

SURPAS

Long Range Planning Report: The Future of Postdocs at Stanford

Prepared by the SURPAS Long Range Planning Committee

2023



Acknowledgements

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This Report was prepared by the Long Range Planning Committee over the course of several years. The following individuals were members of the Committee during that time:

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Land Acknowledgement

We acknowledge that the land on which we live and work in and around Stanford University is the ancestral and unceded land of the Muwekma Ohlone Tribe. As uninvited guests on these lands, we are beneficiaries of the ongoing displacement of the Ohlone people. We pay our respects to the Native peoples, past and present. The Muwekma Ohlone Tribe is seeking to restore federal recognition of their sovereignty. Learn more at muwekma.org.

EXECUTIVE SUMMARY

Postdocs at Stanford are an extremely highly educated group of researchers drawn from all over the world. As of 2023, there are nearly 2500 postdocs at Stanford. Since 1998, postdocs at Stanford have been represented by SURPAS (the Stanford University Postdoc Association).

Purpose

The [purpose](#) of the Long Range Planning process was **to build a shared collective vision of the future of postdocs at Stanford**. That process led to the creation of this Report.

This Report aims to serve a number of subsidiary purposes:

- To communicate a vision for the future of postdocs at Stanford and to coordinate continued advocacy efforts towards strategic goals in pursuit of that vision.
- To provide a snapshot-in-time record of postdoc advocacy efforts at Stanford.
- To communicate the conditions and thoughts of postdocs at Stanford to others, including non-postdoc allies and postdocs at other institutions.

Outline

The body of this Report contains four sections, addressing:

1. The broader [occupational context](#) of the postdoc population in the US;
2. The [historical context](#) of postdoc representation and advocacy at Stanford;
3. The [current mindset of postdocs](#) at Stanford, ascertained through focus groups; and,
4. Contemporary [advocacy efforts](#) of postdocs at Stanford.

The Report concludes with an extensive list of [recommendations](#) broken down by specific issues faced by postdocs and action items for specific stakeholders.

Findings

- Postdocs in academia are underpaid.
- In real terms, postdocs at Stanford are additionally underpaid and have lost ground in recent years relative to local cost of living.
- Postdocs at Stanford with dependents face extreme financial pressures.
- Most postdocs in academia do not become tenure-track researchers.
- Postdocs at Stanford crave more structured training and more information on expectations and outcomes.
- Postdocs at Stanford exist in an occupational limbo; not students, not staff.
- Postdocs at Stanford are underappreciated, performing labor that goes unacknowledged and/or uncredited.
- Postdocs at Stanford appreciate the resources and opportunities for research provided by Stanford, and love the vibrant postdoc community.
- Postdocs at Stanford continue to face Justice, Diversity, Equity, Inclusion, and Belonging issues. However, these are overshadowed by difficulties in fulfilling basic human needs.
- Postdocs at Stanford face job instability in the short term because of single-year contracts and in the longer term because of the 5-year postdoc term limit at Stanford.
- Postdocs at Stanford who are international (>60%) face additional job and life instability due to single-year visa extensions.

Vision

Our Vision for the future is:

Postdocs at Stanford should be enabled to perform the best research possible, and be supported to achieve success in their subsequent careers inside or outside of academia.

Principles

- **Postdocs should be appreciated and not exploited.**
 - Postdocs should receive salary and benefits commensurate with their existing high level of training and their expected contributions to the research enterprise.
 - Postdocs at Stanford should receive yearly increases in their salary in accordance with their increasing research experience (as is done by the NIH and was done in the past at Stanford).
 - Postdocs at Stanford should be classed as advanced research staff and not as students or trainees, and receive employment benefits in accordance with this.
- **Postdocs' basic needs should be met.**
 - On top of the level of compensation that acknowledges postdocs' experience and contributions (see above), postdoc salary and benefits at Stanford should be increased to account for the high cost-of-living of the local area.
 - The minimum salary should be set at a level such that postdocs do not need to spend more than 30% of their income on housing.
 - Postdocs should have access to healthcare plans that meet the needs of themselves and their dependents and are accessible and affordable on the minimum salary.
 - Stanford should provide childcare facilities such that all postdocs are able to find a place for their child/ren and postdocs should not be required to spend more than 30% of their income on childcare.
- **Postdocs should have job security.**
 - The postdoc period should not be limited to 5 years. There should be no distinction made between "postdocs" and "research staff". Postdocs are advanced research staff.
 - Postdocs should be employed as permanent staff, with provisions to terminate their employment if explicitly stated conditions are not met, rather than yearly contracts.
 - Work visas should be sought and supported to reflect this permanent staff work status in order to allow for international researchers to continue to work at Stanford as now.
- **Postdocs should receive job structure and career support outside of their immediate research groups.**
 - Structured guidance should be provided to postdocs at multiple points throughout their time at Stanford, ideally in a cohort setting. The existing postdoc orientation session run by OPA is appreciated but overwhelming.
 - Career tracking of past postdocs should be undertaken and the findings communicated to current postdocs in the context of career planning.
 - Group leaders should receive training to improve their mentorship skills.
- **Postdocs should be actively included in University business.**
 - Postdocs should continue to have representatives sit on University committees and working groups, ideally with voting rights.
 - Postdocs should have a formal mechanism for raising issues to the Faculty Senate.

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Purpose, Mission, & Process for SURPAS Long Range Planning

Beginning in early 2020, SURPAS has been engaged in a Long Range Planning process, the purpose of which is **to build a shared collective vision of the future of postdocs at Stanford.**

During this collaborative process, the SURPAS Long Range Planning Committee (“the Committee”) sought participation and feedback from all interested postdocs in order to formalize the expectations, hopes, and goals regarding life as a postdoc.

The mission of the Committee was **to conduct a community-oriented, bottom-up process to assess the broad vision and strategic goals of the postdoc community and provide clear communication of these to all postdocs now and into the future, as well as to other stakeholders.**

The Long Range Planning process sought to be a means of detailing what work postdocs believe needs to be done, providing recommendations for how to achieve change, and setting mile markers that future postdocs can use in their advocacy efforts.

The Committee conducted three major information-gathering efforts:

- the first was to pull together an understanding of the competitive landscape for postdocs based upon published research, career-focused reporting, and labor statistics;
- the second was to review past reports, presentations, and other documents produced by former postdoc representatives at Stanford, predominantly those operating within SURPAS or one of the postdoc affinity groups (Stanford Black Postdoc Association, Stanford Latinx Postdoc Association, LGBTQIA+ Postdocs, Stanford Chinese Postdoc Association); and,
- the third was to conduct a series of focus groups with postdocs currently at Stanford to gain a deeper understanding of what postdocs are thinking about regarding their own experiences and the future of postdocs at Stanford.

The Committee then synthesized the information gathered through these three major efforts into the present Long Range Planning Report (“the Report”), which is to be made publicly accessible.

Many issues brought before SURPAS require sustained advocacy for a number of years to bring about change. This Report aims **to serve as a vehicle to coordinate advocacy for postdocs through time.**

The Committee’s intention was to create a living document, with each new generation of postdocs engaging in their own Long Range Planning process to determine what a postdoc means to them.

This Report contains recommendations of action items for postdocs and other stakeholders within and beyond the University community. Recommended action items for other stakeholders within the University will clearly delineate postdoc goals and expectations of those in leadership positions.

The Committee recognizes that many postdocs will go on to leadership roles in their future careers and hopes that the information and recommendations contained within this Report may additionally provide a roadmap for progress to be made beyond Stanford.

The Long Range Planning process and this Report were deliberately focused on foregrounding the voices and efforts of postdocs themselves: “**What do postdocs think about the postdoc role?**”. Postdocs are oftentimes overlooked within the research enterprise and decisions are made on their behalf; sometimes with postdoc representatives in the room, sometimes not. No doubt postdocs exist within a complex research ecosystem and postdocs benefit greatly from the efforts of non-postdoc allies. However, with respect to the postdoc role, the thoughts of postdocs themselves should be paramount.

We hope to engage with the University as a unique and important stakeholder group while Stanford continues to execute the vision that emerged from the University-wide long range planning process.¹

The Long Range Planning work contained within this Report spanned approximately January 2020 to December 2022. This means it was conducted in the context of: the COVID-19 pandemic; the murder of George Floyd (and countless other Black community members); the January 6, 2021 insurrection at the US Capitol Building; multiple conservative Supreme Court decisions, including the striking down of the constitutional right to an abortion (Roe vs Wade, 1973); Stanford's President becoming implicated in image manipulation in published papers; and the largest mobilization of academic workers for labor rights in United States history as 48,000 postdocs, graduate students, and researchers across the University of California system went on strike. Postdocs at Stanford were and continue to be impacted by all of these events.

Importantly, the Committee was inspired and deeply influenced by the leadership of the Black community at Stanford in their clear and explicit statement of goals and values published in The Stanford Daily on Juneteenth 2020, entitled “Opinion: Letter to the President and Provost: Action items for achieving racial equity”.² The Recommendations within this Report seek to emulate this by detailing action items that are similarly clear and directed.

The Committee actively sought to center the voices of the most marginalized members of our community through a process of outreach and engagement with postdoc affinity groups such as the Stanford Black Postdoc Association, the LGBTQIA+ Postdoc Group at Stanford, and the Stanford Latinx Postdoc Association.

¹ Stanford: Our Vision. Accessed Dec 10, 2022 at <https://ourvision.stanford.edu/>

² Stanford Black Community Members, (Jun 19, 2020) “Opinion: Letter to the President and Provost: Action items for achieving racial equity”. *The Stanford Daily*. Accessed Dec 10, 2022 at <https://stanforddaily.com/2020/06/19/letter-to-the-president-provost-of-stanford-university-concerning-a-george-floyd-action-plan/>

Postdoc at Stanford Background

Defining a “Postdoc”

This section of the Report concerns how postdocs are officially defined by various institutions involved in the academic research enterprise.

In 2007, the National Institutes of Health (NIH) and the National Science Foundation (NSF) agreed on the definition of a postdoc as “an individual who has received a doctoral degree (or equivalent) and is engaged in a temporary and defined period of mentored advanced training to enhance the professional skills and research independence needed to pursue his or her chosen career path.”³ For intramural postdocs, the NIH further clarifies that “applicants for postdoctoral [sic] must have less than 5 years of relevant research experience since the receipt of their doctoral degrees.”⁴

Stanford University’s Research Policy Handbook⁵ defines a postdoc as the following:

“A Stanford postdoctoral scholar is a non-matriculated trainee, in graduate student status, in residence at Stanford University pursuing advanced studies beyond the doctoral level in preparation for an independent career. Postdoctoral Scholars are appointed for a limited period of time and may participate on Stanford research projects and/or may be supported by external awards or fellowships. In all cases, their appointment at Stanford is for the purpose of advanced studies, research, and training under the mentorship of a Stanford faculty member.”

The Office of the Vice President for Research at MIT says postdocs “are valued members of MIT’s community, playing critical roles as trainees and partners in our academic research enterprise. Working under the supervision of MIT faculty members, postdoctoral scholars come to MIT to develop their scholarly competence... Postdocs join the MIT community soon after receiving their doctorate, and their length of stay varies depending on area of interest and individual circumstances. Since the postdoctoral position is not intended to be long-term, MIT limits the postdoctoral period to four years, with promotion to the rank of senior postdoctoral associate after three years. Extension for a fifth year or promotion to research scientist requires a dean’s or VPR approval.”⁶ Postdocs can be appointed as Postdoctoral Fellows or Associates based on whether researchers receive a salary from MIT or are paid by fellowship or stipend.⁷

³ https://grants.nih.gov/training/Reed_Letter.pdf Accessed March 20, 2023.

⁴ https://www.training.nih.gov/resources/faqs/postdoc_irp Accessed March 20, 2023.

⁵ Stanford University Vice Provost for Graduate Education, “Research Policy Handbook: 10.3 Postdoctoral Scholars”. Accessed Dec 9, 2022 at <https://doresearch.stanford.edu/policies/research-policy-handbook/non-faculty-research-appointments/postdoctoral-scholars>

⁶ MIT Office of the Vice President for Research, The Postdoctoral Position. <https://postdocs.mit.edu/postdoctoral-position> Accessed March 20, 2023.

⁷ MIT Office of the Vice President for Research, Defining Postdoc Fellows and Associates. <https://postdocs.mit.edu/postdoctoral-position/defining-postdoc-fellows-and-associates> Accessed March 20, 2023.

Postdocs at Harvard may be employed by the Faculty of Arts and Sciences/School of Engineering and Applied Sciences (FAS/SEAS), Harvard Medical School, or the School of Public Health. The FAS Postdoctoral Fellows' Handbook states "Postdoctoral scholars (postdocs) come to Harvard University for further training in their chosen discipline under the general supervision of one or more Harvard faculty members. The FAS and SEAS recognize that postdocs are critical engines to our research and educational enterprise, contributing significantly to the discovery and creation of new knowledge, and helping to guide the research of undergraduate and graduate students... Postdoctoral Fellows and Research Associates are not faculty, staff, or students, but researchers in training."⁸ The Office for Postdoctoral Fellows at Harvard Medical School says "the engine of the basic research laboratories at HMS is the postdoctoral workforce," but admits that "as trainees, postdoctoral fellows are not considered students, staff, or faculty and therefore exist outside of the established policies and procedures for those populations."⁹ At the School of Public Health, "postdoctoral research fellows are trainees working in apprenticeship mode in preparation for a career as scientific professionals."¹⁰

The FAS Postdoctoral Fellows' Handbook defines the term "Postdoc" as research scholars who have recently completed a doctoral degree and are temporarily engaged in research in the FAS/SEAS and divides them into four categories of researchers⁸:

- **"Employee" postdocs**, who are supported by research grants and contracts or internal Harvard funding under the direction of a Harvard Principal Investigator.
- **"Stipendiary" postdocs**, who receive a fellowship that is managed by Harvard University. In this case the fellow is paid through Harvard.
- **"External" postdocs**, who are paid directly by an external entity and are, therefore, not paid through Harvard.
- **"Research Associates"**, who, ordinarily, have had at least three years of postdoctoral experience and are continuing their research under the general supervision of one or more faculty members.

Postdocs at UC Berkeley are engaged in "rigorous research experiences that offer recent Ph.D. recipients a chance to pursue their research agendas, build on their degrees, hone their skills and abilities, prepare to launch their professional careers, and take the next step in their professions... Initial postdoc appointments are full-time positions that typically last between one

⁸ FAS Postdoctoral Fellows' Handbook Faculty of Arts & Sciences (FAS), Harvard University. Accessed March 20, 2023 at

https://facultyresources.fas.harvard.edu/files/facultyresources/files/fas_postdoc_handbook_final_-_sept_2021.pdf?m=1633369350

⁹ The Office for Postdoctoral Fellows at Harvard Medical School 2017 Annual Report (most recent available) Accessed March 20, 2023 at

https://postdoc.hms.harvard.edu/files/postdoc.hms/files/opf.report.2017_finalv4.pdf

¹⁰ Harvard TH Chan School of Public Health Office of Faculty Affairs, Responsibilities of Postdoctoral Fellows and Faculty Supervisors Accessed March 20, 2023 at

<https://www.hsph.harvard.edu/faculty-affairs/postdoctoral-research-fellows/postdoc-guidelines-2/>

and two years, up to a maximum reappointment of five years with a rare exception of a sixth year.”¹¹ Across the entirety of the UC system, postdocs are officially defined in the tentative agreement unionized postdocs ratified in late 2022¹² as (1) “an individual who has received a doctoral degree (or equivalent) and is engaged in a temporary and defined period of mentored advanced training to enhance the professional skills and research independence needed to pursue his or her chosen career path. (2) Postdoctoral Scholars train under the direction and supervision of faculty mentors in preparation for academic or research careers. (3) In addition to pursuing advanced preparation in research, Postdoctoral Scholars may be approved to engage in other activities to enhance teaching and other professional skills. If formal teaching duties are assigned, a Postdoctoral Scholar will be assigned both a Postdoctoral Scholar title and an appropriate teaching title. (4) Ordinarily, Postdoctoral Scholars are not permitted to serve as principal investigators on extramurally sponsored contracts or grant applications. Because the University recognizes that proposal preparation is an important aspect of most postdoctoral training, campuses may permit Postdoctoral Scholars to serve as principal investigators on such applications that are restricted to Postdoctoral Scholars, or in other circumstances approved by the University. **Applications for Principal Investigator status shall be carefully considered.** (5) The provisions of this section are not grievable.” Depending on funding source, postdocs at UC may be classified according to different employment codes while all falling under the above definition.

Doctorate-holding researchers at Stanford may only be a “postdoc” for a maximum of five years. It is not uncommon for postdocs who have reached the five-year time limit to be appointed as a research staff member for an additional one to two years. During this time, day-to-day work responsibilities (most often) remain the same as when the researcher was a “postdoc”. These researchers can continue working at Stanford for years on consecutive short term contracts.

Some early career PhD researchers come to Stanford with external funding. These researchers are sometimes classified as Visiting Scholars rather than postdocs and are therefore not guaranteed to be paid the University Minimum Postdoc Salary depending on their individual funding source. There are many non-tenure track PhD-holding researchers at Stanford, only some of whom are officially classified as postdocs.

For academic workers at Stanford, these definitions often feel like we are Schrödinger’s Postdoc - we exist in a superposition of student and employee until observation collapses us into whatever category is convenient for the University in that particular case.¹³

¹¹ UC Berkeley VPSA, Postdoc Appointments. Accessed March 20, 2023 at <https://vspa.berkeley.edu/postdoc>

¹² UC-UAW Successor Bargaining Postdoctoral Scholars, Article 26 - Titles and Classifications. Accessed March 20, 2023 at https://ucnet.universityofcalifornia.edu/labor/bargaining-units/px/docs/px_tentative_agreements_effective_12-09-2022.pdf

¹³ This adheres to the Copenhagen Interpretation.

Postdoc Demographics at Stanford

The following demographic information was taken from the publicly accessible version of the Stanford University IDEAL Dashboard representing the 2022-2023 academic year.¹⁴ In total, there are 2,474 postdocs with a male:female ratio of 54:46 (these data do not include an intersex option). More than 60% of postdocs are international. There are more postdocs than faculty (2,304). There are three times as many undergraduates (7,761) as there are postdocs and nearly four times as many graduate students (9,565). There are six and a half times as many staff (16,107) as postdocs. Nearly half of postdocs have dependents. Based on insurance enrollment data shared with SURPAS in 2022, 26% of postdocs have their spouse as a dependent on their health insurance, 15% cover both spouse and children, and 2% cover children with no spouse. That adds to a total of 43% of postdocs with dependents, which serves as a lower limit; some postdocs have partners working outside of academia who may cover postdocs or their families with their health insurance.

¹⁴ IDEAL Dashboards Accessed March 17, 2023 at <https://ideal.stanford.edu/data-reports/ideal-dashboards>

Population Headcount Comparison ?

Academic Year: 2022-23 | School/Area: (All) | Race/Ethnicity Detail: Race/Ethnicity Underrepresented Minorities

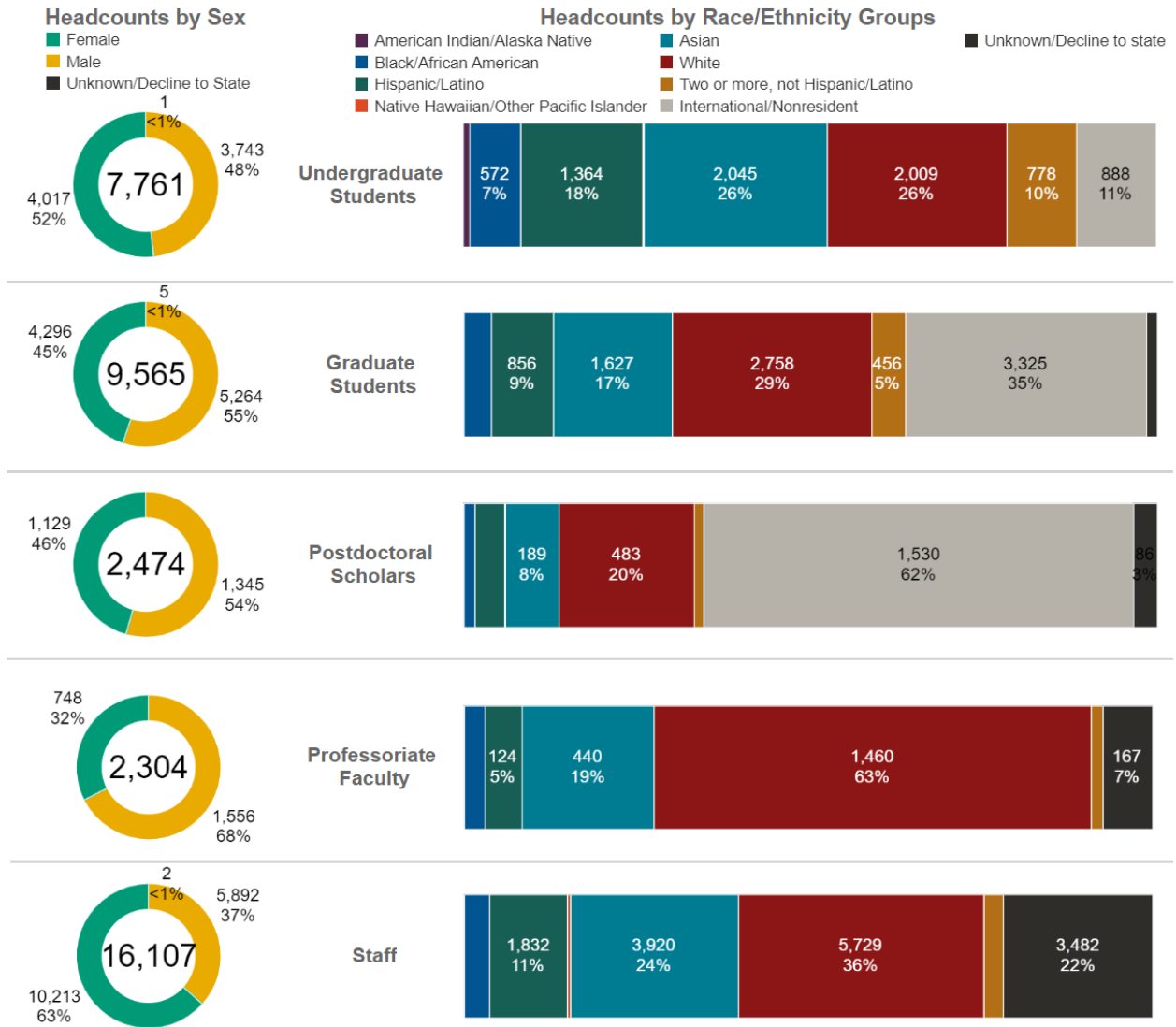


Figure 1. Population Headcount Comparison of Undergraduate Students, Graduate Students, Postdoctoral Scholars, Professoriate Faculty, and Staff. Total numbers for each population are included as well as population breakdown by binary sex (Female/Male/Decline to State) and Race/Ethnicity Groups. Source: IDEAL Dashboards <https://ideal.stanford.edu/data-reports/ideal-dashboards>.

In addition to the slice-in-time data about various populations within Stanford, the IDEAL dashboard has headcount trends of populations between the 2010-2011 and 2022-2023 academic years broken down across the following demographics: sex, race/ethnicity, and underrepresented minority status.

Postdoc Composition by Sex

In the 2010-2011 academic year, the postdoctoral population was 60% male and 40% female, with a total population of 1,846. In 2022-2023, there were 2,474 postdocs with a 54% male/46% female split. The change in total postdoctoral population during this time represents a 1.3x increase. Sex ratios for other groups in 2022-2023 are as follows (male:female): Undergraduate: 48:52; Graduate Student: 55:45; Professoriate Faculty: 68:32; Staff: 37:63. There is a clear skew in the breakdown of populations by sex for more senior academic positions, where the professoriate faculty is heavily skewed towards male and academic staff is heavily skewed towards female. This stands in contrast to the relative parity between sexes at earlier career stages. Only data on binary sex is available via the IDEAL Dashboard currently. The University is undertaking a Gender Data Enablement Project to address this shortcoming.¹⁵

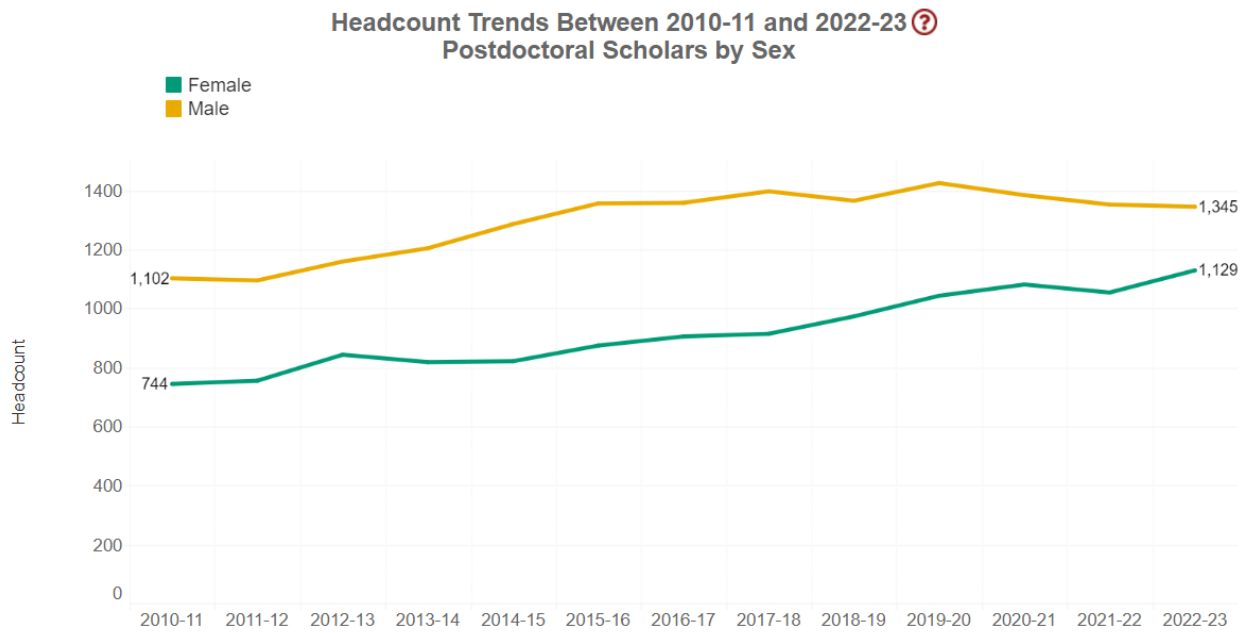


Figure 2. Headcount trends between 2010-2011 and 2022-2023 for Postdoctoral Scholars by sex. Source: IDEAL Dashboards <https://ideal.stanford.edu/data-reports/ideal-dashboards>.

¹⁵ Stanford IDEAL Gender Data Enablement Project. <https://ideal.stanford.edu/data-reports/gender-data-enablement-project>

Postdoc Composition by Ethnicity/Race

The majority of the Stanford postdoc community is international. This is not further disambiguated by nation of origin or race/ethnicity, making assessment of demographics for a majority of the postdoctoral population limited. In the 2010-2011 academic year, 57% of postdocs were international. That proportion increased to 62% in the 2022-2023 academic year. The next largest group of postdocs are white postdocs, comprising 23% and 20% in the 2010-2011 and 2022-2023 academic years, respectively. In 2010-2011, 7% of postdocs were Asian; in 2022-2023, that percentage was 8%. Approximately 4% of the postdoc population identified as Hispanic/Latino and approximately 2% identified as Black/African American in 2022-2023.

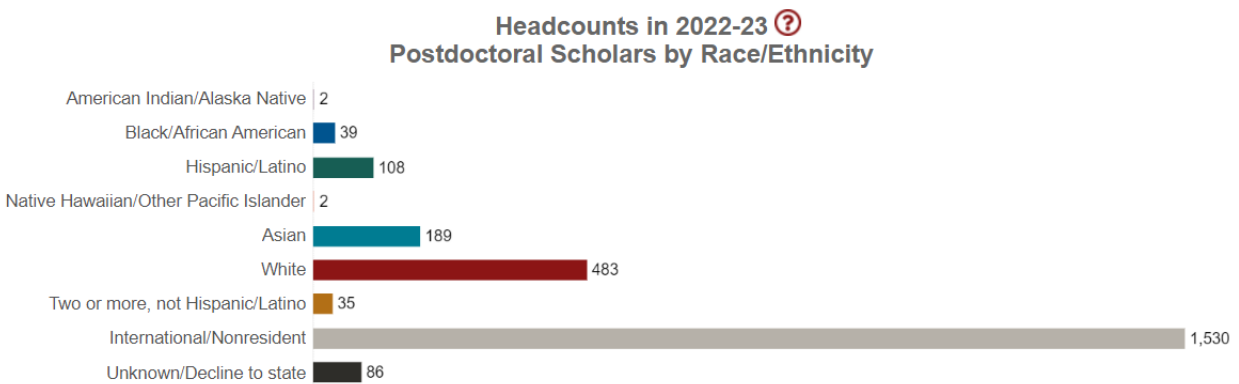
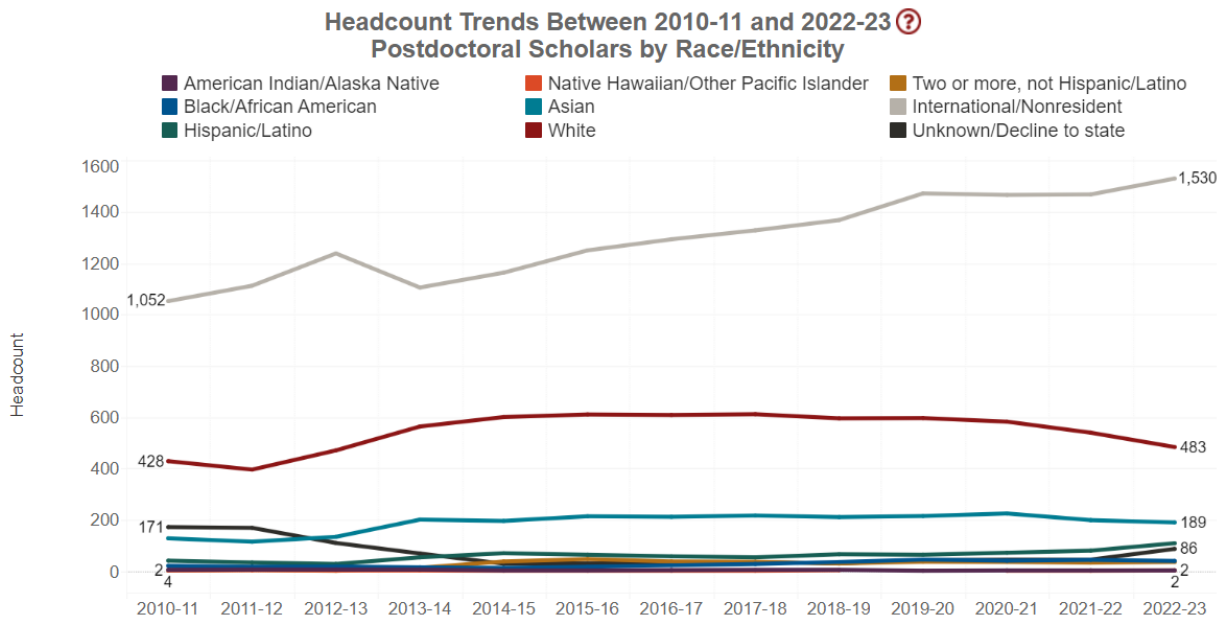


Figure 3. Headcount trends between 2010-2011 and 2022-2023 for Postdoctoral Scholars by Race/Ethnicity. Source: IDEAL Dashboards <https://ideal.stanford.edu/data-reports/ideal-dashboards>.

Postdoc Composition by Underrepresented Minority Status

In the breakdown of postdocs by underrepresented minority status, international scholars, the majority of our community, are lumped into the single category of international/nonresident. This

is not further disambiguated by national origin or underrepresented status. In the 2010-2011 academic years, 30% of postdocs were not underrepresented minorities. That fraction remained relatively flat at 28% in 2022-2023. Underrepresented minorities went from 3.5% to 7% of the postdoctoral population between the 2010-2011 and 2022-2023 academic years. That increase in underrepresented minorities seems to have come from a change in the number of postdocs in the unknown/decline to state category, which went from 9% to 3% of postdocs over the same time frame.

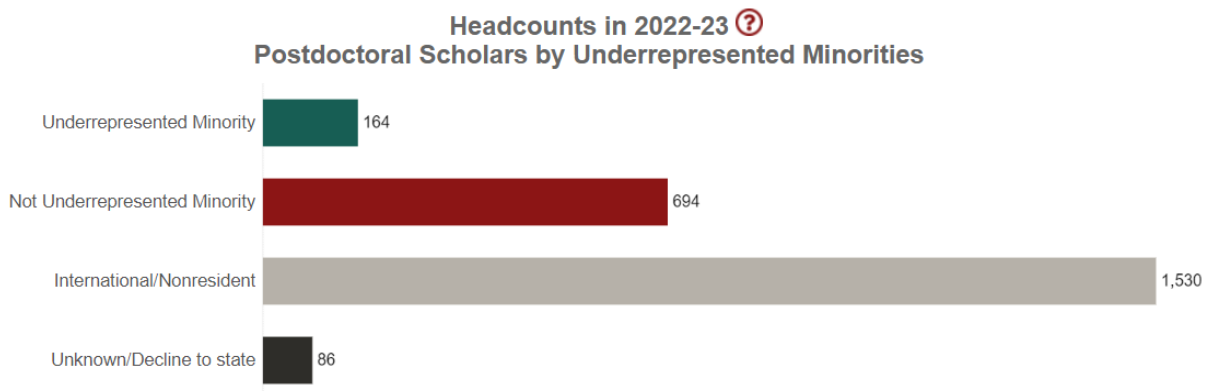
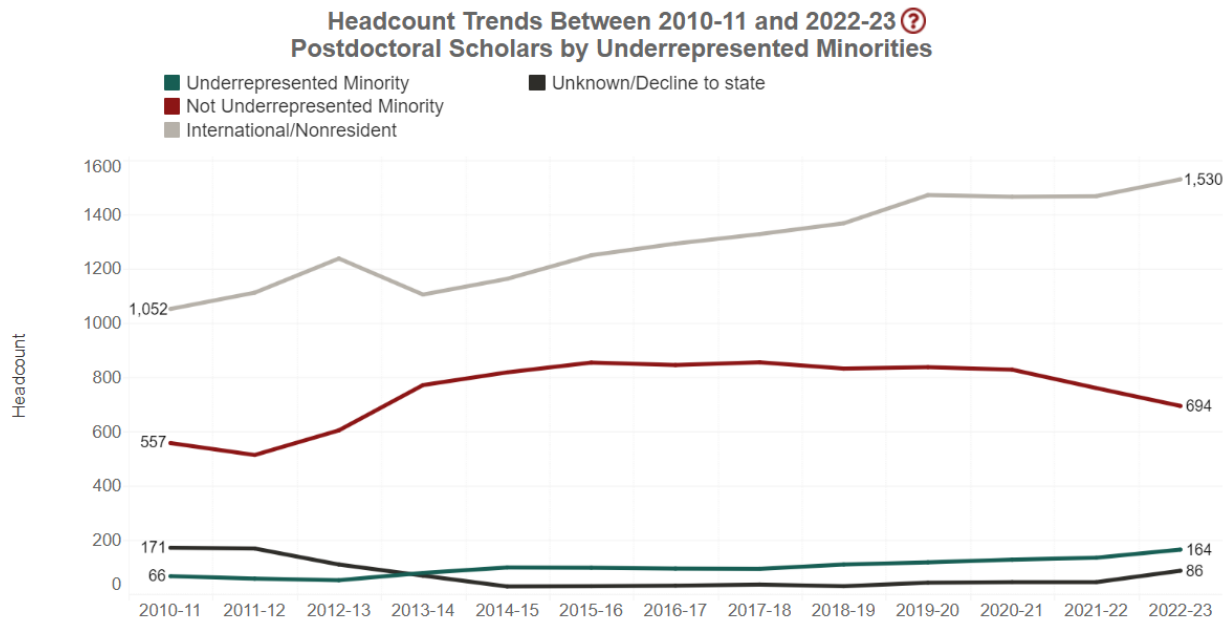


Figure 4. Headcount trends between 2010-2011 and 2022-2023 for Postdoctoral Scholars by status as an Underrepresented Minority. Source: IDEAL Dashboards <https://ideal.stanford.edu/data-reports/ideal-dashboards>.

