LLOYD B. MINOR, MD

CARL AND ELIZABETH NAUMANN DEAN OF THE STANFORD UNIVERSITY SCHOOL OF MEDICINE

Professor of Otolaryngology—Head and Neck Surgery
Professor of Neurobiology and of Bioengineering, by courtesy

Stanford | MEDICINE

May 5, 2021

Andrew Hoffman, MD
Justin Annes, MD, PhD
Division of Endocrinology, Gerontology and Metabolism
300 Pasteur Drive
Room S025
Palo Alto CA 94304

Re: "Endocrinology, Diabetes and Metabolism", Training Grant

Dear Drs. Hoffman and Annes,

I am pleased to offer the enthusiastic support of the School of Medicine (SOM) for the renewal of your institutional Training Grant application entitled "Endocrinology, Diabetes and Metabolism." The School of Medicine (SOM) is committed to supporting the proposed program, which has a long and distinguished history at Stanford. This training grant has provided key support for the development and growth of one of the best endocrinology and diabetes research and training programs in the country. With the outstanding interdisciplinary program faculty (including 12 new faculty added to the program), the tradition of interaction and collaboration among the faculty and their lab groups, and the innovative research being carried out in their labs, prospects are indeed strong for the continued success of this postdoctoral training program.

The importance of endocrinology as a field of biomedical research continues to grow dramatically, as the epidemic of diabetes and obesity continues to be a major health problem in the US and throughout the world. The training of the brightest and most capable young scientists is critical for making progress in translating basic research findings into new approaches for improving human health. As detailed in the progress report, the trainees have been very productive, contributing to pioneering research across basic, translational, and clinical sciences. Most of the program's alumni continue to be active in the biomedical sciences in academia, government and industry. Moreover, you have been very successful in recruiting women and under-represented in medicine trainees to your program.

I would like to highlight the extensive institutional support offered for training grants and their trainees in the School of Medicine:

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 postdoctoral 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 Responsible Conduct of Research (RCR) coursework and workshops, which cover research integrity and experimentation. In addition, we offer 58

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graduate-level courses on experimentation and statistics. We highlight the following opportunities available for postdoctoral trainees:

- Introduction to R for Data Analysis teaches R, an open-source programming language for statistical analysis, focusing on the computational aspects of reproducible research and transparency in publication.
- The Data Studio through our Department of Biomedical Data Science (formed in 2015) also provides specialized focus in rigor and reproducibility for our students and postdocs. Most sessions are an extensive and in-depth consultation for a researcher based on research questions, data, statistical models, and other material prepared by the researcher with the aid of a facilitator. During the Data Studio, the researcher explains the project, goals, and needs. Experts in the area across campus are invited to contribute to the brainstorming. Drop-in consulting is also available pairing students and postdocs with faculty experts in data science to provide assistance with research questions and data analysis.
- Stanford Biosciences Grant Writing Academy supports over 100 graduate students (2nd years and beyond) and postdocs annually in creating proposals and providing productive writing practice as preparation for F and K fellowship applications. R&R is a significant component and trainees are guided to incorporate R&R into their proposals.
- The Stanford Library 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 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 trainee in the 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 Neuroethics, Stem Cells and Society, 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. Our trainees also have the opportunity to enroll in other ethics-related courses; 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. Supporting core facilities and technology resources

As detailed in this application, the postdoctoral trainees in this program benefit from outstanding facilities and resources provided by Stanford University and its schools. 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:

- Clark Center is a 3-story, 146,000-square-foot research center that brings together disciplines including biology, physics, medicine, chemistry, and engineering.
- Stanford Laboratory for Cell and Gene Medicine (LCGM) is a state-of-the-art cGMP facility providing support and services for clinical investigators during the entire arc of translational research activities including consulting, technology transfer, process and analytical development, clinical manufacturing and regulatory affairs.
- The Richard M. Lucas Magnetic Resonance and Spectroscopy Imaging Center has major centralized resources devoted to research in magnetic resonance imaging (MRI), spectroscopy (MRS) and X-Ray/CT imaging.
- Stanford Clinical Trials Research Unit (CTRU) is the major clinical research facility for the School of Medicine. It provides an optimal facility for the conduct of patient-oriented research, with core nursing and laboratory support to investigators conducting clinical trials. The main clinical site at the Jill and John Freidenrich Center, is 5,900 square feet and includes a reception area, 16 patient bays, 7 exam/procedure/consultation rooms, including several designed for pediatrics, medication storage, standard medical clinic equipment, separate phlebotomy and a kitchen unit

3. Providing adequate staff, facilities, and educational resources

The Dean's office supports the Office of Postdoctoral Affairs (OPA), with eight staff members. OPA sponsors multiple programs addressing career skills for academic research, entrepreneurial endeavors, mentoring, and communication. Programs include talks and workshops on setting up a lab, negotiating job offers, teaching, writing grants and fellowships, and conflict resolution. Quarterly orientations, held in conjunction with the Stanford and School of Medicine career centers, provide a wide range of information on Stanford, resources available to postdocs, and career planning. In his role as Advising Dean of Graduate Education and Postdoctoral Affairs, David Schneider meets with trainees regularly and advises them on issues ranging from academics to wellness. The Associate Dean for Postdoctoral Affairs meets regularly with postdocs and faculty to resolve conflicts, plan careers, and provide general guidance. Postdocs can and do audit graduate courses, including our newly minted Mini-courses, which allow a deep dive into or exploration of a new area with a limited time commitment. Postdocs also have access to a range of workshop and course offerings from Lane Library, the School of Medicine Biosci Careers office and BEAM, Stanford Career Education.

The SOM Dean's office has structured a systematic Individual Development Plan (IDP) program for all 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 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 web-based tracking system to ensure every NIH-supported postdoctoral scholar completes an IDP and meets at least once annually with his/her advisor for discussion of this material.

The office of the Senior Associate Dean of Graduate Education and postdoctoral affairs (led by Dean Sheri Krams) 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.

4. Supporting the PDs/PIs and other key staff associated with the planned training program

The program faculty consists of 27 faculty mentors with outstanding records of scholarship. The program selects faculty mentors dedicated to research, mentoring, and teaching, and includes both senior faculty with established track records in 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. In addition, the program has administrative staff dedicated to postdoc support.

5. Ensuring that faculty with a role in the proposed program have time available to devote to their responsibilities to the program

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 the faculty will have adequate time as part of their 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 institutional mentor training workshops, launched in January 2020 from the office of Dean Krams 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. All of the faculty serving as mentors on the training grant are well funded from extramural sources, and all have made a commitment to teaching fellows and other learners in their laboratory groups. Several of four mentors have taken part in workshops organized by the Stanford Faculty Development Center for Medical Teachers.

6. Promoting diversity and inclusion at all levels of the research training environment (trainees, staff, faculty, and leadership)

Stanford 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.

Through the Stanford Postdoctoral Recruitment Initiative in the Sciences and Medicine (PRISM), Stanford commits substantial resources and effort toward recruiting a diverse postdoctoral population. We invite graduate students, and especially those from backgrounds underrepresented in academia, to apply for a PRISM interview opportunity. Underrepresented groups include, but are not limited to: African Americans, Latinos, Native Americans, Pacific Islanders, Filipinos, those with disabilities or from disadvantaged backgrounds, and those underrepresented on the basis of gender identity or expression or sexual orientation. Stanford PRISM invites students to explore our training environment and to consider whether advanced training at Stanford would support their career goals.

Stanford School of Medicine's newly formed Propel Postdoctoral Scholars Program seeks to 1) attract and train talented postdocs from backgrounds typically underrepresented in the sciences, 2) provide postdoctoral funding support and professional development programs that will prepare individuals to assume leadership roles as faculty in academia, and, in so doing, 3) champion a culture of belonging and inclusion in science and academia, within and beyond Stanford.

