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May 20, 2019

Dr. [Program Director Name]
[Program Director Address]

Dear [Program Director Name]

We are enthusiastic in expressing our strong institutional support for your T32 Training Program [program name]. Student-centered, inclusive, interdisciplinary training and professional development are central to graduate education at UCLA. By embodying this commitment to holistic training, your program provides exceptional guidance and support for trainees in [program area], preparing them to succeed in their graduate studies and subsequent stages in their career paths. This is a unique educational program with an impact that extends across multiple departments and divisions. As described below, UCLA offers a rich variety of institutional resources to promote the effectiveness of your program.

For all predoctoral T32 training programs, the Graduate Division currently provides annual supplemental financial support at a level corresponding to 15% of the annual direct student support (trainee stipend plus tuition/fees) from the NIH. These funds may be used to support additional trainees, to defray the costs of tuition/fees not covered by the training grant, or to top-off the pre-doctoral trainee's stipends in the academic year or summer. Additionally, the Deans of the David Geffen School of Medicine (DGSOM), Engineering, and the College Divisions of Life and Physical Science contribute \$1,000 per predoctoral trainee annually to each T32 program as unrestricted funds for support of activities to enhance the program, including outreach and recruitment, career development, program retreat, program-specific curriculum, and participation at off-site conferences, courses and workshops.

Rigor, Reproducibilty and Responsible Conduct. As a member of the University of California (UC), UCLA adheres to the <u>UC-wide policy on integrity in research</u>. As such, the research community is guided by the following principles: research integrity "includes not just the avoidance of wrongdoing, but also the rigor, carefulness, and accountability that are hallmarks of good scholarship. All persons engaged in research at the University are responsible for adhering to the highest standards of intellectual honesty and integrity in research. Faculty and other supervisors of research activities have a responsibility to create an environment that encourages those high standards and integrity. Open publication and discussion, emphasis on quality of research, appropriate supervision, maintenance of accurate and detailed research procedures and results, and suitable assignment of credit and responsibility for research and publications are essential for fostering intellectual honesty and integrity in research."

With these principles, UCLA strives to constantly reinforce a culture that holds research faculty, trainees and staff to the highest standards of rigor and integrity through existing formal and informal training as well as new initiatives. Formal training in rigor and reproducibility has been carried out primarily at the training program level, to allow focus on how standards of rigorous experimentation apply to the trainee's particular area of research. Various approaches have been adopted, including incorporation into existing curriculum and stand-alone courses. One example of a stand-alone course is the Chemistry/Biochemistry course in "Research Integrity and Methods in Cellular Biology, Molecular Biology, and Biochemistry Research" with learning objectives to understand how to conduct research in the field to reliably advance knowledge with rigor, reproducibility, and transparency. In addition to core issues in research integrity there is a special emphasis on research methods that lead to robust and correct conclusions, including topics of data recording, designing experiments, and analyzing data. Quantitative and statistical analyses of data are examined in detail, as well as methods for ensuring the integrity of research materials and special problems that can occur with immunochemical analyses. As a complement to these program-level strategies, the umbrella Graduate Programs in Bioscience (GPB) and the David Geffen School of Medicine (DGSOM)

Office of Postdoctoral Affairs (OPA) are developing an annual set of four two-hour workshops to provide a broader consideration of Rigorous Experimental Design and Transparency to Enhance Reproducibility. These workshops will be open to predoctoral and postdoctoral trainees, with a format that combines introductory presentation of background material with team-based consideration of case studies. This workshop series will be designed to standardize training in topics of scientific premise, scientific design, variables and authentication.

To facilitate development of the highest levels of integrity in our trainees, formal training occurs at both the program level and more broadly. In addition to program courses such as the Chemistry/Biochemistry course described above, GPB and DGSOM OPA organize a cross-department course "Ethics and Accountability in Biomedical Research" that serves first-year Ph.D. students and new postdoctoral scholars in the biosciences. The curriculum covers standard and ethical practices in life and biomedical sciences research with emphasis on: misconduct, malfeasance, and whistle-blowing, mentorship, scientific recordkeeping and data treatment, animal and human subjects, laboratory safety, authorship and peer review, conflicts of interest, ownership of data and intellectual property, collaborative research, and ethical issues related to research in emerging fields (such as, genetics and stem cell technology). An additional section has been added to address mentorship of colleagues and students, mental health and wellness, and reporting and combatting discrimination, bias and harassment. A refresher course covering the same topics in a shorter format is offered for fourth year Ph.D. students.