Missing from the IDEAL Dashboard data is information on the median tenure of postdocs. How long an individual postdoc remains at the university and information of where postdocs obtain permanent employment after leaving Stanford are absent. Also absent is information regarding previous employment (e.g. coming to Stanford directly from graduate school vs. from another postdoc position).

Opportunities for Early Career Researchers: Competitive Landscape for Postdocs

Introduction

This section of the Report lays out general trends and figures concerning the postdoctoral workforce, firstly in the United States and then at Stanford University specifically. We draw out key points from the available data, including: in the last ten years, the postdoc population has largely stopped growing while the number of doctorate-holding non-faculty researchers has continued to rise; more than half of postdocs are on temporary visas; postdocs in academia are underpaid; postdoctoral training is required for tenure-track jobs (of which there are few) but not required for non-academic jobs; postdocs at Stanford are paid more than postdocs at many other locations but the cost of living around Stanford is much higher than at most other locations; the Stanford Postdoc Minimum Salary has not kept pace with inflation in recent years; particular groups of postdocs at Stanford are most affected by financial pressures, such as those with dependents; postdocs at Stanford have several avenues for representation within the University but continue to be overlooked.

The data in this section are drawn from source documents produced and published by: the federal government, such as the Bureau of Labor Statistics, the National Academies, National Science Foundation, and National Institutes of Health; state and local governments, such as the California Department of Housing and Community Development; academic researchers and academic journals, whose reports are often based on national or international surveys of postdocs; and, reporting by various media outlets, including The Stanford Daily.

Postdocs in the US

Changing Workforce Demographics

Postdocs are a large and critical part of the US academic research ecosystem. In April 2022, the National Science Foundation estimated that there were more than 65,000 academic postdocs working in the United States as of 2020 in the fields of Science, Engineering, and Health.¹⁶ This may be a substantial underestimate due to inconsistent job titles across or within institutions.¹⁷ The number of Postdoctoral appointees in the US increased steadily between 1980 and 2005, then rose sharply between 2005 and 2010, before largely leveling off between

¹⁶ National Science Foundation, (April 5, 2022) “Survey of Graduate Students and Postdoctorates in Science and Engineering: Fall 2020” Data Tables | 22-319. Accessed Dec 9, 2022 at <https://ncses.nsf.gov/pubs/nsf22319>

¹⁷ Polka, Krukenberg, McDowell, (April 15, 2015) “A call for transparency in tracking student and postdoc career outcomes” *Mol. Bio. Cell*. Accessed Dec 9, 2022 at <https://www.molbiolcell.org/doi/pdf/10.1091/mbc.e14-10-1432>

2010 and 2020 (**Figure 5**). The number of doctorate-holding Non-Faculty Researchers also increased sharply in the two years before 2010 and have since risen more quickly than the numbers of Postdocs. The growth in Non-Faculty Researchers may represent Postdocs transitioning into staff researcher roles or teaching-focused roles.

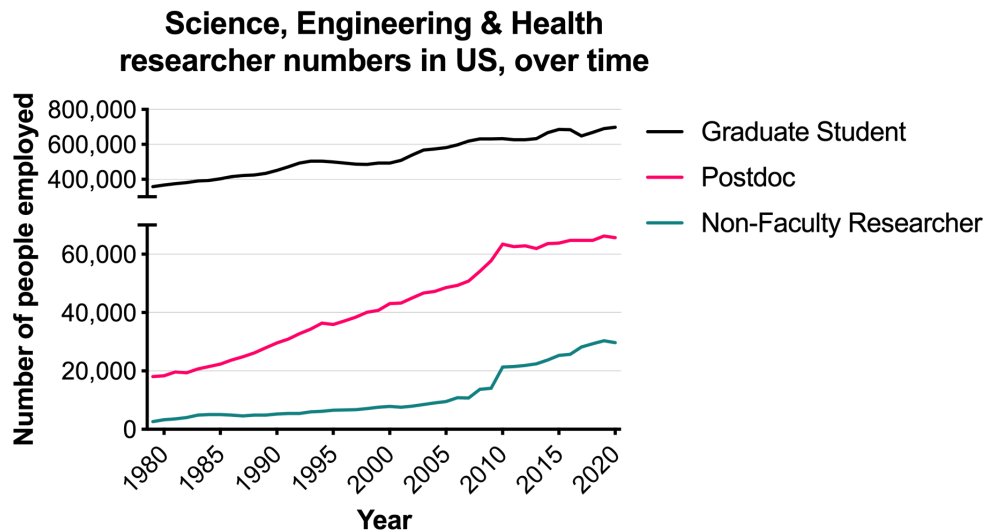
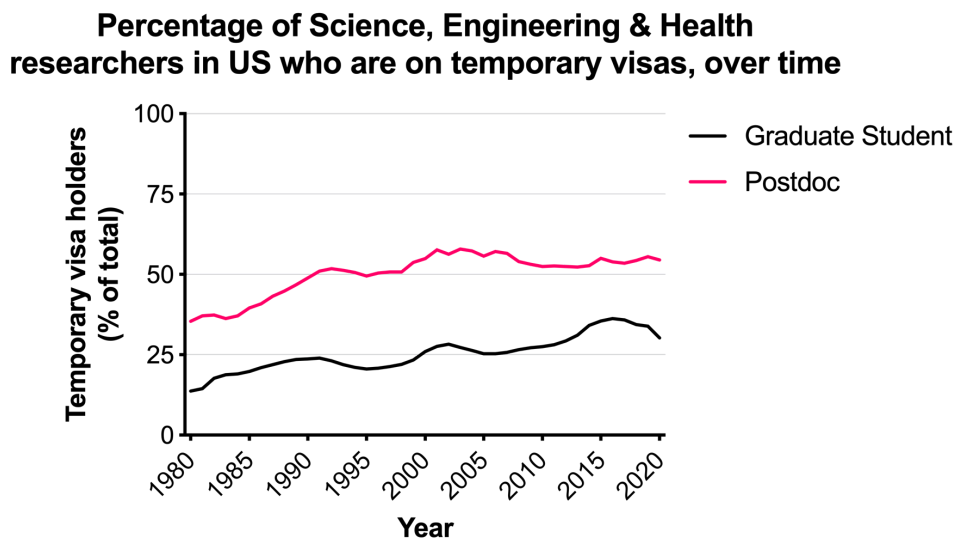


Figure 5. Number of Graduate Students, Postdoctoral appointees, and doctorate-holding Non-Faculty Researchers within Science, Engineering, and Health in the US academic workforce between 1979-2020. Source: NSF¹⁸. Refer to Appendix D: Data Tables for raw data used to prepare this graph.

The percentage of both Graduate Students and Postdoctoral appointees who are temporary visa holders (i.e. they are not US citizens or permanent residents) has increased since 1980 (**Figure 6**). For the past 20 years (2000 to 2020), a clear majority of Postdocs working in the United States have been on temporary visas.



¹⁸ National Science Foundation, (Apr 5, 2022) "Survey of Graduate Students and Postdoctorates in Science and Engineering: Fall 2020". Accessed Dec 10, 2022 at <https://ncses.nsf.gov/pubs/nsf22319>

Figure 6. The proportion of Graduate Students and Postdoctoral appointees working in the US who are temporary visa holders (i.e. not US citizens or permanent residents) between 1980-2020. Data for doctorate-holding Non-Faculty Researchers were not available. Source: NSF¹⁹. Refer to Appendix D: Data Tables for raw data used to prepare this graph.

Postdoc subpopulations within different fields of study have grown at different rates, with those fields with fewer postdocs growing most rapidly. For instance, between 2000 and 2008, the number of engineering and social sciences postdocs increased by 64% and 32%, respectively, whereas in life sciences and physical sciences postdoc numbers increased by 22% and 10%, respectively.²⁰ Pursuing a postdoc is now a very common career choice for recipients of science and engineering doctorates. From 2009 to 2018, 45.0% of physical sciences and engineering doctoral recipients and 64.8% of life sciences doctoral recipients took postdoctoral employment upon graduation.²¹ Most postdocs (70-80%) were employed in the academic sector, as opposed to in industry or government sectors. Of those who started a postdoc in academia, one third of them (33-35%) worked in industry 5-6 years later, while more than half (57-62%) stayed in academia, although only 25-33% were in tenure-track positions. Of those who started a postdoc in industry, 65-84% were still in industry 5-6 years later.

Doctorate-holding Non-Faculty Researchers, a group that does not include postdocs, are more numerous than ever and are likely to experience low job security. There are minimal data available on the employment conditions of doctorate-holding Non-Faculty Researchers, particularly in comparison to Postdocs. It is not clear, for instance, what proportion of Non-Faculty Researchers are in permanent staff scientist positions or on short-term research contracts. Nor is it clear whether or in what way the work performed by Non-Faculty Researchers differs from that performed by Postdocs. We also do not know the immigration status of these workers. Research has shown that the salaries of postdocs are significantly impacted by their precise job title.²² Non-Faculty Researchers may in reality represent a Postdoc by another name. More information is needed on the rapidly growing Non-Faculty Researcher population.

Non-tenure track positions provide little job security. The proportion of non-tenure track full-time faculty increased from 8.7% to 27.1% at public doctoral universities and from 12.5% to 30.0% at private nonprofit doctoral universities in the decade between 2008-2018, indicating an increase

¹⁹ National Science Foundation, (Apr 5, 2022) "Survey of Graduate Students and Postdoctorates in Science and Engineering: Fall 2020". Accessed Dec 10, 2022 at <https://ncses.nsf.gov/pubs/nsf22319>

²⁰ Cantwell, Taylor. Rise of the science and engineering postdoctorate and the restructuring of academic research. *The Journal of Higher Education*. 2015;86(5):667–96; and: Institute of Medicine. *The Postdoctoral Experience Revisited*. Washington, DC: The National Academies Press; 2014.

²¹ Denton, Borrego, Knight, (Feb 2, 2022) "U.S. postdoctoral careers in life sciences, physical sciences and engineering: Government, industry, and academia" *PLoS ONE*, 17(2): e0263185. <https://doi.org/10.1371/journal.pone.0263185>

²² Athanasiadou, Bankston, Carlisle, Niziolek and McDowell (2018) "Assessing the landscape of US postdoctoral salaries" *Studies in Graduate and Postdoctoral Education*. Vol. 9 No. 2, pp. 213-242. doi: 10.1108/SGPE-D-17-00048

in contingency and decrease in stability for the academic workforce.²³ In other words, the tenure track roles most postdocs are pursuing are being removed from the workforce and the lost labor is being performed by those with little stability. Only about a fifth (22%) of contracts for non-tenure track faculty are multi-year and nearly half (47.2%) are for less than 12 months.²⁴ As examples, contingent faculty and adjunct professors, two types of non-tenure track faculty, have been reported to face substantial difficulties up to and including struggling with homelessness.²⁵

Short contracts and low pay for teaching-related roles lead to high staff turnover. Increasing reliance on contingent faculty to teach creates instability in the academic workforce. Each year between 2015 and 2020, at least a quarter of lecturers within the University of California system did not return to teach.²⁶ Low compensation coupled with uncertain, short-term contracts push the skilled PhD workforce that fills teaching positions at many major universities away from academia. This churn in the teaching workforce may also negatively affect student learning outcomes by decreasing teaching continuity. At present, it is unclear what proportion of Postdocs transition to stable long-term employment versus continuing in unstable short-term positions.

Postdocs are critical for the educational outcomes of graduate students, performing an integral role in the research and education missions of the University. Postdocs, along with graduate student workers, senior scientists, and research associates, serve as the skilled workforce that carries out the research grants obtained by faculty who serve as principal investigators. Postdocs also bring in their own funding through fellowships and career development grants. Postdocs are indispensable in graduate education, as peer reviewed research has demonstrated that postdoc engagement is a better predictor of graduate student skill

²³ Almanac 2019, (Aug 18, 2019) "Change in Percentages of Full-Time Faculty Members Who Were Non-Tenure-Track, by Institutional Classification, 2008-9 and 2018-19". *The Chronicle of Higher Education*. Accessed Jan 22, 2023 at

<https://www.chronicle.com/article/change-in-percentages-of-full-time-faculty-members-who-were-non-tenure-track-by-institutional-classification-2008-9-and-2018-19/>

²⁴ Almanac 2019, (Aug 18, 2019) "Contract Lengths of Non-Tenure-Track Faculty Members, Fall 2017". *The Chronicle of Higher Education*. Accessed Dec 9, 2022 at

<https://www.chronicle.com/article/contract-lengths-of-non-tenure-track-faculty-members-fall-2017/>

²⁵ Benderley, (Jun 10, 2019) "A warning from the academic underground of adjuncts and contingent faculty". *Science: Careers*. Accessed Dec 9, 2022 at

<https://www.science.org/content/article/warning-academic-underground-adjuncts-and-contingent-faculty>.

Johnson, (Apr 5, 2019) "Life On (and Off) the Tenure Track". *Inside Higher Ed*. Accessed Dec 9, 2022 at <https://www.insidehighered.com/advice/2019/04/05/tenure-track-faculty-members-can-and-must-support-their-adjunct-colleagues-opinion>.

San Jose KPIX 5, (Aug 30, 2017) "Homeless San Jose State Professor Struggles Living Out Of Her Car". *CBS San Francisco*. Accessed Dec 9, 2022 at

<https://www.cbsnews.com/sanfrancisco/news/homeless-san-jose-state-professor-struggles-living-out-of-her-car/>.

²⁶ Zinshteyn, (Oct 5, 2021) "UC workforce churn: Why a quarter of lecturers don't return each year". *Cal Matters*. Accessed Dec 9, 2022 at

<https://calmatters.org/education/higher-education/2021/10/uc-workforce-lecturers/>

development than PI engagement.²⁷ Yet postdoctoral researchers are also trainees themselves, seeking new skills, entering new fields, and seeking career mentorship while developing an independent research program.

In the contemporary research environment, institutional forces (i.e. funding agencies) have recognized postdoctoral training as a defined segment of one's career that can last as long as graduate training. A majority of postdocs at Stanford are in the School of Medicine, where a typical pathway towards an academic career might involve applying for an individual postdoctoral fellowship (e.g. NIH F32, or various similar private fellowships)²⁸ for three years of funding followed by a career transition award (e.g. NIH K99/R00 or others)²⁹ for two more years as a postdoc before transitioning to an independent role; a total of five or more years as a postdoc. This lengthy training period and the instability resulting from reliance on short-term contracts coincides with a period when postdoctoral scholars are seeking stability to plan for families and retirement. Despite the potential length of postdoctoral training, the position is also inherently transient. At Stanford, postdocs have a five year time limit. However, this time limit is usually spanned with short term contracts of one or two years, resulting in instability in both the short and long term. The longstanding precarity associated with the postdoctoral position came to a crisis during the COVID-19 pandemic when pressures pushed many postdocs out of the academic workforce.³⁰

Higher Education Does Not Mean Higher Pay

Academia pays less than non-academia. For professional research scientists, the annual mean wage in academic employment is far lower than outside of academia across all fields surveyed by the U.S. Bureau of Labor Statistics (BLS), including biochemists and biophysicists (\$66,060

²⁷ Feldon, Litson, Jeong, Blaney, Kang, Miller, Griffin, Roksa, (Sep 30, 2019) "Postdocs' lab engagement predicts trajectories of PhD students' skill development". *PNAS*. 116 (42) 20910-20916. <https://doi.org/10.1073/pnas.1912488116>

²⁸ NIH, F32 Ruth L. Kirschstein Postdoctoral Individual National Research Service Award. <https://researchtraining.nih.gov/programs/fellowships/F32>

Jane Coffin Childs Memorial Fund for Medical Research <https://www.jccfund.org/about-fund/>
Damon Runyon Cancer Research Foundation Fellowship Award.

<https://www.damonrunyon.org/for-scientists/application-guidelines/fellowship>

Life Sciences Research Foundation. <https://lsrf.org/>

²⁹ NIH, K99/R00 Pathway to Independence Award.

<https://researchtraining.nih.gov/programs/career-development/K99-R00>

Burroughs Wellcome Fund Career Awards at the Scientific Interface.

<https://www.bwfund.org/funding-opportunities/interfaces-in-science/career-awards-at-the-scientific-interface/>

³⁰ Woolston, (Jul 6, 2020) "Seeking an 'exit plan' for leaving academia amid coronavirus worries" *Nature Career Feature*. Accessed Dec 10, 2022 at <https://www.nature.com/articles/d41586-020-02029-6>

Ahmed, Behbahani, Brückner, Charpentier, Morais, Mallory, Pool, (May 29, 2020) "The precarious position of postdocs during COVID-19" *Science*. 368 (6494), pp. 957-958. doi: 10.1126/science.abc5143

Woolston, (Nov 23 2020) "Postdocs Under Pressure: 'Can I Even Do This Anymore?'" *Nature Career Feature*. Accessed Dec 10, 2022 at <https://www.nature.com/articles/d41586-020-03235-y>

Gould, (Nov 25 2020) "The Career Costs of COVID-19: How Postdocs and PhD Students are Paying the Price" *Nature Careers Podcast*. Accessed Dec 10, 2022 at

<https://www.nature.com/articles/d41586-020-03108-4>

vs. \$121,310), physical scientists (\$70,580 vs. \$130,680), life scientists (\$85,770 vs. \$107,740), and physicists (\$104,050 vs. \$162,240) (**Figure 7**).³¹ These numbers from the BLS are echoed in the results from various nation-wide or world-wide surveys of postdocs in recent years, which have concluded that postdocs are an undervalued workforce,³² that there is high disenchantment with working as a postdoc,³³ and that the stagnating salaries of postdocs may push potential future postdocs off the academic career track.³⁴ Furthermore, the challenging postdoctoral period comes after the already-challenging graduate school period, during which time researchers may be paid below the living wage and face food insecurity.³⁵ Unsurprisingly, immediate financial concerns, such as supporting a family or paying off student loans or saving for retirement, may prevent a researcher from pursuing a postdoc. Given these challenges, those who are actually able to undertake a postdoc are likely to represent individuals who already come from a certain level of privilege.

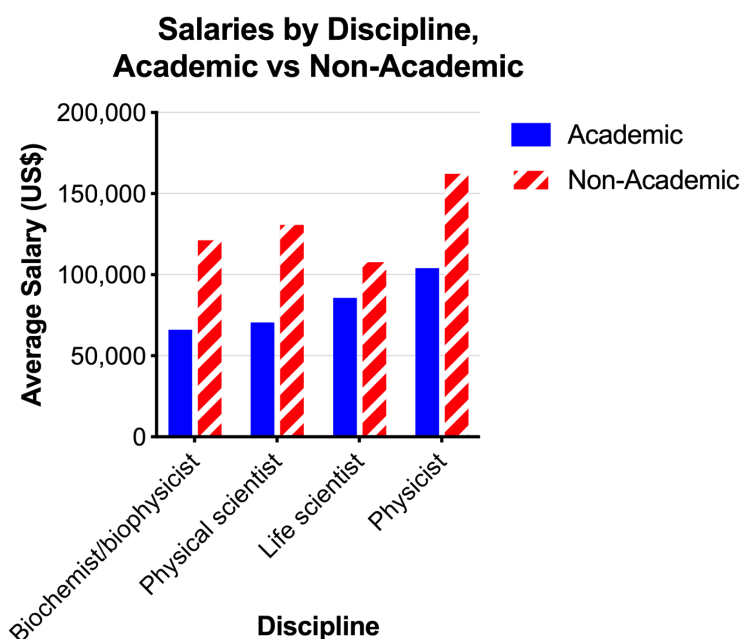


Figure 7. Comparison of salaries for research scientist roles inside versus outside academia. Source: U.S. Bureau of Labor Statistics, May 2021. Refer to Appendix D: Data Tables for raw data used to prepare this graph.

National funding bodies in the United States have known for many years that academic researchers, including postdocs, are underpaid. In the year 2000, the U.S. National Research

³¹ U.S. Bureau of Labor Statistics, “Occupational Employment and Wages, May 2021” Accessed Dec 9, 2022 at <https://www.bls.gov/oes/current/oes191021.htm>

³² Woolston, (Feb 18, 2019) “Huge variations in US postdoc salaries point to undervalued workforce” *Nature: Career News*. Accessed Dec 9, 2022 at <https://www.nature.com/articles/d41586-019-00587-y>

³³ Woolston, (Nov 18, 2020) “Postdoc survey reveals disenchantment with working life” *Nature: Career Feature*. Accessed Dec 9, 2022 at <https://www.nature.com/articles/d41586-020-03191-7>

³⁴ Woolston, (Nov 16, 2021) “Stagnating salaries present hurdles to career satisfaction” *Nature: Career Feature*. Accessed Dec 9, 2022 at <https://www.nature.com/articles/d41586-021-03041-0>

³⁵ Woolston, (May 23, 2022) “PhD students face cash crisis with wages that don’t cover living costs” *Nature: Career Feature*. Accessed Dec 9, 2022 at <https://www.nature.com/articles/d41586-022-01392-w>; and, Woolston, (Oct 31, 2022) “‘Not even enough money for food’: graduate students face cash crunch” *Nature: Career Feature*. Accessed Dec 9, 2022 at <https://www.nature.com/articles/d41586-022-03478-x>

Council called for an increase in stipends for researchers.³⁶ In response, the National Institutes of Health (NIH) in 2001 set a target annual stipend of \$45,000 for entry-level postdocs and planned to increase then-current stipends by 10 to 12% over the following few years to reach that target before subsequently maintaining the real value of stipends by annual cost-of-living adjustments.³⁷ Starting from \$45,000 in September 2001 and adjusted for national average inflation, this target minimum annual postdoc stipend would now (in September 2022) be equivalent to \$74,403.³⁸ However, the current NIH minimum postdoc salary is just \$54,840 (**Figure 8**).³⁹ This is a gap of almost \$20,000. Notably, these numbers only reflect national salary minimums and do not take into account local cost of living differences. In the case of Stanford University and the San Francisco Bay Area, the local cost of living is substantially higher than for most of the rest of the country, as is detailed below.

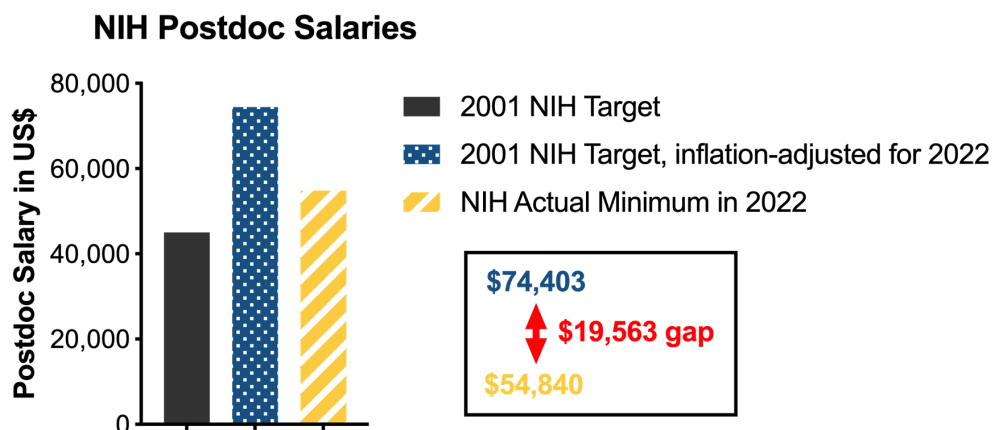


Figure 8. Comparison of 2001 NIH Target entry-level postdoc salary with that goal adjusted for inflation in 2022 and the actual NIH minimum postdoc salary in 2022. Sources: NIH,⁴⁰ BLS Inflation Calculator.⁴¹ Refer to Appendix D: Data Tables for raw data used to prepare this graph.

³⁶ For instance: “Recommendation 5-4. Stipends and other forms of compensation for those in training should be based on education and experience and should be regularly adjusted to reflect changes in the cost of living.” in Chapter 5: Crosscutting Issues in Research Training, in: National Academies of Sciences, Engineering, and Medicine. 2000. Addressing the Nation’s Changing Needs for Biomedical and Behavioral Scientists. Washington, DC: The National Academies Press. <https://doi.org/10.17226/9827>.

³⁷ National Institutes of Health, (Mar 22, 2001) “NIH Statement in Response to the NAS Report: Addressing the Nation’s Changing Needs for Biomedical and Behavioral Scientists”. <https://grants.nih.gov/grants/guide/notice-files/NOT-OD-01-027.html>

³⁸ Inflation calculation performed with the US Bureau of Labor Statistics Inflation Calculator. Accessed Jan 22, 2023 at https://www.bls.gov/data/inflation_calculator.htm

³⁹ National Institutes of Health, (May 13, 2022) “Correction to Stipend Levels for Ruth L. Kirschstein National Research Service Award (NRSA) Stipends, Tuition/Fees and Other Budgetary Levels Effective for Fiscal Year 2022”. <https://grants.nih.gov/grants/guide/notice-files/NOT-OD-22-132.html>

⁴⁰ National Institutes of Health, (Mar 22, 2001) “NIH Statement in Response to the NAS Report: Addressing the Nation’s Changing Needs for Biomedical and Behavioral Scientists”. <https://grants.nih.gov/grants/guide/notice-files/NOT-OD-01-027.html> ; and, “Correction to Stipend Levels for Ruth L. Kirschstein National Research Service Award (NRSA) Stipends, Tuition/Fees and Other Budgetary Levels Effective for Fiscal Year 2022”

<https://grants.nih.gov/grants/guide/notice-files/NOT-OD-22-132.html>

⁴¹ Inflation adjustment performed using the US Bureau of Labor Statistics Inflation Calculator. Accessed Jan 22, 2023 at https://www.bls.gov/data/inflation_calculator.htm

Pursuing an academic postdoc leads to a loss in average lifetime earnings.⁴² The academic postdoctoral timeline is longer than in non-academic sectors and academic postdoctoral researchers later receive lower salaries, resulting in an overall loss in lifetime earnings (of \$3,730 per year of postdoctoral training over a 30 year post-PhD career). Academic postdocs tended to be longer in duration across fields, with an average length of 1.3 - 1.6 years in industry compared with 2.4 - 3.3 years for academic postdoc positions.⁴³ Analysis of salary disaggregated across sectors of employment at year 5-6 shows that those who initially pursued academic postdocs have lower salaries than their peers regardless of where they are eventually employed, except for in tenure-track positions where they are at the median. Meanwhile, those who worked as postdocs in the government sector immediately following receipt of their doctorates had relatively higher salaries, even in the broadly low-paying academic fields. For those who ended up in permanent industry positions, a government postdoc led to a salary advantage of \$7,350 over an academic postdoc.⁴⁴ For career mobility and long-term salary gains, an academic postdoc compares unfavorably to a government postdoc.

Even late-career, world-leading researchers continue to be deeply affected by the career instability and low wages of academia. Prof. Emmanuelle Charpentier worked at nine institutions in 25 years, an average of less than three years per institution, while performing the work that would earn her the Nobel Prize in Chemistry.⁴⁵ Dr. Katalin Karikó spent years in contingent roles as a doctorate-holding non-faculty researcher pioneering work on mRNA that gave rise to coronavirus vaccines that have helped fight against the global pandemic.⁴⁶ Dr Jeffery Hall, who received the 2017 Nobel Prize in Physiology or Medicine for his work on circadian rhythms, left science in part because of his disenchantment with the difficulties in obtaining scientific funding.⁴⁷ Leon Lederman sold his Nobel Prize at the end of his life to pay for health care costs.⁴⁸ Job instability and low wages affect many in academia, including postdocs.

⁴² Cheng, (Jul 2021) "What's Another Year? The Lengthening Training and Career Paths of Scientists" *National Bureau of Economic Research*. https://conference.nber.org/conf_papers/f159298.pdf

⁴³ Denton, Borrego, Knight, (Feb 2, 2022) "U.S. postdoctoral careers in life sciences, physical sciences and engineering: Government, industry, and academia" *PLoS ONE*, 17(2): e0263185. <https://doi.org/10.1371/journal.pone.0263185>

⁴⁴ *ibid.*

⁴⁵ Kolata, (Jul 14, 2016) "So Many Research Scientists, So Few Openings as Professors". *New York Times*. Accessed Dec 9, 2022 at <https://www.nytimes.com/2016/07/14/upshot/so-many-research-scientists-so-few-openings-as-professors.html>

⁴⁶ Kolata, (Apr 8, 2021) "Kati Kariko Helped Shield the World From the Coronavirus". *New York Times*. Accessed Dec 9, 2022 at <https://www.nytimes.com/2021/04/08/health/coronavirus-mrna-kariko.html>; and, Scales, (Feb 12, 2021) "How Our Brutal Science System Almost Cost Us A Pioneer Of mRNA Vaccines". *WBUR*. Accessed Dec 9, 2022 at <https://www.wbur.org/news/2021/02/12/brutal-science-system-mrna-pioneer>

⁴⁷ Jeffery C. Hall, (2008) "Q&A: Jeffery C. Hall" *Current Biology*, 18 (3), doi: 10.1016/j.cub.2007.12.016

⁴⁸ Kliff, (Oct 4, 2018) "A Nobel Prize-Winning Physicist Sold His Medal for \$765,000 to Pay Medical Bills." *Vox* Accessed Dec 9, 2022 at <https://www.vox.com/health-care/2018/10/4/17936626/leon-lederman-nobel-prize-medical-bills>

Advanced Training for Limited Academic Roles

Many postdocs are motivated by the desire to train in cutting-edge research with expert mentors, and in many fields, completing a postdoc is required for pursuing an academic career. Indeed, when asked, a majority of postdocs cite academic research positions as a major career goal.⁴⁹ However, there are far fewer tenure-track positions available than there are postdocs; only about a fifth of postdocs will go on to tenure-track jobs.⁵⁰

There have been long standing concerns over the treatment of postdocs within the academic research ecosystem. In 2000, the National Academies published a report on how to enhance the postdoctoral experience, citing large variability of the postdoc experience with particular concerns over poor guidance or mentoring; little opportunity for growth towards independence; and mentors, institutions, and funding bodies not assigning postdocs the status, recognition, and compensation that are commensurate with their skills and contributions.⁵¹ More than ten years later, one commentator, the chief executive officer of the American Association for the Advancement of Science, lamented that none of the recommendations from the National Academies' 2000 report had been implemented on a broad scale.⁵² Another National Academies report published in 2014 again expressed concerns that the experience of postdocs is highly variable and in many cases is far from the ideal.⁵³ In particular, the vast imbalance between the large number of postdocs and the small number of available tenure-track faculty positions leads to: extra long postdoctoral periods (>5 years) and sometimes the same person completing multiple postdocs, postdocs taking jobs for which postdoc training is not required, or postdocs subsequently leaving research altogether.

Despite what seems to be an oversupply of postdocs in the academic system, principal investigators have complained of difficulties in recruiting postdocs, both back in 2015 and in the wake of the COVID-19 pandemic.⁵⁴ These hiring difficulties have led some leaders in academia

⁴⁹ McConnell, Westerman, Pierre, Heckler, Schwartz, (Dec 18, 2018) "Research: United States National Postdoc Survey results and the interaction of gender, career choice and mentor impact" *eLife*. <https://doi.org/10.7554/eLife.40189>

⁵⁰ Denton, Borrego, Knight, (Feb 2, 2022) "U.S. postdoctoral careers in life sciences, physical sciences and engineering: Government, industry, and academia" *PLoS ONE*, 17(2): e0263185. <https://doi.org/10.1371/journal.pone.0263185>

⁵¹ National Academy of Sciences, National Academy of Engineering, and Institute of Medicine, (2000) "Enhancing the Postdoctoral Experience for Scientists and Engineers: A Guide for Postdoctoral Scholars, Advisers, Institutions, Funding Organizations, and Disciplinary Societies" *The National Academies Press*. <https://doi.org/10.17226/9831>

⁵² Leshner, (Apr 20, 2012) "Standards for Postdoc Training" *Science: Editorial*. 336 (6079), p. 276. doi: 10.1126/science.1222476

⁵³ "2: The Disconnect Between the Ideal and Reality" in: Committee to Review the State of Postdoctoral Experience in Scientists and Engineers; Committee on Science, Engineering, and Public Policy; Policy and Global Affairs; National Academy of Sciences; National Academy of Engineering; Institute of Medicine, (2014) "The Postdoctoral Experience Revisited." *The National Academies Press*. <https://www.ncbi.nlm.nih.gov/books/NBK268776/>

⁵⁴ Benderly, (Dec 9, 2015) "The case of the disappearing postdocs" *Science: Careers*. Accessed Dec 10, 2022 at <https://www.science.org/content/article/case-disappearing-postdocs> ; and, Langin, (Jun 13, 2022) "As professors struggle to recruit postdocs, calls for structural change in academia intensify" *Science Careers*. Accessed Dec 9, 2022 at

to acknowledge the plight of postdocs and suggest recommendations for how to fix the system.⁵⁵ These recommendations largely echo the ignored calls of the past 20 years.

