Stanford MEDICINE | Department of Surgery
Division of Abdominal Transplantation

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PROFESSOR

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Dear Dr. Weissman, Dr. Wysocka and Dr. Desai:

I am writing to express my strong and enthusiastic support for your NIGMS T32 application for the Stem Cell Biology and Regenerative Medicine (SCBRM) Program at Stanford. SCBRM is integral to our efforts to train the scientists who will implement future efforts in cell-based therapies, including those that require genetic engineering to successfully treat diseases. The innovative curriculum focuses on stem cells as a unit of development, and teaches students how to approach clinical cell-based therapies using the rapidly evolving science behind cellular reprogramming, CRISPR technology, and the unique training opportunity afforded by the Center for Definitive and Curative Medicine.

Below I highlight the fourteen areas of extensive institutional support that we offer for training grants and their trainees in the School of Medicine (SoM).

1. Developing and promoting a culture that advances the highest standards of scientific rigor, reproducibility and responsible conduct of research:

Rigor and Reproducibility (R&R): Our goals are to enhance graduate training in experimental design and data collection, organization, and analysis. The University maintains a Research Policy Handbook, which describes policies on the conduct of research, faculty responsibilities to staff and students, authorship, non-discrimination in research agreements, misconduct, and retention and access to data. The schools provide RCR coursework and workshops, which cover research integrity and experimentation, to students. In addition, schools offer a combined 58 graduate-level courses on experimentation and statistics. Courses and trainings to highlight in general and specific to this program are:

- Foundations in Experimental Biology course for first-year graduate students in the SoM is designed to facilitate students toward becoming independent scientists with a focus on experimental design elements, data analysis, and how uncertainty can impact data considerations.
- Foundations of Statistics and Reproducible Research is a planned mini-course customized for first year bioscience students covering basic principles of experimental design, analysis, and statistical reasoning as well as tools and practices to make research reproducible.
- Software Engineering for Scientists is focused on standardized software engineering techniques, such as cloud computing, virtualization, automated testing, and source control, which are becoming increasingly critical for science and research.
- Stem Cells and Human Development: From Embryo to Cell Lineage to Determination: A didactic course in human development and the origins of organ-specific stem cells and stem cells in regeneration. This course prepares students for the future of regenerative medicine by exploring central concepts in stem cell biology and the actual experiments that led to these concepts and evaluating how R&R is applied in the collection of data through statistical analysis of data presented in the paper.
- Stem Cells and Translational Medicine: A didactic course focused on clinical translation of basic discoveries in the field of stem cell biology, with emphasis on transplantation of stem cells for treatment of neoplastic and genetic diseases and the role of gene therapy in this

process. Focus is on the fundamentals of stem cell biology and stem cell applications in basic research and translational medicine with a foundational R&R focus.

- Bioinformatics for Stem Cell and Cancer Biology: A practical exposure to bioinformatics concepts and techniques required to address biological questions within these research areas. The beginning of the quarter is focused on foundational principles underlying bioinformatics and genomics. Focus for the remainder of the quarter is on direct, hands-on experience with applications to common research problems.
- Modern Statistics for Modern Biology teaches the use visualization and statistical methods to analyze data from the fields of immunology, microbiology, cancer research, and ecology.
- Stanford Biosciences Grant Writing Academy supports over 100 graduate students (2nd years and beyond) and postdocs annually in creating proposals and productive writing practice as preparation for F and K fellowship applications. R&R is a significant component of these applications and trainees are guided on incorporating R&R into proposals.

The Stanford Library also offers regular workshops with the Center for Open Science on Reproducibility, which cover writing useful project documentation, employing version control, creating pre-analysis plans, and enhancing scientific workflows by implementing open source tools. Such Open Source tools are also being developed here at Stanford, including the OpenfMRI tools and data-sharing platforms developed by the Stanford Center for Reproducibility in Neuroscience, which also serves to further discussion about reproducibility on campus. Likewise, the Meta-Research Innovation Center at Stanford (METRICS), which aims to transform research practices to improve the reproducibility, efficiency and quality of scientific investigation, offers courses and webinars on methods, evaluation, reporting, and reproducibility that are available to all. These offerings are enhanced by the NIH training modules on Rigor and Reproducibility, which are made known to all trainees on T32s and other training grants requiring that content.