Research rigor, integrity and ethics are also addressed informally for predoctoral students through direct mentoring from the faculty adviser and regular meetings with the dissertation committee, providing guidance and instruction in appropriate design and execution of research, protection of animal and human subjects, and appropriate data management and interpretation. Also, UCLA's career development training seminars often include career-related topics in ethics, e.g. mentor/mentee responsibilities, maintaining good scientific notes or laboratory notebooks, intellectual property and technology transfer, and ethical issues at the frontiers of science and medicine.

Start-up and bridge funding for faculty. In the biomedical, life and physical sciences and engineering, new faculty are provided with generous start-up packages (normally in the range of \$1.5-2M) that allow the investigator to establish an independent research program that includes trainees. Funds provide enough support to equip the lab and operate for a period of time sufficient to generate data for strong extramural grant applications. Also, in the first few years new faculty are commonly excused from full teaching and service requirements so they can focus on training and mentoring students and other lab members to establish research momentum.

In most of the relevant Ph.D. programs for the [name of program], students in their first year are funded from institutional sources while they carry out research rotations under different faculty members. At the end of the year, program advisers are careful to guide new students to thesis mentors with robust funding, although in the current funding climate it is difficult to predict continuous funding over the course of a student's thesis research. If a mentor encounters a loss of funding, it is standard practice for the School/Division and Department to provide bridge funding, including support for trainees until new funding is obtained. To formalize such support, GPB implemented a policy requiring that any faculty member intending to take a new student provides a form signed by the Department Chair that acknowledges the faculty member has sufficient funding to support the student and if a funding lapse occurs and other support sources are not identified, the department will assume financial responsibility for student support.

Core facilities and technology resources. As a world-class research university, UCLA supports multiple Centers and Institutes that offer a wide array of core facilities and technology resources for virtually all types of STEM research. The Deans of the various Schools regularly invest in core facilities by contributing to the purchase of new equipment and/or financially subsidizing a core's services when subsidies are necessary for sustainability. Expert staff provide instruction for trainees and other users on application of these technologies to particular research problems. [programs should choose examples most relevant to the area of research]. As notable examples relevant to the [program name]: the California NanoSystems Institute (CNSI) serves as a hub of interdisciplinary research, translation, and education, housing state-of-the-art technology that includes advanced light microscopy and spectroscopy, cryoelectron microscopy, nanomaterial synthesis, nano-scale fabrication, and automated molecular screening; the UCLA-DOE Institute for Genomics and Proteomics provides six core technology centers to develop and maintain tools for production, structural determination, characterization, and computational analysis of molecular systems - X-ray Diffraction Core, Macromolecular Crystallization Core, the NMR Core,

Bioinformatics and Computational Core, Biological Instrumentation Core, and Protein Expression Core; the Quantitative and Computational Biology Institute (QCBio) promotes research into the development of algorithms, software, statistical, mechanistic, and dynamical models to analyze large data sets. QCBio offers a unique training opportunity through the Collaboratory, in which expert postdoctoral scholars lead workshops on data analysis, programming and statistical techniques, including analysis of next generation sequence data. Graduate students can receive course credit for these workshops as well as direct support on their research projects.

PDs/PI, staff, facilities and educational resource support for program. UCLA will ensure that adequate staff, facilities and educational resources are available to support the success of the [program name] program. [Program fill in specifics and indicate primary department(s) and/or institutes, etc that will contribute. address administrative assistance, use of facilities/rooms, any local educational resources.]

Additional educational support is available through the following institutional resources:

- The UCLA <u>Center for Advancement of Teaching</u> (CAT) provides campus-wide expertise in pedagogy, educational technology, assessment, learning spaces, and curricular research. In a recent effort to support graduate education, CAT will begin to offer instructional improvement grants for innovation, experimentation, and development of graduate curricula. Also, CAT has developed training courses for graduate teaching assistants to improve their teaching skills and advance their professional development.
- The <u>UCLA Center for Education Innovation and Learning in the Sciences</u> (CEILS), supported by the
 Divisions of Life and Physical Sciences, was established to enhance teaching excellence, assessment,
 diversity, and scholarship using the latest evidence-based active-learning approaches. To prepare
 graduate students (and postdoctoral scholars) interested in a faculty career path that involves teaching,
 CEILS offers a full spectrum of workshops and journal clubs focused on preparing future faculty in best
 practices for inclusive pedagogy.
- The UCLA Center for the Integration of Research, Teaching, and Learning (CIRTL) is part of a nation-wide network of universities committed to implementing evidence-based teaching practices for diverse learners in STEM. CIRTL@UCLA is organized around the core CIRTL principles of teaching-asresearch, learning communities and learning-through-diversity. The interdisciplinary Scholars of Teaching and Research (STAR) program is a recent initiative that creates a pathway to CIRTL certification for UCLA graduate students and postdoctoral scholars. STAR includes a series of graduate-level courses for credit (Grad PD 496 A,B,C) that provide participants with a) pedagogical training in evidence-based teaching, b) opportunity to apply the full inquiry cycle and research methods to their teaching towards the goal of designing a teaching-as-research (TAR) project, and c) classroom contexts in which to implement their TAR projects, tools to analyze the assessment results, and then present their findings to an external audience. In addition to CIRTL@UCLA activities, graduate students, postdoctoral scholars, and faculty have access to the full program of CIRTL-wide on-line courses, workshops and events.
- The Graduate Writing Center provides workshops, programs, writing groups and one-on-one consultation on general and specialized topics such as manuscript preparation, grant and fellowship applications, and thesis preparation. GWC recruits consultants with expertise appropriate for STEM disciplines including Chemistry/Biochemistry, Neuroscience, Bioengineering, and Molecular Biology.
- The UCLA Career Center (CC) has developed an active cross-campus effort in graduate student career development training to complement program-specific training. The Career Center Graduate Career Services team offers rotating workshops, career advising and counseling appointments, and works with training programs to provide customized workshops. Career Development training seminars and workshops are organized by core competencies so pre- and post-doctoral trainees and their mentors can quickly identify appropriate training topics, including: fellowship writing, mentor relationships, time and project management, communication, presentation, and writing skills, career outlook and preparation for different fields, professional networking, job search, interviewing and resume/CV writing. The annual slate of 50-60 events and workshops changes every year, so trainees can keep returning for more information and new perspectives throughout their training. Some topics have been grouped into series that provide continuity for trainees' development and improvement over time, such as: The UCLA Academic Job Series, which helps trainees prepare for the academic job market through speakers and panel discussions on application materials, job talks, interviewing, CV, research and teaching statement writing, and negotiating. Informational sessions are followed by workshops that allow trainees to practice

the skills discussed by panelists and seek feedback on application materials and job talks; *The Careers In... Series*, which brings in PhD panelists from a variety of careers in and outside of academia to discuss their career paths and preparations. Multiple career areas are targeted each year, broadly targeting the career areas used by myIDP as a framework. Each panel provides trainees an opportunity to learn about career paths, find out about the preparation required, the pros and cons of a variety of career paths, and network with working PhD professionals; *The UCLA PhD Career Development Conferences*, which alternate each year between one large conference that serves all predoctoral and postdoctoral research trainees on campus, and several smaller, discipline-focused conferences on alternate years. The themes and topics include activities relevant to early and late-stage trainees and a variety of potential career paths. All conferences include PhD alumni and employers for networking and advice.

The CC supports preparation of Individual Development Plan (IDP), offering workshops for trainees on how to use the *Science Careers* myIDP tool and follow ups on preparation of the IDP. Additionally, the CC and Graduate Division created a Career Preparation Toolkit for Graduate Students and Postdoctoral Scholars. The Toolkit provides a structured approach to for each trainee to evaluate options for pursuing different career paths, with sections on Career Development Planning, Analysis of Skills, Strengths and Values, Career Exploration and Informational Interviews, Job and Internship Search, Application Materials for Careers in Industry, Non-profit, and Government, Application Materials for Careers in Academia, and Interviewing and Negotiation.

Protected time for mentoring, training and research. UCLA is fully committed to supporting faculty mentoring, training and research, as codified in the UC Academic Policy Manual (APM) section 210, which describes policies on the expectations for faculty advancement that stress achievements in research, teaching, service, and diversity. Teaching includes classroom instruction, research training, and mentoring. For faculty in the School of Medicine and Engineering, and the College Divisions of Life and Physical Sciences, assignments of classroom instruction and institutional service responsibilities take into account the time necessary for faculty to excel in research and trainee development. For physician-scientist faculty with clinical responsibilities, protected time is assured by state-funded FTE for a subset of faculty and by departmental support for others; advisors in each training program ensure that trainees join labs in which the mentor has ample time for research and mentorship.

Graduate training in tenure and promotion. UC APM section 210 specifies that teaching and mentorship are key elements for tenure and promotion decisions: "Clearly demonstrated evidence of high quality in teaching is an essential criterion for appointment, advancement, or promotion. Under no circumstances will a tenure commitment be made unless there is clear documentation of ability and diligence in the teaching role. In judging the effectiveness of a candidate's teaching, the committee should consider such points as the following: ...fostering of student independence and capability to reason; spirit and enthusiasm which vitalize the candidate's learning and teaching; ability to encourage high standards, and to stimulate advanced students to creative work...extent and skill of the candidate's participation in the general guidance, mentoring, and advising of students; effectiveness in creating an academic environment that is open and encouraging to all students, including development of particularly effective strategies for the educational advancement of students in various underrepresented groups."