Worryingly for the 75-80% of postdocs who do not obtain a tenure-track position, pursuing a postdoc does not necessarily prepare you for a career outside of academia. Several studies have found that the skills postdocs learn in academia are not necessarily sought by employers outside of academia.⁵⁶ Therefore, despite having undertaken advanced training, postdocs face uncertain prospects for their future careers.⁵⁷

One issue that has compounded this uncertainty is the lack of reliable and available data on the career outcomes of postdocs. Within the field of biomedicine, an international group of prominent institutions, called the Coalition for Next Generation Life Science, sought to address this lack in 2017 by announcing a data initiative to track the career outcomes of graduate students and postdocs, which began in 2018.⁵⁸ Conspicuously absent from this Coalition are the two largest employers of postdocs in the United States – Harvard and Stanford Universities.⁵⁹ Data collection efforts to track postdoc career outcomes are long overdue.

A recent analysis of the hiring dynamics for university faculty across the United States revealed a number of potentially concerning details. This 2022 study revealed an intense “prestige hierarchy” in the production of faculty.⁶⁰ A minority of universities produce an outsized proportion of eventual faculty. Only 11% of US faculty hold doctorates from international universities. For faculty who received their doctorate within the US, just 20.4% of universities produced 80% of the faculty. Moreover, nearly 14% of faculty received their PhDs at one of five institutions – University of California Berkeley, Harvard University, University of Michigan, University of Wisconsin-Madison, and Stanford University. While postdoctoral training was not considered in the analysis, these results certainly have implications for those pursuing a career as faculty within academia. As a result of the current lack of data on postdoc career outcomes, it is unclear the extent to which completing a postdoc at Stanford contributes to success (or otherwise) in gaining a faculty position. Depending on a researcher's training background, these hiring dynamics may lower the odds of obtaining a faculty position. The existing data indicate that

<https://www.science.org/content/article/professors-struggle-recruit-postdocs-calls-structural-change-academia-intensify>; and, Woolston, (Aug 30, 2022) “Lab leaders wrestle with paucity of postdocs” *Nature Career News*. Accessed Dec 9, 2022 at <https://www.nature.com/articles/d41586-022-02781-x>

⁵⁵ Goldsmith, (Jul 21, 2022) “Fixing the plight of the postdoc” *Science: Editor’s Blog*. Accessed Dec 10, 2022 at <https://www.science.org/content/blog-post/fixing-plight-postdoc> ; and, Editorial, (2020) “What next for postdocs?”. *Nat Cancer*. 1, pp. 937–938. <https://doi.org/10.1038/s43018-020-00137-w>

⁵⁶ Woolston, (Dec 7, 2018) “Why a postdoc might not advance your career” *Nature: Career News*. Accessed Dec 9, 2022 at <https://www.nature.com/articles/d41586-018-07652-y>

⁵⁷ Woolston, (Dec 1, 2020) “Uncertain prospects for postdoctoral researchers” *Nature: Career Feature*. Accessed Dec 9, 2022 at <https://www.nature.com/articles/d41586-020-03381-3>

⁵⁸ Blank, Daniels, Gilliland, Gutmann, Hawgood, Hrabowski, Pollack, Price, Reif, Schlissel, (Dec 15, 2017) “A new data effort to inform career choices in biomedicine” *Science: Policy Forum*. 358 (6369), pp. 1388-1389. doi: 10.1126/science.aar4638 ; and, Coalition for Next Generation Life Science, <http://nglscoalition.org/coalition-data/>

⁵⁹ <https://postdocinusa.com/postdoc-numbers/>

⁶⁰ Wapman, Zhang, Clauset, Larremore, (2022) “Quantifying hierarchy and dynamics in US faculty hiring and retention”. *Nature*. 610, pp. 120–127. <https://doi.org/10.1038/s41586-022-05222-x>

cities that produce the highest proportion of tenure track faculty are also associated with higher cost of living, while postdoctoral salaries fail to account for disparities in cost of living.⁶¹

Postdocs at Stanford

With more than 2400 postdocs, Stanford's share of the total US postdoc population is approximately 4%.⁶² Given that there are some 280 R1 and R2 institutions in the US,⁶³ this is a very large fraction for a single institution to hold. Stanford was one of the first institutions to have a formal postdoctoral association, with the Stanford University Postdoctoral Association founded in 1998. At that time, there were 1200 postdocs at Stanford. As of 2023, there are nearly 2500 postdocs at Stanford. The postdoctoral association is now known as SURPAS. SURPAS aims to represent all postdocs at Stanford. SURPAS is run entirely by volunteers who are all postdocs at Stanford. SURPAS receives funding from the University via the Office of Postdoctoral Affairs.

Prestige Does Not Prevent Poverty

Stanford University pays postdocs more than the minimum postdoc salary set by the National Institutes of Health (NIH). This has been the case since at least 2014, and for each year between 2018 and 2022 Stanford's Postdoc Minimum Salary exceeded the NIH's by at least \$11,500 (**Figure 9, left panel, and Appendix D, Table 5**). This is a substantial difference, representing at least 22% higher salary compared to the NIH minimum each year between 2018 and 2022.

However, whereas the NIH postdoc salary increases for each additional year of postdoc experience, Stanford's postdoc salary does not increase at all for 0 to 5 years of postdoc experience (**Figure 9, right panel, and Appendix D, Table 7**). A postdoc who started at Stanford in 2018 fresh out of their PhD (PhD + 0 years experience) and received the Stanford minimum salary was \$11,568 (22%) better off than the NIH minimum salary, but by their fifth year at Stanford on the minimum salary (2022; PhD + 5 years experience) they were only \$6246 (10%) better off than the NIH minimum. A survey of postdocs at Stanford conducted by the Stanford Postdoc Association (SURPAS) Leadership Team in December 2021 found that 53% of respondents were being paid at the minimum salary and an additional 30% were on less than \$72,000 per year (equivalent to 110% of the minimum salary; see **SURPAS Benefits and Affordability Survey (Winter 2021/22)**). Increased transparency around Stanford postdoc remuneration across different years of experience, different fields/departments, different funding mechanisms, and different Principal Investigators would enable a deeper understanding of the heterogeneity (or homogeneity) of postdoc personal finances.

⁶¹ Sainburg, (2023) "American Postdoctoral Salaries Do Not Account for Growing Disparities in Cost of Living," *Research Policy*, 52, 104714, pp1-7, doi: 10.1016/j.respol.2022.104714

⁶² $2400 / 65,000 \times 100 = 3.69\%$

⁶³ R1 and R2 institutions being Doctoral Universities with Very High or High Research Activity. Figure from: Goldsmith, (Jul 21, 2022) "Fixing the plight of the postdoc" *Science: Editor's Blog*. Accessed Dec 10, 2022 at <https://www.science.org/content/blog-post/fixing-plight-postdoc>

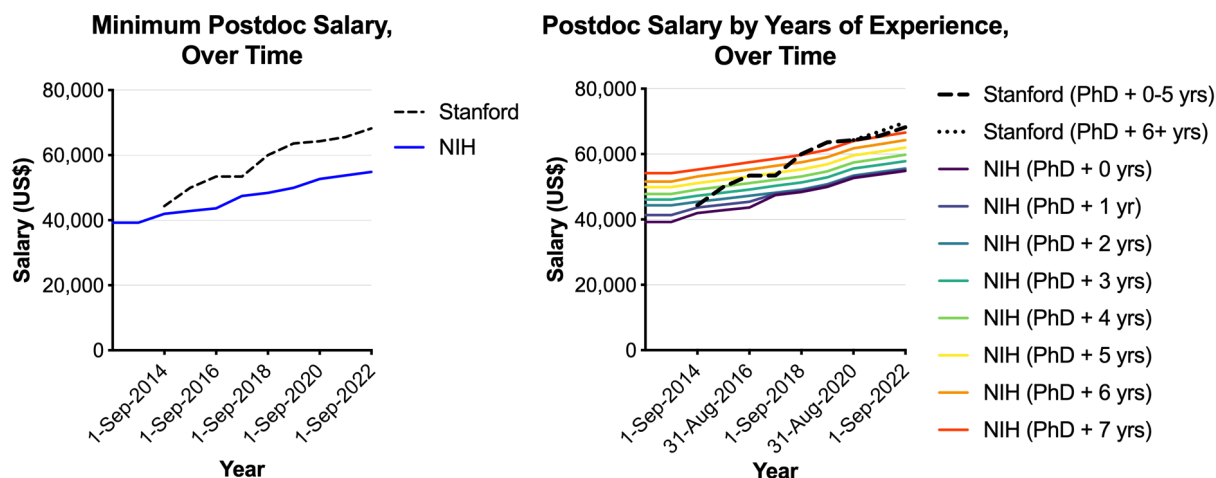


Figure 9: Comparison of Stanford Postdoc Salary and National Institutes of Health (NIH) Postdoc Salary since 2012. **Left:** Minimum Postdoc Salaries from Stanford and the NIH. **Right:** Postdoc Salaries by Number of Years Experience post-PhD. Sources: NIH,⁶⁴ Office for Postdoctoral Affairs,⁶⁵ and email correspondence. Refer to Appendix D: Data Tables for raw data used to prepare this graph.

The cost of living around Stanford is extremely high relative to other locations in the US and this may be one reason that Stanford’s Minimum Postdoc Salary is higher than that of the NIH. A 2018 analysis of data drawn from a 2016 US national postdoc survey put postdoc salaries into the context of the local cost of living across a variety of locations around the US (**Figure 10**).⁶⁶ Postdocs at Stanford, despite receiving near to the highest absolute salaries, were placed among the lowest in the country in terms of real wages (see “Santa Clara, CA” in **Figure 10**).⁶⁷ Notably, in the year of this national survey (2016) Stanford’s Minimum Postdoc Salary was actually 22% higher than the NIH Minimum (**Appendix D, Table 5**), indicating that even with a salary substantially exceeding the NIH Minimum, Stanford’s postdocs remain very financially disadvantaged compared to postdocs living in almost every other location within the US. Stanford University is a large campus in a suburban environment with limited options for public transportation. This is in contrast to universities in urban environments (e.g. New York, NY or San Francisco, CA) where postdoctoral workers may be able to utilize public transit rather than relying on a personal vehicle, creating additional expenses for postdocs at Stanford compared with other postdocs on the low end of the compensation scale.

⁶⁴ Multiple NIH Notices, e.g. for fiscal year 2022: “Correction to Stipend Levels for Ruth L. Kirschstein National Research Service Award (NRSA) Stipends, Tuition/Fees and Other Budgetary Levels Effective for Fiscal Year 2022” <https://grants.nih.gov/grants/guide/notice-files/NOT-OD-22-132.html>

⁶⁵ Stanford Office for Postdoctoral Affairs (OPA) website: Funding Rates & Guidelines. Accessed on Jan 22, 2023 at <https://postdocs.stanford.edu/funding-rates-and-guidelines>

⁶⁶ McConnell, Westerman, Pierre, Heckler, Schwartz, (Dec 18, 2018) “Research: United States National Postdoc Survey results and the interaction of gender, career choice and mentor impact” *eLife*. <https://doi.org/10.7554/eLife.40189>

⁶⁷ Stanford University is an unincorporated area within Santa Clara County.

Average Postdoc Incomes by Location, Cost of Living Adjusted versus Absolute Value, 2016

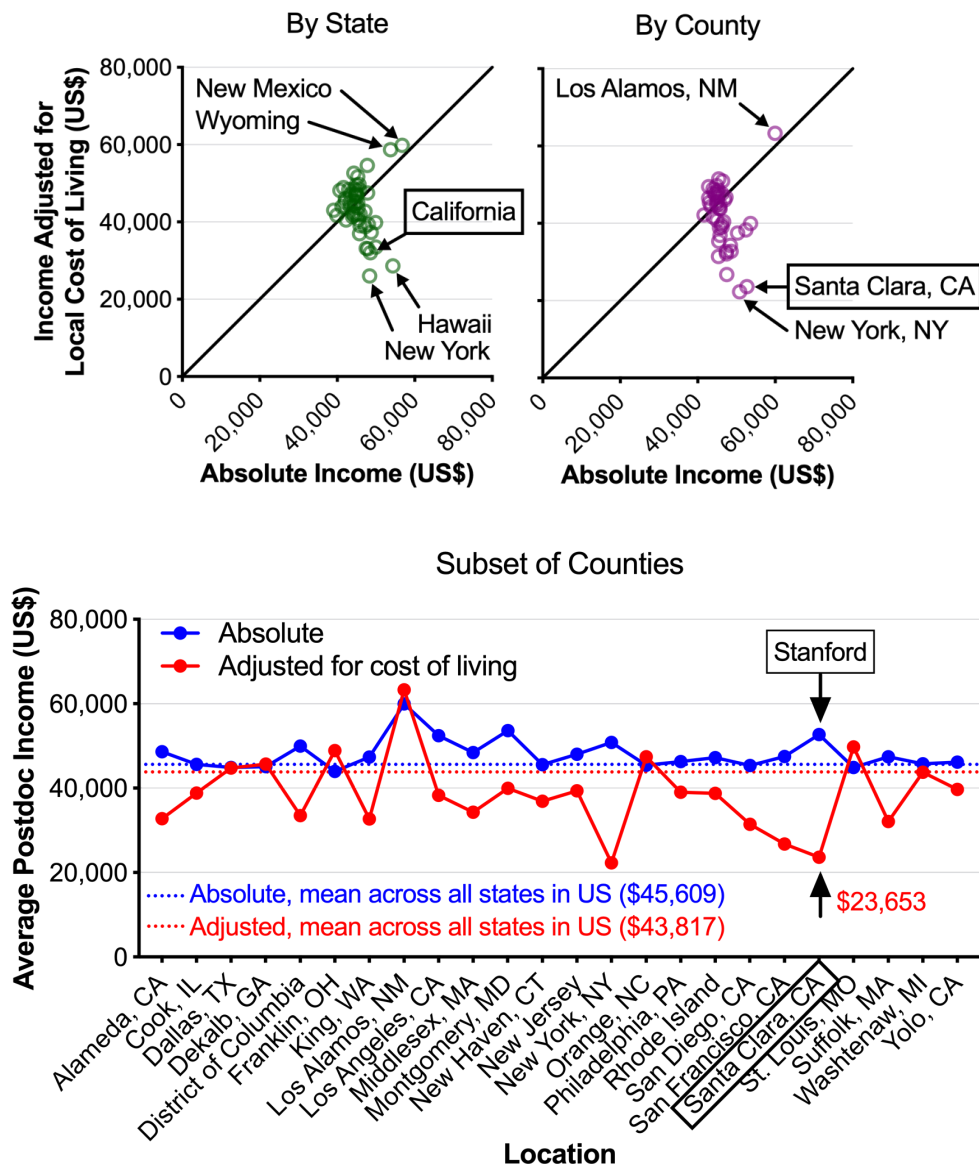


Figure 10: Comparison of 2016 postdoc salaries in absolute dollars and adjusted to cost of living. Data in this graph is based upon the results of a 2016 U.S. national postdoc survey. Each location included in this graph had more than 50 postdoc respondents. Source: McConnell et al., (2018) *eLife*.⁶⁸ Refer to Appendix D: Data Tables for raw data used to prepare this graph.

Furthermore, increases to the Stanford Postdoc Minimum Salary over the past several years have not kept pace with inflation. Postdocs at Stanford received a 2% and 4% year-on-year increase to the Minimum Salary starting September 1 the past two years (academic years

⁶⁸ McConnell, Westerman, Pierre, Heckler, Schwartz, (Dec 18, 2018) “Research: United States National Postdoc Survey results and the interaction of gender, career choice and mentor impact” *eLife*. <https://doi.org/10.7554/eLife.40189>

2020/21 to 2021/22 and 2021/22 to 2022/23, respectively) (**Appendix D, Table 5**). The Bureau of Labor Statistics reports that for the months August 2021 and August 2022 the 12-month percentage change in the Consumer Price Index (CPI) for the San Francisco-Oakland-Hayward, CA metropolitan area was 3.7% and 5.7%, respectively.⁶⁹ Therefore, the Stanford Minimum Postdoc Salary has lagged CPI by 1.7% for each of the past two years, representing \$2207 in lost purchasing power over those two years ($\$64,268 \times 1.037 \times 1.057 = \$70,445$ versus actual 2022 salary of \$68,238).

A comparison of the Stanford Minimum Postdoc Salary with the Area Median Income (AMI) of Santa Clara County (in which Stanford University is located) similarly reveals that postdocs at Stanford, and certain groups in particular, are not well off (**Figure 11**). In 2022 in Santa Clara County, single-earner households of any size with a postdoc on the Stanford Postdoc Minimum Salary (**Figure 11, black dashed line**) were either Low or Very Low Income. A single-parent postdoc with any number of dependents was Very Low Income. Double-earner households with two postdocs on the Minimum Salary (**Figure 11, black dot-dash line**) without any dependents (“2 person household”) are at the 2022 Median Income but dip below it with one dependent and are close to Low Income with two dependents. Based on health insurance enrollment, at least 43% of postdocs at Stanford have dependents,⁷⁰ which means that a sizable portion of the postdoc population exists within a household of more than one person and may need to cover more than just their own personal expenses on their postdoc salary.

The federally-funded housing assistance program, Housing Choice Voucher (Section 8), organized through the Santa Clara County Housing Authority is available to households whose income falls below the Very Low Income level (50% AMI) (**Figure 11, bright red line**).⁷¹ In 2022, this level was \$67,400 for a 2-person household and \$75,850 for a 3-person household. The 2022 Stanford Minimum Postdoc Salary was \$68,238. This means that a postdoc with two or more dependents, who was the sole income-earner and was on the Stanford Minimum Postdoc Salary, would have been eligible for federal housing assistance. A postdoc in the same situation but with only one dependent earned just \$838 too much to qualify for federal housing assistance. This rental assistance program allows for recipients to pay just 30% of their gross income on rent, with the remainder paid for by the program.

Regardless of household size, over the past three years (2019-2022) postdocs at Stanford have lost ground relative to the local Area Median Income levels (**Figure 11**). Since 2019, increases in the Stanford Minimum Postdoc Salary have not kept pace with increases in the AMI for Santa Clara County, leading to a substantial decrease in the real wages of postdocs at Stanford. A

⁶⁹ U.S. Bureau of Labor Statistics, Graphics for Economic News Releases, “12-month percentage change, Consumer Price Index, metropolitan areas, all items”. Accessed Jan 22, 2023 at: <https://www.bls.gov/charts/consumer-price-index/consumer-price-index-by-metro-area.htm>

⁷⁰ Postdocs may choose for their dependents to not be enrolled on their Stanford health insurance, for instance if their partner has access to alternative health insurance.

⁷¹ Santa Clara County Housing Authority, “FAQ For Housing Choice Voucher (Section 8) Participants: Who qualifies to receive rental assistance?” Accessed Mar 21, 2023 at: <https://www.scchousingauthority.org/section-8/for-participants/for-participants-faq/>

Minimum Postdoc Salary of \$81,000 in 2022 would return postdocs at Stanford to the pre-2019 relative income level.

Stanford Minimum Postdoc Salary and Area Median Income for Santa Clara County over time

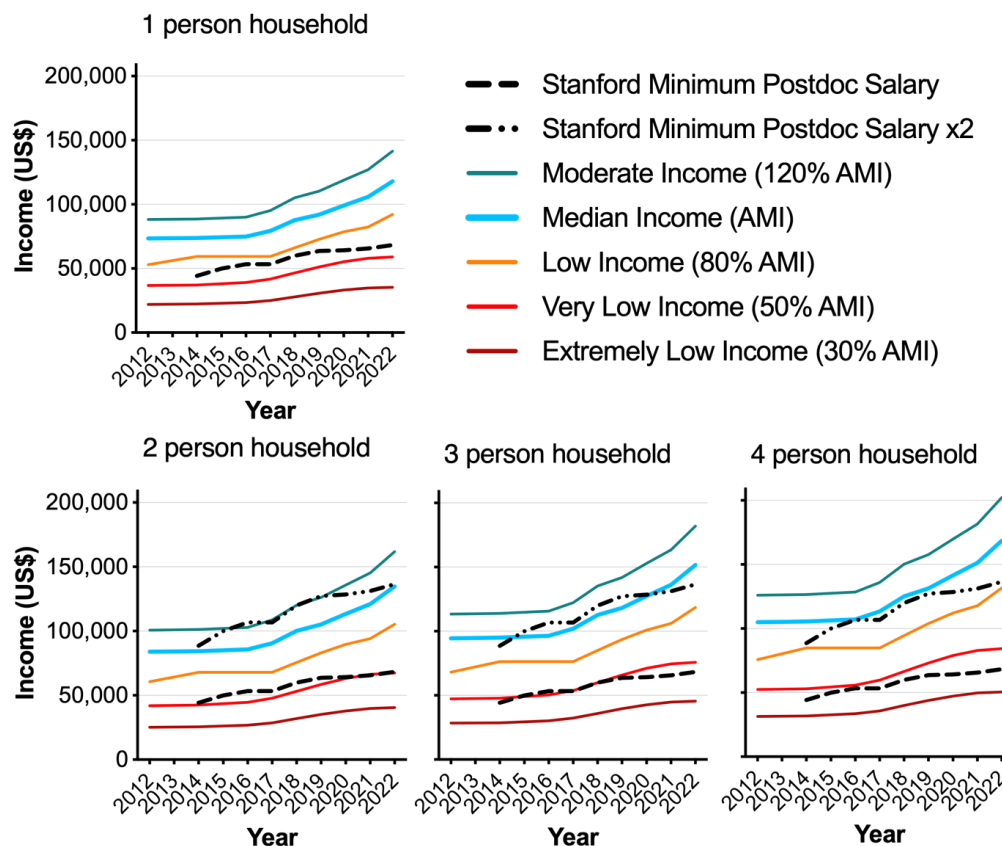


Figure 11: Comparison of Stanford Minimum Postdoc Salary with Area Median Income (AMI) levels for Santa Clara County (the county in which Stanford is located), including federally defined (by the Department of Housing and Urban Development, HUD) definitions of Moderate, Median, Low, Very Low, and Extremely Low Income. Twice the Postdoc Minimum Salary is also included in graphs for households of 2 or more persons. Sources: California HCD,⁷² Office for Postdoctoral Affairs⁷³ and email correspondence. Refer to Appendix D: Data Tables for raw data used to prepare this graph.

The Reality of Postdoc Financial Challenges

Low salaries for postdocs at Stanford lead to very real financial hardships, up to and including struggling to meet basic needs. Housing is likely to be the largest regular expense for postdocs

⁷² Area Median Income data from California Department of Housing and Community Development (HCD): <https://www.hcd.ca.gov/grants-and-funding/income-limits/state-and-federal-income-rent-and-loan-value-limits>

⁷³ Stanford Office for Postdoctoral Affairs (OPA) website (<https://postdocs.stanford.edu/funding-rates-and-guidelines>)

at Stanford. The cost of housing in the San Francisco Bay Area is very high, with those areas closest to Stanford (Palo Alto, Mountain View, Menlo Park, Atherton) being at or close to the most expensive in the Bay.⁷⁴ Average effective monthly rent in the City of San Jose, Santa Clara County, was \$2,635 in the fourth quarter of 2022.⁷⁵ Renters must earn \$117,560 per year to afford the average effective monthly rent for a 2-bedroom apartment (the Stanford Minimum Postdoc Salary was \$68,238 in 2022/23). The US Census also reported that the median gross rent for Santa Clara County between 2017-21 was \$2,530.⁷⁶ The U.S. federal Department of Housing and Urban Development (HUD) defines someone who spends more than 30% of their income on rent as Rent Burdened. For a postdoc on the Stanford Minimum Postdoc Salary in 2022/23, 30% of their pre-tax monthly salary is \$1,706.⁷⁷ This is \$929 less than the City of San Jose figure for average effective monthly rent in Q4 2022 and \$824 less than the US Census figure for median gross rent in 2017-21. According to a December 2021 postdoc survey (see **SURPAS Benefits and Affordability Survey (Winter 2021/22)**), almost half of postdocs at Stanford (47%) pay more than \$2000 per month for housing, making them Rent Burdened. Many postdocs at Stanford (25% or ~600 individuals) live with roommates.⁷⁸

For postdocs with families, living with roommates is not likely to be an option. Some postdoc families make ends meet by having a partner who works in a higher paying field than academia; others separate geographically from their family for the duration of their postdoc; still others take out loans to join the postdoctoral workforce (see **Stanford Latinx Postdoc Association Survey (Fall 2022)**).⁷⁹

Postdocs are eligible to apply for Stanford on-campus housing. However, because postdocs are classified as “non-matriculated students”, they have no priority and no guarantee of receiving an offer for on-campus housing.⁸⁰ In reality, this meant that very few, if any, postdocs received on-campus housing. This was the case until 2021 when the COVID-19 pandemic led to a huge decrease in the demand for on-campus housing from (matriculated) students. At this point, a number of postdocs were able to access on-campus housing. However, when (matriculated) students returned to campus in Fall 2022, some postdocs were evicted from on-campus housing with only three weeks notice.⁸¹ Shortly afterwards, Stanford announced the purchase of

⁷⁴ Favro (Feb 8 2023), “Mountain View Now the Most Expensive City to Rent a One-Bedroom Apartment: Report” *NBC Bay Area*. Accessed Feb 9, 2023 at

<https://www.nbcbayarea.com/news/local/south-bay/mountain-view-rent-report/3152054/>

⁷⁵ City of San Jose (in Santa Clara County), “Housing Market Update, Fourth Quarter 2022”, Accessed Mar 24, 2023 at:

<https://www.sanjoseca.gov/your-government/departments-offices/housing/data/housing-market>

⁷⁶ U.S. Census Bureau “Quick Facts: Santa Clara County, California”, Accessed Mar 24, 2023 at:

<https://www.census.gov/quickfacts/fact/table/santaclaracountycalifornia/HSG860221#HSG860221>

⁷⁷ Calculation: $\$68,238 / 12 * 0.30 = \1705.95

⁷⁸ “Roommates” does not include a partner or dependent/s.

⁷⁹ Stanford Latinx Postdoc Association, (2022) “Moving & living expenses survey”. Accessed Dec 9, 2022 at <https://slpa.github.io/survey2022/>

⁸⁰ Direct communications with a representative from Stanford Residential & Dining Enterprises (<https://rde.stanford.edu/>), March 2023.

⁸¹ Li, (Sep 8, 2022) “Some postdocs received campus housing during the pandemic. Now, they’ve been asked to move out.” *The Stanford Daily*. Accessed Dec 9, 2022 at

additional housing near campus where postdocs are to have the highest priority.⁸² The addition of postdoc-specific Stanford housing is extremely welcome and long awaited amongst the postdoc community. However, concerns remain over the affordability of these units, given prevailing market rates and current postdoc salaries (see **Stanford Chinese Postdoc Association Housing Costs Letter (2022)**). Even with the recently added 759 postdoc-specific units, the majority of Stanford's more than 2400 postdocs will still live off campus and need to find housing in the Bay Area.

Stanford does not provide financial assistance for postdocs relocating to Stanford. The cost of relocation expenses raises a barrier to economically disadvantaged postdocs joining the academic workforce (see **Stanford Latinx Postdoc Association Survey (Fall 2022)**). This initial period often comes with additional financial burdens on top of regular rent and utility bills, including paying for a security deposit, first and last month's rent, and purchasing of furniture and other necessary items. Stanford has recently piloted a transitional housing program to provide a landing place for new postdocs moving to the Bay Area.⁸³ These housing units, while fully furnished and not requiring a security deposit, are offered at market rates and are therefore expensive. At \$2700 per month for a one-bedroom unit, this is almost half of a postdoc's pre-tax monthly minimum salary. The transitional nature of this housing means the maximum length of stay is 4 months.

A significant number of postdocs at Stanford suffer from food insecurity. At a SURPAS Council meeting in late 2019, it was reported that nearly 10% of postdocs suffered from food insecurity. A subsequent survey of postdocs at Stanford in December 2021 bore this out, finding that more than one-third (36%) suffered from some level of food insecurity: either Occasionally (22.9%), Sometimes (7.6%) or Often (5.1%) (see **SURPAS Benefits and Affordability Survey (Winter 2021/22)**). There is a pop-up food pantry on campus that provides undergraduate and graduate students and their affiliates with additional food support at no cost.⁸⁴ Postdocs avail themselves of this essential service too. However, as of January 2023, postdocs are no longer eligible to use this service.

Postdocs with dependents must contend with additional financial burdens. Health insurance and childcare for dependents represent major and essential expenses. During the COVID-19 pandemic, premiums to cover dependents on the postdoc health insurance plan increased by 60%. Following an outcry from postdocs (including the **SURPAS Family Committee Letter (2020/21)**), Stanford offered a mechanism by which these added health insurance costs would

<https://stanforddaily.com/2022/09/08/some-postdocs-received-graduate-housing-during-the-pandemic-no-w-theyve-been-asked-to-move-out/>

⁸² Li, (Sep 27, 2022) "Stanford acquires 759-unit apartment building in drive to expand postdoc housing." *The Stanford Daily*. Accessed Dec 9, 2022 at

<https://stanforddaily.com/2022/09/27/stanford-acquires-759-unit-apartment-building-in-drive-to-expand-postdoc-housing/>

⁸³ Stanford Office of Postdoctoral Affairs. "Pilot Transitional Housing for Incoming Postdoctoral Scholars". Accessed Jan 24, 2023 at

<https://postdocs.stanford.edu/pilot-transitional-housing-incoming-postdoctoral-scholars>

⁸⁴ Residential & Dining Enterprises, Food Pantry Pop-Up. Accessed Jan 22, 2023 at <https://rde.stanford.edu/food-pantry-pop-up>

increase over the course of 12 months, rather than be incurred by postdocs with dependents immediately.⁸⁵ At around the same time (February 2021), Stanford initiated three new financial aid programs for postdocs (Child Care Assistance Grant Program, Family Grant Program, Back-up Child Care Assistance (BUCA)) and expanded a fourth program (Emergency Grant in Aid).⁸⁶ For childcare, Stanford offers an emergency relief fund to help offset its large cost.⁸⁷ However, the maximum benefit from this fund is \$5000 per year, while childcare costs can easily reach \$2500 per month, meaning that this provision may only cover a sixth of total annual childcare costs. Suffice it to say, paying for only the essentials – housing, healthcare, childcare, and food – as a postdoc with dependents in the Bay Area is extremely difficult, if not impossible, on the Stanford Minimum Postdoc Salary, even after a postdoc maximizes targeted funding provisions from Stanford.

Representation and Advocacy on Campus

Stanford has an institutional postdoctoral office called the Office for Postdoctoral Affairs (OPA), which is focused entirely on assisting postdocs at Stanford.⁸⁸ The OPA expanded its headcount in 2021 and now has 13 staff members. Many academic research institutions still lack such an office and postdocs at Stanford are very fortunate to have an office dedicated to them.⁸⁹ Research has shown that access to an institutional postdoctoral office is correlated with mitigation of some stress associated with darkened outlooks on future career opportunities for postdocs during the COVID-19 pandemic.⁹⁰

Leaders of the Stanford postdoctoral association, SURPAS, meet regularly with OPA staff in order to advocate for improved conditions. SURPAS has a yearly operating budget composed of funds deposited from a line item in the OPA budget disbursed in Fall of each year. The Dean's Office from the School of Medicine and the Vice Provost for Graduate Education and Postdoctoral Affairs also contribute funds to specific events, such as the Postdoc Symposium, Diversity Perspectives Seminar Series, or the Family Committee Fall Festival. Other than the yearly deposit from OPA, any additional funds must be applied for by the SURPAS Leadership Team. Consistently one of the largest single line item expenses on the SURPAS budget for the

⁸⁵ Email from postdocbenefits@stanford.edu on Oct 29, 2020 with the subject line "Important changes to dependent care premiums", including a table detailing a discount on monthly premiums for dependent health insurance that would decrease each quarter to no discount by Oct 2021; email forwarded out again on Apr 21, 2021 (subject line "Reminder: Important changes to dependent care premiums").

⁸⁶ Email from postdocaffairs@stanford.edu on Feb 25, 2021 with the subject line "New Financial Aid Programs for Postdocs".

⁸⁷ Stanford Office of Postdoctoral Affairs. "2022-2023 Child Care Grant Program". Accessed Jan 26, 2023 at <https://postdocs.stanford.edu/2022-2023-child-care-assistance-grant-program>

⁸⁸ Office for Postdoctoral Affairs (OPA), <https://postdocs.stanford.edu/>

⁸⁹ Only 36% (101 out of 280) of R1 and R2 institutions have a specific office dedicated to postdoc affairs. From: Goldsmith, (Jul 21, 2022) "Fixing the plight of the postdoc" *Science: Editor's Blog*. Accessed Dec 10, 2022 at <https://www.science.org/content/blog-post/fixing-plight-postdoc>

⁹⁰ Morin, Helling, Krishnan, Risner, Walker, Schwartz, (2022) "Research Culture: Surveying the experience of postdocs in the United States before and during the COVID-19 pandemic" *eLife* 11:e75705. <https://doi.org/10.7554/eLife.75705> ; and, Woolston, (Sep 8, 2020) "Pandemic darkens postdocs' work and career hopes." *Nature: Career Feature*. Accessed Dec 9, 2022 at <https://www.nature.com/articles/d41586-020-02548-2>

past decade has been the cost of buying drinks for a barbeque held by OPA during National Postdoc Appreciation Week in September, which typically takes place at the end of the SURPAS budget cycle.⁹¹

SURPAS Leadership also represents the needs of postdocs on the Provost's Advisory Committee on Postdoctoral Affairs (PACPA). SURPAS co-chairs have a non-voting seat on both the university-wide Faculty Senate and the School of Medicine Faculty Senate. In addition to the SURPAS Leadership Team and SURPAS Council, which are the two elected representative bodies of the Stanford postdoctoral community, there are also several postdoctoral affinity groups that represent and seek to build community amongst postdocs with specific identities. At present (2023), these affinity groups are: the Stanford Black Postdoc Association (SBPA), the Stanford Latinx Postdoc Association (SLPA), LGBTQIA+ Postdocs, and the Stanford Chinese Postdoc Association (SCPA). These affinity groups are independent of SURPAS but frequently collaborate with SURPAS.

