Center for Professional Excellence Research & Evidence-Based Practice

***In collaboration with***

***The University of Cincinnati***

***Center for Clinical and Translational Science and Training***

**PS2 Research Scholars Program in Nursing and Allied Health**

**Program Description and Guidelines**

**PS2 Program description and Scholar requirements** The Research Scholars Program in Nursing and Allied Health at CCHMC is designed to support the research career development of faculty in nursing and allied health and prepare them to engage in peer-reviewed, extramurally-funded clinical-translational health care research as a primary career path. The program is aimed at nursing and allied health professionals at CCHMC employed in the Department of Patient Services who have obtained doctoral training but may not have engaged in post-doctoral research training previously. Individuals who are motivated to engage in clinical research and are seeking the mentorship and time to be able to obtain scientific training beyond the doctoral degree are the intended applicant pool for this grant mechanism.

In line with the 2020 Strategic Plan of CCHMC, the PS2 program aims to “*Develop outstanding researchers and clinicians who are globally competitive*” and to “*Further help staff and trainees reach their career goals*”. Nurses and allied health professionals on the front lines of clinical patient care are in an excellent position to identify critical areas for translational and patient-oriented research and to carry out studies with human subjects. However, these medical disciplines do not often provide an opportunity to engage in focused scientific training during the intensive clinical education process. This places them at a disadvantage in the competition for NIH funding and funding from other organizations. The PS2 award provides a mechanism to support two to three years of mentored training in the application of scientific research methodology to clinically relevant questions in pediatric health care. The aim of the PS2 grant mechanism is to positively impact on the career of young clinician-scientists and ultimately on patient care and outcomes.

The PS2 program is patterned after the KL2 Research Scholars Program that is part of the NIH-funded Center for Clinical and Translational Science and Training (CCTST). The objectives of both programs are to identify and train selected junior clinical scientists at CCHMC to conduct clinical and translational research. The Scholars will be given 75% protected time to establish their research program and access to CCTST resources, including Research Central, the K Club, etc. The PS2 program through Patient Services utilizes team mentorship. First degree mentors will be required to have: 1) at least $300,000 in annual research funding for clinical or translational research, 2) a strong record of mentorship, and 3) protected time for mentorship. Protected time for mentorship will be ensured either through K24 grants or through commitments from division chiefs and department chairs. Prior to preparing a PS2 application, please identify your primary mentor and advisors and obtain approval for your mentorship team from the PS2 program directors. These can be selected with guidance from the CTSA website which lists a strong cadre of mentors meeting these criteria is available at [https://cctst.uc.edu](http://cctst.uc.edu).

The PS2 Research Scholars Program in Nursing and Allied Health represents a career step bridging the doctoral degree, fellowship training or post-doctoral PhD training and application for mentored grants such as K01, K08, K25 and K23 and R01 awards or their equivalents. Scientific guidance by mentors is complemented by formal coursework and access to extensive resources throughout the Academic Health Center (AHC). A compulsory component of the program is training in the responsible conduct of research, in research methods, and in preparing grant applications for extramural funding, all of which are provided in the new Certificate in Clinical and Translational Research program as well as the MS in Clinical and Translational Research program.

*Candidate pool:* Candidates for PS2 Scholar awards must be faculty members employed in the CCHMC Department of Patient Services who are in the initial years of their first faculty appointment at the AHC and who have not been principal investigators on NIH grants other than R03s or R21s. We anticipate applications for the PS2 awards from candidates with PhDs, AUDs, DSc, and PharmD/PhDs. Applicants who have had a hiatus of any kind in their career will be given equal consideration. Scholars will be required to spend at least 75% full-time professional effort in research and career development activities.

Special attention will be paid to recruiting and retaining minorities and women. In 2003, the UC College of Medicine established an Office of Diversity and Community Affairs to develop programs that increase the number of underrepresented minority faculty through recruitment, retention, and professional development. To that end, the Office of Multicultural Affairs has implemented a College-wide strategic plan that also addresses recruiting and retaining underrepresented minorities for residency training and graduate programs. CCHMC is also an equal opportunity employer and strongly supports and encourages faculty members from under represented minorities to pursue this and other opportunities in support of research of career development.

*Didactic coursework:* PS2 Research Scholars should enroll in either the full MS in Clinical and Translational Research program or the abbreviated Certificate in Clinical and Translational Research program or other course work depending upon the applicant’s background and his/her individual needs. PS2 Research Scholars will likely have had specialized courses in their area of focus but may wish to enhance their education in such areas as genetics, molecular biology, environmental health, clinical epidemiology, biostatistics, and the responsible conduct of patient-oriented research. We anticipate that most PhD-level PS2 Research Scholars will complete their didactic coursework through the Certificate program. AuD and PharmD PS2 Research Scholars, who do not have formal research training, will be encouraged to matriculate into the full MS in Clinical and Translational Research training program, concentrating in one of the 5 tracks. Scholars (and other trainees) interested in pursuing a master’s or doctoral degree in epidemiology or biostatistics with a focus in clinical or translational research will be encouraged to apply to the epidemiology or biostatistics graduate programs conferred through the Department of Environmental Health.