A significant development for institutional support of graduate student mentoring is the 2018 report by the UCLA Mentoring and Evaluation of Graduate Academic Progress (MEGAP) workgroup. The workgroup, convened by the UCLA Graduate Council and Graduate Division, made the following recommendations: 1) create and publicize mentoring resources (digital and hard copy) for faculty and students; 2) create mentoring resources to address the specific needs of underrepresented and underserved populations; 3) institute a mentoring training and certificate program for faculty; 4) incentivize mentoring among Ph.D. programs; 5) encourage the Council on Academic Personnel (CAP) and the Academic Personnel Office (APO) to integrate mentoring into the promotion and review of faculty; 6) Include "Mentoring" as a distinct category of evaluation in the regular Graduate Council reviews of Ph.D. programs; 7) mandate that Ph.D. programs conduct an annual (once per academic year) progress review with each graduate student. Recommendation 5 in particular addresses mentoring as a criterion for academic advancement, explicitly advocating that mentoring is considered as an activity "separate from and equally important as research, teaching, service, and diversity, that is factored in faculty reviews for tenure, promotion, and merit increases".

A campus-wide team has been charged with implementing the recommendations of the MEGAP report. There are also a number of ongoing efforts to enhance faculty mentoring skills. Among these, GPB offers an annual full-day research mentoring workshop for faculty that covers topics on effective communication, aligning expectations, promoting self-efficacy, fostering independence, equity and inclusion, and assessing understanding. The workshop is adapted from curricula of the Wisconsin Institute for Science Education and the National Research Mentoring Network (NRMN). To date, over 100 UCLA faculty have participated in this workshop. Furthermore, to sustain and expand faculty mentor training, last year GPB initiated a "train-the-trainer" workshop to prepare faculty and staff to lead mentor training activities in their home departments/programs. This workshop was led by the GPB Associate Director for Recruitment and Inclusion, who is a NRMN-certified master facilitator. Twelve faculty attended the first offering of this workshop and to date new mentor training activities have been initiated in two departments. Additionally, this coming June, CIRTL@UCLA and the Institute of the Environment and Sustainability will host a regional faculty training (both mentor and facilitator) as part of UCLA's partnership with the NSF INCLUDES ASPIRE Alliance. Another initiative is led by the UCLA Associate Vice Chancellor for Faculty Development who is piloting use of mentoring circles as a scalable approach to advance faculty mentoring. The mentoring circles are faculty small group discussions under a structured format aimed at presenting and solving mentoring challenges. For teaching and mentoring in the classroom, Life and Physical Sciences co-sponsor an annual, off-site multiday workshop on "Inclusive Excellence Student Success in Science". The workshop, led by outside facilitators, aims to improve faculty abilities in teaching and mentoring of diverse undergraduate and graduate students in the sciences. Over 150 faculty have participated.

Promoting diversity and inclusion and ensuring an inclusive research and training environment. As a public university set in one of the most multicultural metropolitan areas in the world, inclusive excellence is central to UCLA's mission to "create, disseminate, preserve and apply knowledge to better our global society". As paraphrased from the Principles of Community that guide the mission - UCLA believes that diversity is critical to maintaining excellence in all endeavors and the university seeks to foster open-mindedness, understanding, compassion and inclusiveness among individuals and groups. The commitment to promote inclusion is manifested throughout different levels of the institution. Importantly, the UC APM section 210 specifies that "Contributions in all areas of faculty achievement that promote equal opportunity and diversity should be given due recognition in the academic personnel process, and they should be evaluated and credited in the same way as other faculty achievements." Additionally, contributions to diversity are considered as a critical factor in the selection of new faculty and many departments now require a separate diversity statement in applications for faculty positions.

The Office of the UCLA Vice Chancellor for Equity, Diversity and Inclusion (EDI) is the campus-wide leader in equity and inclusion. Through the BruinX team, EDI sponsors workshops and projects aimed at ensuring equal learning, training and working environments at UCLA. EDI also has a Student Advisory Committee of undergraduate and graduate students that serve as advisors and liaisons. The Office also houses the Discrimination Prevention and Title IX Offices which oversee the reporting and investigation of discrimination claims. Another major function of EDI is to offer resources and required briefings for all faculty search committee members to address implicit bias and best practices in promoting equity in faculty hiring.