Responsible Conduct of Research: All Stanford graduate students and postdocs are required to receive instruction in the responsible conduct of research. For our trainees, this formal training takes place through the Stanford Center for Biomedical Ethics. During their first year, every SCBRM trainee (and every student enrolled in the Stanford-wide graduate Biosciences program) takes MED 255 (The Responsible Conduct of Research), an 8-hour course taught by the Center's professional staff. MED 255 is offered in multiple sections throughout the academic year; each session meets from 9 am-5 pm on a Saturday or Sunday during the year. Topics include: (1) conflict of interest; (2) policies regarding human subjects; (3) mentor/mentee responsibilities; (4) collaborative research; (5) peer review; (6) data acquisition; (7) research misconduct; and (8) contemporary ethical issues.

In addition to offering MED 255, the Center offers programs, seminars, and journal clubs in a number of areas including Stem Cells and Society, Neuroethics and Integration of Research on Genetics and Ethics, as well as a program in Bioethics and Film. These programs are available for any interested trainees to attend. More information can be found at http://bioethics.stanford.edu/. Our students also have the opportunity to enroll in other ethics-related courses, of which the SoM offers 22 additional courses related to research ethics. The School of Education offers 2 courses related to ethics and the Law School offers 1 research ethics course.

2. Ensuring sufficient start-up funding to permit early-stage faculty to participate in training, and bridge funding to ensure that training may continue if a mentor experiences a hiatus in funds:

Per SoM policy, start-up funds are provided and documented in offer letters.
The Office of Academic Affairs and Faculty Compensation reviews offer letters to ensure start-up funds are adequate. Start-up funds cover research expenses typically for the first 3-4 years, including supplies, equipment, and personnel. In some departments, start-up also includes

assistance with housing and salary (if not covered by funding). Bridge funding is provided in the case of a hiatus in funding. Bridge funding in clinical departments is decided at the department level. In SoM basic science departments, investigators can access bridge funding up to $200,000 total.

3. Supporting core facilities and technology resources, and describing how they can be used to enhance training:

As detailed in this application, the predoctoral trainees in this program benefit from outstanding facilities and resources provided by Stanford University and its schools (see http://corefacilities.stanford.edu/). The extraordinary level of investment of the University and schools in the research environment – new buildings, centers and institutes, shared instrumentation facilities, and other research resources – has played a large role in building outstanding laboratory research environments.

For example, the following state-of-the-art buildings highlighted below - among others - are core to this program:

- Lokey Stem Cell Research Building is a 4-story, 200,000-square-foot building and the largest of its kind in the country dedicated to stem cell research.
- Center for Clinical Sciences Research (CCSR) is a 4-story, 214,000-square-foot building that promotes translational research and bench-to-bedside approach to medical research, housing both basic science and clinical science faculty.
- Clark Center is a 3-story, 146,000-square-foot research center that brings together disciplines including biology, medicine, chemistry, physics, and engineering.
- Bass Biology Research Building is a 5-story, 133,000-square-foot building dedicated to research in the life sciences, and is in close proximity to other departments including computer science, statistics, and engineering to promote collaborations and interactions among faculty and students from different academic disciplines.
- Li Ka Shing Center for Learning and Knowledge (LKSC) is a 4-story, 120,000-square-foot building that brings together cutting-edge education and advanced technology. The fourth floor is dedicated exclusively to students (graduate and medical), and provides them with a variety of study, reflection, and social spaces in which to work, connect with their peers, exercise, and relax. A lounge, kitchen, entertainment area, and a rooftop terrace create a stress-free environment to complement a large variety of study spaces, and a project rehearsal area provides students with a state-of-the-art space to practice key presentations.
- Biomedical Innovation Building (BMI) is a new 215,000-square-foot structure located just steps from the new Stanford Hospital. It houses laboratories and support space for nearly 1,000 faculty, students and staff in various specialties. The BMI fosters scientific collaborations by bringing together multidisciplinary teams of engineers, basic scientists, and physician-researchers in a modern and technologically advanced facility and inspire ways for different disciplines to work together on basic, translational and clinical studies.
- The Wu Tsai Neurosciences Institute and ChEM-H (Chemistry, Engineering & Medicine for Human Health) are interdisciplinary research institutes designed to bring faculty from many disciplines together to create novel interactions. Both institutes are housed in a new 235,000-square-foot building home to 40 laboratories, core research facilities, meeting spaces, and a pub.