Postdoctoral issues have been raised with the University Administration over many years, including through various working groups of the University's Long Range Planning of 2017/18.⁹² In 2017, organized postdocs at Stanford sounded a note of optimism following a meeting with senior University leadership figures at Stanford in expectation of a productive working relationship to address years of being treated as "second class citizens" within Stanford.⁹³ However, postdocs at Stanford have continued to be overlooked. During the pandemic, postdocs received no institutional support in the form of funding extensions similar to the faculty tenure clock extension.⁹⁴ Postdocs also received no communication from Stanford about their COVID-19 vaccine eligibility until April 26, 2021, eleven days after all Californians were eligible for vaccination and more than six weeks after postdocs became eligible as workers in the education sector.⁹⁵

Conclusion

This section of the Report has laid out, in broad strokes, the system-wide situation of academic postdocs within the US and then specifically the situation of postdocs at Stanford. We have

⁹¹ From SURPAS Treasurer financial records of SURPAS expenses for years 2013-2022.

⁹² "Planning for the Vision", <https://ourvision.stanford.edu/planning-vision>

⁹³ Brown, (May 24, 2017) "Postdoc perspective: Sounding a note of optimism." *The Stanford Daily*.

Accessed Dec 9, 2022 at

<https://stanforddaily.com/2017/05/24/postdoc-perspective-sounding-a-note-of-optimism/>; and, Vol. 253 Editorial Board, (Mar 1, 2018) "Editorial Board: Stanford's 'second class citizens'" *The Stanford Daily*.

Accessed Dec 10, 2022 at

<https://stanforddaily.com/2018/03/01/editorial-board-stanfords-second-class-citizens/>

⁹⁴ Stanford Faculty Handbook, (Revised Oct 31, 2020) "COVID-19 Tenure and Appointment Clock Extension Policy". Accessed Dec 10, 2022 at

<https://facultyhandbook.stanford.edu/faculty-handbook/covid-19-related-supplemental-policies/covid-19-tenure-and-appointment-clock>

⁹⁵ California Department of Public Health, (May 12, 2021) "Updated COVID-19 Vaccine Eligibility Guidelines". Accessed Dec 10, 2022 at

<https://www.cdph.ca.gov/Programs/CID/DCDC/Pages/COVID-19/VaccineAllocationGuidelines.aspx>

drawn from a wide range of reputable sources to synthesize some key throughlines: postdocs have been consistently undervalued and underpaid since the conception of the postdoc role; more than half of the postdocs in the US are on temporary visas; postdoc experiences vary widely and in the majority of cases do not lead to tenure-track positions; pursuing an academic postdoc is correlated with decreased average lifetime earnings; repeated calls over many years to improve conditions for postdocs, for instance by increasing pay and increasing structures for accountability, have not resulted in widespread changes.

The situation for postdocs at Stanford is both better and worse than the broader picture. Stanford pays its postdocs more than the NIH minimum. But postdocs at Stanford get paid less in real wages. They get paid less compared to postdocs living in other parts of the US (due to high local cost of living). They get paid less now compared to postdocs at Stanford several years ago (due to salaries not keeping up with inflation). They get paid less relative to their work experience the longer they remain a postdoc at Stanford (due to a flat salary structure). And they get paid less now compared to Stanford's local Area Median Income (due to salaries not keeping up with local wages). This low salary is particularly challenging for certain groups of postdocs, including those with dependents, due to very high costs for housing, childcare, and health insurance. Postdocs at Stanford have several avenues for representation within the University (unlike at many other institutions) but continue to be overlooked.

A Quarter Century of Postdoc Advocacy at Stanford: Review of Previous Work

Overview

Postdocs at Stanford have been advocating for improved conditions for themselves since at least 1998 when the Stanford postdoctoral association, SURPAS, was founded (see **Appendix A: SURPAS (Stanford Postdoc Association) Bylaws**). The Committee engaged with past advocacy efforts of postdocs at Stanford by reviewing and synthesizing information from SURPAS' records, as detailed in this section of the Report.

Our community represents one unique stakeholder group within the University that shares common issues with many other stakeholder groups. While this Long Range Planning process is focused on the postdoc perspective, we also recognize the need for solidarity and support with other University communities, such as graduate students, medical residents, custodial staff, and kitchen workers. As an example of common issues between stakeholders, postdocs at Stanford faced increases in costs for dependent health insurance at the same time as service workers on campus (see **SURPAS Family Committee Letter (2020/21)**).⁹⁶

Document Review Process

The Committee assessed previous work performed by postdoc organizers. We accessed documents on major advocacy efforts throughout the years that had been collected and stored by SURPAS Leadership. Each of these individual resources was read and analyzed by two Committee members to ensure a diversity of viewpoints. Committee members wrote a three-sentence summary of the “acute needs” of postdocs that they identified within the resource and a separate three-sentence summary of any “long-term ideas” identified. Collective analysis of these resources by the Committee led to the themes and ideas presented in this section of the Report. Most resources addressed multiple themes.

The five core themes that emerged through our review of past work were:

1. Mentoring
2. Affordability
3. Status
4. Justice, Diversity, Equity, Inclusion, Belonging
5. Implementation & Outreach

Each theme is expanded upon in the headings below. All include “Key points to consider” and “Areas for action”.

⁹⁶ Patrone, (Nov 11, 2020) “Why are Stanford’s healthcare premiums being hiked?” *The Stanford Daily*. Accessed Dec 9, 2022 at <https://stanforddaily.com/2020/11/11/why-are-stanfords-healthcare-premiums-being-hiked/>

Resources Surveyed

(Listed in reverse chronological order.)

1. "Opinion: Letter to the President and Provost: Action Items for Achieving Racial Equity", (Jun 19, 2020). *The Stanford Daily, Opinions*.
<https://stanforddaily.com/2020/06/19/letter-to-the-president-provost-of-stanford-university-concerning-a-george-floyd-action-plan/>
2. "School of Medicine Faculty Senate Presentation on Postdocs", (Nov 19, 2019).
3. "A Primer on the Stanford Budget", (Oct 1, 2019). Later published: MacKenzie (Apr 13, 2022) "From the community | A primer on the Stanford budget or: how I learned to stop worrying and love the endowment" *The Stanford Daily*.
<https://stanforddaily.com/2022/04/13/from-the-community-a-primer-on-the-stanford-budget/>
4. "SURPAS Comments on Stanford's General Use Permit (GUP) application to Santa Clara County Board of Supervisors", (Oct 2019).
5. "Brainstorming Advocacy for Postdoc Benefits", (Sep 30, 2019).
6. "Engaging Bioscience Researchers Taskforce (School of Medicine)", (Jul 2019).
7. "SURPAS Diversity Strategy", (created Aug 8, 2017; last updated Mar 16, 2019).
8. "CONF Postdoc Affordability Taskforce Recommendations", (Apr 8, 2019).
9. "IDEAL Postdocs: Report on Two Brainstorming Sessions", (2018-2019). Where "IDEAL" is Stanford's diversity initiative and an acronym for "Inclusion, Diversity, Equity, and Access in a Learning Environment".
10. "SURPAS Family Committee Survey", (2018-2019).
11. "Postdoc Priority Needs", (Aug 12, 2018).
12. "PACPA Meeting", (Mar 28, 2018).
13. "SURPAS LRP White Paper Response Letter for VPGE, PACPA, OPA", (Mar 17, 2018).
14. "Brainstorming on Postdoc Leadership/Service Awards", (Feb 12, 2018).
15. "SURPAS review of LRP white papers (response to University Long Range Planning initiative)", (Feb 2018).
16. "SURPAS Letter for Provost's Advisory Committee on Postdoctoral Affairs (PACPA); Mission/Representation", (2018).
17. "Meeting of SURPAS Leadership with the Vice Provost for Graduate Education (VPGE)", (Oct 4, 2017).
18. "Thoughts on "Postdoc Identity" Issue", (May 24, 2017).
19. "Presentation by SURPAS Leadership for Provost Persis Drell", (May 3, 2017).
20. "Transportation Survey", (2017).
21. "Postdoc Housing and Transportation Committee Survey", (2017).
22. "SURPAS Leadership Presentation on Postdocs to the Stanford Faculty Senate", (2017).
23. "White Paper: Tips on How to Run a Postdoctoral Association", (2015).
24. "OPA:Postdoc Survey 2012", (Fall 2012).

Theme 1: Mentoring

A defining characteristic of the postdoctoral position is the advanced training with a faculty advisor who serves as a primary mentor for an early-career researcher. During the postdoctoral training period, a researcher can develop new technical skills, learn about problems in new fields, and seek out career development opportunities. On the other hand, postdocs fulfill an important role in providing mentorship, often serving as a first point of contact and important player in the education of graduate students. Though these mentorship experiences are important for postdocs to develop mentorship capabilities, they are rarely formally recognized. Furthermore, there do not exist professional training or certification processes by which postdocs can seek mentorship training as a career development option. The lack of mentorship training programs for postdocs creates a pool of faculty candidates who have not had formalized mentorship training, perpetuating the issue.

Key points to consider:

- Awareness of the importance of mentoring should be increased both for the professor and also among postdocs. Mentorship training for both postdocs and principal investigators is generally non-existent or poorly adopted.
- Many postdocs are very grateful for scientific environment at Stanford but feel a lack of support in other areas: insufficient career development options, lack of encouragement for pursuit of non-laboratory opportunities (e.g. career development or teaching), difficulty interacting with faculty members outside of primary research advisor, and most especially *monetary compensation*. Many people plan on leaving academia because they do not have financial support, with some going into debt to work as a postdoc with the high cost of living.
- Active participation by postdocs in laboratory discussion is an important part of the mentorship and education PhD students receive during graduate school. Postdocs provide hands-on instruction in the laboratory, give professional and academic feedback, model how an academic career may look for the graduate student, and provide personal/emotional support.
- Postdocs led the creation of the “Someone Like Me” Mentoring program⁹⁷ to provide support for trainees with marginalized backgrounds.
- Postdocs are required to schedule an Individual Development Plan (IDP) meeting at least yearly with their advisor to discuss career progression. In many cases these meetings rarely occur or are poorly implemented. The onus for scheduling and reporting the meeting is placed on postdocs with no incentive or consequence for PIs engaging with the meeting.

Areas for action:

- A solid mentorship program for postdocs should be developed. Such a program would need to emphasize the need for the postdoc to receive mentorship and also to practice

⁹⁷ SURPAS, Someone Like Me Mentoring Program.
<https://surpas.stanford.edu/someone-like-me-mentoring-program/>

mentoring younger scientists. A two-day Mentoring in Research workshop⁹⁸, which used to be run quarterly, has not been offered since early 2020. Reimplementation of this mentorship workshop is a first step.

- Searching for successful mentoring examples and identifying best practices would be a great benchmark to build the curriculum for these mentoring courses.
- The Postdoc Teaching Certificate is offered as a professional certification for postdocs preparing to be a lecturer/tenure-track faculty member⁹⁹. Creation of an analogous certificate for mentoring would be important to provide postdocs hands-on skill in mentoring younger scientists. Mentorship training would be of value for postdocs hoping to become a principal investigator in their own academic lab and for postdocs transitioning to industry.
- Postdocs should have the opportunity to receive mentorship from multiple professors beyond their primary faculty advisor, either through formal or informal mentorship structures. Incentives that compensate faculty for their time would be required to get buy-in from the mentors. Current incentive structures do not reward faculty for mentorship¹⁰⁰.

Theme 2: Affordability

Stanford is one of the wealthiest institutions in the world and is located in the heart of Silicon Valley, where cost of living far outstrips the modest salary postdocs receive. As a result, postdocs at Stanford suffer from food insecurity and rely on the pop-up food pantry run by Second Harvest Food Bank and initially organized by the Stanford Solidarity Network.¹⁰¹ With waitlists for childcare opportunities on campus often lasting longer than some postdoc's appointments, many postdoctoral scholars with families do not bother applying and are forced to shoulder the costs themselves. The February 2021 announcement of a \$5,000 family grant (now up to \$10,000) is much appreciated but does not sufficiently cover the costs of childcare.¹⁰² These affordability issues raise the barrier to an academic career for those with families and people from disadvantaged economic backgrounds.

Key points to consider:

- With a minimum salary of \$68,238 as of September 1, 2022,¹⁰³ postdocs make far lower than the median income in Santa Clara County (\$117,900 for a single person

⁹⁸ Stanford Office of Postdoctoral Affairs, Mentoring in Research. <https://postdocs.stanford.edu/events/series/mentoring-research>

⁹⁹ Stanford Office of Postdoctoral Affairs, Postdoc Teaching Certificate. <https://postdocs.stanford.edu/events/series/postdoc-teaching-certificate>

¹⁰⁰ Ruben (Aug 31, 2020) "Scientists aren't Trained to Mentor. That's a Problem" *Science Careers*. Accessed Dec 10, 2022 at

<https://www.science.org/content/article/scientists-aren-t-trained-mentor-s-problem>

¹⁰¹ Residential & Dining Enterprises, Pop-Up Food Pantry <https://rde.stanford.edu/food-pantry-pop-up>

¹⁰² Bent and Zacharias (Feb 25, 2021) "Message to Postdocs Announces New Financial Aid Programs" *Stanford Report*. Accessed Dec 10, 2022 at

<https://news.stanford.edu/report/2021/02/25/message-postdocs-announces-new-financial-aid-programs/>

¹⁰³ Stanford Office of Postdoctoral Affairs: Funding Rates and Guidelines. Accessed Dec 10, 2022 at <https://postdocs.stanford.edu/funding-rates-and-guidelines>

household). A single postdoc is classified as “Low Income”; a two-person household relying solely on a postdoc salary (as is the case for international postdocs with a spouse who is not allowed to work in the US) hovers barely above the “Very Low Income” category; while a three-person household is thousands of dollars short of the line separating “Low Income” from “Very Low Income” (as defined by the CA Department of Housing and Urban Development).¹⁰⁴

- In 2020-2021, a sudden change in the postdoc health insurance plan caused a spike in premium costs of over 60% for postdocs with dependents. Meanwhile, postdocs with no dependents saw no change in insurance costs.
- Paid parental leave policies vary from department to department (or even from Principal Investigator to Principal Investigator). While some departments at Stanford and many prestigious postdoctoral fellowships offer paid leave for 12 weeks, this policy is patchwork across the university.
- For retirement savings, postdocs (who are being paid a salary through Stanford, but not necessarily those on fellowship funding) have access to a Tax-Deferred Account and a Roth 403(b) Account. However, there is zero matched contribution from Stanford towards any postdoc retirement savings. By contrast, as of November 2022, Stanford “benefits-eligible employees” (not postdocs) begin to receive matched contributions after one year of service which increases thereafter. (see also next section, “**3. Status**”)

Areas for action:

- Eliminate food insecurity among Stanford’s research population by increasing postdoc salaries. Postdocs should also be able to access affordable housing (defined as paying no more than one-third of take-home income on rent). Salaries must take into account the cost of living and the housing market in the local area.
- Ensure equity in fee changes such that postdocs who are already economically vulnerable do not disproportionately bear the burden (e.g. postdoc parents with healthcare costs).
- Institute a standardized 12-week minimum paid leave for all postdoc parents.
- Offer affordable childcare to postdocs with dependents.
- Matched contributions for postdoc retirement accounts.
- Target fundraising and allocate money from the Stanford Endowment Income Funds Pool (“EIFP”) and the Expendable Funds Pool (“EFP”) to assist in the creation of an endowed fund specifically for postdocs to provide funding for initiatives like matched retirement contributions, increased salaries, and defraying the cost of childcare.

Theme 3: Status

Postdoc status impacts both how Postdocs are perceived by themselves and others in the Stanford community, as well as more concrete issues such as access to resources and benefits.

¹⁰⁴ Olmstead (April 30, 2020) “Memorandum for Interested Parties, State Income Limits for 2020” Department of Housing and Community Development
<https://www.hcd.ca.gov/grants-funding/income-limits/state-and-federal-income-limits/docs/income-limits-2020.pdf>

Postdocs are currently defined as ‘non-matriculated, non-degree seeking students’. However, because many Postdocs also receive W2 forms and do not pay student fees, the financial systems at Stanford (e.g. payroll, ASSU) view Postdocs as closer to employees. Though there are multiple organized postdoc groups beyond SURPAS, none are officially recognized by the university; the non-matriculated status of postdocs prevents us from accessing many benefits available to students.

Key points to consider:

- School of Medicine and several other departments now recognise Postdocs as alumni with access to alumni networks. However, the Stanford Alumni Association only allows postdocs to have an Affiliate Membership which has reduced benefits compared to full membership.
- As of 2022 Postdocs have priority access to housing near campus. However, units are limited in number and costs make postdocs severely rent burdened (see **Stanford Chinese Postdoc Association Housing Costs Letter** in **Ongoing Stanford Postdoc Advocacy** section of the Report).
- Some postdocs have student loan debt and the classification as ‘non-matriculated students’ allows postdocs to defer payments during their training period. Many postdocs feel that after receiving a terminal degree they should be able to afford student loan payments without worry or need to defer, something that is unattainable on a current postdoc salary.
- The term student does not recognise that Postdocs have already completed several years of training and hold terminal degrees in their fields. Postdocs additionally contribute to mentoring, teaching, research, and maintenance within their lab spaces.
- There is a lack of clarity over employee rights/benefits that Postdocs are entitled to, e.g. matched retirement contributions, workers compensation rights.
- Many postdocs transition to senior scientist or instructor roles after timing out of their postdoctoral position. In these situations, job duties remain largely unchanged while the postdoc becomes officially classified as an employee.
- The lack of clarity with regards to postdoc status leads to postdocs being left out of university initiatives. In 2021, the Community Board on Public Safety sought input from Stanford community members in a pair of meetings. A meeting for faculty, postdoctoral scholars, and staff was held March 26. A meeting for students was held on April 12. There were no attempts by University administration to inform postdocs of the existence of these meetings (e.g. through presentation at a SURPAS Council meeting or emailing the postdoc listserv). Postdocs only learned of the call for input after the March 26 meeting had already passed.

Areas for action:

- Regardless of classification as students or employees, postdocs should be paid salaries commensurate with our status as holders of terminal degrees. Compensation should be high enough that postdocs can afford life expenses such as student loan payments, saving for retirement, or childcare expenses.

- Postdocs should receive matched contributions to retirement accounts comparable with staff compensation. In the interim while such a program is rolled out, all postdocs who have transitioned to staff roles (e.g. senior scientist, instructor) should have time spent as a postdoc count towards years of employment for matched contributions. Data on the number of postdocs making the transition to staff roles each year should be made accessible.
- SURPAS should reach out to the Santa Clara County Office of Labor Standards Enforcement to receive a Know Your Rights Training to better understand employee rights we possess.
- Ensuring that Postdocs have a 'seat at the table' on all groups and committees making decisions which affect them. This representation must be in the form of voting seats - the ability to discuss but not directly participate in decision making is infantilizing. Any community feedback events and townhalls must include proactive outreach to postdocs.

Theme 4: Justice, Diversity, Equity, Inclusion, Belonging

There is general recognition that the Stanford postdoc community is not representative of the diversity of the population (either of Stanford undergraduate diversity or the US national diversity) and efforts should be made to rectify this. In general, postdocs from minoritized backgrounds do not feel supported by Stanford and often feel isolated or lacking in community. There is recognition that the diversity of the postdoc pool is the diversity of the future faculty pool. There have been lots of conversations and many ideas over the past decade or so, but relatively little action or progress has been made.

Key points to consider:

- There is some progress that is worth celebrating:
 - The Stanford Postdoctoral Recruitment Initiative in Sciences and Medicine (PRISM) program and its expansion, run by the Office for Postdoctoral Affairs. This program assists postdoctoral candidates from underrepresented backgrounds to visit Stanford's campus, meet current postdocs and interview with faculty, covering the costs of travel, accommodation and food for the visit.
 - The provision of the Diversity Center of Representation and Empowerment (D-CORE) space, a permanent physical space, within the School of Medicine. This space is open for diversity and inclusion focused events and meetings, and includes a Racial Justice Library.
 - The creation of the Certificate in Critical Consciousness and Anti-Oppressive Praxis (CCC&AOP) Program, initially (2019/20) operating within the School of Medicine and now (2022/23) within the Office of Inclusion, Community and Integrative Learning (ICIL). This program, grounded in critical theory and Black Feminism, seeks to provide training for graduate students and postdocs towards critical understandings of identity and positionality, the ability to identify present and historical oppressive structures, and a developed awareness of inclusive practices for transformative change.

- A new program within the School of Medicine for “diversity postdoc fellowships”. This program was launched in 2021 as the Propel Postdoctoral Scholars Program. It provides a fellowship of \$10,000 on top of the base postdoc salary to 10 postdocs per year as well as professional development and networking opportunities.
- Decentralization of Stanford is a serious and ongoing issue. Funding/budgets and policy (e.g. training) are arranged separately by School or Department and hiring/recruitment of postdocs is done by individual PIs. In some ways this is a positive - for example, certain schools and departments have started their own fellowship programs or recruitment/inclusivity initiatives without having to get approval across the university. However, this requires more work from postdocs themselves to lobby their own individual programs for support, rather than a combined effort across Stanford.
- What does the postdoc community look like? More than 60% of postdocs are “international” but there is no further breakdown of “international” by country or race or ethnicity, and international does not mean underrepresented. However, representation for racial groups within the United States have not been conflated with this “international” categorization in the IDEAL dashboard. Although goals for increasing DEI within the postdoc population can be supported by both of these categories, specific efforts toward improving the underrepresented populations (African American, Native American, etc.) have not yet improved representation at Stanford (it remains at 5%).
- Many of these and other postdoc-related issues rely on faculty engagement; however, Stanford prioritizes the autonomy of its faculty within its decentralized structure, making faculty buy-in a barrier to progress.

Areas for action:

- Improve conductance of DEI conversations, for instance by increasing representation of URM individuals on committees and improving awareness/training of those on committees, particularly for non-URM individuals. The University needs to hire more URM individuals to have a larger pool from which to select for committee service to prevent the creation of a ‘minority tax’ on specific individuals.
- Increase DEI awareness and training for everyone, ideally universal training required on an annual basis (e.g., anti-racist training).
- Transparency on progress-to-date for DEI initiatives (e.g., IDEAL, surveys, etc.)
- Remuneration for individuals conducting DEI training or participating in DEI work, particularly those from URM backgrounds, including by consideration of DEI efforts and university service in hiring and tenure decisions.
- Increase hiring/recruitment and retention of people from URM backgrounds, particularly African American people. Specific funding provided for these positions.
- Developing institutional relationships with Historically Black Colleges and Universities and Hispanic Serving Institutions.
- Continued improvement of the postdoc community for underrepresented scholars, as retention is a key factor preventing growth of URM populations at Stanford. Feelings of isolation or exclusion are common; further improvements could involve the construction of a Postdoc Community Center or better integration with existing campus community

centers, specific budget items for this sort of work, or dedicated administrators or offices instead of reliance on trainees to push forward initiatives.

Theme 5: Implementation & Outreach

“Implementation” here refers to the practicalities of operating postdoc community and advocacy organizations. “Outreach” here refers to relationships external to Stanford for passing on knowledge of these implementation practices in order for it to be applied at other institutions.

Stanford has a large postdoc community with more than 2400 postdocs across campus. Stanford’s postdoc organizations have been operating for many years and have substantial buy-in from the University administration and from postdocs themselves. However, postdocs remain a largely invisible or under-acknowledged community within the University and within academia at large. Stanford’s postdoc community and community organizations are more robust than those at many other research institutions.

Postdocs face unique challenges given the heterogeneity of our community. Since each Postdoc is hired individually, there is no ‘cohort’ analogous to the situation for graduate students. With the University’s decentralization, the integration of any postdoc into department communities is contingent upon the local conditions in that specific department. Identifying the needs of a community and engaging in advocacy first requires the existence of that community. Postdocs have implemented community and advocacy in a variety of ways, providing a strong foundation upon which to build. At the same time, the strategies and tactics of other groups within and beyond the University community can serve as inspiration for future developments. The uncertain status of postdocs within the University often contributes to missed connections and poor implementation of University-wide policies with regards to the postdoctoral community - actors beyond the postdoctoral community hold responsibility for actively working to ensure our inclusion in University-wide initiatives.

Key points to consider:

- SURPAS organizational structures are well-established, with multiple bodies (Council, Leadership, and Committees) that have been operating for many years and have undergone internal review at several points.
 - These structures have experienced significant challenges in the wake of the COVID-19 pandemic, including fewer postdocs putting themselves forward to volunteer for SURPAS Leadership roles. Anecdotally, a small number of postdocs have low confidence that SURPAS is able to effect meaningful change for postdocs’ benefit and view SURPAS as being an administrative extension of the Office for Postdoctoral Affairs, rather than an independent representative body.
- Stanford’s postdoc affinity groups (Stanford Black Postdoc Association, Stanford Latinx Postdoc Association, LGBTQIA+ Postdocs, Stanford Chinese Postdoc Association) are similarly well-established within the Stanford community.
- Many other research institutions lack strong community and advocacy organizations for their postdocs.

- Monthly SURPAS Council meetings provide a forum for postdocs to learn about ongoing initiatives and how to get involved. Happy hours provide a venue for postdocs to destress and network to build community.
- Postdocs can and do take positions on specific issues by passing resolutions as Council.¹⁰⁵ Individual postdocs can introduce a resolution at a Council meeting for voting for adoption by the Postdoc community at Stanford.
- In other situations, open letters from committees or individuals with wide signature gathering from within the postdoc and university community has been an effective strategy to implement advocacy. (See **Ongoing Stanford Postdoc Advocacy** section).
- Postdocs have proactively done outreach and asserted their place as important stakeholders in the local community by advocating directly to Santa Clara County.¹⁰⁶
- SURPAS has helped build community within the postdoctoral community by helping organize and participate in the Bay Area Postdoctoral Association and its Symposium.¹⁰⁷
- Postdocs led the creation of the “Be a Better Ally” series as a growth from the Someone Like Me mentoring program. Postdocs take leadership roles in creating programs that can be adopted and supported with university resources.
- There is poor implementation for postdocs within the university bureaucracy. The university states the Individual Development Plan (IDP) is an important required mentorship meeting between postdocs and their advisors, but the website for reporting the IDP was down for over a year.¹⁰⁸ Failure to update basic infrastructure indicates postdocs are not a priority for distribution of university resources.

Areas for action:

- Develop stronger connections with other university groups (e.g. GSC and Undergraduate Senate - pass joint resolution by all three bodies to enable SURPAS to have a mechanism for bringing topics to faculty senate agenda).
- Develop connection with medical residents since they are at a similar career stage in medical training.
- Develop deeper connections with other postdoc associations in the area (e.g. UCSF, UC Berkeley).
- Get a reporter from Stanford Daily to attend monthly council meetings (there is someone on the grad student beat who covers weekly GSC meetings).

¹⁰⁵ Hsieh and Bagdasarian (May 27, 2021) “Advocates, Elected Officials Call for Free Period Products at Stanford in Wake of New County Plan” *The Stanford Daily*. Accessed Dec 10, 2022 at <https://stanforddaily.com/2021/05/27/advocates-elected-officials-call-for-free-period-products-at-stanford-in-wake-of-new-county-plan/>

¹⁰⁶ SURPAS Leadership, “Comments on Stanford’s General Use Permit (GUP) Application for Submission to Santa Clara County Board of Supervisors”, Nov 2019. Accessible in SURPAS Google Drive at https://docs.google.com/document/d/16jJQFUvyR2BFNIOP_rou4R1ZrciR-kP6_4mc01xnf4k/edit?usp=sharing

¹⁰⁷ Bay Area Postdoctoral Association, <http://www.bayareapostdocs.org/>

¹⁰⁸ Stanford Office of Postdoctoral Affairs, Your Individual Development Plan (IDP). <https://postdocs.stanford.edu/current-postdocs/navigating-your-individual-development-plan-idp/your-individual-development-plan>

- More focus from administrators on including postdocs - there should be a postdoc in the room for most conversations (e.g. university search committees). Active outreach to our community is necessary.
- Keep an eye for Stanford re-applying for General Use Permit from the county so postdocs can attend meetings and advocate directly to the County Board of Supervisors for our needs. There is potential for solidarity with graduate students as was done in the past.
- Orientation is overwhelming and needs to be revamped or have follow up after a bit of time. New postdocs are inundated with information that is too much to absorb all at once and much gets lost; then there is no follow-up.
- Stanford's postdoc organizations have an opportunity to provide more guidance and resources to postdocs at other institutions, either to promote the creation of new postdoc associations or to share ideas for better events or programs.

Conversations with Postdocs at Stanford: Focus Groups 2021

Overview

We conducted in-depth, hour-long, open-ended conversations about the present and future of the postdoctoral experience with groups of between two and ten postdocs. Twelve different focus group sessions were held between March and December 2021 with a total of 50 participants. Due to the COVID-19 pandemic, all focus groups were conducted virtually via Zoom. As an expression of our appreciation for their time and energy, participants were offered reimbursement for lunch up to the value of \$15 each. This cost was supported by SURPAS.

To ensure that postdocs from as many different identities as possible were included in our conversations, we hosted focus groups that were specifically advertised for historically minoritized groups, including the Stanford Black Postdoc Association, Stanford Latinx Postdoc Association, LGBTQIA+ Postdocs, Postdocs with Dependents, and Late-stage Postdocs. Postdocs with these identities were also welcome to join the focus groups that were advertised to the postdoc community at large.

All focus groups were conducted in the same open-ended manner according to the template provided in **Appendix B: How to Run a Long Range Planning Focus Group**. Focus group participants were initially presented with a broad question: **“What should the postdoc experience at Stanford look like in 2030?”** If necessary to stimulate further conversation, additional follow-up questions were posed. Questions were deliberately broad and open-ended in order to not bias the responses of the participants; we wanted participants to raise the issues that were already on their minds, rather than seek their response to previously identified issues. To this end, focus groups with historically minoritized groups were not directed to focus their comments on issues that might be specifically relevant to their group. Instead, the same broad questions were posed to these groups.

Detailed notes for each focus group were taken during the conversations by an assigned notetaker (a Committee member), who then wrote a summary of the main topics raised within that session. After all the focus groups had been completed, these summaries were compiled into a single document. The themes below were identified from that compilation document as frequently raised topics. These themes represent the topics that were most commonly raised by focus group participants. They do not represent an exhaustive account of everything that was discussed.

Focus group conversations were recorded via Zoom (following verbal consent from all participants) and these recordings were later transcribed to text by the Committee members. Quotations included below that address particular themes were selected from these transcripts.

Meta-Analysis of Focus Group Conversations

Our Focus Group participants spanned a wide range of departments (**Figure 12, left panel**) and length of time (**Figure 12, right panel**) as a postdoc at Stanford. Participants self-identified as being from the following departments at Stanford (**Figure 12, left panel**), and this was representative of the different schools and departments present at Stanford. The participants also spent varying amounts of time as a Postdoc at Stanford (**Figure 12, right panel**).

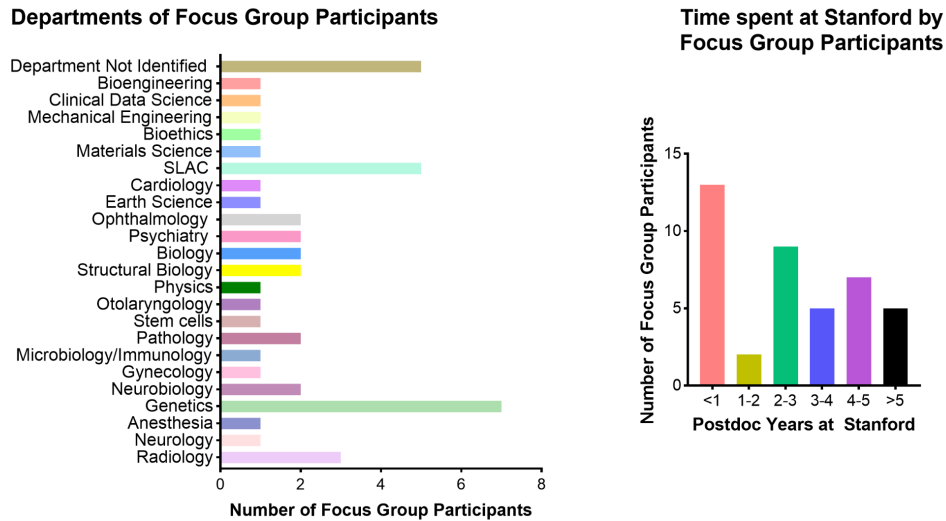


Figure 12. Distribution of departments and time spent as Postdocs at Stanford of focus group participants.

The percentage of Focus Group sessions in which each identified theme was mentioned were as follows:

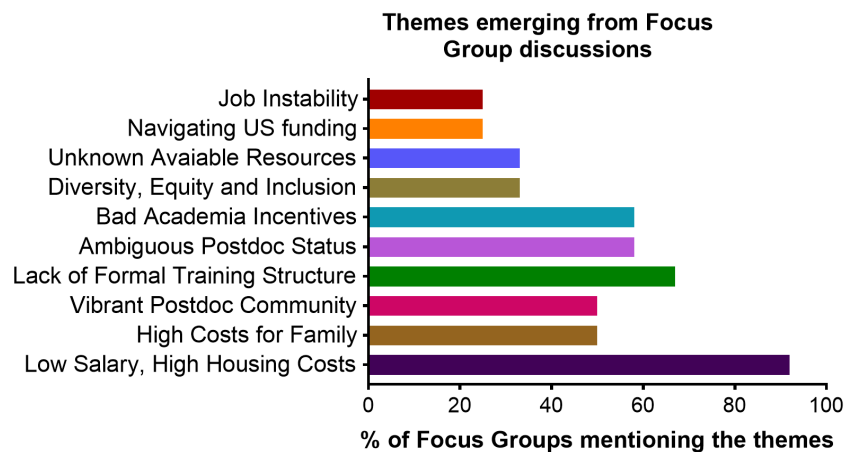


Figure 13. Percentage of focus groups in which each theme was raised.

The views presented in this section were from a diverse pool of Postdocs and the themes that were identified during the Focus Group sessions as shown in **Figure 13** are summarized below.

1. Postdoc Salaries Are Insufficient For Extremely High Cost of Living

(N.B. The Focus Groups were conducted in 2021, prior to the intense inflation of 2022. As of December 2022, the postdoc minimum salary has not been raised commensurate with inflation. Therefore, postdocs' purchasing power has decreased since the Focus Group conversations.)

Postdocs at Stanford struggle with the extremely high cost of living in the Bay Area. This was the challenge most consistently reported by Focus Group participants. Unprompted, it was raised in all but one of the groups. This suggests a high mental toll on the postdoc community due to this single issue.

Postdoc pay is viewed, almost universally, as low and insufficient for living in the areas around Stanford. Housing costs, as the single biggest expense for most households, are extremely high. One Focus Group participant reported requiring 75% of their postdoc income to cover just housing and dependent care expenses. Childcare, where it is accessible, is also extremely expensive (see the next section: **"2. Postdoc Parents Face Very High Costs and Low Access to Childcare"**). Moving to Stanford from abroad (>60% of Stanford's postdocs are international) involves substantial additional expenses that Stanford does not assist with. Commuting is another substantial cost that occupies postdocs' minds.