*Mentor-Scholar relationship:* PS2 Research Scholars will have the benefit of team mentorship through a Scientific Oversight Committee (SOC) comprised of a first degree mentor and 2-3 second degree mentors. At least one of the second degree mentors will be based in a division/department different from the Scholar’s home division/department, and if the Scholar is enrolled in the MS in Clinical and Translational Research program, then one of the second degree mentors will double as an academic advisor in the MS program, advising the Scholar on which courses to take and ensuring that the Scholar meets the degree or certificate requirements. The Scholar will work with the first degree mentor on a one-on-one basis in designing and carrying out research projects. First degree mentors will be allowed to mentor only a single PS2 Scholar at a time. The second degree mentors will provide points of view from different disciplines, allowing the Scholar to discuss research and career development with impartial parties. The SOC will review the Scholar’s progress, addressing deficits/conflicts and how to overcome them; at the end of the first year, the SOC will provide a written critique and set of recommendations to the trainee. This report and recommendations are to be included with the first year progress report and request for second year of PS2 funding. In addition, Scholars will be encouraged to attend the weekly multidisciplinary research in progress seminar at the AHC’s Center for Clinical Effectiveness and will be required to present their research update – or rehearse an abstract presentation, as the case may be – once each quarter.

Importantly, the intent of the CCTST PS2 Research Scholars Program is to develop and enhance the career of the Scholar, *not* that of the first degree mentor. The first degree mentor will provide research resources for the Scholar and meet with him/her at least weekly. The SOC will meet at least every 6 months. The expectations for the Scholar and the Mentor should be agreed upon and written into a formal contract that is to be signed by the Scholar, the Mentor and approved by the SOC prior to the award. A template for this agreement is attached at the end of this document. Key elements of the contract will include confidentiality, frequency of meetings, objectives and expectations, roles, progress reporting, rules for resolving conflicts or disagreements about research progress or “ownership” of data, and success criteria. As part of this contract, a timeline for publications (by title and authorship) and for grant applications must be included.

*Research proposal:* Once the Scholar starts to work with the first degree mentor, the Scholar will continue to develop his/her research plan. The revised research plan will be fleshed out in the format of an NIH grant application (12 + 1 pages) and submitted to the SOC by the end of Year 1. The Scholar will be given written feedback from the SOC on the “grant application” within two weeks in the format of an NIH summary statement. SOC members will score the “application” according to NIH study section guidelines so that the Scholar can start to learn the NIH review process.

*Evaluation of Scholar’s progress:* Each Scholar will be evaluated annually at their SOC meetings. Objective criteria considered in the evaluations will include: 1) satisfactory completion of coursework, 2) participation in research seminars, 3) research progress as indicated by first-authored publications, meeting presentations, and work in progress, and 4) generation of focused research applications to appropriate extramural sources. The SOC will offer the Scholar suggestions to improve his or her performance, e.g., via additional laboratory experience, clinical exposure, or graduate-level coursework. If progress is found to be unsatisfactory, a joint meeting of the Scholar, Mentor, and SOC will be convened to discuss the Scholar’s future in the program. Scholars can be dismissed from the PS2 program upon egregious violations of their contract; every attempt will be made to help the Scholar succeed.

*Transition to becoming an independent investigator:* A major obstacle in establishing a successful research career is the transition to becoming an independent investigator. The PS2 Research Scholars Program will focus on preparing Scholars to achieve independence in a stepwise manner. Preparing and revising mock and actual grant applications will be an integral part of the program beginning with the initial research proposal. In their second and possible third year, scholars will prepare and submit grant applications to supplement their research programs. Scholars will be urged to apply for mentored research grants, such as K01, K08, K25 or K23 awards, with the help of their SOC and the biostatistics/study design cores. Scholars obtaining their own K awards will continue to be mentored by their SOC and have access to all CCTST resources as they prepare their R01 applications.

*Training for mentors and Mentors-in-Training:* Mentors in the PS2 program will be invited to attend a full-day workshop offered by CCTST program. The workshop will consist of lectures on mentorship and working in teams, plus breakout sessions in which small groups of mentors and scholars discuss 6 real-world cases of problematic mentor-mentee relationships. Mentors-in-Training serving as second degree mentors will also be invited to attend the Mentorship Workshop.

*Program direction:* The PS2 program will be administered through the Division of Research in Patient Services at CCHMC in cooperation with the CCTST. The process of announcing, reviewing, and awarding the PS2 grants will make use of the same infrastructure already in place for the KL2 program. Additional reviewers and mentors will be recruited to the program and trained as needed. The funds for the PS2 awards will be awarded directly from the Department of Patient Services to the Scholar and the PS2 funds will only be allocated to support PS2 awards. However, only PS2 applications that meet the standards of the CCTST review process will be selected for funding and the same expectations for productivity and career development will be applied to the PS2 Scholars as are used for the KL2 Scholars. The goal is to prepare the PS2 Scholars to compete successfully for NIH funding within a period of 2-3 years from the beginning of the PS2 award.

An Internal Advisory Committee will meet twice a year to oversee the CCTST KL2 and PS2 Scholar programs. The Committee’s responsibilities will include selecting and evaluating Scholar candidates and mentors. The Committee will be composed of the 2 KL2 co-directors and 5 senior faculty members who have had substantial NIH funding and experience mentoring junior faculty. Members of the Internal Advisory Committee will serve 3-year terms. To avoid conflicts of interest stemming from advisors who might want to steer Scholars into their labs, members of the Internal Advisory Committee will not serve concurrently as KL2 mentors.

An External Advisory Committee for the CCTST program consisting of 2 nationally recognized experts in the area of interdisciplinary clinical and translational research meets in Cincinnati annually to review the Center. At this meeting the KL2 co-directors provide an overview of the program’s accomplishments in the preceding year and the KL2/PS2 scholars’ annual progress reports are included in the packet of materials furnished for the review. External Advisors report to us on the strengths and weaknesses of our CCTST KL2 and PS2 Scholars programs, commenting on the progress of each Scholar. Their report is included in the annual progress report sent to NIH.