The university contributes in many ways to the support, success, and advancement of our graduate students. Stanford University's unique environment fosters training of the very best students in interdisciplinary research. The School of Medicine, as well as key partners across campus, including Biology and Chemistry in the School of Humanities and Sciences (H&S), as well as Bioengineering and Computer Science in the School of Engineering (SoE), are among the best in the world and are in close proximity with frequent interactions and collaborations.

4. Providing adequate staff, facilities, and educational resources to the planned program:
Our graduate education curriculum aims to empower students both academically and professionally. In the summer prior to the first year, our students participate in an online orientation led by faculty and senior students. The orientation is designed to help them transition from undergraduate and other pre-graduate school pursuits and to hit the ground running. This level of commitment to student success continues into the first year with our innovative "Foundations in Experimental Biology" course designed to facilitate students' critical first steps toward becoming independent scientists. Throughout their training, our students have the opportunity to enroll in mini-courses that are one- to three-week intensive classes that give them an opportunity to learn more about a specific biosciences field or develop a new skill.

Our home programs and T32 programs are committed to providing academic advising in support of graduate student scholarly and professional development. When most effective, this advising relationship entails collaborative and sustained engagement by both the advisor and the advisee. The program director serves as the faculty advisor for all matriculating students to help them design their academic program; this role transitions to the PhD advisor once trainees have joined a laboratory. Faculty advisors are expected to guide students in key areas such as selecting courses, designing and conducting research, developing of teaching skills, navigating policies and degree requirements, and exploring academic and professional opportunities.

In addition, the SoM Dean's office centrally tracks all Thesis Committee meetings to ensure our graduate students receive the guidance and support they deserve. We have also structured a systematic Individual Development Plan (IDP) program for all Biosciences PhD candidates and postdoctoral scholars. The IDP program was developed through extensive consultation with multiple groups of faculty, students and staff. Standardized IDP forms, specifically tailored to each stage of a trainee's progress through graduate school and postdoctoral training, comprehensively assess each trainee's academic, professional and career progress, and create a clear action plan toward achieving goals and milestones in those areas. Stanford has a tracking system to ensure every NIH-supported Biosciences PhD candidate completes an IDP and meets at least once annually with his/her advisor for discussion.

Through the Office of Graduate Education, we aim to help train and empower the next generation of leaders and innovators within and beyond academia and industry. Our functional areas include operations and administration, wellness and development, curricula, admissions, and diversity and inclusion.

Through BioSci Careers, we support graduate students and postdoctoral scholars with individualized counseling, curriculum, career mentoring, and connections, including BioSci Connect, a new online Biosciences alumni mentoring platform to connect alumni to our PhD students and postdocs in support of their professional and career development.

Finally, the SoM Dean's office supports all T32 training grant directors by hosting a quarterly meeting to share best practices and discuss topics of interest, and my office carries out official program reviews, including interdepartmental, departmental, and T32 program reviews. As Senior Associate Dean, I am in frequent contact with students in all of the Biosciences home programs to address any concerns or suggestions about student training.