Exemplifying the institutional commitment to diversity, of the four Deans that support most of the NIH T32 programs, three are women (School of Medicine, School of Engineering, Division of Life Sciences) and one is from an underrepresented group (Division of Physical Sciences). Each School/Division has an EDI Advisor, appointed from School/Divison faculty, who consults closely with the campus EDI office and works directly with the respective Dean on strategies, policies, training, and accountability for inclusive practices in recruitment and training at all levels. These efforts rely on guidance from Faculty Diversity committees in the School of Medicine and College Life and Physical Science Divisions.

The UCLA Graduate Division provides campus-wide support for recruitment and support of students from underrepresented groups. The Diversity, Inclusion, and Admissions team annually visits minority-serving institutions throughout the nation, meeting with students and faculty advisers to describe our graduate programs and resources, answer questions, and direct students to the appropriate program contacts. Among many examples of diversity and inclusion support offered by Graduate Division are: a campus-wide Equity, Diversity, Inclusion (EDI) Welcome Day for all new graduate students that focuses on issues that are particularly challenging to underrepresented students; financial resources that include the Cota-Robles fellowship, a four year fellowship for incoming doctoral students which strongly encourages

applications from students from underrepresented cultural, racial, linguistic, geographic and socioeconomic backgrounds; the Competitive Edge program, a funded six week pre-matriculation program designed to prepare incoming underrepresented doctoral students for a smooth transition into Ph.D. programs in STEM and Social Sciences. Competitive Edge involves full-time faculty-guided research and mentoring, as well as academic and professional workshops; Summer Programs for Undergraduate Research (SPUR), which includes a number of pipeline STEM research programs focusing on students from underrepresented or disadvantages backgrounds. The new GradSTRIVE program for first-gen and underrepresented students provides guidance and mentoring to help them successfully navigate graduate school challenges and barriers.

Campus-wide resource centers include the <u>Bruin Resource Center</u> which provides resources, services and learning opportunities, with a particular focus on current and former foster youth, students with dependents, students in recovery, student veterans and undocumented students. Also the <u>LGBTQ Campus Resources Center</u> offers a comprehensive range of education and advocacy services supporting intersectional identity development as well as an open, safe, and inclusive environment for UCLA's LGBTQ community.

In the inclusive climate developed by this wide-ranging network of institutional support, local activities to foster diversity and inclusion have flourished. To highlight one area relevant to the iname of program] program, diversity and inclusion is a central mission of the GPB umbrella. Spearheaded by the GPB Director for Recruitment and Inclusion, GPB organizes student/faculty representation of bioscience, physical science and engineering Ph.D. programs and helps fund exhibitor booths for outreach at the Society for Advancement of Chicanos/Hispanics and Native Americans in Science (SACNAS) National Conference, the Annual Biomedical Research Conference for Minority Students (ABRCMS), and the Emerging Researcher's National (ERN) Conference. GPB has organized high-level sponsorship when conferences are in the area (SACNAS 2014, 2016, ABRCMS 2019). The GPB faculty director and/or the GPB Director for Recruitment and Inclusion GPB also represents Home Areas and Training Programs at regional conferences, as well as through visits to minority-serving institutions including California State University campuses. GPB hosts an annual UCLA Summer Symposium and Graduate Fair for California State University students to promote scientific exchange and provide information on graduate educational opportunities as a way to strengthen interactions between CSU capstone research programs and UCLA graduate programs. Under the Graduate Division SPUR program, GPB organizes the Summer Program for Undergraduate Research in the Life And Biomedical Sciences (SPUR-LABS), designed to prepare undergraduates from underrepresented/disadvantaged backgrounds to succeed in Ph.D. programs. SPUR-LABS consists of a rigorous research experience in a GPB faculty member's lab combined with professional development activities to prepare undergraduates to succeed in Ph.D. and M.D./Ph.D. programs.

UCLA also has a vibrant culture of student groups dedicated to promoting diversity and inclusion. The Organization for Cultural Diversity in Science (OCDS), founded in the Chemistry/Biochemistry department, has created a close-knit community among the graduate students in the sciences, with an emphasis in increasing cultural diversity at UCLA. The award-winning UCLA SACNAS chapter is focused on increasing the numbers of underrepresented students in higher education and in science. Group members include undergraduates, graduate students (including the current chapter president), transfer students, community college students, post-docs, faculty and staff. In addition to outreach, SACNAS@UCLA hosts a number of professional development and community building events. GPB sponsors a number of student groups including the Association for MultiEthnic Bioscientist Advancement (AMEBA) whose goals are to foster the advancement of PhD students in GPB and promote diversity in the sciences via outreach to underrepresented communities and youth, and Black Scholars in Bioscience, organized to build community and foster broader mentoring relationships with faculty role models. GPB, together with the SACNAS@UCLA and OCDS, sponsors the Scientific Excellence through Diversity Seminar series, a student-organized series that brings highly successful professionals in biomedical, life, and physical science fields to UCLA for a research seminar and discussions on career success and contributing to diversity in science.