The following on-campus postdoc groups are diverse and critical to our institution:

- Stanford University Postdoc Association (SURPAS) is the umbrella organization of all postdoctoral scholars at Stanford. SURPAS' mission is to work with university administration in enriching the lives and the career development of postdocs; in addition SURPAS organizes social and academic events.
- Stanford Black Postdoc Association (BPA) builds community among black postdocs that will lead to a professional network to support and promote diversity. BPA provides information about conferences, workshops, seminars, grants/fellowships, travel awards, and volunteer opportunities related to diversity.
- Stanford Latinx Postdoc Association (SLPA) strives to improve, enhance, and enrich the Latinx postdoc experience at Stanford through community building, professional development and networking. SLPA supports the presence and growth of the community through the promotion of diversity and inclusion in higher education.
- Out in Science, Technology, Engineering, & Mathematics (STEM@Stanford) is part of the national student (and postdoc) society dedicated to increasing the participation and visibility of people who identify as lesbian, gay, bisexual, transgender, or queer (LGBTQ+) in disciplines related to science, technology, engineering, or mathematics.
- Science and Engineering Graduate Women's Association (SEGWA) is the umbrella organization for all graduate women in science and engineering at Stanford. SEGWA promotes interdisciplinary communication and collaboration between women and women's organizations for increased efficiency and impact of organizational efforts.

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.

One of the endocrinology fellows currently supported on this T32 started a Fellows' College Council, a fellow-led committee that meets to form new initiatives, social opportunities and projects that support all postdoctoral fellows. Council members act as a liaison to the fellowship leadership and have the opportunity to work on projects aimed at improving the fellowship experience and well-being for their community.

Our Office of Postdoctoral Affairs (OPA) is the hub for all postdoctoral appointments at Stanford and supports postdocs in all aspects of their training as they develop their independent careers. OPA collaborates with university organizations, faculty, postdocs, administrators, and external entities to support the personal growth and professional development of each postdoc in preparation for their independent research, professional, and academic careers.

7. 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 7 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.

8. Ensuring accessibility of research facilities to trainees with disabilities

The School of Medicine supports the recruitment, enrollment and graduation of students and postdoctoral fellows 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 includes students who have disabilities. The Office of Accessible Education (OAE) provides resources to all students and postdocs 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 and postdocs. The Campus Access Guide is an online system of maps detailing accessibility information for buildings on campus, including research buildings.

9. 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 postdocs to define and follow their own path to success. Our trainees have full access to the undergraduate, graduate, and medical curricula to supplement and enhance their educational and training experience. The following SOM and OPA programs are also instrumental in enriching the research and training environment for postdocs 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 students and trainees have nearly doubled since the Academy was founded in 2014. The applicant success rate has remained stable at almost 30%.
- School of Medicine's Dean's Postdoctoral Fellowships. This program encourages and supports young investigators in the first two years of their postdoctoral research training and who are under the mentorship of faculty in the School of Medicine. With the goal to support current postdocs and to facilitate the recruitment of new scholars, the Dean's Fellowship is often used as seed money while outside funds are sought.
- Designing Your Postdoc. This workshop applies design thinking to an individual's postdoctoral training and reflects on who you are, where you are going, and how you can get there. The postdoc will identify resources and plan to apply them to his/her training in the right place at the right time. This work will support a thoughtful and balanced individual development plan.
- Mentoring in Research. This two-day workshop helps postdocs improve their mentoring and managing skills to work more effectively with undergraduates, graduate students, and research assistants and prepare for the academic job market.