Participants questioned how many potential postdocs are choosing not to come to Stanford because of the very real affordability difficulties. Stanford is losing out on an unknown number of excellent candidates as a result. Another participant put it more frankly: "Doing a postdoc [here] is not accessible to people who need to work to earn a living." Others cited financial stress as negatively impacting their research productivity. This should be particularly concerning to academic institutions and Principal Investigators who hire postdocs. Postdocs are very often the researchers who are responsible for driving key aspects of research and mentoring within the university setting.

Participants offered a range of potential actions that could help to address this situation. They suggested: Stanford should build more housing that could be provided to postdocs at a subsidy (and thereby be affordable); Stanford should provide more financial assistance in general; Stanford should raise the Minimum Postdoc Salary to be equivalent to that paid by industry; Stanford should have a short-term housing provision to assist incoming postdocs with their transition from elsewhere into local (non-Stanford) housing; Stanford should provide free meals for postdocs; postdoc salary, benefits, and support system should be boosted substantially.

"Postdocs should be making enough money to live in this area without having to worry or going into debt."

"I think the cost of living in the Bay Area is outrageous, so compensation along those lines to the extent that we can live as adults would be a major component in making the postdoc better."

“It’s already such a financial hit to take this salary, which actually is good here compared to most other places. It is still much lower than what all my former classmates are getting in industry, but they are also getting matched 401(k) [retirement savings]. That would be huge to have a few more years of compound interest retirement savings, would be really really big.”

“Just build more houses! Why are they not working more to have more housing for postdocs? To make sure their employees can stay on campus and work on-site to make less traffic in and out of the campus.”

2. Postdoc Parents Face Very High Costs and Low Access to Childcare

(N.B. The Focus Groups were conducted in 2021. Stanford’s Postdoctoral Scholar Family Grant program increased the maximum amount from \$5000 to \$10,000 in January 2022.)

Many postdocs feel that starting a family is incompatible with being a postdoc. In our Focus Group conversations, the primary difficulties cited were: the lack of access to childcare (limited places, long waitlists) and the extremely high cost of childcare (relative to postdoc salary). As a result of these lack of resources, some postdocs choose to forgo starting a family while they are a postdoc. This is a source of considerable concern and frustration for some postdocs.

One Focus Group participant stated that the only model for having children as a postdoc that is workable, although still not easy, is for the postdoc to have a partner who works in a much higher paid field (such as the tech industry) and to use the childcare provision of the partner’s workplace (i.e. not use Stanford’s childcare facilities and not rely on the postdoc’s compensation). All other models are extremely challenging. As an example, one participant, in order to support their two children and also work as a postdoc at Stanford, had to split their family across multiple states for years at a time in order to make ends meet. Where postdocs are also immigrants (>60% of postdocs at Stanford are international), the situation can be even more dire as postdocs may have a dependent spouse/partner who is not able to work due to visa restrictions.

Stanford does have a Postdoctoral Scholar Family Grant program, in part aimed at subsidizing the high cost of childcare. While Focus Group participants acknowledged that any assistance with these extremely high costs is helpful, the current level of support is not sufficient; more assistance is required because the maximum hardship fund award (\$5000, as of 2021) is only a small fraction of the cost of childcare. Further, positioning this fund as “hardship-only” greatly raises the barrier for postdocs to apply for it as it suggests the postdoc has failed in some way (with associated feelings of shame or guilt) if they cannot balance the extremely high costs of childcare with their relatively low pay. This has the potential to exacerbate mental health issues of postdocs with dependents, a population that is likely to be more vulnerable to mental health

issues than even the general population of academia which already has higher prevalence of mental health issues than the wider population.

On the other hand, several participants cited the flexibility of their job to manage their own time as being a big plus for taking care of a baby.

Despite the challenges, many postdocs do choose to have children while working as a postdoc or are already supporting dependents. Each year some 50 postdocs at Stanford become parents or carers. As such, these are critical and ongoing challenges for many postdocs at Stanford.

“Living here, I cannot imagine myself having a kid with me being the only earning member, or even if my husband is a postdoc. My husband is not a postdoc, he works in tech, so that gives us a little more financial stability and mental relaxation.”

“I don’t have a child but I’m thinking about it. One of my thoughts was to never get pregnant and have a child while I’m at Stanford because I won’t be able to finance it.”

“[Regarding Stanford childcare grants:] I’m grateful for any money that we can get our hands on. Like any dollars is great in addition to our salary. But at the same time, it’s a monthly cost of two grand for daycare. So five grand is two months.”

“My husband is still on the East Coast, so I’m managing our two kids by myself in the Bay Area and I have to kind of structure my work, like the actual time I spend in the lab, with going to pick them up because I actually cannot afford childcare. So I have to drop them off at school and then rush to Stanford and then maximize as much time as I can get out of the limited time that I have.”

3. Strong Research Environment and Vibrant Postdoc Community at Stanford

Focus Group participants were complimentary and appreciative of the high quality research environment at Stanford. The availability of research resources, such as core facilities and instruments, as well as the sharing of knowledge through regular seminars, workshops, bootcamps, meetings, and training opportunities all make Stanford a great place for doing research.

Participants also praised the strong postdoc community at Stanford. Great peer groups and various support-group activities were cited as key parts of the research environment. In-person social events (such as happy hours and coffee socials) in particular were raised as important opportunities for bringing postdocs together, providing space for both social and professional networking, and for fostering collaborations and sharing expertise.

While connections at Stanford were generally considered an existing strength, some participants expressed a desire for more opportunities for researchers who work on similar topics to gather to discuss ideas and collaborations. Postdocs who had joined Stanford during the COVID-19 pandemic and who therefore had yet to experience SURPAS in-person social events (which were not permitted due to the risk to the community's health) unsurprisingly expressed a desire for more in-person social events. Some postdocs who are based away from the main Stanford campus, such as those working at the Stanford Linear Accelerator Center (SLAC), desired more social events that were accessible to them.

“Stanford is definitely a land of opportunity in the sense that whatever you want to do there’s probably a way to do it here.”

“If you want to do it, you have access to it. And I think Stanford does a pretty good job of that.”

“SURPAS is a really powerful instrument of postdoc empowerment. And I think that it’s growing. It has been a wonderful community for several decades for postdocs at Stanford. So I think it’s worth celebrating and acknowledging that community as well.”

“I would say there are many opportunities at Stanford compared to [another university], where I came from. They don’t take care of their postdocs as much as Stanford does.”

“The people have been the best part for me at Stanford. I didn’t quite expect that. I am thinking about my interaction with SLPA and the Black Postdoc Association. I have met some amazing women in those groups. They are not in my area of research, so I would not have met them just through science.”

4. Instability of Postdoc Position Prevents Longer-Term Life Planning

Several Focus Group participants expressed that a postdoc position does not provide job security and is highly unstable because of the short duration of postdoc contracts and the nature of the job. This instability makes longer-term life planning difficult, especially since many of the postdocs are in their late 20s to mid-30s and are thinking of starting a family or settling down. As Stanford typically provides a 1-year contract for postdocs, there is an uncertainty whether these contracts would be renewed, how many times the contract would be renewed and whether one can find their next position in time, in case the postdoc contracts are not renewed. Many participants said that this feeling of uncertainty is further exacerbated for international postdocs who are on a visa. Some participants suggested that providing a slightly longer postdoc contract, such as for two or three years, would provide some sense of short-term stability in order to plan their lives. Postdocs who have transitioned (after Stanford’s 5-year postdoc time limit) to a staff scientist role still face instability as contracts continue to be in 1-year increments

and for international researchers this means renewals for work visas must be completed every year too.

“For me, the main issue of being a postdoc here now is I don’t feel safe or have my job secured or even my stay in the country secured. For example, I cannot be unemployed for even one day because I am on a visa.”

“Having even a two-year contract would let you focus more on the science rather than what’s next... How do I time-manage? I could be gone next year.”

“It isn’t written down that you may have to move five or six times if you want that tenured permanent faculty position... that kind of structure is often also unclear.”

5. Effective Formal Postdoc Structure Is Lacking

Many Focus Group participants expressed a desire for more structure within their postdoc. The primary current system of providing postdoc structure – the Individual Development Planning (IDP) scheme – is either inappropriate (because it focuses on a yearly performance cycle rather than developing a career-focused plan) or in many cases simply not implemented. Suggestions for more formal or organized postdoctoral training included: a centralized set of guidelines for all postdocs; more check-ins or check-points with one’s supervisor; having an advisory committee and meeting with them regularly; having advisors who are external to one’s research group/department but are aligned with one’s research goals and meeting with them regularly; internship opportunities; exit surveys; and predefined rules for publishing. Mentorship training for Principal Investigators (PIs) was also raised as a suggestion to improve postdoc training, implying that postdocs feel PIs are not adequately prepared for their formal role as mentors.

Three factors contributed heavily to these conversations. Firstly, the ambiguous status of postdocs within the University setting: Are postdocs students or employees? (See theme: “**7. Ambiguous Status of Postdocs on Campus Leads to Feelings of Exclusion.**”) Secondly, the lack of clear expectations: How long is a postdoc? When is it complete? What do I need to achieve? What is the expected number of outputs? How independent am I meant to be from my supervisor? Thirdly, Stanford is highly decentralized and postdocs’ experiences are highly dependent on their Principal Investigator.

Participants expressed that the orientation period at Stanford was overwhelming: there was too much information presented at once to properly absorb. An orientation recap several months after arrival was suggested to address this.

Several participants expressed that postdoc time at Stanford should not be limited to five years because high quality and innovative work takes time to produce; such a time-limit hinders scientific inquiry. Others felt that a time limit for this career stage was necessary, in order that postdocs could be pushed to find a permanent position and not linger forever as a postdoc.

“[I would like for] a postdoc be seen as a more structured training position rather than what it is right now, which is a holding pattern where postdocs are expected to make their own way while still being capable and not being given a lot of independence responsibilities.”

“Here at Stanford, they are very proud of the one-year document that we share with our PIs on our plans for the future. However, the university does not do anything with them; does not do any reports on what is expected for postdoc.”

“The postdoc check-in list is quite nice, I have to say, for the first week but after that, what happens? I don’t know.”

“It’s obviously nicer if there were more opportunities for people who want to stay on longer to stay on longer in some official capacity. That also provides stability from a family planning perspective, long-term planning perspective, you know, knowing that you have a job long term.”

“I do think that some time limit is good to promote that we try to find some permanent job in the long run.”

6. US Funding Systems Difficult to Navigate, Especially for International Postdocs

Postdocs at Stanford, particularly the international community, expressed that understanding and navigating the US funding system was difficult. Participants attributed two main reasons for this difficulty: one is the lack of awareness regarding the various grants and funding opportunities available to postdocs and the second is the paucity in grants available to international postdocs. Most of the grants currently available require either permanent residency (Green Cards) or US citizenship, limiting opportunities for International postdocs.

Many people wanting to transition to faculty were unaware about how the grant system in the USA functions and which grants they can apply to. Participants suggested that having a systematic resource as a centralized document with useful links will be very helpful. Other criticisms that were raised was the lack of support from their supervisors on writing individual grants since most of the focus was on grants for the supervisor and/or for the project the postdoc was already working on.

For a successful transition to a faculty position, one criterion is the ability of the candidate to secure independent funding. One participant mentioned that Stanford policies make it extremely difficult for postdocs to have their names on grants as a Principal investigator (PI). This negatively impacts the postdoc’s faculty application since there is no proof of their grant writing

or grant acquiring skill. Having PI status on grant applications is crucial for the success of postdocs at Stanford looking for an academic career track.

“ If you come from somewhere else, it’s really hard to understand the American landscape on grants and what it means to be a postdoc here”

“The first thing that popped across for opportunities I wish I had, would be that I can’t be a listed PI on a grant. I have shared this story ‘n’ number of times, I got a sequencing grant that had no money exchanged, I wrote it myself, my PI was a co [PI on the grant], I submitted it. They were literally taking my samples and sequencing them and Stanford sponsored programs made them take my name off of the entire thing. And that drives me insane!”

7. Ambiguous Status of Postdocs on Campus Leads to Feelings of Exclusion

Several participants from the Focus Groups felt that the positioning of postdocs within the academic structure of Stanford (or for that matter any University) is ambiguous. They are neither staff nor students. They do not have the so-called employee benefits. There is a dichotomy in the present situation. Although postdocs are in a trainee phase, everyone holds terminal degrees and are already experts in their respective fields. The liminal space postdocs occupy between faculty and graduate student makes it feel like they are excluded from benefits of either group. Many of them explained that unlike other periods of their academic careers, they did not join Stanford as a cohort, as each postdoc starts their position at a different time of year, which can often lead to feeling isolated and/or excluded from their peers.

Due to this ambiguous status of postdocs, many participants felt they were losing benefits, such as retirement savings plans, which would have been available to them if they were considered as staff. Losing five years of one’s working years without such plans or savings (which is already meager due to the low current postdoc salary versus the high cost of living) has immense financial implications when postdocs are planning for their future livelihoods. Some participants even said that this ambiguous status made it difficult to reach out to the relevant administrative staff to seek help in solving certain issues. Participants suggested that having a clear definition of postdocs within the Stanford academic setting would not only make administrative policies easier, but also help to foster a sense of belonging and inclusion on campus.

“I feel like postdocs are an invisible population on campus.”

“It is quite a solitary type of job, being a postdoc. So you do work quite a lot on your own and check in a few times per week or everyday with your supervisor but I didn’t realize how solitary it was.”

“You’re sometimes treated as an equal and sometimes you’re not. It’s this in-between of a postdoc life. Sometimes you’re treated as a PhD student, sometimes you’re treated like a professor.”

“The postdoc status at Stanford is a little bit awkward, when I first joined, because I didn’t have a sense of whether I am faculty, student, or staff. Stanford treats postdocs as students but ASSU [Associated Students of Stanford University] doesn’t have a council for postdocs, they just care about other students. The last time I met OPA [Office for Postdoctoral Affairs] they said that because students pay tuition they have more power.”

“[Another prominent university] treats its postdocs like faculty and Stanford absolutely has no desire to do that.”

“Stanford doesn’t really think of us as workers which became an issue when they wanted to make me staff... My time as a postdoc didn’t count towards staff benefits: vacation days didn’t roll over, I didn’t immediately start on the retirement matching. They said my postdoc didn’t count towards staff [benefits] because I was a student. Recognition [for postdocs] as workers would be much appreciated.”

8. Much More Effort is Required on Justice, Diversity, Equity, Inclusion, & Belonging

Many Focus Group participants emphasized the importance of finding diverse postdoc candidates and also keeping diverse postdocs, the implication being that Stanford does not provide an inclusive environment that diverse postdocs would want to continue working at. Some participants were concerned that Principal Investigators (PIs) were hiring postdocs who were of a similar mindset and identity as themselves. Others expressed that postdocs are equally responsible for improving diversity across campus as are PIs and must find ways to promote diversity amongst their communities.

Several participants made the connection between affordability pressures and impacts on diversity – diverse candidates are less likely to choose to come to Stanford if the postdoc salary does not match the cost of living. One participant expressed that Stanford needs to be more competitive in order to attract postdocs who are parents and come from underrepresented minority backgrounds.

Out of twelve Focus Group sessions, issues related to Justice, Diversity, Equity, Inclusion, and Belonging were raised explicitly in just four. This was despite the relatively recent turmoil following the high-profile murder of George Floyd in 2020. Even for Focus Groups with participants drawn from Postdoc Affinity Groups (e.g. Stanford Black Postdoc Association, Stanford Latinx Postdoc Association, LGBTQIA+ Postdocs), for whom Justice, Diversity, Equity, Inclusion, and Belonging concerns might be more salient than for postdocs from dominant identities, the conversations were much more centered around difficulties fulfilling basic needs, such as housing, food, and childcare, than around microaggressions or police discrimination on

campus, for instance. This suggests that the best way to improve Justice, Diversity, Equity, Inclusion, and Belonging amongst postdocs at Stanford in the first instance is to address affordability concerns.

“If the university is interested in getting diverse people... not just diverse by race but economic status, where they are living in the world... the transition from graduate school to postdoc, that move is really expensive and it puts you in debt and you are not going to get paid for the first two months, till you move here... There’s “finding the diverse candidates” and then there’s “supporting them when they are here”. I think the “supporting them when they are here” is the hardest part and I think that’s where the institution could do a better job.”

“I would like to see more representative cohorts...to foster a more inclusive environment where people are more comfortable.”

“I wish the postdoc community at Stanford can be more diverse in the future, not only to increase the population of the underrepresented groups but also to see more collaboration, and interdisciplinary research.”

“I know our group has a bit of a gender imbalance for sure. I know they’re trying to address that. I think they’re hiring a few more women postdocs and staff scientists, but I think in our group we have a pretty non-diverse group. So I think more diversity is always gonna be good as well.”

“To address these problems with diversity, it’s just we have to start from all angles. Both from the top and from the bottom. So also the postdocs have to help each other, to promote people from different backgrounds and different cultures and different research skills.”

9. Existing Academic Incentive Structures are Poorly Designed & Unclear

Participants expressed that there is little incentive for postdocs at Stanford to engage in any profession-relevant activities that are not research, such as communication of science, developing teaching skills, or engaging in other forms of outreach and service with the local community.

Several participants expressed frustration that postdocs were not given credit for the work that they do. Examples of this non-credited or under-recognized work included: writing and editing of manuscripts; reviewing manuscripts; and mentoring graduate students or undergraduates in the lab.

Others were frustrated that Stanford actively limits postdocs' ability to be recognized as key contributors to grants as a result of not being able to be listed as "principal investigators" on grant applications, thereby hampering academic job prospects. Stanford's system for providing "PI waivers" is limited to only certain grants (e.g. the NIH's K99 grant) and predominantly used within the School of Medicine and not by other Schools within the University.

One participant's view was that the postdoc position is an inherently exploitative one; that a postdoc is first and foremost a source of cheap labor for PIs. Other participants, who had heard similar views, were frustrated with this perspective and found it hurtful to be thought of in this way, suggesting an additional mental toll on top of the financial one.

Some expressed a desire for job models that make the research endeavor in science collaborative, rather than competitive. They also wanted a restructuring of the academic career such that individuals were not required to persist through years of low wages or the requirement to move location multiple times or to have no parental leave.

"In terms of reimagining what a postdoc can be, it is a really hard question because it is inherently an exploitative position, right? Your interests as a postdoc are inherently not aligned with your advisors because you are a source of cheap and highly skilled labor for them."

"People our age are working hard to bust that myth that you only have to publish in big journals. But obviously there is a caveat - can you get an academic position by publishing in small journals? ... I think the whole stress of publishing in big journals should not be there for postdocs."

"Depending on the lab, postdocs can play a very major role in practice, but not in paper, [for example] in the mentoring of graduate students, but then the PI gets all the 'credit'. We are in this weird role where we are supposed to do just science but there are so many more things that are expected, unspoken expected....I am just realizing how important of a role postdocs can play for the mentoring of future students but they don't get officially recognized."

"[Stanford] try really hard to make sure you can't have your name on any grant, which in my experience made it very difficult to get a faculty job because there's no proof that I have contributed to funded projects except for my boss writing a recommendation letter, and if we didn't have a great relationship that would never be showcased."

10. Postdocs are Not Always Aware of the Resources that are Available to Them

On a number of occasions, Focus Group participants expressed a desire for a resource or opportunity that was in fact already available to them at Stanford. This speaks to a lack of

effective communication structures and channels for postdocs. One participant said that they receive a huge number of emails from Stanford, of which 80% are irrelevant and needed to be sorted through in order to find the relevant 20%. Others expressed that there is far too much information conveyed during the orientation process for postdocs. One suggested solution for this issue was for the University to offer a follow-up information session several months or even a year after orientation.

The following resources are examples that do address concerns that some participants spoke about:

- Stanford Financial Credit Union: for getting a bank account before having a permanent residential address and for getting a credit card without a pre-existing credit score.
- Grant-Writing Academy: for assistance with writing grant proposals.
- BioSci Careers: for non-academic job resources and advice for postdocs with a biomedical focus.
- Postdoc Teaching Certificate: for obtaining training and a qualification in teaching skills.

Some participants mentioned that they found that the most efficient way to find relevant information and have their questions answered was often to chat with other postdocs at SURPAS social events. However, they expressed concern that relying on this mechanism was potentially unreliable.

Better communication strategies are required on campus in order for postdocs to be connected up with existing resources that would be relevant and helpful to them.

“I think those classes and courses are great and I'm really grateful that Stanford offers them. But in my first year, I definitely did not know that they were out there.”

“Orientation is overwhelming. I would say that the first orientation is very overwhelming. They are telling you about benefits, health insurance, taxes and I don't know what all of that means. It's a lot. So maybe you could have a follow-up orientation two-months post. It was a lot of information and looking back at it now, it was there, but I didn't digest it fully at the time.”

Ongoing Postdoc Advocacy at Stanford: Surveys & Letters 2021/2022

This Report is intended to provide a big-picture view of the postdoctoral position through the eyes of postdocs. While the Committee conducted focus groups and reviewed previous advocacy efforts from organized postdocs, contemporary efforts continued unabated. This section of the report includes advocacy efforts spearheaded by postdocs concurrent to the work of the Committee. It provides a slice-in-time collection of issues important to postdocs at Stanford and data about material conditions for use in future advocacy efforts. The items contained within this section are representative of postdoc advocacy efforts and are analogous to the resources reviewed by the Committee of past postdoc efforts in the **A Quarter Century of Postdoc Advocacy at Stanford: Review of Previous Work** section of the Report.

The first section concerns **Matters Arising** from the initial distribution of the Report to the postdoctoral community and contains some detail of the major discussion points and how they were incorporated into the final draft of the Report.

The second section is a **SURPAS Leadership Position Paper on Support for the Underrepresented Postdoc Community (2022)**, approved by the full SURPAS Council and sent to Stanford administrators in December 2022.

The third section is a summary of major findings and an associated open letter from the **Stanford Latinx Postdoc Association Survey (Fall 2022)** that detail difficulties faced by new workers moving to Stanford to join the academic workforce as a postdoc.

The fourth section addresses concerns about costs for Stanford-provided, postdoc-specific housing that became available for the first time in late 2022, detailed in the **Stanford Chinese Postdoc Association Housing Costs Letter (2022)**.

The fifth section includes a summary of results from the **SURPAS Benefits and Affordability Survey (Winter 2021/22)** and provides data on postdoc material conditions before the historic inflation that took place in 2022.

The final section addresses affordability difficulties for the 43% of postdocs with dependents, highlighted in the **SURPAS Family Committee Letter (2020/21)**.

Matters Arising from Report Draft (2023)

*The Long Range Planning Committee sought feedback on the Report as outlined in **Appendix C: Communication Strategy of Report**. Postdocs had opportunities to provide feedback through discussion at Council meetings, via asynchronous comments on the draft of the Report, and via personal meetings and emails with Committee members. This feedback was incorporated into the body of the Report at the appropriate locations.*

The Committee felt that several of these conversations were very important and warranted more extensive inclusion in the Report. Thus, major discussion topics and how the Committee engaged with the community's feedback are briefly outlined in this section.

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### **Meta-Analysis of Feedback on Report Draft**

During the feedback period (Feb 9 - Mar 10, 2023), the draft Report (a Google Doc) had 74 unique viewers, and received 173 new comments and 91 replies to comments.

Given the length of the Report (100+ pages), the Committee suggested that any interested postdocs should focus their attention on the Executive Summary and the Recommendations sections. Accordingly, we received the most feedback on the Executive Summary and many comments on the Recommendations section. However, feedback was not limited to these sections; most of the other sections of the Report also received some feedback.

### **Postdocs are Valuable to the University & Research Enterprise**

Some commenters felt that the Report had not sufficiently emphasized the critical role that postdocs play within the University and the broader research ecosystem. Whilst the living and working conditions of postdocs as human beings should be treated with the utmost importance, the Committee fully understands that research institutions and organizations will judge the value of postdocs by their work output. Within this framing, it is still highly justifiable for postdocs to be treated with higher value than they currently are.

Postdocs are an indispensable group of researchers who are important to the University and its research output. They play a crucial role in designing, executing, and performing research experiments while also assisting in writing grants, and supervising graduate and undergraduate students. Postdocs are generally the ones that drive research projects leading to high-impact publications and in some cases are also necessary for competing against other research institutions. Overall, without the contribution of postdocs as an essential backbone to academia, there would be serious repercussions to the University's research output.



## Where are the Numbers to Back This Up?

A number of commenters requested that the Report should include more detail around particular comments or conclusions that are drawn within the text of the Report. Many of these requests were directed at the Executive Summary (“What are the numbers behind this statement?”) or, less frequently, at specific items in the Recommendations section.

The Committee took the view that the Executive Summary should be as concise as possible (two pages at maximum) and also cover as many of the findings from the rest of the Report as possible. For the sake of brevity, we have excluded most specific numbers from the Executive Summary. However, as trained academic researchers, we understand the need to back up our claims with solid evidence, be it with citations or the data themselves. In the body of the Report (and in particular the Competitive Landscape section), we strove to include as much detail as was necessary to fully back up any and all claims that we make elsewhere in the Report (including in the Executive Summary). **Wherever possible, we included in the body and appendices of the Report the exact numbers, calculations, raw data, and sources for these data.** The Committee is not faultless and we accept that despite our best efforts there may still be errors within the final version of the Report.

The Committee also accepts that there are more data and sources out there that we did not include in this Report. We welcome the Report being built upon in future through more in-depth investigations into the situation of postdocs (perhaps conducted by non-volunteers). Nevertheless, given the substantial number of sources that we did consult through the Long Range Planning process, we feel confident in both our specific claims and in our general statements about the situation of postdocs, both in the US broadly and at Stanford.

## What is the Specific Salary Ask of the Report?

The question of “Specifically, what Postdoc Minimum Salary are you proposing? No, really, what is the exact number?” was brought to the Committee by multiple people at different times. The intense interest in postdoc salary is not surprising given the amount of financial stress that postdocs at Stanford live under. We believe that the pervasiveness of this concern has been reflected by the prominent inclusion of this issue in every section of this Report. Indeed, of the 17 different issues that we identified in the Recommendations section of the Report, six of these issues were explicitly about the financial cost of being a postdoc at Stanford. Clearly, this is a critical issue.

However, in this Report, the Committee has refrained from holding up a single number as the overarching conclusion of our work. The reasoning for this decision is largely philosophical: the Long Range Planning Committee was tasked with crafting a vision for the future of postdocs towards the year 2030, not with generating specific salary recommendations for the current fiscal cycle (although such a “postdoc salary committee” could prove to be a valuable support to the efforts of the SURPAS Co-Chairs in advocating for heavily-evidenced and well-justified salary increases with the Provost). We are utterly convinced that postdocs at Stanford are

underpaid and should be paid considerably more than they are at present. All of our analyses, both through hard numbers and through a multitude of personal narratives, points to this conclusion. However, any single number that we might advocate for in the present moment (March 2023) will quickly become outdated, and especially so given the recent high levels of inflation. Instead, in an effort to make this Report both more relevant and more useful throughout this next decade, we have sought to unearth useful data and provide new comparisons that could be utilized by current and future postdoc leaders at Stanford to advocate for specific Postdoc Minimum Salaries moving forward.

We hope that the general principles we have outlined (e.g. postdocs should not be required to spend more than 30% of their income on housing) and the types of analyses that we have done in this Report (e.g. the Postdoc Minimum Salary versus the Area Median Income for the local area of the University) provide some guidance and a starting point for future advocacy efforts.

## **Should There be a Time Limit for the Postdoc Period?**

Currently, Stanford limits the time that an individual can be a postdoc to 5 years. The suggestion from the Committee in the draft Executive Summary that the postdoc period should not be limited to 5 years (i.e. that the postdoc period should be allowed to extend for longer than 5 years) attracted questioning and pushback from a number of commenters. Several noted that a postdoc is “meant to be” a transitional period within an academic career and it would be undesirable for this transition to extend longer than 5 years (which is already considered by some to be an excessively long period of time). Another commenter stated plainly: “I think if the postdoc period is not limited to 5 years they will be exploited even further.”

The Committee appreciates this feedback and welcomes the pragmatism in these comments. However, we maintain that one aspiration for the future of postdocs should be to remove the 5-year limit, whilst also necessarily addressing the major causes of postdoc suffering.

The Committee’s position rests on a number of understandings:

- 1) Quality academic research does not often fit within prescribed timelines. A particular project may take longer to complete than 5 years; or, an individual postdoc may take longer than 5 years to collect the requirements for moving into a faculty position within a particular discipline. From the perspective of optimizing for research outcomes (i.e. academia being primarily about knowledge creation), it does not necessarily follow that research time should be artificially limited. From the perspective of optimizing for career satisfaction (given that many researchers find, or at least seek, deeper meaning in their work than just money), it does not necessarily follow that each individual should proceed in their career at the same or similar rates.
- 2) In reality, many postdocs at Stanford already extend beyond 5 years. Although Stanford does not allow postdocs to extend beyond 5 years, at this point (after 5 years) many postdocs transition into a research staff position, in which they perform *exactly the same job duties* as they did as a postdoc. This begs the question: “How is a postdoc different from a research staff member?”. And “If it is no different, why do postdocs not receive

the same salary and benefits as a research staff member?”. One common-sense response is: “Postdocs aim to become faculty, whereas research staff do not.” (Clearly not always true.) This leads to the conclusion that postdocs sacrifice salary and benefits for their *intention* to pursue a faculty position.

- 3) The research enterprise positions a postdoc as a period of additional training prior to moving into a (tenure-track) faculty position. However, most academic postdocs do not move into faculty positions, so the premise (or promise) of an academic postdoc is false for most.
- 4) The research enterprise positions a postdoc as a “transitional” period. Given the “transitional nature of a postdoc”, it is apparently acceptable to exploit individuals in this role because the institution does not need to be accountable to them in the longer term. In many careers outside of academia, individuals can stay in positions for far less than 5 years and they are not considered “transitional”. The narrative of “postdocs are transitional” is false and it is a detrimental one for postdocs themselves.
- 5) The power imbalance between faculty and trainees (postdocs and also graduate students and undergraduates) further exacerbates this issue of exploitation, as does the lack of faculty training in management and mentorship.
- 6) Undertaking a postdoc at Stanford currently involves significant sacrifice and suffering (in terms of salary, quality of life, mental health, etc.) for most individuals, and substantially more for those individuals from less privileged backgrounds (this is perhaps the greatest barrier to diversifying the postdoc population and thereby the professoriate). Nobody wants or aims to be a postdoc; the aim is to become a tenured professor. The sacrifice of a postdoc only makes sense in this context.
- 7) In the minds of postdocs, the 5-year time limit is primarily a safeguard for limiting the suffering and sacrifice inherent to undertaking a postdoc.

The key question regarding the postdoc time limit appears to be: **What strategy will lead to less exploitation of postdocs?**

The Committee reasons that the 5-year limit (or any time limit) only makes sense in the context that being a postdoc is unsustainable for individuals in the longer term because of the conditions that we are required to accept. If the conditions of suffering are removed, then there is no good reason to enforce a time limit (which is often not abided by anyway).

In seeking to frame a positive vision of the future of postdocs, we feel we cannot endorse the fundamentally damage-centered, harm-reductionist position of: “Let’s accept that postdocs are exploited and just seek to limit the duration of it”. Instead, we choose to endorse a positive, desire-centered vision for the future: **“Postdocs are full and valued members of the academic enterprise, and as such they are supported to do great research.”** The requirement that postdocs not be exploited comes as a natural extension of this vision. In this context, the primary justification for the 5-year time limit (at least from the postdoc perspective: as a safeguard against additional suffering) is no longer apparent.

We understand that this position may lead to fewer postdoc positions being available (for instance, due to budgetary limitations: if postdocs are paid more, then fewer postdocs can be afforded by research groups). However, we believe that this will also lead to less suffering in general.

## **How to Best Define a Postdoc?**

The question of how to define a postdoc arose in multiple ways. Several commenters asked how universal or unique the definition of a postdoc at Stanford is in comparison with that of other institutions. The Committee addressed this question by including multiple definitions of postdocs from peer institutions as a point of comparison.

Several academic researchers who self-identify as postdocs but are not classified as such by the University reached out to the Committee to describe how they were not included in the original draft of the Report, which used Stanford's Research Policy Handbook for the definition of a postdoc. The description of visiting scholars and postdocs who transition to staff after the five year time limit was added to account for these researchers.

By far the topic that received the most comments with regards to the definition of a postdoc was the question of whether postdocs should be classified as employees or trainees. One commenter explicitly said postdocs can have pretty substantial benefits by being able to access perks from both student and staff categories while recognizing it as "a double edged sword... leaving you at the mercy of your department and PI in a lot of ways." Others worried that classification as staff rather than students or trainees would cause postdocs to lose access to training opportunities. One postdoc highlighted that classification as staff would require domestic postdocs to start paying back student loans, adding a major financial burden to postdocs.

In the information gathering efforts of the Committee, we found that the uncertain classification of postdocs usually leads to missed connections in practice. Postdocs tend to be excluded from benefits for either students or staff, rather than being able to access both. As an example, on February 22, 2023 an email was sent to the Stanford community about the university undergoing the once-in-a-decade accreditation process. As part of the process, there was a meeting scheduled for students and postdocs to meet with the accreditation committee. However, postdocs received no communication until they pointed out that administrators had failed to include them in the initial email to the entire campus community. Postdocs are excluded from critical campus communications due to our uncertain status. The definition of Schrodinger's postdoc - a superposition of student and employee until observation collapses the postdoc into whatever is convenient for the university - resonated with many postdocs.

The Committee takes the position that the opposition between classification as a trainee or an employee is a false dichotomy. Classification of postdocs as employees should not remove access to training opportunities. It is common in many career pathways for workers to be able to take advantage of career development opportunities. Academia is not alone in having on-the-job training and entry level positions. In this Report, postdocs call for various forms of training,

including university-wide anti-racist training and management and mentorship training for faculty members. It would be absurd for faculty to lose their status as employees simply for partaking in career development and training opportunities. Assistant Professors receive training on the job before being promoted to Associate Professors, and there is no question of whether they are employees. It is not mutually exclusive to be both a trainee and an employee.

Postdocs lose out on concrete material benefits by not being classified as employees. Postdocs do not receive matched contributions to retirement accounts as is common for workers in many industries. A central principle of compound interest is that even a small principal can grow to large amounts by retirement age for workers by starting early. Postdocs miss out on the potential for matched contributions after already having forewent such plans as graduate students. The difficulty in building assets for the future raises the barrier for people to continue on an academic career track.