5. Supporting the PDs/PIs and other key staff associated with the planned training program:
SCBRM faculty consists of 50 individuals with outstanding records of scholarship in stem cell biology and regenerative medicine. The program selects faculty mentors from 25 departments within the University, dedicated to research, mentoring and teaching and is well-balanced between senior faculty with established track records in graduate training and junior faculty. The program assigns a supportive mentor from the senior faculty to each Assistant Professor to ensure that students are well trained and mentored. My office gives full authority to the T32 program directors to remediate or

remove participating faculty from the program who are poorly performing mentors based on their set of guidelines and policies.

Mentors in the Biosciences Umbrella Program have an average of 1-2 graduate students, ensuring that student-advisor interactions remain personal and direct. In addition, the program has administrative staff dedicated to student support.

6. Ensuring faculty have protected time devoted to mentoring, training, and research:
Each faculty member's percent effort with respect to teaching (mentoring, training), research, clinical care, and administration is articulated and reviewed regularly (usually annually) by the department. SoM recognizes the critical importance of mentoring trainees and faculty, and will ensure that you both have adequate time as part of your university and department roles to direct this outstanding training program. Training grant faculty are also given the necessary time to excel as faculty mentors and are encouraged to participate in the Biosciences Faculty Mentor Training Workshops, launched in January 2020 from my office, to support our T32 faculty on a regular basis. Topics include Mentor/Mentee Communications; Trust, Conflict Management, Building Better Communication; Trainee Career and Professional Development; Addressing Equity and Inclusion; Culturally Sensitive Mentoring; Ethics and Responsible Research; Supporting Trainee Wellness; and Negotiation.

7. Considering activities integral to excellent graduate training (such as teaching and mentorship) in tenure and promotion decisions:
For the University Tenure Line (UTL): Excellence in scholarship, teaching, and mentoring (and clinical care, if applicable) is an important prerequisite for a tenured appointment at Stanford because the University is dedicated to outstanding achievement in all of these domains. The purpose of the appointment, reappointment, or promotion evaluation is to appraise, on the basis of the record to date, the candidate's standing in and impact on his or her scholarly discipline (broadly defined) and the candidate's quality as a teacher and mentor (and as a clinician, if applicable). The second criterion for a UTL appointment is promise – or a record demonstrating – that the candidate is capable of sustaining a first-rate teaching program during his/her Stanford career.

Teaching is broadly defined to include: the classroom, laboratory, or clinical setting; advising; mentoring; program building; and curricular innovation. Teaching may include undergraduates, graduate students, medical students, residents, postdoctoral fellows and in postgraduate and continuing medical education. It is recognized that many tenure-line faculty in clinical departments teach in small group sessions or with individual trainees.

Stanford's Vice Provost for Faculty Development and Diversity (VPFDD) provides key resources to faculty to support their development within UTL criterion. The office plans and executes New Faculty Orientation each fall. The office also provides faculty professional development including mentoring and leadership. SoM's Teaching and Mentoring Academy promotes excellence in teaching and mentoring by developing, supporting and recognizing dedicated educators and mentors to ensure world-class training for the next generation of physicians, researchers, and educators. SoM also offers faculty development/professional development workshops, leadership programs, and networking through the Office of Academic Affairs and Office of Faculty Development and Diversity.

8. Promoting diversity and inclusion at all levels of the research training environment (trainees, staff, faculty, and leadership):
Stanford Biosciences is committed to fostering a diverse community in which all individuals are welcomed, respected and supported to achieve their full potential. We value diversity because we believe that interaction with people with unique backgrounds and life experiences allows us to reach a new level of innovation in education, scientific research, and medicine. Stanford commits substantial resources and effort toward recruiting a diverse student cohort to its Biosciences PhD programs. Since 2014, diversity in our student population has increased (~22-25% URM incoming students in recent years). Successful PhD recruitment programs and mentoring programs are listed below:

- Stanford Summer Research Program, a fully funded residential internship program for underrepresented minority undergraduates who are interested in pursuing PhD programs in the biomedical sciences. Since the program's inception, Stanford has trained more than 500 talented undergraduate students from diverse backgrounds, and 97% went on to pursue an advanced degree.
- Stanford Preview, a three-day program jointly sponsored by the Stanford Biosciences and the Stanford Black Bioscience Organization, is designed to introduce sophomores and juniors from diverse backgrounds to the Stanford campus and to provide guidance for the graduate school admissions process.
- The Diversity Excellence Program, led by the Biosciences Diversity Advisory Council (with eight faculty) and Ayodele Thomas, Associate Dean for Graduate and Career Education and Diversity, provides financial support to interview a diverse group of students and encourages departments to proactively identify diverse and high achieving candidates, employing measures beyond traditional assessments such as GPA/GRE.
- ADVANCE, an eight-week intensive summer transition program, supports the success and retention of incoming graduate students from underrepresented and disadvantaged backgrounds. Participants in the program engage in activities centered on academic development, professional development, and community building – all of which seek to prepare them for a successful graduate career at Stanford. The program strives to foster community, leadership, and excellence in an interactive learning environment.

In addition, the Diversity Center of Representation and Empowerment, or D-CORE, was established in October 2017 to provide a physical location where any member of the Stanford Medicine community interested in issues of inclusion and diversity can hold meetings or support groups, or just hang out and study. Diversity-focused staff hold regular office hours to increase engagement with and support for students of all backgrounds.

VPFDD has a guidebook for departments when conducting faculty searches, "Building for Excellence: Inclusive Practices for Faculty Recruitment and Searches." The University also funds programs to recruit diverse faculty to Stanford: the Faculty Incentive Fund supports incremental appointments that bring diversity to departments and schools; Gabilan Provost's Discretionary Fund ensures that resources are available to recruit women in the sciences and engineering; VPFDD provides faculty retention strategies with a concentration on department climate, salary and compensation, and access to University resources.

9. Ensuring the research facilities and laboratory practices promote the safety of trainees: Safety is a core value at Stanford, and the University is committed to continued advancement of an institutional safety culture with strong programs of personal safety, accident and injury prevention, wellness promotion, and compliance with applicable environmental and health and safety laws and regulations. Stanford University makes all reasonable efforts to: (1) promote occupational and personal safety, health and wellness; (2) protect the health and safety of Stanford University faculty, staff, and trainees; (3) provide information to faculty, staff, and trainees about health and safety hazards; (4) identify and correct health hazards and encourage faculty, staff, and trainees to report potential hazards; (5) conduct activities in a manner protective of the environment, and inform the Stanford community regarding environmental impacts associated with institutional operations; and (6) maintain a risk-based emergency management program to reduce the impact of emergency events to the Stanford community.

Faculty, staff, and trainees are responsible for: (1) keeping themselves informed of conditions affecting their health and safety; (2) participating in safety training programs as required by Stanford policy and their supervisors and instructors; (3) adhering to health and safety practices in their workplace, classroom, laboratory, and student campus residences; and (4) advising of or reporting to supervisors, instructors or Environmental Health and Safety potentially unsafe practices or serious hazards in the workplace, classroom or laboratory. Stanford's program for providing a safe

workplace for faculty, staff, and trainees includes: facility design; hazard identification, workplace inspection, and corrective action; shutdown of dangerous activities; medical surveillance; and emergency preparedness.

10. Ensuring the research facilities are accessible to trainees with disabilities:
Biosciences supports the recruitment, enrollment and graduation of students with disabilities. The Diversity and Access Office (DAO) ensures that the entire Stanford community has equal access to resources, facilities, and opportunities. The DAO provides technical assistance, training on assistive technology, transportation, lodging, recreation, community resources, event, and evacuation plans. The Vice Provost for Graduate Education's diversity statement (http://vpge.stanford.edu/diversity/) includes students who have disabilities. The Office of Accessible Education (OAE) provides resources to all students on campus who have disabilities, such as classroom and housing accommodations. All of Stanford's research facilities are fully accessible to researchers with disabilities, and we are fully committed to providing any necessary accommodations for disabled students. The Campus Access Guide is an online system of maps detailing accessibility information for buildings on campus, including research buildings.