At the staff level, a wide variety of programs and events are available to improve outreach, recruitment, increase diversity, and to attain affirmative action goals and objectives. Offered by General Campus Human Resources and Health System's Human Resources recent examples are: training sessions on Managing a Diverse Workforce, Navigating the Intergenerational Workplace, Understanding and Developing Emotional Intelligence; (for managers and faculty) Preventing Workplace Discrimination, Sexual

Violence and Sexual Harassment, and Leading a Diverse and Inclusive Workforce. Additionally, the Staff Diversity & Affirmative Action/EEO Compliance Office conducts regular training on issues related to affirmative action, equal employment opportunity and diversity, as well as monitoring compliance with the federal affirmative action regulations, disability and veteran-related anti-discrimination acts, assessing UCLA's personnel practices and activities, and preparing the Staff Affirmative Action Plan.

In addition to the extensive institutional support for diversity and inclusion described above, there are many additional programs, initiatives and activities designed to strengthen the inclusive environment of UCLA by fostering awareness, sensitivity and respectful dialogue. Among these are "CrossCheck" forums for on-line and live discussions of challenging topics on equity, diversity and inclusion at UCLA, hosted by the Vice Chancellor for EDI, and "Open Forums" hosted by the School of Medicine Dean, Vice-Dean for Education, and Senior Associate Dean for Diversity Inclusion, in which faculty, students, and staff discuss issues of equality, equity, race, gender, and all forms of social justice. The Bruin Resource Center Intergroup Dialogue Program offers workshops and courses designed to engage, support and educate the UCLA community on issues of social identity, interpersonal and intergroup relations/conflicts, prejudice reduction, social justice, and to impart valuable multicultural skills necessary for active participation in an increasingly diverse and global society. A very recent development is the "Cultural North Star" initiative in the DGSOM, which is designed to promote unity in the School's shared mission of advancing science and medicine by helping facilitate problem-solving, decision-making and collaboration. Setting clear and high expectations for faculty, trainee, and staff actions and interactions, the Cultural North Star consists of twelve purpose statements, of which several emphasize the central importance of positive, supportive and inclusive practices: We work together to eliminate inequity; We seek out diverse voices; We are strongest when we show empathy; We engage in dialogue even when we disagree. DGSOM has mounted a comprehensive campaign to establish the Cultural North Star purpose statements as a foundation for the training and research environment of the School.

Research and clinical safety. UCLA Environment, Health, and Safety (EHS) oversees UCLA safety including all aspects related to laboratory and clinical safety. EHS is organized into six areas or responsibility. Administration and Training provides communications and training for the UCLA campus community. The unit's teams arrange scheduling of schedules safety classes, oversee the Worksafe on-line learning management system and records management, develop online training, oversee records, and develop publications and videos to support the EH&S efforts. Laboratory Safety comprises specialists from various scientific backgrounds providing support to labs for compliance with campus policies and safety regulations. Areas of expertise include chemical safety and other laboratory-related issues around the working environment. Biosafety oversees facilities, equipment and practices used to maintain worker and environmental safety and regulatory compliance for those working with potential biological hazards including recombinant and synthetic nucleic acids. UCLA Fire mitigates threats/hazards to the University, prepares the public to manage an emergency, responds to calls for service, partners with stakeholders in recovering from emergencies and disasters, and investigates all incidents that occur on campus. The Office of Emergency Management assists all UCLA community members in preparing for disasters and other emergencies. The unit also offers customized training presentations and workshops to students, faculty, and staff upon request. Environmental, Occupational and Safety Programs encompasses all aspects of permitting, compliance and safety for the entire campus and for several off-campus UCLA properties.