Postdocs should not be classified as students. It is hard to reconcile the current classification of postdocs at Stanford as a type of student with our status as holders of terminal degrees. Achieving the vision for the future of postdocs laid out in this Report will necessarily relieve some of the financial pressures postdocs face, lowering the impact of the requirement for postdocs with student loan debt to begin repaying were this student classification to be removed. The Committee added a recommendation for State and National governments to pursue policies to forgive a certain dollar amount of student loan debt for postdocs for every year of work to reduce the impact of student loan debt on the postdoctoral workforce.

A reasonable working definition of a postdoc would be a non-administrative, non-tenure track academic worker with a terminal degree. This definition would include postdocs who have transitioned to staff roles as well as academic workers in non-tenured teaching roles. This more inclusive definition of postdocs would enable easier tracking of statistics about the academic workforce, such as the proportion of work performed at universities by non-tenure track employees and how that compares to historical trends. This definition may also help to address the well-documented disparities in pay based on job title (noted in the Competitive Landscape section of this Report).

## **Existing Demographic Data are Inadequate**

Several commenters took issue with the data that we presented on postdoc demographics at Stanford. Specifically, the demographics data included a category for “Sex” (with binarized responses: “Male” or “Female” or “Unknown/Decline to State”) but no data on gender. Additionally, the “Race/Ethnicity Groups” data included an “International/Nonresident” category that the majority of postdocs fit into, with no additional breakdown. Notably, it appears that “International/Nonresident” is mutually exclusive to “Underrepresented Minority” and “Not Underrepresented Minority”.

The Committee did not independently collect demographic data on the postdoc population at Stanford. We obtained these data directly from the Stanford IDEAL Dashboard website

(<https://ideal.stanford.edu/data-reports/ideal-dashboards>). We appreciate that the IDEAL initiative has made these data publicly available and we also agree that the type of data collected could be substantially improved. For example, an additional option of “Intersex” could be added to the “Sex” question; an additional question for “Gender” could be added (with multiple inclusive response options); an additional question of “Country of Origin” or “Country of Citizenship” could be added; “Underrepresented Minority” could be clarified as “Underrepresented Minority Within the US”.

## **The Question of Postdoc Unionization**

One anonymous commenter expressed dissatisfaction and impatience with the efforts of both the Office of Postdoctoral Affairs and SURPAS in addressing the challenges that postdocs at Stanford face. They raised the idea of postdoc unionization as a more effective path forward.

The SURPAS LRP Committee was not tasked with examining unionization of postdocs and we have not researched or investigated this potential path forward. However, we acknowledge that unionization is one way that postdocs could proceed with collective action in addressing some of the issues highlighted in this Report.

## **Covering Basic Needs**

For many postdocs who responded to the Report, the aspects about the difficulty postdocs face meeting basic needs resonated deeply. In written comments and private conversations, postdocs shared with the Committee that reading about the widespread financial difficulties within the postdoctoral population covered in the Report made them feel less alone. When the Committee began the work of the Long Range Planning Report, we expected to focus on topics such as identifying and spreading best practices of mentorship or building community within the postdoctoral population. While these themes are present in the Report, a surprisingly large amount of the data we collected and analyzed dealt with postdocs struggling to meet basic needs. The current status quo of postdoctoral training and career progression is untenable for those with families or who do not come from backgrounds of economic privilege.

# SURPAS Leadership Position Paper on Support for the Underrepresented Postdoc Community (2022)

*This letter was composed by several postdoc leaders. The letter was adopted by the full SURPAS Council at the November 2022 meeting and sent to Dr. Stacey Bent, the Vice Provost for Graduate Education and Postdoc Affairs and Dr. Sofie Kleppner, the Associate Vice Provost and Associate Dean for Postdoctoral Affairs on December 7, 2022.*

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Open Letter

Support for the under-represented minority and under-privileged postdoctoral community

Introduction

Postdoctoral scholars are central to Stanford’s preeminence, making significant contributions to Stanford’s innovative and creative reputation. Postdocs fill integral roles in the teaching and research mission of the university. Postdocs work with faculty to formulate and conduct ground-breaking research, write grants, mentor students, publish papers, generate key data for NIH grants, and help lead research groups, as well as volunteer in programs to enrich the postdoc experience. Stanford aims to be an institution that supports postdocs, enabling them to realize their career ambitions and become leaders in the professions of their choosing. However, the reality is that the goals of most Stanford postdocs are often limited due to the challenges of trying to balance the pressures of research and the inability to afford basic human needs. Further, these challenges curtail the potential of some of the most skilled members of the postdoc community and inordinately affects those from traditionally underrepresented identities.

Despite the irreplaceable work performed by postdocs, **they are often not accounted for within the university hierarchy or afforded access to the same resources and structures as students, faculty, and/or staff.** As a result, postdocs are excluded from programs aimed at helping these other groups; without formal cohorts or support networks, they are often isolated and deprived of a sense of community and belonging. This lack of support disproportionately impacts underrepresented minorities (URM) and other underprivileged current and future postdocs, who are excluded from Stanford through structural biases or bear the burden of the “diversity tax” with few external sources of support.

Below we outline key challenges faced by URM postdocs and potential solutions to ensure their successful training, enabling their transition into their desired career choice. These issues are in line with [Stanford’s long-range vision and commitment to diversity and inclusion](#).

Key Areas	Recommended Action	Intended Outcome
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<p>Affordability The 2022-2023 minimum stipend for a Stanford postdoc is \$68,238. While this is among the highest institution-wide minimums, due to the high local cost of living in the bay area, ~50% of postdocs live below the Santa Clara County area median income (published by the U.S Department of Housing and Urban Development as of April 1, 2021). As a result, ~36% of postdocs report experiencing food insecurity and ~10% have considered or will apply for government food stamps (based on SURPAS-led survey in December 2021).</p> <p>Many graduate students are considering industry jobs and those who want to pursue academia would prefer to go to institutions where they can afford to dedicate most of their time to research and less on trying to sustain a living.</p> <p>Progress Stanford has made significant efforts by giving postdocs priority at the Oak Creek Apartments. However with only 25% discount, these apartments still remain out of the reach of most postdocs.</p> <p>Stanford has also provided several grants to postdocs</p> <ol style="list-style-type: none"> 1. Family Grant (up to \$10,000) 2. Childcare Grant (up to \$5000) 3. Backup childcare 	<p>Housing: Provide affordable (30% of post-tax income) housing on or near campus for postdocs such as below market rates to postdocs who apply to the Stanford-owned housing.</p> <ol style="list-style-type: none"> 1. Oak Creek 2. Stanford West 3. Cardinals 4. Colonnades <p>Moving costs: Stanford should provide moving costs up to \$5000 to incoming postdocs who have demonstrated financial need for moving costs. Eligibility criteria based on NIH standards: Individuals from disadvantaged backgrounds are defined as those who meet two or more of the following criteria:</p> <ol style="list-style-type: none"> 1. Were homeless, as defined by the McKinney-Vento Definition of Homeless (this act can also be used as a guide for international postdocs). 2. Were eligible for programs like the Federal Free and Reduced Lunch Program. 3. Have no parents or legal guardians who completed a bachelor’s degree. 4. Received support from programs such as the Special Supplemental Nutrition Program for Women, Infants and Children (WIC) as a parent or child. 5. Grew up in one of the following areas: a) a U.S. rural area, as designated by the Health Resources and Services Administration (HRSA), Rural Health Grants Eligibility Analyzer, or b) a Centers for Medicare and Medicaid Services-designated Low-Income and Health Professional Shortage Areas. <i>International areas that fall under these categories should be</i> 	<p>Stanford’s research mission is to foster discovery, creativity and innovation and this requires diverse perspectives and experiences which can only be achieved by bringing the best minds together to become part of the Stanford community.</p> <p>Making Stanford more accessible will support recruitment and mitigate the upfront burden of moving costs, and help realize the promise of making Stanford truly inclusive and equitable.</p>
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<p>4. Emergency grant-in-aid (up to \$5000)</p> <p>Stanford has also provided access to the GoPass for the Caltrain, making transportation easily accessible.</p>	<p><i>considered.</i></p>	
<p>Diversity in the postdoc population</p> <p>Progress Stanford has implemented the PRISM and PROPEL programs however, there is still a screening process by faculty which is subject to bias.</p>	<p>Provide additional administrative support for the offices of Institutional Equity, Access & Community and for the School of Medicine office for Commission on Justice and Equity.</p> <p>Develop 1:1 faculty (at all levels) mentoring and coaching programs (Duke University has implemented these programs) and implement best practices for hiring developed by the Committee on Diversity, Equity, Inclusion, and Belonging in the Stanford Department of Biology as part of the 1:1 training.</p> <p>Provide financial incentives for faculty to complete the annual individual development plan (IDP) with their postdocs.</p> <p>Collect data to quantify whether URMs and under-privileged postdocs are</p> <ol style="list-style-type: none"> 1) not applying for postdocs at Stanford, 2) not getting interviews, 3) not getting offers, or 4) getting offers and choosing not to come 5) leaving Stanford early. <p>Have faculty submit open positions to the Office of Postdoctoral Affairs (OPA).</p> <p>OPA should advertise positions more widely and in HBCUs by establishing a diversity recruitment committee, similar to the Graduate Medical</p>	<p>These efforts will increase diversity and achieve the goal of equity and inclusion at Stanford.</p> <p>The 1:1 mentoring and coaching programs and financial incentives will also allow faculty to glimpse the backgrounds of their postdocs, inspire understanding and be more invested in the success of their postdocs.</p> <p>The data collected on URM and under-privileged postdocs will inform on how best to increase diversity at Stanford.</p>

	<p>Education diversity recruitment program.</p> <p>Encourage faculty to work with the new Director of HBCU Partnerships and Engagement, Dr. Judith Ned.</p>	
<p>Sense of community and belonging URM postdocs do much of the work advancing diversity and inclusion and are expected to be as scientifically productive as their colleagues without DEI concerns/efforts and deserve compensation for this work as well.</p>	<p>Hire dedicated staff to help with the programs implemented for creating community and sense of belonging for URM postdocs to alleviate the diversity tax burden on URM postdocs. Examples of current programs include:</p> <ol style="list-style-type: none"> 1. Someone Like Me (postdoc and graduate student mentoring) 2. Someone Like Me (faculty and postdoc mentoring) 3. Better Ally 4. Just Like You 5. Pro <p>Ensure that postdocs who serve on DEI committees are compensated. One possibility is to have a University-wide DEI fund that departments (or even the committees directly) can apply for to compensate for service.</p>	<p>These efforts will reduce the burden of the “diversity tax” on URM postdocs.</p> <p>Dedicated staff will help create a mechanism for postdoc groups to work with existing department administrators and would expand the reach and impact of URM groups.</p> <p>The financial compensation goes a long way to recognize the hard work being done by those engaged in DEI and will provide encouragement to continue to engage in these activities.</p>
<p>Formal structure to address bias, discrimination, and/or microaggressions The issues that postdocs face, such as the pressures of their research and being productive, evidenced by publications and obtaining grants, the uncertainty of being able to attain their preferred career trajectory, are compounded by financial stress, lack of feeling included and equal to their non-URM colleagues at Stanford, and bias and discriminatory</p>	<p>Establish a resource (see UCSF program) to mediate relationships between mentor and mentee - formally requesting a meeting between the faculty member, postdoc and an objective mediator to facilitate a positive resolution. This provision should be made available for all postdocs.</p> <p>Actively provide support for postdocs who have reported bias, discrimination and/or microaggressions such as follow-up meetings with the postdoc and faculty mentor to ensure that a successful resolution has been achieved.</p>	<p>This will instill confidence that the University cares about these issues and provide a sense of belonging to the postdoc while at the same time educating the faculty member who may or may not realize the implications of their actions and will have the opportunity to listen and learn from the perspectives of their postdoc.</p>

<p>experiences, creates a significant amount of mental stress. This is compounded by the lack of diverse therapists and mental health workers at Stanford.</p> <p>Progress Stanford has taken measures to institute Meru, a free mental health program for postdocs.</p>	<p>Provide diverse and accessible mental health and wellness therapists. Meru does not include face-to-face interactions with the therapist and the program does not guarantee requests for a therapist with a specific background or identity which is important for mental health.</p>	<p>Helping the minority populations by providing mental health resources will help the larger Stanford population.</p>
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Conclusion

Stanford postdocs are represented by people from diverse backgrounds. The achievement of this diverse community, however, comes at a great cost, especially to those that do not come from privileged financial backgrounds. Addressing these issues, which are key to the success of postdocs, is a great opportunity for Stanford to demonstrate its commitment to equity, inclusivity, and diversity.

Sincerely,

Stanford University Postdoctoral Association (SURPAS)

Chinyere Iweka and Julia Abitbol (SURPAS Co-Chairs)

Seungsoo Kim and Michael Lawson (SURPAS JEDI committee co-chairs)

Aravind Natarajan (Postdoc representative to the Stanford SOM DEI Cabinet)

Azeezat Azeez (former SBPA co-chair)

Signed by the following groups in solidarity:

Stanford Latinx Postdoctoral Association (SLPA)

Stanford LGBTQ+ Postdoctoral Association

Stanford Black Postdoctoral Association (SBPA)

Stanford Chinese Postdoctoral Association (SCPA)

Background information

High cost of living combined with low income

Housing is the main component of cost of living: ~47% of postdocs spend >\$2000/month on housing. Furthermore, 25.3% of postdocs share housing with roommates, however, this is not an option for all postdocs (e.g. those with families). Many Stanford postdocs cannot afford to live near campus due to high rents and childcare costs, and some live as far as San Jose, Santa Cruz and the East Bay. Cost is a major factor for many top URM candidates who decide to pursue their training elsewhere (based on discussions with candidates from the PRISM program; no data on declined postdoc offers exist). The high cost of rent, plus moving costs and security deposit, is particularly burdensome in the first weeks of a postdoc position, before the first stipend payment. Indeed, a recent survey administered by the Stanford Latinx Postdoc Association (SLPA) showed that [~66% of incoming Latinx postdocs spend >\\$3000 on moving costs alone](#).

Stanford has taken steps to mitigate housing issues for postdocs, including temporarily opening graduate housing to postdocs by lottery during the COVID-19 pandemic, a pilot program to offer transitional housing for incoming postdocs, and the first priority now being given to postdocs at the newly acquired Oak Creek Apartments (but at 25% discounted rate, housing will still be a challenge for low-income background postdocs). However, due to the high enrollment of undergraduate students for the 2022/23 academic year, the lottery system is no longer available to postdocs - they were asked to vacate all student housing by August 14th, 2022, less than a month's notice of the lottery being discontinued. Even while open, graduate housing was competitive as postdocs were last priority, and even those who did obtain housing faced the uncertainty of having to move or losing it each year if they were not selected in the annual lottery. This instability was particularly challenging for postdocs with disabilities and with children. In this manner, Stanford perpetuates systemic inequity and continues to remain an exclusive institution for the privileged.

Lack of diversity in postdoc population

URM postdocs make up only 6% of the Stanford postdoc population—in contrast to over 30% of Stanford undergraduates and 15% of Stanford graduate students (~27% *graduate students in basic sciences*; [IDEAL 2021-22](#)). One particular limitation to increasing diversity among postdocs is the **decentralized nature of postdoc hiring**. The first step of postdoc hiring is typically an unsolicited email to a faculty member, at least in biomedical sciences. Usually, this is the most selective and potentially biased part of the process, as many faculty cannot carefully consider all emails and instead screen for factors such as PhD training in well-known institutions or labs (where URMs are often especially underrepresented). Furthermore, the lack of data on postdoc hiring makes it impossible to determine the extent of bias in this and other stages of postdoc hiring.

The University has taken important steps to increase diversity within the postdoc community, namely the PRISM-Baker program. This program aims to support URM postdoc candidates,

from funding the travel costs of interviewing, through one or more years of postdoc funding and community-building. However, candidates are prescreened by faculty and the aforementioned biases limit the pool of URM postdoc candidates.

Many URM considering a postdoc at Stanford are faced with added financial burdens and thus may often choose not to pursue a postdoc at all. While Stanford does offer support to those in financial need (through [emergency grants](#) and has recently expanded support for those with children by raising the maximum [family grant](#) to \$10,000/year, as well as the childcare grant), this funding may not be known to potential candidates and applying also comes with the burden and stigma of applying and justifying need. Moreover, funding does not support those with obligations to support parents or other relatives who are not legally dependents.

Lack of community and belonging

Postdocs lack formal cohorts and other structures provided by PhD programs, and many are the only or one of few postdocs in their lab. SURPAS, postdoc affinity groups, and other cross-disciplinary postdoc communities aim to address this need. However, these groups face challenges reaching the often isolated postdocs whose only initial and regular contacts are with their advisor and department administrators. While Stanford (Office of Postdoctoral Affairs (OPA) and Vice Provost of Graduate Education and Postdoctoral Affairs (VPGEPA)) support these groups financially, administrative support is minimal. Thus, the time-intensive burden of organizing and running these groups falls on postdocs, particularly URM, who “feel a professional and personal burden of having to do diversity and inclusion work without recognition or reward, something they refer to as the ‘diversity tax.’”

URM postdocs that work to provide a community are already overwhelmed with their research responsibilities, professional development training on top of the effort to fit in. This community-building work is usually uncompensated and also contributes to the perception that community-building work is a distraction from their training and research. The OPA recently instituted an annual JEDI recognition award during the National Postdoctoral JEDI awards, and while this is a step in the right direction, it does not protect time spent by URM postdocs doing JEDI work.

No formal structure to address bias, discrimination, and/or microaggressions

Many URM postdocs report experiencing acts of bias or discrimination ([IDEAL survey](#)), often perpetrated by faculty members, including their own advisor. The unique power of advisors over their postdocs makes the threat of retaliation overwhelming. Currently, postdocs can seek anonymous counseling via the Ombuds offices and take formal action via the Office of Postdoctoral Affairs. Yet, a clear reporting structure does not exist and postdocs lack knowledge about their resources. Moreover, there are rarely repercussions against the perpetrator, increasing the fear of retaliation and disempowering postdocs. Providing a safe environment for URM postdocs—including international postdocs who refrain from reporting due to visa concerns—should be a priority for the University. Clear protocols for bias and discrimination reporting, including mediation efforts and updates on repercussions between affected parties should be developed.

Lack of diversity in faculty population

Increased URM faculty presence instills confidence in URM postdocs and potential formal or informal mentors. While the number of female faculty at Stanford rose from 22% to 32% and Asian faculty increased from 10% to 19%, the number of URM faculty members has remained fairly stagnant, increasing from 6% to 7.2% in 20 years. Between 2016 and 2020, URM faculty in the School of Medicine has increased only by 0.8%, exhibiting a Compound Annual Growth Rate (CAGR) of only 0.1% while total faculty CAGR is 6.8%. Stanford recently hired a very small number of URM faculty, however, this was loosely based on their research of the URM faculty to include or relate to diversity topics. Hence there still remains little increase in URM faculty whose research is based on clinical or basic science.

Stanford Latinx Postdoc Association Survey (Fall 2022)

*In 2022, the Stanford Latinx Postdoc Association conducted a survey of postdocs on moving & living expenses. The data and analysis were made publicly available at the following website: <https://slpa.github.io/survey2022/>. The survey was completed by 212 anonymous postdocs, of which 55 identified as Latinx. The survey questionnaire was designed by Julieta Álvarez Manjarrez with input from the SLPA board members Clare Abreu, Sur Herrera Paredes, Renato S. Navarro, Fátima Pardo Ávila, Maria-Belen Perez-Ramirez, and Vanessa Sanchez with report and analysis prepared by Clare Abreu, Sur Herrera Paredes, and Fátima Pardo Ávila with input from Stephanie Aguilon and Julieta Álvarez Manharrez. SURPAS leadership and Communications Director Geetha Saarunya Clarke helped disseminate the survey. We highly encourage interested readers to peruse the data and analysis at the link above. The summary of major findings from the report and a copy of the open letter with more than 150 signatories are included below. **The major ask from SLPA was for the creation of a need-based \$5,000 relocation grant for all incoming postdocs.***

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### Summary of Major Findings

- We present the results from the largest ever survey of the Stanford Latinx postdocs, sampling more than 40% of the whole Latinx postdoc community.
- The median postdoc had a monthly salary of \$1,701-\$2,500 prior to Stanford, and they spent a median of \$3,000-\$4,000 in their first month for housing and around \$2,000 in moving costs other than housing when moving to Stanford.
- Latinx postdocs are a diverse population. When compared with non-Latinx postdocs, we see that Latinx postdocs move to Stanford from a greater number of distinct regions, and had more variable salaries prior to Stanford.
- When compared with the most recent SURPAS benefits survey (conducted in December 2021 - January 2022), we detected increases in expenses related to housing, car transportation, and food. These increases track with known global, national, and regional trends and are likely driven by inflation, and have outpaced minimum salary increases.
- Latinx postdocs are disproportionately affected in housing costs, living distance to campus, car transportation costs, financial concerns, and retirement savings. In aggregate, these differences point to a troubling trend.
- Overall, postdocs are dissatisfied with their financial situation, with majorities indicating that their salary doesn't cover their living expenses, and that this has negative impacts in multiple aspects of their lives. We found other factors to have much weaker, if any effects.
- In their responses to an open ended question, postdoc comments indicated overwhelming frustration and negative emotions. Many postdocs highlighted financial struggles, and the negative consequences on their mental and physical health.

## Open Letter

To the Stanford community:

“Increasing the diversity of the faculty, especially faculty from underrepresented backgrounds including racial and ethnic minorities and women in STEM” was the top challenge identified by the [2021 Provost’s Statement on Diversity and Inclusion](#)<sup>109</sup>. Postdoctoral scholars represent the crucial link between Stanford’s highly diverse student body and its less diverse faculty. As the Stanford Latinx Postdoc Association (SLPA), we are committed to help Stanford rise to this challenge and to identify the barriers faced by our community to advancing their academic careers. Our newly released postdoc [moving and living expenses survey](#)<sup>110</sup> reveals a **disturbing picture of Stanford postdocs struggling to cover basic expenses, with Latinx postdocs disproportionately affected by monthly costs, living distance to campus, and financial stress**. In particular, the cost of moving to the Bay Area is the first barrier that potential postdocs face when considering Stanford. Here, **the signatories propose the creation of a need-based relocation grant open to all incoming postdocs**.

The struggle to afford basic expenses is taking a toll on postdocs’ mental and physical health, inhibiting academic progress and causing some to leave academia. **A majority of postdocs report that their salary does not cover their living expenses**, and for many, completing a postdoc at Stanford is feasible only with a partner’s salary and/or without having children. SLPA fully supports the efforts of our colleagues across the many active postdoc organizations at Stanford (SURPAS and its committees, the Stanford Black Postdoc Association, the Stanford LGBTQ+ Postdocs, and the Stanford Chinese Postdoc Association) to improve affordability and overall well-being for Stanford postdocs.

Importantly, **the sheer difficulty of arriving at Stanford means that our community is the product of survivor bias: how many talented scientists couldn’t afford to come to Stanford?** The challenges for incoming postdocs begin before reaching Stanford; the costs of relocating cause postdocs to deplete savings and incur debt. These burdens can last long after beginning a postdoc appointment. Our survey shows that Latinx postdocs, in particular those moving from Latin America, spend less in their first month at Stanford, while at the same time they are more likely to ask for a loan to relocate. This means that they are stretching their financial possibilities to the limit, which comes at the expense of living farther away or in precarious conditions. It is important to point out that moving from Latin America is an easy proxy for prior low income, but other historically marginalized groups, such as Black, Native American or first generation college graduates, are likely to face similar or even greater burdens.

**In order to fulfill Stanford’s commitment to diversifying academia, it is imperative to address the high barrier to entry for Latinx and other historically marginalized scientists.** As a first step, SLPA and the signatories propose **the creation of a need-based \$5,000 USD relocation grant open to all incoming postdocs**. This grant would cover moving expenses,

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<sup>109</sup> <https://ideal.stanford.edu/about-ideal/diversity-statement>

<sup>110</sup> <https://slpa.github.io/survey2022/>



and the first month of housing, transportation, childcare and miscellaneous expenses. All incoming postdocs would be eligible, and priority should be given to those moving from low and middle income countries, postdocs with dependents, and postdocs from historically marginalized backgrounds.

We are convinced that in order to diversify academia we must tear down the unjust barriers that limit the potential of countless postdocs. **We ask that postdocs are no longer required to sacrifice their well-being in order to be able to be part of the Stanford community.** Our university has the material and human resources necessary to create an inclusive and equitable environment, where opportunities and success are determined only by the dreams of each person, and not by their historical realities. [We are hopeful that the administration, faculty, student body and the Stanford community at large are committed to overthrowing these barriers.](#) We are certain that together we will make Stanford the model of a just, equitable, diverse and inclusive community.

In solidarity,

Stanford Latinx Postdoc Association

**Signed by the following groups:**

Stanford Chinese Postdoctoral Association (SCPA)

Stanford LGBTQ+ Postdocs

Stanford Black Postdoc Association (SBPA)

Stanford University Postdoctoral Association (SURPAS)

## Stanford Chinese Postdoc Association Housing Costs Letter (2022)

*This letter was written and circulated by the Stanford Chinese Postdoc Association in response to the [University's acquisition](#)<sup>111</sup> of Oak Creek Apartments for postdocs, with more than 150 postdocs signing in a period lasting fewer than two weeks. When the housing became available, postdocs would have only 24 hours to respond when they were taken off the waiting list. At the SURPAS Council meeting on February 22, 2023, a Council member shared a story from a postdoc who was taken off the waiting list but was told they did not qualify for housing because their income (the university minimum) was below the minimum threshold for affordability.*

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To whom it may concern,

We are postdocs from diverse departments at Stanford. We are writing this letter to express our deep concerns about postdocs' housing situations.

In September, we were very excited and grateful that the university has acquired hundreds of units in Oak Creek, which is expected to alleviate the rising housing cost for postdocs. However, the rental rates are **\$2,345~\$3,356 for 1B and \$3,016~\$4,003 for 2B, excluding costs for sewage, water, electricity, and internet.**

These are unreasonable and unaffordable rental rates for us postdocs. First of all, the price does not conform with the early claim that "Rental rates for eligible Stanford-affiliated tenants at Oak Creek will be less than the market rate". **They are only negligibly lower than the market rate in Palo Alto** (which is no longer true, if taking into consideration that sewage and water are included in the rental fees for many apartments on the market, as well as Stanford housing); **however, still 40%-50% higher than Stanford Housing.** Second, according to the U.S. Department of Housing and Urban Development (HUD), people who spend more than 30% of their income on housing are defined as housing-cost burdened. **Our monthly income excluding tax ranges between \$4200-\$5000** (most of us are at the lower end). Hence, **this rental-to-income ratio is astonishingly 60%-80% for most Stanford postdocs.** Even worse, for many of us, our stipend/salary is the only source of income for our family, and as we are international students, the gap is even larger. Not to mention that a large number of postdocs have one or more than one kid, which has long put their family in budget deficits (we appreciate the university's great support of Family/Child Grant Funding, but it is still a drop in the bucket). It is impossible for us to afford this high rental fee while maintaining the normal run of a family. As a whole, these high rental rates are devastating to us.

¹¹¹ Li (Sep 27, 2022) "Stanford acquires 759-unit apartment building in drive to expand postdoc housing" *The Stanford Daily*. Accessed Dec 9, 2022 at <https://stanforddaily.com/2022/09/27/stanford-acquires-759-unit-apartment-building-in-drive-to-expand-postdoc-housing/>

Consequently, although we now seem to have more on-campus housing options, we cannot afford them at all. This will in no way help resolve our enormous difficulty in housing, which we believe goes against the goodwill of Stanford's action to acquire this property.

We also would like to express our serious concerns that the rising living cost has threatened our work efficiency and willingness to stay in academia. Worries about finding an affordable living place have put our family and us in great anxiety. Many of us are being or have already been forced to decide to leave and join the industry because our limited salary combined with the high rental fee has threatened our basic living.

We appreciate your attention to this urgent matter and kindly ask for your help.

SURPAS Benefits and Affordability Survey (Winter 2021/22)

This survey effort was spearheaded by the SURPAS Leadership Team, including Co-Chairs Chinyere Iweka and Chuchu Wang.

The Benefits and Affordability Survey was designed and administered by SURPAS in response to testimonials from postdocs regarding continued affordability struggles, especially after increases to health care costs were implemented.

The survey ran for 1 month (December 2021).

We received 316 responses, which is a 13% response rate based on the total population of postdocs at Stanford.

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### **Demographics**

Demographic information indicates that the sample is representative of the current postdoc population at Stanford:

- Most postdocs are in their early 30s.

- Most survey respondents are in the first 3 years of their postdoc.

- Respondent school distribution is similar to postdoc population (majority SOM).

- Respondent citizenship status is similar to postdoc population (majority is international).

- Other demographic considerations:

  - 4.7% of responders identified as disabled or having a disability

  - 20% of responders identified as having low socioeconomic status

  - 31% of responders identified as First Gen college students

### **Summary of Results**

Postdoc salaries are low.

- 83% of postdocs earn less than \$72k/year.

- When total household income is taken into account, 50% of postdocs live below the SCC poverty line (\$82,450).

Housing affordability is a major issue facing postdocs and impacts decisions of where to live and how far.

- 88% of postdocs list cost and proximity to campus as major reason for wanting on-campus housing.

- ~47% of postdocs live >5 miles from campus and spend >30 minutes/day on their commute.

Low salaries and high housing costs make food and health care costs a big burden, specifically for postdocs with families.

- 36% of postdocs suffer from food insecurity.

27% of postdocs on the SHCA plan report being significantly impacted financially by recent increase in healthcare premiums.

Financial Aid grants are awarded to 90% of applicants. However, only ~50% of postdocs are aware that they exist and only ~25% have ever applied for them. Of the 25% that apply, 35% applied for multiple grants, suggesting that an individual grant is insufficient (or was, before the increase in amount).

Overall these results suggest that the postdoc salary (after taxes) is incompatible with the Bay Area living costs. The strain to cover all costs is high, especially for postdocs with families. The financial aid grants that have been awarded are a great place to start to address this issue. However, they only meet the needs of those that apply and are awarded them. Below are some recommendations that might benefit postdocs more broadly.

## **Recommendations**

1. Salary increase to \$85,000 (slightly above \$82,450 SCC poverty line and will make a difference).
  - a. We are aware that this may be a burden on the Faculty. The reality is that it is difficult to survive with our current salary. We wonder if there is a way to find a middle ground? Such as provide more benefits and cut the costs for postdocs.
2. Allocating some housing units in Escondido Village for postdocs.
3. Use graduate student housing units that become available once graduate students move to Escondido Village as subsidized housing for postdocs.
4. Make Stanford-owned housing available at Below Market Rate for postdocs.

## **SURPAS Family Committee Letter (2020/21)**

*This letter was written by the SURPAS Family Committee in response to the increase in health insurance premiums for postdocs with dependents in 2021. Over 300 community members, including postdocs, graduate students, faculty, and staff, signed the letter. It is addressed to Dr. Stacey Bent, the Vice Provost for Graduate Education and Postdoc Affairs, and Dr. Sofie Kleppner, the Associate Vice Provost and Associate Dean for Postdoctoral Affairs. As a result of postdocs objecting to the sudden increases in rates and beginning to draft this letter, the planned insurance increases were phased in via four installments over the course of the year rather than in a single increase, with costs covered by subsidies. After postdocs sent this letter, the university created a Family Grant of up to \$5,000 for postdocs (now up to \$10,000). Some signers provided comments, a selection of which (edited for anonymity) are included.*

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Letter

November 5, 2020

Dear Dr. Stacey Bent & Dr. Sofie Kleppner,

As representatives of Stanford Postdocs, we are writing this letter in regard to the recent changes to the healthcare coverage for Stanford Postdocs, particularly for Postdocs with dependents. According to the recently released 2021 Health Plan premium rates, the monthly cost for a Postdoc to cover their children or their entire family through SHCA will increase by 61%, while the cost to cover a partner will increase by 28%. While we certainly appreciate the subsidies that are being offered to help alleviate some of the initial burden, these subsidies only provide temporary relief and are not long-term solutions. We understand that the cost of these benefit packages fluctuates over time, however, we believe that the most recent changes and their associated costs place an unfair burden on Postdocs with dependents. Our concerns are as follows:

- Postdocs with dependents represent an economically disadvantaged population on campus. This recent increase will cause a further reduction to their already limited funds, with up to 10% of their take-home income dedicated to health care coverage, and this is before any additional co-pays and other costs are included.
- This burden is disproportionately placed on Postdocs with dependents, especially international Postdocs who have visa limitations for spouse/partner contributions, single income families in which the partner/spouse provides childcare, and families without access to generational wealth to offset the cost of living.
- Postdocs now only have a single option for benefits while Faculty and Staff have multiple options, most of which are cheaper than SHCA.
- To our knowledge, these negotiations took place months ago without request for feedback or input from the individuals that were being most affected by these changes.
- Postdocs have no security going forward regarding how much of their limited income is dedicated to healthcare costs.

Given the issue at hand and having full confidence that your offices care deeply about the well-being of Postdocs, we would like to propose that you help us achieve the following:

1. That the institutional subsidies be maintained to cover the same fraction of total health plan cost as in 2020. For example, under the 2020 contribution rates, Stanford paid approximately 90% of the total SHCA cost for postdocs with covered families, whereas under the 2021 rates, Stanford's contribution will drop to 85% of the total cost.
2. That Postdocs, especially those with dependents, as well as Graduate students, who have also experienced equity issues surrounding their health care costs, be represented in negotiations and informed of potential changes to their healthcare packages before Stanford approval for such changes.
3. That equity working groups ensure that undue financial burdens are not disproportionately placed on Postdocs and Graduate Students in the future, especially those from disadvantaged backgrounds and with dependents.

Failure to act on this will impose the great financial burden on Postdocs with dependents that has been mentioned above, will go against Stanford's Diversity, Equity, and Inclusion efforts, and will reinforce the statement that Postdocs cannot afford to have children during this stage of their life.

We look forward to hearing from you and to working with you on this.

Sincerely,

John Hegarty, Max Turner, and Arianna Celis on behalf of
The Stanford University Postdoctoral Association (SURPAS) Family Committee

Testimonials

As if we do not have enough financial struggle in our lives and as if everyone is not unusually stressed due to the pandemic, now we need to pay more for healthcare. These days, we hear these a lot: "be gentle to yourself", "take good care of yourself", "support each other". Then, some people are trying to charge us more for something which has never been this vital. This is an exploitation of the pandemic.