- Postdoc Academic Chats. These monthly lunchtime seminars for postdocs from all disciplines led by Dr. Rick Reis covers topics relevant to pursuing academic careers. Topics vary monthly and readings are posted prior to the chat.
- Postdoc Pedagogy Journal Club. This is a monthly, cross-field journal club focusing on pedagogical topics, including teaching methods and pedagogy theory. In addition to helping participants engage in contemporary teaching training, this journal club fosters a community of postdocs interested in teaching.
- Postdoc Teaching Certificate. Offered through OPA, the Postdoc Teaching Certificate provides a framework for postdocs to engage in teaching preparation and practice.
- Postdoc Wellness Programs. OPA offers various workshops, series, and wellness-related events for postdocs throughout the year.
- Preparing for Faculty Careers. This Spring Quarter course is for postdocs and advanced graduate students considering a career in academia. Through this course and its accompanying workshops, participants do self-exploration, learn about the variety of roles in academia, learn how to apply and land a faculty job, and develop a plan to thrive as a faculty member.
- Scientific Management Series. This Winter Quarter course introduces postdocs to skills needed to establish independent careers in academic and other settings through seminars by leading faculty and subject matter experts on topics related to directing and managing a research lab.

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 postdocs in any discipline to help them grow academically and professionally. VPGE has provided guidelines for advising relationships between faculty and trainees. In making expectations explicit, faculty advisors and trainees gain a shared understanding of Stanford's commitment to best practices that establish clear communication within advising relationships.
- BEAM, Stanford Career Education also offers a complementary set of programs and events for our postdoc community 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.

10. 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.

11. Ensuring that trainees will continue to be supported when they transition from the training grant to other sources of support

The SOM has a variety of programs to help fund postdoctoral trainees, including the Dean's fellowships and the Berry Fellowships. The Dean's fellowships provide 50% of the minimum stipend for 1 year, and funds 30-40 scholars a year. The Berry fellowship provides up to 3 years of funding as well as ancillary funds for research and travel for 2-3 scholars each year.

In addition, the Child Care Assistance Grant (CCAG) and the Family Grant provide ancillary financial support for postdocs. Initiated in 2021, CCAG provides support for postdoctoral scholars with dependent children to assist with the cost of childcare. The Family Grant Program provides support for postdoctoral scholars with dependent children for unrestricted use.

Stanford has several programs that can help support the postdoctoral fellows when they have completed work on this Training Grant. We have an institutional K12 program that can provide support for advanced trainees who are investigating Type 1 diabetes, and the Department of Pediatrics has initiated the Physician-Scientist Bridge to K Program, designed to provide physician scientists financial support and career development mentorship to bridge the years between fellowship training and a faculty position.

This SOM funding commitment helps to provide the financial support necessary to allow trainees to extend their training and complete their research projects. In addition, several of these programs create community through regular lunches and discussion of career and research issues with affiliated faculty.

12. Career Services: The School's Biosci Careers office supports postdoctoral scholars with career mentoring and counseling, exposure to myriad career choices, and development of a range of scientific and leadership skills. The SOM provides an environment of personal and professional exploration, allowing students and postdocs to define and follow their own path to success. Our unique location in the middle of innovative Silicon Valley—as well as the School's co-location with the rest of Stanford's campus allows for diverse connections to interdisciplinary collaborations and opportunities in and out of the lab. The curriculum reflects this interdisciplinary perspective by offering access to courses in other schools, such as Engineering, Business, Education, and Law. Stanford faculty,

alumni and staff offer trainees the mentoring and resources to succeed in a wide range of careers. In addition, BioSci Connect is an online Biosciences alumni mentoring platform to connect alumni to our PhD students and postdocs in support of their professional and career development.

In summary, Stanford University School of Medicine is committed to maintaining and expanding its outstanding program in Endocrinology, Diabetes and Metabolism. This Training Grant, now in its 46 year, is a critical component necessary to support the training of postdoctoral fellows. The program of Endocrinology, Diabetes and Metabolism is at the intersection of several medical specialties, including Medicine, Pediatrics, Neurosurgery, Pathology, Epidemiology, Developmental Biology, Chemistry and Genetics. With a multi-disciplinary approach, the postdoctoral trainees in this program collaborate with the leading researchers in each of the above areas. Because of this comprehensive and long existing support, this application has my strongest support and endorsement.

Sincerely,

Lloyd B. Minor, MD