11. Ensuring a positive, supportive and inclusive research and training environment for individuals from all backgrounds:
The SoM provides an environment of personal and professional exploration, allowing students and postdocs to define and follow their own path to success. The students have full access to the undergraduate, graduate, and medical curricula to supplement and enhance their educational and training experience. Throughout their PhDs, our graduate students have the opportunity to enroll in courses in the School of Medicine, School of Humanities and Sciences and School of Engineering.

The following SoM programs are also instrumental in enriching the research and training environment for students from all backgrounds:

- The Stanford Biosciences Grant Writing Academy, sponsored by the office of Dean Krams, supports trainees in creating proposals and productive writing practice; teaches trainees to write and edit efficiently; empowers trainees to elicit and provide effective feedback; and provides coaching, editing, and review of proposals and scientific writing. Proposals submitted by SoM graduate students have nearly doubled since the Academy was founded in 2014. The applicant success rate has remained stable at almost 30%, hence NIH fellowships to our students have doubled since the Academy was founded.
- The Wellness Matters program, sponsored by Dean Krams' office, provides curricula, programs, and support for our graduate students that promote self-care, resiliency, and holistic personal health, helping to create an environment in which all graduate students can thrive. On a related note, all students have access to health insurance, counseling, and psychological services.
- The mission of the Student Outreach to Alumni Resources (SOAR) Mentor Program is to foster mentorship opportunities across the Stanford Biosciences community. This comprehensive mentoring program exposes students and postdocs to a breadth of career options, promoting greater community and collaboration with alumni.
- The Solidarity, Leadership, Inclusion, Diversity (SoLID) Mentorship Program connects graduate students with faculty who can provide additional mentorship to guide and support students on issues that may be largely outside of their research, such as mental health and wellness, academic activism, microaggressions, and imposter syndrome, among others.

Our multi-faceted mentoring approach allows graduate students and postdocs to be matched with peer and/or professional mentors of their choosing in additional to their faculty advisor. Trainees can opt to be matched with multiple mentors, thereby increasing the breadth of advice they receive.

The following university units are also essential in providing a supportive trainee environment:

- The Office of the Vice Provost for Graduate Education (VPGE) offers a complementary set of programs and events for Stanford graduate students in any discipline to help students grow academically and professionally. VPGE has provided guidelines for advising relationships between faculty and graduate students. In making expectations explicit, faculty advisors and students gain a shared understanding of Stanford's commitment to best practices that establish clear communication within faculty-student advising relationships.
- BEAM, Stanford Career Education also offers a complementary set of programs and events for our PhD and postdoc communities that focus on the academic track and the non-academic track. Examples include Jumpstart Your Academic Job Search, Academic Job Search: Negotiating Faculty Job Offers, and PhD Pathways.

Two key student organizations – the Stanford Biosciences Student Association (SBSA) and Biomedical Association for the Interest of Minority Students (BioAIMS) – welcome students from all backgrounds. In addition, Stanford has excellent centers committed to coordinating students' extracurricular and cultural activities and professional development. These centers include the Graduate Student Center and Cultural Community Centers for students from (or with interest in) the Latino, African American, Native American, Asian American, International, and LGBTQ communities on campus.

For healthcare and counseling services, our graduate students have full access to Vaden Health Services (http://vaden.stanford.edu) on campus and CAPS-Counseling & Psychological Services (https://vaden.stanford.edu/caps). For graduate housing, our students are guaranteed housing (https://rde.stanford.edu/new-housing-options-page) with three options: (1) single graduate housing; (2) couples without children housing and (3) students with children housing on campus at Stanford.