Cost of living is already high and I think it is important to take into account the burden this increase will have on families even if the increase is delayed. For me personally with 3 children to support by myself, an increase of as little as \$20 a month is a significant burden.

Dental and vision are not included for dependents and need to pay high cost for these treatments for dependents.

Graduate students would be excited to unite on this issue. Health care a month for dependents is outrageous for us too.

How could dependent parents be included in postdoc healthcare plans? At about the same rates as spouses? As postdocs, we often have aged parents who need care and financially depend on us for healthcare.

I am actively considering leaving a promising academic track career because I cannot figure out how to afford kids on a postdoc salary in the Bay Area. We cannot hope to support diversity and inclusion at Stanford while simultaneously making it harder for those with families to afford being here.

I am getting married soon, and this puts additional financial burden on me.

I am thinking of changing my insurance provider since not only is it very expensive, but it also does not cover the needs that my family has, like orthodontics for my children. One of them needs them because of functional, not aesthetic, purposes. It is a shame that with all the uncertainties and stresses that postdoctoral life has, we also need to be losing our sleep about health care insurance cost and coverage.

I am very unhappy that these material changes are made with no discussion with the faculty and the postdocs themselves. This is not a way to treat our Stanford community.

I currently live out of the service area to be included in Stanford Alliance coverage so I also have the added cost of Aetna Choice for my dependents and I.

Imagine how much a postdoc would be paying for housing and health benefits if he is a father of a baby and a husband of a housewife. Stanford should treat their postdoc either as students or employees. Currently, postdocs seem to be categorized as whichever comes with less benefit on a case by case basis (retirement, housing, transportation, you name it), which has been extremely frustrating... Stanford should state this fact very clearly on their benefit page before people decide to join the Stanford family such that they are aware of how much Stanford are valuing their postdocs and how much the living cost is in the bay area.

It is deeply ironic and very sad to see Stanford putting effort into “wellness” and simultaneously increasing healthcare premiums for postdocs, particularly those with families, many of whom are living month to month on their extremely low salary for the area cost of living. It is time for Stanford University, and the office of postdoctoral affairs, to put its money where its mouth is. No amount of “wellness” initiatives can ameliorate the extreme financial stress of the postdoc salary, and no amount of diversity and inclusivity initiatives can ameliorate the unequal burden that increased premiums place on postdocs with families who have taken non-traditional career paths due to their background. Postdoctoral salaries here are already despicable and make it very difficult to recruit talent; this is a step very much in the wrong direction. We will not tolerate this treatment silently.

It is unconscionable that Stanford is pushing increased costs due to the pandemic on some of the most economically vulnerable members of our community.

It is very difficult for me to even be able to afford insurance for my significant other, who has supported my career, on my current salary. It is actually close to impossible to afford housing and also medical insurance for the both of us.

Please reconsider the huge increase of insurance premium. Stanford is already known for being a place hard to live in because of the most expensive living cost in the US for postdocs with dependents. On top of that, the 61% increase would overwhelm most of a postdoc's life in Stanford. Eventually, this situation potentially makes Stanford be not a charming place to live for prospective researchers.

Please reduce the financial burden on our Postdocs with families. It's huge money to be paid along with rental charges and supporting family expenses.

Postdocs are already financially strained to their limits, in particular those with family. Any further burden is unacceptable.

Postdocs are the foundation of academic research and we deserve to be paid fair compensation and benefits.

Postdocs did not have financial means to support a family in the bay area. You are increasing the premiums of a very valnourable [sic] group of people who conduct the most important purpose of the institute; research. Besides unilaterally putting an addition financial burden on only postdoc with families is a clear discrimination postdoc with families.

Science at Stanford is eroding because we cannot get the best people to come because they cannot afford to live here. Stanford has done far less to address this issue compared to several comparable institutions.

Stanford must do a better job supporting its postdocs, and affordable health care in the middle of a pandemic should be number 1 priority.

This is outrageous. Stanford claims it's an equal-opportunity employer. By making it completely unaffordable for employees with family to keep health insurance, you are directly discriminating against workers who are not single or already face higher health care costs. So much for equal opportunity.

Transparency is key. When major changes happen with anything, those affected should be notified. This is important so that their voices can be heard and contingency plans can be made.

RECOMMENDATIONS

Overview

This section of the Report contains recommendations to address the issues identified throughout the previous sections. For each identified issue, specific recommendations are provided for various stakeholder groups. These recommendations call on the stakeholder groups to continue, to change, or to begin a course of action. These recommendations aim to suggest specific policies and actions that comport with the general principles outlined in the Executive Summary. Even as specific policies are implemented, these principles can continue to guide advocacy for postdocs looking to be recognized as full and valued members of the academic research enterprise. These principles include:

- Postdocs should be appreciated and not exploited.
- Postdocs' basic needs should be met.
- Postdocs should have job security.
- Postdocs should receive job structure and career support outside of their immediate research groups.
- Postdocs should be actively included in University business.

The first stakeholder group for each issue is postdocs themselves *as individuals*. Recommendations are informed by the lived experience of Committee members and the general postdoctoral population in recognition of the agency postdocs possess in taking direct action to improve their material conditions. The next recommendations are directed at SURPAS (i.e. postdocs working together collectively) and are a crystallization of institutional knowledge from long-serving postdoc organizers. Though most recommendations for postdocs collectively are targeted towards SURPAS specifically, postdocs can and do organize collectively in other ways (e.g. affinity groups); these organized postdocs can take advantage of these recommendations as well.

The next stakeholder group is Stanford Faculty, highlighting expectations postdocs have of their senior colleagues. The next stakeholder is the Stanford Administration, indicating what is expected of those with decision making power within the university structure. Stanford Administration exists at multiple different levels, ranging from university-wide (Provost level) to local (Department level) and in between (School level) and can have overlap with faculty who fill some administrative positions. We have suggested recommendations directed towards Stanford Admin in general but these may be best implemented at differing levels within that stakeholder group; the Committee leaves specifics of implementation to those who will perform that work.

Funding bodies (e.g. NIH, NSF, private funders) are included as the next stakeholder group to indicate postdoc perspectives on incentive structures within academic research. Publishing and professional organizations (e.g. journals, preprint servers, professional societies [e.g. National

Postdoc Association, Biophysical Society]) are included as the next stakeholder group. Local community members, such as Stanford undergraduates, graduate students, or other non-postdoc groups in Stanford and the Bay Area, are included as the next stakeholder group to provide seeds for future collaboration. Local government is included as the next stakeholder, generally represented by the Board of Supervisors for Santa Clara County since Stanford sits on unincorporated county land. State and national governments represent the final stakeholder.

Costs: Overall

Identified Issue: Many postdocs at Stanford struggle with covering basic needs for themselves and their families. While Stanford pays more than the NIH's national minimum salary, the cost of living around Stanford is incredibly high and postdocs continue to struggle to meet necessary costs. Effectively addressing this critical issue would relieve postdocs of the enormous mental toll of financial precarity and allow them to focus on doing their best work.

Recommendations:

- *Postdocs themselves (as individuals)* should:
 - apply for supplemental grants provided by Stanford that can help cover some living expenses (e.g. the Family Grant, Childcare Grant, Backup childcare, and Emergency grant-in-aid).
 - continue to advocate for themselves to their faculty advisors, their department, and school for increases in salary.
- *SURPAS (postdocs collectively)* should:
 - continue to advocate for increases to the Postdoc Minimum Salary.
 - reach out to and build solidarity with other academic postdocs in the Bay Area. (Postdocs at the University of California went on strike with their union at the end of 2022. SURPAS should invite the UC Postdoc Union to present at a SURPAS Council meeting.)
 - create a Postdoc Salary Committee to uncover data on local cost of living, postdoc salaries at peer institutions, and investigate other useful comparisons to generate well-justified and heavily evidence-based proposals for Stanford Postdoc Salaries, in support of the advocacy efforts of the SURPAS Co-Chairs.
 - continue to request aggregated salary data for the postdoc population from the Office for Postdoctoral Affairs.
 - continue regularly surveying postdocs in order to collect information about their salary level and cost of living pressures.
 - maintain a historical record of the Stanford Minimum Postdoc Salary (and related details) and the Area Median Income for Santa Clara County, to be used in future salary negotiations. (Refer to Data Tables in **Appendix D**.)
- *Stanford Faculty* should:
 - pay their own postdocs more.
 - advocate for postdoc salary increases within their own department and school and across the University at large.

- include budget requests for postdoc salaries that reflect the cost of living in the Bay Area in grant applications.
- *Stanford Admin* should:
 - raise the Postdoc Minimum Salary to restore local area purchasing power for postdocs to pre-2019 levels. For the 2022-23 academic year, this would be \$82,000.
 - raise the postdoc salary to at least the Low Income level (Low Income is defined by the federal government's Department of Housing and Urban Development as 80% of Area Median Income, which for Santa Clara County in 2022 was \$92,250) in Santa Clara County for a one-person household so a single postdoc supporting themselves is not required to live in poverty.
 - increase postdoc salary for each additional year of experience (for instance, by +3.5% per year), as is done by the NIH (i.e. have a graded salary scale for postdocs).
 - make aggregated postdoc salary data available and transparent on a yearly basis, so that all postdocs at Stanford have a clear understanding of where their own salary fits within the distribution of postdoc salaries at Stanford.
 - leverage Stanford's Buffer funds in order to help cover Minimum Postdoc Salaries, for example to offset shortfalls in faculty-obtained grants from funding agencies.
 - undertake targeted fundraising and create an endowed fund that covers the gap between NIH Minimum Salary and the Low Income level in Santa Clara County (\$92,250 in 2022) for postdoc salaries so that faculty can afford to hire postdocs.
- *Funding Bodies* should:
 - increase their mandated Minimum Postdoc Salary to account for the existing advanced training and expected research contributions of postdocs.
 - normalize their minimum funding levels to account for the cost of living where postdocs work.
 - provide increased funds for senior postdoctoral fellows and research scientists.
- *Publishing and Professional Organizations* should:
 - highlight the lived reality of material conditions for postdocs and advocate for increased salaries.
- *Local Community* should:
 - (Bay Area postdoc associations) collaborate with postdocs at Stanford to advocate collectively for better compensation and conditions for all postdocs, particularly given the high cost of living in the Bay Area.
- *Santa Clara County Board of Supervisors* should:
 - ensure postdocs are included in any studies about workers at Stanford as a specific stakeholder group.
- *State and National Governments* should:
 - allocate funds to support increased salaries for researchers.
 - create policies to forgive student loans up to a certain dollar amount for every year of work as a postdoc for all postdocs.

Costs: Food Insecurity

Identified Issue: Postdocs at Stanford suffer from food insecurity and the number has been rising in recent years. In Fall 2019, nearly 10% of postdocs suffered from food insecurity. During the COVID-19 pandemic and before the historic inflation of 2022, that number increased to 36% of postdocs suffering from food insecurity. At the January 2023 SURPAS Council meeting, postdocs were informed they were no longer eligible to utilize the pop-up food pantry created in 2020 (though the service would not turn anyone away).

Recommendations:

- *Postdocs themselves (as individuals)* should:
 - continue to avail themselves of the monthly pop-up food pantry as needed to combat food insecurity.
 - support each other, for instance through mutual aid efforts.
- *SURPAS (postdocs collectively)* should:
 - continue to advertise and send information about the monthly pop-up food pantry to the postdoc population.
 - continue to advocate for the Postdoc Minimum Salary to be increased.
 - continue to ask postdocs in regular surveys about their experience of food insecurity.
 - continue to provide food at all SURPAS-hosted events at no cost to attendees.
 - form coalitions with other organized groups on campus (undergraduates, graduates, workers) to collectively address this issue.
- *Stanford Faculty* should:
 - pay their postdocs more.
 - suggest and promote opportunities for providing postdocs with meals, for instance in one-on-one meetings or lab meetings.
 - seek departmental and/or school financial support in order to take your postdoc/s to lunch (as has been done during National Postdoc Appreciation Week in the past).
 - advertise the existence of the pop-up food pantry to incoming postdocs when they are hired to help new postdocs meet their basic needs.
 - proactively ask their employees about whether they are able to cover their own basic needs and those of their family on their current salary, and increase their salary accordingly.
- *Stanford Admin* should:
 - increase the Postdoc Minimum Salary so that in the future no postdocs and their families suffer from food insecurity. Ensure basic needs can be met for postdocs with their salaries in the high cost of living Bay Area.
 - offer subsidized meal plan services for postdocs on campus.
 - at the departmental and school level, provide financial support for faculty to provide food for postdocs, for instance in one-on-one meetings or lab meetings.

- at the departmental and school level, provide financial support for faculty to take their postdoc/s to lunch (as has been done during National Postdoc Appreciation Week in the past).
- publish data on monthly utilization of the pop-up food pantry.
- ask about food insecurity on University-wide surveys, and make the data and results from these surveys publicly available.
- *Funding Bodies* should:
 - increase mandated minimum postdoc salaries and normalize these to the cost of living in the location of the institution.
 - penalize institutions that allow postdocs and other trainees to suffer from food insecurity (e.g. by lowering the Facilities and Administrative rate for delinquent universities).
 - provide funding for researchers to study food insecurity within the academic workforce.
- *Publishing and Professional Organizations* should:
 - continue to highlight the difficulties faced by postdocs, including meeting their basic needs, in publications.
 - continue to provide subsidized membership and registration fees to postdocs.
- *Local Community* should:
 - (Second Harvest Food Bank) evaluate their income limits for access to food banks in light of the historic inflation that occurred in 2022.
 - (Organized groups on campus) form coalitions with postdoc groups to collectively address this issue.
- The *Santa Clara County Board of Supervisors* should:
 - fund a study to determine the degree of food insecurity for postdocs and all other workers employed by Stanford to determine the drain on county resources due to low compensation for Stanford workers.
- *State and National Governments* should:
 - increase funding for academic research.
 - enact policies to eliminate food insecurity and ensure basic needs are met for all residents.

Costs: Housing

Identified Issue: Very high housing costs in the areas around Stanford and the Bay Area in general mean that postdocs on the Stanford Minimum Salary are highly likely to need to live with one or more other wage-earning adults (e.g. partners, roommates, property owners) or else be Severely Rent Burdened. This issue also includes the related topic of transportation as it is fundamentally linked to housing.

Recommendations:

- *Postdocs themselves (as individuals)* should:
 - share information about good housing situations to new and current postdocs, for instance when they leave their roles and move away from Stanford.

- *SURPAS (postdocs collectively)* should:
 - continue to advocate for increased salaries for postdocs.
 - continue to advocate for housing access and housing subsidies.
 - continue to advocate for subsidizing the Transitional Housing Program for incoming postdocs.
 - continue to advocate for the Caltrain GoPass program for postdocs (i.e. a CalTrain pass provided to postdocs at no cost to them, which improves affordability by allowing postdocs to live farther away from the University without them having to pay substantially more in transportation costs).
 - advocate directly to the County Board of Supervisors whenever Stanford reapplies for a new General Use Permit to govern expansion of University facilities.
 - organize/mediate the sharing of information about good housing situations to new and current postdocs (perhaps through the SURPAS Housing & Transportation Committee).
- *Stanford Faculty* should:
 - advocate for postdoc affordable housing at the University level.
 - ask for increased salaries for postdocs on grant applications to account for local housing costs.
 - increase postdoc salaries beyond the University Postdoc Minimum Salary.
- *Stanford Admin* should:
 - make Oak Creek postdoc housing rates affordable for postdocs on the Postdoc Minimum Salary (i.e. no more than 30% of the Postdoc Minimum Salary in order to prevent them from being Rent Burdened). See **Stanford Chinese Postdoc Association Housing Costs Letter (2022)**.
 - provide subsidized housing for postdocs similar to the program for medical residents and research fellows at the Icahn School of Medicine at Mount Sinai.¹¹²
 - publicly disclose data on wait list size and actual monthly costs for postdoc housing options provided by the university.
 - provide expanded transit benefits to reduce costs for postdocs who live far from the University, including VTA passes for people in the South Bay and Muni and BART discounts for people in San Francisco and the East Bay.
 - convert the Caltrain GoPass program for postdocs from a pilot to a permanent benefit.
 - subsidize the cost of the Pilot Transitional Housing program for incoming postdocs while limiting the duration of stay to a maximum of four months.
- *Funding Bodies* should:
 - increase mandated Minimum Postdoc Salaries and normalize them against the cost of living for the location where postdocs work.
- *Publishing and Professional Organizations* should:

¹¹² Icahn School of Medicine at Mount Sinai, Housing.
<https://icahn.mssm.edu/education/residencies-fellowships/life/housing>

- continue to publish stories of how postdocs manage to make ends meet in the face of high housing costs (e.g. by working for their landlord as a handyman like one former postdoc at Stanford).¹¹³
- *Local Community* should:
 - (Bay Area residents) advocate for building more housing in the region, especially at the affordable end of the spectrum.
- *Santa Clara County Board of Supervisors* should:
 - require Stanford to build housing for all workers that will be brought to the campus as a condition of approval for any new General Use Permit governing University expansion.
- *State and National Governments* should:
 - create policies to provide affordable housing for all residents.

Costs: Transition to Postdoc

Identified Issue: Postdocs moving to Stanford face very high immediate expenses, usually after moving from low-paying positions (e.g. graduate student). Local housing options often require an in-person visit before offering a lease, making transition to new housing difficult.

Recommendations:

- *Postdocs themselves (as individuals)* should:
 - provide mutual aid by offering to view apartments for incoming postdocs in their lab, department, or across the University.
- *SURPAS (postdocs collectively)* should:
 - facilitate connections for incoming postdocs to help view potential apartments before they arrive at Stanford.
- *Stanford Faculty* should:
 - provide funds to newly hired postdocs for assistance with moving to Stanford.
 - submit grant proposals with budget requests to support moving expenses for postdocs.
 - advocate for moving expenses to be supported at the department, school, or university level.
- *Stanford Admin* should:
 - create a fund to provide \$5,000, need-based relocation assistance for postdocs as requested by SLPA (see **Stanford Latinx Postdoc Association Survey (Fall 2022)**).
 - continue allowing postdocs access to transitional housing on or near campus through the Transitional Housing program.¹¹⁴
 - convert the Transitional Housing program from a pilot to a permanent program.

¹¹³ Langin (Aug 30 2018) "Cities Offer Great Postdoc Opportunities - But Make Sure You Factor in the Cost of Living" *Science Careers*. Accessed Dec 10, 2022 at <https://www.science.org/content/article/cities-offer-great-postdoc-opportunities-make-sure-you-factor-cost-living>

¹¹⁴ Stanford Office of Postdoctoral Affairs, Pilot Transitional Housing for Incoming Postdoctoral Scholars <https://postdocs.stanford.edu/pilot-transitional-housing-incoming-postdoctoral-scholars>

- increase the subsidy on housing provided through the Transitional Housing program to lower costs for new postdocs and prevent them from being immediately Rent Burdened upon arrival at Stanford.
- publicly disclose data on utilization of transitional housing program, including percentage of entering postdocs who apply, percentage who are accepted, and average duration of stay.
- through the Research Management Group (and Research Process Managers, RPMs) provide template budgets for PIs' grant applications that includes a specific line item to assist with the cost of the postdoc transition to Stanford.
- *Funding Bodies* should:
 - provide a moving stipend in grants for when postdocs are hired.
- *Publishing and Professional Organizations* should:
 - publish stories highlighting postdocs transitioning from previous employment to their postdoctoral role to bring attention to the associated difficulties.
- *Local Community* should:
 - (current graduate students) help new postdocs joining their lab by helping view apartments for them before they move to the area.
- *Santa Clara County Board of Supervisors* should:
 - pursue policies to enable construction of more housing, particularly at the affordable end of the spectrum.
- *State and National Governments* should:
 - develop policies that provide protection and benefits to tenants.

Costs: Childcare

Identified Issue: Childcare costs are very high in the vicinity of Stanford, and this is after the challenge of finding any available spot in local childcare programs, which often require children to be put on the waiting list before they are even born. The cost of childcare stretches family budgets to the absolute limit.

Recommendations:

- *Postdocs themselves (as individuals)* should:
 - apply for all targeted grants and funding provided by Stanford (e.g. the Family Grant, Childcare Grant, Backup childcare, and Emergency grant-in-aid).
- *SURPAS (postdocs collectively)* should:
 - continue to collect and share information on childcare resources, physician recommendations, and local activities for families via the SURPAS Family Committee.
 - continue to build community amongst postdocs with dependents.
- *Stanford Faculty* should:
 - provide higher salaries for postdocs with dependents to enable them to meet basic needs of themselves and their dependents.
 - advocate at the University level for creation of childcare facilities that are affordable and accessible to postdocs.

- *Stanford Admin* should:
 - provide on-campus childcare that is affordable and accessible to postdocs. (Wait-lists for current offered service cannot be used as the sole means of determining demand. Waiting times can be longer than some postdoc's appointments so they do not even bother applying.)
 - provide standardized 12-weeks of parental leave for all postdocs.
 - provide funding for childcare at conferences to enable postdocs with dependents to attend conferences with or without their dependents.
 - publicly disclose data on childcare grants for postdocs, including number of postdocs applying each year, percentage who receive funding, and total amount of money distributed.
- *Funding Bodies* should:
 - support childcare costs for postdocs with dependents, both on individual postdoctoral fellowships and on faculty grants.
 - support parental leave for postdocs within fellowship and grant funding.
- *Publishing and Professional Organizations* should:
 - offer childcare at conferences included with registration costs, ideally subsidized.
- *Local Community* should:
 - (graduate student parents) work together in solidarity with the SURPAS Family Committee to compile and share resources for academic workers with families.
- *Santa Clara County Board of Supervisors* should:
 - include a mandate for building accessible, affordable childcare centers as a condition of approval for any future expansion plans by Stanford under a new General Use Permit.
 - proactively reach out to postdocs as a critical stakeholder in any Stanford-community related topics that arise on their agenda.
- *State and National Governments* should:
 - pursue policies to provide universal childcare for all ages before enrollment in local schools.
 - pursue policies to provide parental leave to all new parents in line with benefits offered in other countries.

Costs: Healthcare for Dependents

Identified Issue: While the health insurance costs for postdocs who do not have dependents are low, the costs of healthcare for postdocs with dependents represent a very high proportion of their take-home income. Healthcare plans for postdocs consist of a single option and this option is geographically limited. As a result, postdocs who live and work at Stanford-affiliated locations outside the core counties serviced by the health plan (e.g. Hopkins Marine Station in Monterey County) face additional costs and complications.

Recommendations:

- *Postdocs themselves (as individuals)* should:

- if possible, rely on health insurance plans from partners outside academia until such time as cost for benefits are in line with salaries for postdocs (this is an imperfect solution and will not be an option for all postdocs with dependents).
- *SURPAS (postdocs collectively)* should:
 - continue to provide support and organize resources for postdocs with dependents through the SURPAS Family Committee.
 - advocate for postdoc dependent insurance plans to be able to cover aged parents of postdocs.
 - advocate for expansion of plans available to postdocs and their families.
- *Stanford Faculty* should:
 - cover dependent healthcare costs for postdocs and other academic workers.
 - advocate for increased plan options and improved affordability for postdoc dependent health insurance.
- *Stanford Admin* should:
 - return to covering 90% of costs for postdoc dependent health insurance plans (see **SURPAS Family Committee Letter (2020/21)**).
 - increase plan options available to postdocs, including ability to cover aged parents of postdocs.
 - increase geographic distribution of plan coverage areas.
 - increase postdoc salaries so postdocs can afford to have a family.
 - ensure that health insurance for postdocs with dependents is affordable given the prevailing Stanford Postdoc Minimum Salary.
 - match benefits to the costs that they are supposed to cover (e.g. the Family Grant covers just a small fraction of the cost of childcare for the funding period).
 - publicly disclose data on family grant information, including number of postdocs applying, percentage receiving funding, and total amount of money disbursed.
- *Funding Bodies* should:
 - provide extra funding for postdocs and trainees who have or gain dependents during their careers.
- *Publishing and Professional Organizations* should:
 - ensure to provide childcare at conferences that they organize.
- *Local Community* should:
 - (graduate students, staff) continue to work together with SURPAS Family Committee to advocate for academic workers with families.
- *Local Government* should:
 - send information to postdocs about financial assistance for healthcare they may qualify for through county programs on a regular basis (e.g. quarterly) via coordination with the SURPAS Community Engagement Liaison.
- *State and National Governments* should:
 - pursue policies to ensure health care is available at no out-of-pocket costs at the point of service for all residents in their borders.

Justice, Diversity, Equity, Inclusion, Belonging

Identified Issue: The diversity of the postdoctoral population and the academic workforce at large does not match national or global demographics. Further, while there are some pockets of improvement, the culture and community at Stanford are not yet truly inclusive or equitable. Addressing the critical issue of basic needs (as outlined in the Costs sections above) would be a very good start in also addressing diversity, but more needs to be done in addition to fulfilling basic human needs.

Recommendations:

- *Postdocs themselves (as individuals)* should:
 - join and support postdoc affinity groups. A supportive community for all is key to retention of researchers.
 - support efforts to build community amongst diverse postdocs.
 - invite colleagues from diverse backgrounds within their personal and professional networks to give research talks at Stanford.
 - support recruitment efforts that bring more diverse postdocs to Stanford, for instance through the Stanford Postdoctoral Recruitment Initiative in Sciences and Medicine (PRISM) program,¹¹⁵ run by the Office for Postdoctoral Affairs (OPA).
 - seek out and complete anti-oppression training, for instance through the Certificate in Critical Consciousness & Anti-Oppressive Praxis (CCC&AOP) program run through the Stanford Office of Inclusion, Community & Integrative Learning (ICIL).¹¹⁶
 - seek out and complete inclusive mentorship training.
- *SURPAS (postdocs collectively)* should:
 - continue to develop and run DEI efforts such as “Someone Like Me” and “Be a Better Ally” Series (for example by the SURPAS JEDI Committee).
 - continue to work in collaboration with and provide support to postdoc affinity groups (Stanford Black Postdoc Association [SBPA], Stanford Latinx Postdoc Association [SLPA], Stanford LGBTQIA+ Postdocs, Stanford Chinese Postdocs).
- *Stanford Faculty* should:
 - seek out and complete anti-oppression training, for instance through a program that could be similar to the CCC&AOP program (currently available to graduate students and postdocs) or the Transforming Self and Systems through Praxis Program (currently available to staff).
 - seek out and complete inclusive mentorship training.
 - support and encourage postdocs to participate in DEI efforts and be understanding about the time such efforts require.

¹¹⁵ Stanford Postdoctoral Recruitment Initiative in Sciences and Medicine (PRISM), Accessed Mar 21, 2023 at: <https://postdocs.stanford.edu/PRISM>

¹¹⁶ Certificate in Critical Consciousness and Anti-Oppressive Praxis (CCC&AOP), Accessed Mar 21, 2023 at: <https://icil.stanford.edu/icil-programs/certificate-critical-consciousness-and-anti-oppressive-praxis-cccaop>

- proactively recruit postdocs from minoritized backgrounds, for instance by developing relationships with and giving talks at Historically Black Colleges and Universities (HBCUs) and Hispanic Serving Institutions (HSIs).
- actively advocate for instituting anti-racist policies in the university setting.
- **Stanford Admin** should:
 - (for the Office for Postdoctoral Affairs, OPA) continue to run the Stanford Postdoctoral Recruitment Initiative in Sciences and Medicine (PRISM) program,¹¹⁷ supporting diverse postdoc candidates to visit Stanford's campus and interview with Stanford faculty.
 - generate and require anti-racist training, especially for people in positions of power (e.g. faculty). For instance, the Transforming Self and Systems through Praxis Program currently available to staff.¹¹⁸
 - create funded speaker series to invite current and potential postdocs from diverse backgrounds to give talks at Stanford (e.g. BELONG Neuroscience Seminar Series).¹¹⁹
 - disambiguate 'International' by nation of origin on the IDEAL Dashboard.
 - develop relationships with Historically Black Colleges and Universities (HBCUs) and Hispanic Serving Institutions (HSIs).
 - develop strategies to support researchers from diverse backgrounds at Stanford when they arrive. Recruitment without retention efforts is doomed to failure.
- **Funding Bodies** should:
 - explicitly include and value DEI work conducted by postdocs at a comparable level to research achievements when making funding decisions.
- **Publishing and Professional Organizations** should:
 - highlight DEI efforts to help push for widespread adoption of best practices within the academic research community.
- **Local Community** should:
 - (existing Stanford community centers) proactively reach out to postdocs for inclusion in events and programming, for instance by explicitly welcoming postdocs to join events and by including postdocs on mailing lists.
- **Local Government** should:
 - coordinate with the SURPAS Community Engagement Liaison to invite postdocs to community events.
- **State and National Governments** should:
 - allocate more funds for researcher salaries to allow people with a wider variety of backgrounds to pursue an academic career.

¹¹⁷ Stanford Postdoctoral Recruitment Initiative in Sciences and Medicine (PRISM), Accessed Mar 21, 2023 at: <https://postdocs.stanford.edu/PRISM>

¹¹⁸ Transforming Self and Systems through Praxis Program, Accessed Mar 21, 2023 at: <https://med.stanford.edu/hrg/jedi/programs/transforming-self-and-systems-through-praxis-program.html>

¹¹⁹ Wu Tsai Neurosciences Institute BELONG Seminar Series
<https://neuroscience.stanford.edu/events/series/belong-seminar-series>

Mentorship & Formal Structure

Identified Issue: Mentorship experiences for postdocs are highly variable at both the national and local level. Many postdocs feel that they do not receive adequate mentorship within their postdoctoral research group and desire more formal structured training.

Recommendations:

- Postdocs themselves (as individuals) should:
 - seek opportunities to mentor young scientists earlier in their careers such as through the ChEM-H/IMA Postbac Fellowship in Target Discovery.¹²⁰ The impact these experiences have on mentorship philosophy can be recorded in Teaching Statements when applying for jobs on the faculty market.
 - actively seek out mentors beyond their principal advisor to develop a personalized mentorship team.
 - proactively schedule Individual Development Plan (IDP) meetings with faculty advisors and thoughtfully prepare for the meeting in advance. Make clear the IDP meeting is scheduled as a discussion of career progression and not a research update.
- *SURPAS (postdocs collectively)* should:
 - continue to design new mentorship programs (e.g. Someone Like Me).
 - advocate for creation of a mentorship training program for professional development.
- *Stanford Faculty* should:
 - ensure at least yearly IDP meetings with postdocs that focus on mentorship and career progression beyond standard research update meetings.
 - seek out and complete management and mentorship training on a regular basis.
 - offer personalized mentorship to postdocs and advanced academic researchers based on their personal backgrounds and future career plans.
 - offer opportunities for postdocs to serve as mentors to younger scientists like early stage graduate students and research technicians.
 - provide funding for postdocs to travel to conferences at least once a year.
- *Stanford Admin* should:
 - (continue to) create incentive structures that reward and recognize mentorship work performed by both postdocs and faculty.
 - develop mentorship and management training programs for PIs.
 - develop a mentorship training program for postdocs similar to the Postdoc Teaching Certificate. This would be a structured program for mentorship training that has specific, well-defined criteria for completion that results in a professional certification that could be included on a CV/biosketch.
 - develop a reporting system for IDP meetings for PIs to fill out in addition to the postdoc reporting form. Create structures and policies that incentivize PIs to report on the meetings and give a consequence for failure to do so.

¹²⁰ “Postbac Program in Target Discovery”, Accessed March 22, 2023 at: <https://chemh.stanford.edu/training-education/postbac-program-target-discovery>

- support mentorship programs designed by early career researchers (e.g. Someone Like Me).
- create funds for postdocs to be able to travel to conferences at least once a year.
- *Funding Bodies* should:
 - require mentorship training for postdocs and PIs as part of funding awards.
 - seek regular feedback (e.g. yearly) from trainees in the lab of funded PIs about mentorship received and include that information in renewal decisions.
 - recognize mentorship postdocs perform.
- *Publishing and Professional Organizations* should:
 - highlight best practices and examples of successful mentorship training programs for adoption by the broader academic community.
- *Local Community* should:
 - (Bay Area employers) set up networking events for postdocs (and graduate students) to meet and develop relationships with workers employed outside the academic sector.

Building Community

Identified Issue: Building community within the postdoc population and within other local (and non-local) communities is essential for making friends, improving mental health, developing innovative collaborations and work satisfaction. Unfortunately, postdocs face more challenges to building community than other groups on campus as a result of working (often) solely within independent research groups that may or may not have any other postdocs in them, not being a part of any timed-entry cohort group (as graduate are, for instance), and have a great deal of pressure (internal or external) on them to work hard and perform at their best. These factors mean that structures to promote the building of community are even more important for postdocs.

Recommendations:

- *Postdocs themselves (as individuals)* should:
 - proactively participate in events within their lab, department, school, and across the University, especially postdoc organized events. In addition to forming community with postdocs, these other venues give postdocs the opportunity to integrate more effectively into the university-wide community.
 - continue to form community groups based on mutual interests. Contemporary examples include WhatsApp groups for hiking, cultural events, cycling, etc. organized on an *ad hoc* basis.
 - include advanced researchers and instructors who have transitioned from postdoc to staff roles and postdocs classified as visiting scholars as part of the postdoc community.
 - apply for funds from the Stanford Postdoctoral Initiative Fund (SPIF) for community-building events. Initial pilots for the Postdoc Wine Appreciation Club and Postdoc Reading Open Social Event (PROSE) Book Club were supported by SPIF.

- *SURPAS (postdocs collectively)* should:
 - continue to hold social events to build community. These types of events include happy hours run by the full Council and activities planned by various SURPAS committees such as the Family Committee Fall Festival or different organized activities coordinated by the Sports Committee.
 - continue to support the work of the postdoc affinity groups (Stanford Black Postdoc Association [SBPA], Stanford Latinx Postdoc Association [SLPA], Stanford LGBTQIA+ Postdocs, Stanford Chinese Postdocs) in building community.
 - continue to offer small grants to postdocs for building community and enriching the postdoc experience via the Stanford Postdoctoral Initiative Fund (SPIF) program.¹²¹ This is required by Article II, Section 6 of the SURPAS By-Laws.
 - set up a ‘buddy system’ pairing newly arriving postdocs together in small groups to create a postdoc cohort. These groups can and should include some older postdoc volunteers who can help share knowledge and resources to the new cohorts.
 - actively invite postdocs who have transitioned into staff roles to join postdoc community events.
 - actively invite postdocs who are officially classified as Visiting Scholars to join postdoc community events.
 - advocate for the creation of an endowed fund to cover the yearly SURPAS operating budget.
 - explore strategies to develop an independent funding source, potentially following models from ASSU, which has been financially independent from the University since 1995,¹²² or The Stanford Daily, which has been independent of the University since 1973.¹²³
- *Stanford Faculty* should:
 - proactively make sure postdocs are included in community building events at the lab, department, school, and university levels.
 - ensure postdocs have a place to celebrate the American holiday Thanksgiving, for instance by inviting lab members to their home.
- *Stanford Admin* should:
 - designate a community space for postdocs.
 - empower postdocs to more easily book rooms on campus.
 - formally recognize postdoc affinity groups.
 - perform targeted fundraising to create an endowed fund to provide the SURPAS operating budget. Funding for SURPAS is contingent upon distribution from OPA and VPGEPA, and has not had increases that meet inflation. Occasionally, administrators threaten SURPAS with removal of funding if the organization

¹²¹ SURPAS Stanford Postdoctoral Initiative Fund (SPIF), Accessed Mar 21, 2023 at: <https://surpas.stanford.edu/postdoc-committees/stanford-postdoctoral-initiative-fund-spif/>

¹²² <https://www.sse.stanford.edu/about-us/history> Accessed Feb 28, 2023

¹²³ Liu and Abraham (Feb 23, 2023) “‘Freedom of the press’: The history of The Daily’s independence”, *The Stanford Daily* Accessed Feb 28, 2023 at: <https://stanforddaily.com/2023/02/23/freedom-of-the-press-the-history-of-the-dailys-independence/>

pursues certain avenues of advocacy. An endowed fund would provide long-term stability and independence to SURPAS.