Specifically related to safety of laboratory research that is most relevant for the [name of program] program, UCLA uses a multilayered approach to guide safe practices. There are laboratory safety requirements on individual researchers and principal investigators with oversight by EHS as well as the Vice Chancellor for Research through faculty oversight committees. 1) *Training.* All individual research personnel, including faculty, are required to complete both general and topic-specific safety training before beginning any research activities. This is in addition to research-specific safety training required within research groups. Some departments and schools also require additional safety training that is discipline-specific. 2) *Research laboratories.* All research laboratories are required to adhere to all federal, state, and campus laboratory safety policies and requirements. Each research laboratory undergoes safety review inspections at least annually with detailed reporting and required responses. Most research groups have a Laboratory Safety Officer (LSO) to oversee and coordinate safety actions at the research group level. Some of the LSO's have additional specialized training from the UCLA Office of Environment, Health & Safety. 3) *Departments and Schools.* Safety committees at the department/school/institute level provide guidance and oversight specific to certain research disciplines. Some, such as Chemistry & Biochemistry, set additional

safety training requirements and additional personal protective equipment policies. 4) Campus oversight. In addition to the role of EHS described below, research safety committees supported by the Office of Research Administration under the Vice Chancellor for Research represent the campus administration on laboratory safety policies and requirements. These include: Animal Research Committee, Chemical and Physical Safety Committee, Dual Use Review Entity, Institutional Biosafety Committee, and Radiation Safety Committee. Coordination of those safety committees is provided by the Safety Oversight Committee. Certain research activities require prior review and approval by the campus-wide safety committees before work can commence. Examples include: biological research involving recombinant or synthetic DNA and biohazardous agents; work with radioactivity; research on vertebrate animals; and research on human subjects. These activities require Biological Use Authorizations or Approved ARC Protocols.

Access for trainees with disabilities. UCLA takes pride in maintaining a campus that is open and accessible to people with disabilities and ensures accessibility of facilities, websites, electronic information, publications and information resources. There are numerous campus resources that serve to provide assistance for students, staff, faculty and visitors, including, but not limited to the following: The ADA & 504 Compliance Office serves as the campus resource for information regarding the Americans with Disabilities Act and its requirements; The Center for Accessible Education (CAE) assists students with academic and research adjustments based on a disability; Employee Disability Management Services assists staff and faculty with employment related accommodations; the Tarjan Center provides resources for access to and use of websites, electronic information, publications and information resources; UCLA Recreation provides therapeutically-based recreation programs for people with cognitive and physical disabilities that expand their access to opportunities that promote physical fitness, health and wellness, increased self-esteem, and greater functional independence.

CAE is the primary support resource for doctoral students with disabilities. The mission of the CAE is to create an accessible, inclusive, and supportive learning environment. In collaboration with faculty, staff, and students, CAE facilitates academic accommodations, disability advocacy, and serves as an educational resource for the campus community. CAE facilitates appropriate academic and research accommodations for UCLA students with documented disabilities and medical conditions that qualify as disabilities. Such accommodations constitute modifications or adjustments to a course, program, service, activity, or facility that enable a student with a disability to have an equal opportunity to enjoy the benefits, opportunities, and privileges that are available to all students (with or without disabilities).

Policies, procedures and oversight to prevent discriminatory practices. UC has developed robust policies, procedures, and oversight to prevent discriminatory practices and has on file with the HHS Office for Civil Rights (OCR) Form HHS-690, a one-time Assurance of Compliance. We are fully committed to abide by these policies, to respond promptly and appropriately when such practices are alleged, and to comply with all reporting obligations in relation to these matters.

UC Policy on Discrimination, Harassment, and Affirmative Action in the Workplace "prohibits discrimination against any person employed; seeking employment; or applying for or engaged in a paid or unpaid internship or training program leading to employment with the University of California on the basis of race, color, national origin, religion, sex, gender, gender expression, gender identity, gender transition status, pregnancy, physical or mental disability, medical condition (cancer-related or genetic characteristics), genetic information (including family medical history), ancestry, marital status, age, sexual orientation, citizenship, or service in the uniformed services, including protected veterans." The UC Sexual Violence and Sexual Harassment Policy "addresses the University of California's responsibilities and procedures related to Prohibited Conduct in order to ensure an equitable and inclusive education and employment environment free of sexual violence and sexual harassment." All members of the UC community must take mandatory training in sexual harassment training within 6 weeks of employment and faculty must take periodic retraining every 2 years.

The processes for reporting allegations of discriminatory practices and promptly enacting appropriate responses are handled by dedicated units including: Gender (Including Pregnancy)

Discrimination, Harassment or Retaliation - <u>Title IX Office</u>; Discrimination, Harassment or Retaliation (Non-Gender Related) - <u>Discrimination Prevention Office</u>; and Disability Discrimination - <u>ADA Compliance Office</u>.

UCLA understands its obligations under NIH policies and, through the delegated authority of Authorized Organization Representatives in the Office of Contact and Grant Administration, will follow institutional procedures to request NIH prior approval for changes in the status of program directors or principal

investigators or any other key personnel in cases where there are administrative or disciplinary actions taken that impact the roles of these individuals on training grants.