12. Ensuring that proper policies, procedures, and oversight are in place to prevent discriminatory harassment and other discriminatory practices and to appropriately respond to allegations of such discriminatory practices, including providing any required notifications to NIH

Stanford has long shared NIH's concerns regarding issues of harassment and discrimination. We take pride in welcoming students, faculty, staff, and postdocs of any race, color, national or ethnic origin, sex, age, disability, religion, sexual orientation, gender identity, veteran status, or marital status. Like the NIH, Stanford prohibits unlawful harassment including sexual harassment and sexual violence. Stanford also does not tolerate unlawful discrimination on the basis of these or any other characteristic protected by applicable law in the administration of the University's programs and activities.

Stanford's Nondiscrimination Policy provides:
Stanford University prohibits discrimination and harassment and provides equal opportunities for all community members and applicants regardless of their race, color, religious creed, national origin, ancestry, physical and mental disability, medical condition, marital status, sex, age, sexual orientation, gender identity, veteran status or any other characteristic protected by law.

Additionally, Stanford's prohibition on Sexual Harassment provides:
Where sexual harassment has occurred, the University will act to stop the harassment, prevent its recurrence, and discipline and/or take other appropriate action against those responsible.

Specifically, to provide assurances as required by NOT-OD-19-029, on behalf of the University, we assure Stanford's institutional commitment in the following areas:

- Stanford University has proper policies, procedures, and oversight in place to prevent discriminatory harassment and other discriminatory practices;
- Stanford responds appropriately to allegations of discriminatory practices;
- Stanford has developed a protocol to inform NIH/the Office for Civil Rights in compliance with NOT-OD-15-152; and

- Stanford has adopted and will follow its institutional protocol for requesting NIH prior approval of a change in the status of the Program Director/Principal Investigator (PD/PI) or other key personnel to continue their role on the NIH award described in the training grant application as described in NOT-OD-18-172.

13. Ensuring that trainees will continue to be supported when they transition from the training grant to other sources of support:
For the first four years the SoM covers all student expenses not provided by the training grant, including a stipend considerably higher than the training grant minimum to reflect the high cost of living in the Bay Area. These funds are provided centrally to allow students the ability to carry out research in their lab of choice across all our Home Programs, so that students have the opportunity to pursue their passions in research topic and lab. We prioritize top students for training grant support and encourage all eligible students to apply for external fellowship support; SoM will provide all support for SCBRM students when they are not appointed to the training grant, and when they transition off the training grant. For students in year 5 and up, the PIs are responsible for their funding support. SoM also provides the operating budget for the Institute for Stem Cell Biology and Regenerative Medicine, which contributes administrative support to the SCBRM graduate program. The University offers the Stanford Graduate Fellowship which supports exceptional incoming graduate students with full tuition and stipend for 3 years, and SCBRM is offered one of these nominations each year.

14. Providing resources and expertise for evaluating program training:
Stanford Biosciences Alumni Career Outcomes Dashboard - https://biosciences.stanford.edu/current-students/career/alumni-career-outcomes-dashboard/ - went live highlighting outcomes for 1,773 alumni from 2000 to 2019 including training grant participants. We organize alumni data to include geographic representation, employers, job sectors, academic details, and industry details; all data are stored in the Graduate Student Tracking Alumni Module and shared with the home programs. Our goal is to track our PhD alumni annually to understand their career choices, including job sectors, job title, employers, and geographic locations. In addition, we have invested resources into developing T32 websites to highlight training grant alumni outcomes.

In sum, I am very appreciative of your outstanding leadership and am excited to have you at the helm of this important training program. We share your enthusiasm for promoting the best possible research and training in stem cell biology and regenerative medicine by facilitating and cementing interdepartmental and interschool ties among trainees and faculty in these areas. Thus, I support your application in the strongest possible terms, and I hope that the NIH will support this highly successful and innovative program.

Cordially yours,

Sheri M. Krams, Ph.D.
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