Support for trainees upon transition from training grant. All students in the [name of program] program are fully supported throughout the full course of their graduate studies as members of their Ph.D. program. When students leave the training grant, they transition to different funding sources that can include individual extramural fellowships, faculty research grants, teaching assistantships, Graduate Division sources such as the Cota-Robles and Dissertation Year fellowships, and other faculty or institutional sources. The students continue to receive academic support from their Ph.D. program and other educational resources described above. [add any specifics for program].

Evaluation of program training outcomes. The UCLA Clinical and Translational Science Institute (CTSI) offers a centralized consultation service to guide PIs on evaluation design and methods for T32 programs. The Evaluation Lead, a faculty member in the School of Public Health, is a seasoned evaluator with a expertise in evaluating competency-based educational programs. CTSI-Evaluation provides consultation to T32 PIs and their staff to build capacity for evaluation design and assessment. Consultation is provided in at least five levels as appropriate: (i) Research training and career development, (ii) Faculty teaching and research, (iii) Industry, government, community and NGO partners, (iv) Academic program and institutional policies, and (v) evaluation comparison to other T32s. The evaluation team advises on all stages of evaluation including formative, process/implementation, and summative evaluation to address the five levels. The consultations are responsive to the specific requirements of the T32 application and any available budget allocated for conducting a longitudinal evaluation of the training program. In particular for T32 programs, consultation focuses on: advising the PI and training program team to develop evaluation design, improvement plans, and metrics; assisting with the design and deployment of survey instruments, data processing, analysis, and reporting; measuring and monitoring the training program, educational methods and approaches, and outcomes.

At least two data sources are available for evaluation. The Graduate Division Information Technology team manages a central database on graduate student information and provides data reporting and analytics services. GPB manages and is upgrading a database for graduate student and postdoctoral scholar information (Minerva). Minerva aggregates training data from central campus systems including Graduate Division, serves as the primary repository of data that is not otherwise recorded, and reports on pre-doctoral and postdoctoral training programs in the biosciences. With support of a dedicated GPB data analyst, Minerva is used across the College and Professional Schools to generate populated and formatted data tables required for NIH T32 and other training grant applications and annual reports. UCLA is a member of the Coalition for Next Generation Life Sciences and embraces the Coalition commitment to transparent data reporting on graduate students and postdoctoral scholars. GPB and Graduate Division are collaborating on data collection and reporting. As part of this effort, GPB has collected career data for Ph.D. students in member Ph.D. programs who graduated over the last 15 years and is entering the data into Minerva to use in outcome analysis.

Synergy and shared resources among multiple training programs. UCLA has a large number of training programs for graduate students, postdoctoral scholars, or both. There are a number of ways the institution has moved to provide shared resources and promote interactions, and additional efforts are ongoing. The umbrella structure of GPB provides a foundation to develop cross-cutting support for training programs. A signature example is the role of GPB in managing the Minerva database and associated staff support for training grant table preparation. Another example is the course (described above) "Ethics and Accountability in Biomedical Research" organized by GPB and the DGSOM OPA (Office of Postdoctoral Affairs). The course is designed to address NIH training grant requirements, serving as a requirement for first year GPB students. As an open course, the participants also include students from other programs and postdoctoral fellows supported by T32 grants. GPB has also collaborated with OPA to develop a central website that lists UCLA training grants and provides resources and information for grant preparation. The list is also intended to promote inter-program associations by providing an easy way for individual training programs to identify related programs. To stimulate interactions, GPB and OPA also organize annual or semi-annual meetings for all training grant directors. Topics have included: review of available institutional resources including mentor training for faculty and trainees, discussion of current challenges and resource needs, presentation on use of the database and staff support for preparation of training grant tables, panel discussion with UCLA faculty who have served as T32 grant reviewers, approaches to training in rigor and reproducibility, and strategies for enhancing recruitment of underrepresented and disabled trainees. The

recent decision to integrate GPB and OPA into a single research training unit is intended to promote additional approaches for synergies across training programs. [program can add other examples of particular relevance].

Although there are a large number of training programs, the combination of DGSOM, the College, and Schools of Engineering, Public Health, Nursing, and Dentistry on a single campus easily presents sufficient numbers of qualified research faculty and trainees (over 1000 each) to maintain the excellence of existing programs and create new programs to meet emerging training needs. The size and collaborative nature of UCLA has generated a rich array of shared resources, some illustrated in the descriptions above, to support the full spectrum of training programs. With these resources, UCLA commits to continued support of the [name of program].

In summary, we look forward to continuing institutional support to enhance recruitment and training of the next generation of talented, creative leaders in [program name or area].

Sincerely,

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