- *Funding Bodies* should:
 - create grants that postdocs and other trainees can apply for to receive funding to build community, especially for marginalized groups underrepresented in academia.
- *Publishing and Professional Organizations* should:
 - highlight stories of successful examples of community building by postdocs and other trainees to showcase models that can be adapted to other institutions.
- *Local Community* should:
 - (existing community centers on campus) include postdocs in outreach for community building and cultural events.
- *Local Government* should:
 - coordinate with the SURPAS Community Engagement Liaison to invite postdocs to community events.
- *State and National Governments* should:
 - track and disclose on a publicly accessible dashboard statistics about postdocs (e.g. number, compensation, place of employment) working within their borders.

Postdoc Visibility

Identified issue: Postdocs are a largely invisible population on and off campus. Postdocs are rarely acknowledged as an important stakeholder at the University and are often not included in conversations that are relevant to them. This lack of visibility leads to postdocs being excluded from much of campus life and not supported in the ways that they should be.

Recommendation:

- *Postdocs themselves (as individuals)* should:
 - actively participate in Stanford town halls and organized events that take place across the university.
 - actively participate in school and departmental events and bodies, including retreats and committees.
 - actively participate in SURPAS-hosted events, including the Postdoc Symposium.
- *SURPAS (postdocs collectively)* should:
 - form coalitions with other organized groups of community members, including graduate students (e.g. Graduate Student Council (GSC)) and medical residents (e.g. Stanford House Staff Union)¹²⁴, undergraduates, research staff, and campus workers represented by SEIU 2007¹²⁵ or subcontracted workers employed by UG2.
 - (SURPAS Council) pass a resolution calling on GSC and the Undergraduate Senate in support of postdocs to bring the Long Range Planning Report to the agenda of the Faculty Senate. Currently, a joint resolution by GSC and the

¹²⁴ Stanford House Staff Union. <https://stanfordhousestaffunion.org/>

¹²⁵ SEIU Local 2007, Higher Education Workers. <https://seiu2007.org/>

Undergraduate Senate can bring a topic to the Faculty Senate agenda but postdocs have no formal mechanism for raising issues.

- *Stanford Faculty* should:
 - acknowledge the work of postdocs (e.g. in research publications, in grant applications, in mentoring, in lab management).
 - support the removal of the “PI Waiver” requirement for postdocs applying for grants.
 - support postdocs being included in University initiatives. This could include ensuring there is a postdoc representative on all committees on which faculty serve, including graduate student admissions, faculty hiring, faculty promotion, and University search committees (e.g. the Provost search committee).
 - create a mechanism by which postdocs can raise a topic to the Faculty Senate agenda.
- *Stanford Admin* should:
 - proactively reach out to postdocs when holding events for the university community. It is not enough to add that a community session is nominally open to postdocs if there is no active outreach to our community.
 - include postdocs with voting seats on University committees. True participation and representation requires the ability for people who are impacted by decisions to have a real say in those decisions.
 - remove the requirement for a “PI Waiver” when postdocs are applying for fellowships and grants.
- *Funding Bodies* should:
 - recognize university service in fellowship funding decisions (i.e. make it a specific criterion on which to judge).
- *Publishing and Professional Organizations* should:
 - write profiles of postdoctoral researchers.
 - annotate author lists on publications with the career stage of the authors (in order to address, for instance, “how often are postdocs listed as first author or corresponding author?”).
- *Local Community* should:
 - (The Stanford Daily) assign a journalist to the ‘postdoc beat’, for instance, by sending someone to report on monthly SURPAS Council meetings.
 - (GSC and Undergraduate Senate jointly) pass a resolution in coalition with SURPAS calling for the creation of a mechanism that allows postdocs to raise a topic on the Faculty Senate agenda.
- *Santa Clara County Board of Supervisors* should:
 - proactively reach out to postdocs as key university stakeholders.
- *State and National Governments* should:
 - create and fund policy fellowships targeted to postdocs.

Postdoc Status

Identified issue: Uncertain status of postdocs between student and employee. Postdocs are often unaware of their rights due to this uncertain classification and a lack of knowledge around labor laws for a population that is composed of a majority of people on temporary visas. The five-year time limit for postdocs is another way this uncertainty is embodied - based on focus group conversations, the official transition to staff after reaching the postdoc time limit rarely is accompanied by a change in duties or responsibilities.

Recommendation:

- *Postdocs themselves (as individuals)* should:
 - educate themselves about their rights as workers within the United States.
 - invite and include staff scientists who have transitioned from their postdoc role to events organized by postdocs.
- *SURPAS (postdocs collectively)* should:
 - proactively reach out to the Santa Clara County Office of Labor Standards Enforcement to set up a “Know Your Rights” Training at a Council Meeting. Given the transient nature of postdocs, holding regular trainings (e.g. yearly) would be important.
- *Stanford Faculty* should:
 - provide explicit expectations on contracts and timelines, with a clear path to a permanent position wherever possible.
 - (continue to) provide effective mentoring for longer term career development
 - (continue to) provide full and proper recognition of postdocs’ work through authorships in papers,
 - (continue to) acknowledge individual postdocs’ contributory roles in grants by including them as named co-writers.
- *Stanford Admin* should:
 - officially define a postdoc as any non-tenure track, non-administrative academic employee holding a terminal degree.
 - offer matched contributions to retirement accounts for postdocs.
 - increase postdoc salaries for each additional year of experience as is done by the NIH.
 - create long-term research staff positions.
 - (continue to) inform postdocs of the grants and fellowships that are available to them. For instance, by the Research Management Group (RMG).
- *Funding Bodies* should:
 - create long-term research staff positions that are compensated appropriately.
 - provide increased funds for senior postdoctoral fellows and research scientists.
- *Publishing and Professional Organizations* should:
 - write about the status of non-faculty doctorate holding researchers within academia, a role that has received even less attention than the postdoc position.
- *Local Community* should:

- (postdoc unions at UCSF and UC Berkeley) talk with postdocs at Stanford to help educate on labor rights of postdocs.
- (Stanford House Staff Union) speak with postdocs to talk about Stanford-specific conditions that led medical residents to choose to unionize.
- *Santa Clara County Board of Supervisors* should:
 - coordinate with SURPAS via the Office of Labor Standards Enforcement to help inform our (mostly international) community about labor law and rights in the United States with a “Know Your Rights” Training.
- *State and National Governments* should:
 - positively affirm the worker rights of the highly skilled workforce carrying out advanced academic research (e.g. through the National Labor Relations Board).

Insecurity: Job

Identified Issue: Postdocs are positioned as a transitory role in academia, and this period is defined by high pressure to produce research output along with high uncertainty of success in the faculty job market (most academic postdocs do not go on to tenure-track roles). This means that a postdoc has deep uncertainty built into it and this is compounded with additional job insecurity due to short-term contracts (often of a single year at a time).

Recommendations:

- *Postdocs themselves (as individuals)* should:
 - make decisions that are most appropriate for themselves and their families in planning for the future.
- *SURPAS (postdocs collectively)* should:
 - continue to advocate for multi-year postdoc contracts.
 - continue to advocate for matched contributions to retirement accounts for postdocs.
 - continue to highlight the loss of stable, tenure-track jobs from the academic workforce and the related impacts on current and future postdocs.
- *Stanford Faculty* should:
 - communicate expectations and timelines clearly to postdocs, regardless of contract time limits.
 - offer multi-year contracts (at least two years) for each hiring and renewal for postdocs.
 - advocate against the removal of tenure track jobs and replacement of academic labor with contingent and adjunct roles.
- *Stanford Admin* should:
 - institute multi-year minimum contract lengths.
 - provide matched contributions to retirement accounts for postdocs.
 - increase compensation for postdocs based on years of experience.
 - reverse the trend of replacing tenure track faculty with contingent and adjunct faculty.
- *Funding Bodies* should:

- create permanent staff positions for senior researchers.
- create incentive structures that encourage hiring of tenure track faculty and discourage replacement of stable jobs with contingent and adjunct roles.
- *Publishing and Professional Organizations* should:
 - specifically highlight the increase in contingent and adjunct roles at the expense of tenure track roles and the associated implications for the academic workforce.
 - research and write about the conditions for non-faculty doctorate holding researchers within the academic workforce.
- *Local Community* should:
 - (Bay Area Postdocs) coordinate with postdocs at Stanford to advocate for better conditions for all academic workers across the region and country, especially postdocs.
- *Local Government* should:
 - send regular emails (e.g. quarterly) to postdocs via Community Engagement Liaison highlighting County services postdocs may be eligible for in order to help academic workers meet basic needs during their time working as postdocs.
- *State and National Governments* should:
 - increase funding for early career researchers to allow for greater stability in life planning.
 - create more funding for tenure track faculty positions and discourage replacement of stable employment with contingent and adjunct roles.

Insecurity: Immigration

Identified Issue: The job insecurity that postdocs face (see above) is further compounded for international postdocs (>60% of postdocs at Stanford) by stress around immigration requirements and obtaining visas. Short-term contracts mean short-term immigration documents and regular re-applications for visas in order to continue working as a postdoc in the US.

Recommendations:

- *Postdocs themselves (as individuals)* should:
 - plan far in advance for obtaining and renewing visas.
 - continue to provide mutual aid and personal experience (e.g. via the postdoc exchange listserv) to help postdocs with visa applications.
- *SURPAS (postdocs collectively)* should:
 - continue to advertise peer-resourced mutual aid and sharing of personal experience applying for visas and navigating bureaucracy.
 - reach out to Stanford Law School to inquire about setting up free legal advice clinics for postdocs.
- *Stanford Faculty* should:
 - provide contracts longer than 1 year to provide stability.
 - understand that international postdocs will need to spend time and money applying for visas.

- actively engage and be knowledgeable about visa processes to support, remind, guide, and provide the necessary resources to their postdocs.
- *Stanford Admin* should:
 - standardize postdoc visa services across departments and spread best practices. Currently, different departments provide different levels of support for international postdocs based on localized policy decisions and administrative staff capacity.
 - where possible encourage contracts that have a duration longer than one year in order to obtain visas that also have a duration longer than one year.
- *Funding Bodies* should:
 - create more funding opportunities that are available to non-citizen/permanent resident researchers who work in the US.
- *Publishing and Professional Organizations* should:
 - highlight contributions to the academic research enterprise in the US made by researchers who are on temporary visas.
- *Local Community* should:
 - (Stanford Law School) provide free consultations for postdocs seeking assistance with visa issues.
 - (Bechtel International Center) proactively reach out to and include postdocs with community events and support services.
- *Local Government* should:
 - send quarterly emails to postdocs at Stanford via Community Engagement Liaison with information about the Santa Clara County Office of Immigrant Relations.¹²⁶
- *State and National Governments* should:
 - streamline the visa process for advanced researchers working at non-profit universities.
 - provide visas that allow spouses of academic workers to obtain employment to supplement postdoc salaries.

Career Tracking & Job Seeking

Identified Issue: Data on postdoc career outcomes are scarce (or not openly available), particularly at the local level. Without data such as these, postdocs and potential postdocs cannot make informed decisions around their own career planning.

Recommendations:

- *Postdocs themselves (as individuals)* should:
 - share knowledge of personal career outcomes (place of employment and salary).
- *SURPAS (postdocs collectively)* should:
 - continue to advocate for SURPAS to receive access to the postdoc alumni network (for instance, from BioSci Careers) in order to establish connections for future career development in academia and industry.

¹²⁶ County of Santa Clara Office of Immigrant Relations Mission, <https://oir.sccgov.org/about-us/mission>

- serve as a repository of information about postdoc career transitions and salary scales, to be publicly posted after anonymization.
- *Stanford Faculty* should:
 - (continue to) track and publicly disclose on their lab webpages the career transitions made by postdocs who have left their labs.
- *Stanford Admin* should:
 - join the Coalition for Next Generation Life Sciences.
 - publicly disclose all (anonymized) postdoc career tracking data (i.e. for all postdocs, not just in life sciences). In addition to posting yearly totals of postdoc numbers on IDEAL Dashboard, turnover should be included (i.e. number of new postdocs joining, number of postdocs leaving,).
 - include median postdoc time at Stanford disaggregated across departments as is possible whilst maintaining anonymity.
 - allow postdocs to join the Stanford Alumni Network.
 - (continue to) facilitate networking opportunities for postdocs, with industry-specific career mentors and Stanford alumni. For instance, through Stanford Career Education¹²⁷ and the School of Medicine BioSci Careers.¹²⁸
- *Funding Bodies* should:
 - consider both participation in open data sharing on postdoc outcomes (e.g. Coalition for Next Generation Life Sciences) and the results of those outcomes in funding decisions.
 - require tracking of postdoc career outcomes by funded institutions. Postdoc career outcomes are an important component for understanding the robustness of the academic research ecosystem.
- *Publishing and Professional Organizations* should:
 - utilize national data and generate surveys to track career outcomes for early career researchers.
 - investigate the replacement of tenure track faculty roles with contingent and adjunct roles.
- *Local Community* should:
 - (local employers) highlight postdoctoral experience (or lack thereof) for workers they employ.
- *Local Government* should:
 - track and disclose publicly (e.g. via online dashboard) employment statistics for all workers within the County disaggregated across employment sectors with information including total number of employees and wage and benefits statistics.
- *State and National Governments* should:
 - mandate tracking of postdoc career outcomes. State and national governments invest a great deal of resources in training researchers through graduate education and postdoctoral work. Postdoc career outcomes are an important component for understanding the governments' return on investment in this

¹²⁷ Stanford Career Education: PhDs/Postdocs, Accessed Mar 21, 2023 at: <https://careered.stanford.edu/phdspostdocs>

¹²⁸ BioSci Careers, Accessed Mar 21, 2023 at: <https://med.stanford.edu/bioscicareers.html>

space. For instance, how many postdocs go on to a career that did not require their postdoctoral training? What is the best way to distribute research funding?

Incentives in Academia

Identified Issue: Academic incentive structures are not aligned with the needs of the workforce. Within existing academic incentive structures, it is difficult for postdocs to gain credit or recognition for the work they perform (e.g. postdocs don't get credit for mentoring, grant-writing, or peer review on paper, just by word of mouth from their advisor).

Recommendations:

- Postdocs themselves (as individuals) should:
 - sign up to serve as reviewers for journals in their discipline.
 - actively highlight contributions such as mentoring, grant writing, and peer review in CVs and resumes.
- *SURPAS (postdocs collectively)* should:
 - continue to advocate for recognition of ongoing work performed by postdocs that goes unacknowledged due to lack of metrics within current incentive structures (e.g. DEI work).
- *Stanford Faculty* should:
 - proactively include postdocs in grant writing and peer review processes, and give them credit for this work (e.g. by naming them as core contributors). This may require the removal of the “PI Waiver” requirement (see the **Postdoc Visibility** section).
 - (continue to) highlight contributions from postdocs clearly in recommendation letters.
 - advocate for creation of incentive structures to recognize work that currently goes unrewarded and uncompensated.
 - recognize work beyond published papers (e.g. peer review, organizing conferences, DEI work, etc.) in hiring and tenure decisions.
- *Stanford Admin* should:
 - make an official tracking platform similar to the postdoc teaching certificate to validate and acknowledge the contributions of postdocs in mentorship. This would be a structured program for mentorship training that has specific, well-defined criteria for completion that results in a professional certification that could be included on a CV/biosketch.
- *Funding Bodies* should:
 - recognize mentoring, peer review, etc. as part of selection criteria in funding decisions.
 - track contributions to the research enterprise beyond paper publication, such as peer review and contributions to grant writing from those who do not serve as Principal Investigators.
- *Publishing and Professional Organizations* should:

- adopt and continue models of open peer review, annotated with the career stage of reviewers.
- provide monetary compensation to peer reviewers.
- *Local Community* should:
 - (Bay Area Postdoc Associations) work together with postdocs at Stanford to help recognize work by early career researchers that is currently unacknowledged.
- *Local Government* should:
 - create funded positions and grants to leverage the expertise of local academic employees in researching and implementing policy topics.
- *State and National Governments* should:
 - create funded positions and grants to leverage the expertise of local academic employees in researching and implementing policy topics.

Orientation & Onboarding

Identified Issue: Onboarding and orientation are overwhelming and ineffective for new postdocs. After onboarding, there is not a centralized platform where one can access all the required information for a postdoc. The OPA website itself is not enough, a lot of the information comes from listserv or word-of-mouth after arriving on campus.

Recommendations:

- *Postdocs themselves (as individuals)* should:
 - continue to share personal knowledge and experiences with incoming postdocs.
 - proactively seek out administrators to receive needed information.
- *SURPAS (postdocs collectively)* should:
 - continue to promote the available resources to incoming and new postdocs at council meetings or social gatherings.
 - facilitate the creation of a 'cohort' or 'buddy system' in which new postdocs are assigned to small groups to give specific points of contact to share knowledge and best practices. These groups of new postdocs should also include older postdoc volunteers to be able to provide insight from experience.
- *Stanford Faculty* should:
 - educate themselves on resources available to postdocs and proactively inform their newly hired postdocs about relevant topics.
- *Stanford Admin* should:
 - make a centralized on-boarding document that can list all available resources for postdocs. This document should be shared online.
 - have a follow-up orientation presentation other than the first on-boarding meeting (which has more information than one can absorb at the time).
 - assist in administering the cohort/buddy system to connect postdocs with each other.
- *Funding Bodies* should:
 - require an on-boarding plan for incoming postdocs as part of the training plan in fellowship applications.

- *Publishing and Professional Organizations* should:
 - (professional organizations) hold quarterly webinars with general information for incoming postdocs based on the location of the organization.
- *Local Community* should:
 - (Undergraduates and Graduate students) share relevant and helpful information to new Postdocs arriving in their lab.
- *Santa Clara County Board of Supervisors* should:
 - direct the Office of Labor Standards Enforcement to send quarterly ‘Know Your Rights’ information to postdocs at Stanford.
- *State and National Governments* should:
 - (State) work with local Universities to set up a state-specific guideline for incoming Postdocs that can be adopted by individual Universities.
 - (National) work with the National Postdoc Association and Universities to set-up a general guideline for incoming postdocs.

Personal Health & Safety

Identified issue: Postdocs face a variety of personal health and safety risks on campus. Postdocs may work long or unusual hours and therefore need to be on and moving around campus late at night; Black postdocs may be asked by campus police (Stanford Department of Public Safety) to show their University ID in order to justify their existence in this space (as has occurred on numerous occasions on Stanford campus); postdocs may not be able to work remotely and so be required to work on-site even in the midst of a pandemic; international postdocs may feel less able to speak up about workplace harassment or abuse given their immigration status, particularly so if the harasser/abuser is in a position of power over them; postdocs are also vulnerable to mental health issues. Notably, these risks are in addition to the regular occupational health and safety risks of working in a lab environment.

Recommendations:

- Postdocs themselves (as individuals) should:
 - monitor local COVID levels through tracking wastewater on the County COVID Dashboard.¹²⁹
 - utilize Stanford-provided COVID antigen tests as needed.
 - familiarize themselves with campus safety amenities, such as 5-SURE Safe Rides.¹³⁰
 - watch out for the safety of others around them (be an upstander, not a bystander).
- *SURPAS (postdocs collectively)* should:
 - continue to advocate for more community oversight for the campus police (Stanford Department of Public Safety).

¹²⁹ Santa Clara County SARS-CoV-2 Wastewater Monitoring Data, <https://covid19.sccgov.org/dashboard-wastewater>

¹³⁰ Stanford 5-SURE Safe Rides, <https://vaden.stanford.edu/5-sure-safe-rides>

- continue to advocate for clearer communication from Stanford Admin around public health concerns (including pandemics).
- continue to offer spaces and opportunities for postdocs to raise issues that have affected them or that they are concerned about.
- act in solidarity with Faculty, Admin, and other campus stakeholders to ensure that all postdocs (and everyone else) are safe at all times.
- *Stanford Faculty* should:
 - ensure cultures of safety in the laboratory are developed and adhered to.
 - be attuned to the safety concerns of their group members by asking them about it.
 - advocate to Stanford Admin for improvements in safety amenities across campus to ensure that everyone is safe at all times.
- *Stanford Admin* should:
 - continue to ensure stringent laboratory safety protocols and strong cultures of experimental safety through Environmental Health & Safety.
 - restore full service of Marguerite Shuttles on campus to pre-pandemic levels.
 - mandate anti-racist training for members of Stanford University Department of Public Safety.
 - proactively invite postdocs to meetings and reports from the Community Board on Public Safety.¹³¹
 - allow for postdocs and other community members to opt in to continued surveillance testing beyond antigen testing for symptomatic individuals (e.g. nucleic acid-based provided through Color during the pandemic).
 - ensure walkways on campus are well-lit and emergency access points are available.
 - continue to provide ready access to mental health services for postdocs.
- *Funding Bodies* should:
 - factor compliance with professional codes of conduct in funding decisions.
- *Publishing and Professional Organizations* should:
 - create and enforce codes of conduct for membership.
 - research and report on mental health challenges within the postdoc population.
- *Local Community* should:
 - (undergraduate and graduate student bodies) work in solidarity with SURPAS to advocate for improved safety measures across campus.
- *Santa Clara County Board of Supervisors* should:
 - create an easy to access mechanism for members of the Stanford community to report any topics related to the Stanford Department of Public Safety that may require the Board to exercise its oversight authority. Stanford Department of Public Safety employees are deputized by the Santa Clara County's Sheriff Office but are private employees of Stanford University. The situation is similar to municipal police departments but without typical mechanisms for public oversight.
- *State and National Governments* should:

¹³¹ Stanford Office of the President, Community Board on Public Safety
<https://president.stanford.edu/university-governance/community-board-on-public-safety/>

- continue to require reporting of sexual violence on campuses through Title IX.

Language in Communication

Identified issue: A majority of postdocs at Stanford are international, meaning that a significant fraction do not speak English as a first language. Even for international postdocs from English-speaking countries, cultural and historical background can give rise to misunderstandings (see **Article VIII: External Communications**, Section 4 in **Appendix A: SURPAS (Stanford Postdoc Association) Bylaws**). At the same time, effective communication is an essential skill in academic and research careers.

Recommendations:

- Postdocs themselves (as individuals) should:
 - seek opportunities to develop linguistic and cultural understanding within the US academic context.
 - actively seek out and engage in anti-racism training.
- *SURPAS (postdocs collectively)* should:
 - arrange anti-racism training sessions for all postdocs.
 - advocate for the creation of anti-racism training sessions for Stanford community members.
 - continue to provide spaces for postdocs to practice their communication and presentation skills (e.g. SURPAS Postdoc Symposium).
- *Stanford Faculty* should:
 - continue to offer opportunities for postdocs to practice presenting their work in low-stakes settings (e.g. at group meeting in advance of a conference talk).
 - advocate for the creation of anti-racist training sessions for Stanford community members.
 - encourage postdocs to present their work at conferences and meetings, both at Stanford and beyond.
- *Stanford Admin* should:
 - (Office of Postdoctoral Affairs) continue to offer courses on oral communication for non-native english speakers.¹³²
 - develop mandatory anti-racist training sessions for Stanford community members.
- *Funding Bodies* should:
 - require anti-racist training sessions as a condition of receiving funding.
- *Publishing and Professional Organizations* should:
 - provide resources for communicating research findings in languages other than English.
 - provide resources for aiding researchers whose first language is not English to improve their English communication skills.

¹³² Office of Postdoctoral Affairs, “Advanced English for Non-Native Speakers”, Accessed March 22, 2023 at <https://postdocs.stanford.edu/events/series/advanced-english-non-native-speakers>

Conclusions

This Report contextualizes the role of postdocs within academia *as viewed by postdocs themselves*. The national landscape for postdoc employment within the United States and at Stanford specifically was analyzed by drawing from a wide variety of reputable sources in the **Opportunities for Early Career Researchers: Competitive Landscape for Postdocs** section. An overview of previous advocacy efforts performed by organized postdocs at Stanford was provided in the **A Quarter Century of Postdoc Advocacy at Stanford: Review of Previous Work** section. The mindset and goals for postdocs at Stanford in the early 2020s was ascertained in the **Conversations with Postdocs at Stanford: Focus Groups 2021** section. Models of postdoc advocacy and data about contemporary issues of concern for postdocs are provided in the **Ongoing Postdoc Advocacy at Stanford: Surveys and Letters 2021/2022** section. Issues facing postdocs and expectations for how various stakeholders can address them are included in the **Recommendations** section.

With this Report, SURPAS is positioning postdocs as an important stakeholder within the University and academic research settings. The Report serves as a form of institutional memory for future postdocs at Stanford, crystallizing many efforts and goals undertaken by postdoc organizers in a single document and helping to combat the issues that arise due to the transient nature of the postdoc as it currently exists. The vision for the future of postdocs at Stanford presented within this Report includes data and ideas that future postdoc leaders can leverage. This Report also serves as a communication to other stakeholders within the University and academic communities of postdoc goals and expectations.

The issues, themes, and recommendations within this report are neither groundbreaking nor unique. Many of the same themes emerged in the Fall 2022 survey of postdocs conducted by the National Postdoc Association.¹³³ The issues and recommended solutions echo calls made by researchers at various levels of the academic research enterprise for more than two decades. The COVID-19 pandemic revealed and exacerbated many existing trends, but these inequities are longstanding.

Postdocs at Stanford are relatively better resourced and organized compared with postdocs at other institutions but still face many challenges. It is the hope of the Committee that the materials contained within this Report can serve as a model for postdocs at other institutions to adapt to their own local conditions. Though Stanford employs a disproportionate share of postdocs compared with most other institutions in this country, the nearly 2500 postdocs at Stanford represent a small fraction of postdocs in the US. Additional data about the material conditions of postdocs at a wider variety of institutions will help provide a more complete picture of postdoc positionality.

¹³³ National Postdoc Association, 2023 'Postdoctoral Barriers to Success' Accessed February 4, 2023 at https://cdn.ymaws.com/www.nationalpostdoc.org/resource/resmgr/docs/2023_postdoctoral_barriers_t.pdf; Udesky (Feb 2, 2023) "Postdoc Survey Confirms Widespread Dissatisfaction Among US Researchers" *Nature Career News*, accessed February 4, 2023 at <https://www.nature.com/articles/d41586-023-00332-6>

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Appendices

Appendix A: SURPAS (Stanford Postdoc Association) By-Laws

Postdocs at Stanford have been self-organized to represent their interests within the university community since at least 1998. SURPAS is governed by the following bylaws. SURPAS Council periodically votes on bylaws amendments to reflect changing needs of the organization and community; this process ensures new Council members are aware of our governing structure.

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# **Bylaws of the Stanford University Postdoctoral Association**

## **History**

The Stanford University Postdoctoral Association (SURPAS) was founded in 1998 to promote a community among Postdoctoral Scholars at Stanford University. SURPAS is governed by the Council. The Council was formed in Spring of 1999, and addresses issues related to Postdoctoral Scholars at Stanford. The Council functions in advocacy and helps to maintain a social structure within the postdoctoral community.

**Note:** The Stanford University Postdoctoral Association previously used the acronym SUPD, which was often confused with the Stanford University Police Department. In 2013, the Council appointed a Name and Logo committee to report on the name confusion and potential alternatives. The committee reported that even though the Stanford Police department uses the acronym SUDPS, or Stanford University Department of Public Safety, confusion still occurs, and many alternative acronyms were already claimed by other organizations at Stanford. For instance, SUPA was already used by the Stanford Undergraduate Psychology Association. The acronym SURPAS was identified as a viable alternative, which sounds like the word, “surpass” and has a meaning that aligns well with the mission of the Association. The council voted by majority on September 25, 2013, to adopt the acronym SURPAS.

## **Revision History** *(current version approved: January 2023)*

### **Section 1: 1998-1999 Session**

- A. Creation
- B. 1,200 Postdoctoral Scholars at Stanford

## **Section 2: 2010 Session**

- A. Unknown
- B. 1,800 Postdoctoral Scholars at Stanford

## **Section 3: 2013 Session**

- A. Redesign of Bylaws based on Associated Students of Stanford University (ASSU) Bylaws
- B. Creation of Advisory Board
- C. Added articles for Conflict of Interest, Conflict Resolution, non-discrimination, decision making
- D. Removed redundant passages
- E. 2,000 Postdoctoral Scholars at Stanford

## **Section 4: 2015 Session**

- A. Added activity requirement for Council members to contribute to SURPAS that will be evaluated during review prior to re-election after one year

## **Section 5: 2016 Session**

- A. Change in the election timing of co-chairs, leadership team and honorary committees
- B. Added a responsibility for secretary
- C. Added a clause on maternity leave

## **Section 6: 2017 Session**

- A. Added positions of Events Coordinator and Advocacy Coordinator to leadership team
- B. Updated bylaws to reflect organizational practices (including cap on council seats, number of meetings held, SPIF budget, committee formation, officer responsibilities, timing of elections)
- C. Included diversity and inclusion statement in mission
- D. Expanded maternity leave clause to include other types of leave
- E. Added guidelines for external communications
- F. 2,100 Postdoctoral Scholars at Stanford

## **Section 7: 2018 & 2019 Sessions**

### **Documentation of previously-approved updates**

- A. Use of poll everywhere for voting
- B. Nov and Dec meetings may occur earlier than the last week of month
- C. Council meetings can occur in different locations across campus
- D. SURPAS seats on 'honorary committees'
- E. Updated structure and responsibilities for SURPAS Leadership

- F. Updated timing of elections to reflect offset co-chair positions and campaign regulations.
- G. Term information for Council and Leadership members

### **Minor updates to bylaw language**

- H. Council member responsibilities include the ability to override decisions by the leadership team and require active participation in SURPAS activities
- I. Council member term expiration includes notice
- J. Defined 'adequate' notification for meetings.
- K. Updated the process for the management of Committees and information stream from Committees to the Leadership and Council
- L. Recognition of other postdoc groups on campus

### **Category 3 - Major updates to bylaw content**

- M. Votes of no confidence for removal from positions.
- N. Updated the process for the appointment and responsibilities of Committee chairs.
- O. Added new Community Engagement Liaison position

## **Section 8: 2020 Session**

### **Approved changes**

- A. Postdocs transitioning to non-tenure track roles may continue to be SURPAS members and occupy voting council member seats as long as there are open Council seats and no new members wishing to occupy these.
- B. Wording to increase accessibility to SURPAS Council Meetings
- C. Changes to guidelines for using SURPAS emails

### **Minor updates to bylaw language**

- D. "Maternal/baby/bonding leave" changed to "parental/baby bonding leave"
- E. 2400 postdocs at Stanford

## **Section 9: 2021-2022 Session**

- A. SURPAS co-chairs should extend an invitation and share OPA meeting agenda to the affinity groups. This will enhance SURPAS collaborative interaction with the postdoc affinity groups.
- B. The position of SURPAS representative to the School of Medicine Diversity Cabinet is an elected position from within the current SURPAS leadership OR The position of SURPAS representative to the School of Medicine Diversity Cabinet is an elected position from within the SURPAS Council OR The position of SURPAS representative to the School of Medicine Diversity Cabinet will be assumed by the Advocacy Coordinator.
- C. SURPAS co-chairs should invite Faculty Staff Help Center to present at Council Meetings biannually – this is essential as postdocs are a transient community within Stanford and ensuring that all incoming postdocs have the opportunity to know about the services that FSHC provide is important. Postdocs face many challenges both in research, mentor-mentee

relationships and personally and it is important to ensure that our community is aware of these services.

## **Section 10: 2022-2023 Session**

**A.** Addition to Treasurer/Financial Officer's responsibility: All monthly financial transactions shall be completed within SURPAS for each month prior to the 1st of the next month.

**B.** Addition to Co-Chairs' responsibility: Add "Co-Chairs should schedule quarterly meetings with OPA and Affinity group co-chairs".

**C.** Council member responsibility: Council members must attend at least 9 (75%) council meetings in a year of service on council. Excused absences should be coordinated with the Operations Manager in advance of the meeting. Excused absences and canceled meetings will not be considered missed meetings. Council members missing 3 (25%) scheduled council meetings will be given a warning. Missing additional meetings thereafter will result in being removed from the roster and losing membership.

# **Article I: General**

## **Section 1: Mission**

**A.** The mission of the Stanford University Postdoctoral Association is to enrich the Postdoctoral experience at Stanford, to enable Postdoctoral Scholars to explore opportunities, and to empower Postdoctoral Scholars to become leaders in areas of their choice.

**B.** The Council represents and advocates for the best interests of *all* Stanford Postdoctoral Scholars. Primary goals of the Council include the following:

1. To develop social and networking opportunities for Postdoctoral Scholars from all disciplines, in the interest of fostering a community of postdocs at Stanford.
2. To promote inclusion and representation of all postdoctoral fellows and advocate for a postdoctoral community that better reflects the diversity that is crucial for research and other progress.
3. To work with University Administration to optimize the postdoctoral experience.
4. To strive for the professional enrichment and development of Postdoctoral Scholars.
5. To ensure that postdoctoral benefits and salaries are commensurate with the NIH salary scale and the high cost of living in the Bay Area.
6. To clearly define and communicate the Postdoctoral Scholar status at an institutional level.

**C.** The members of the Council will act as a liaison to the postdoctoral population at large and represent the interests of Postdoctoral Scholars to the Office of Postdoctoral Affairs and to Stanford University by representing Postdoctoral Scholars on University committees and governing bodies.

## **Section 2: Membership of Registered Postdoctoral Scholars**

All registered Postdoctoral Scholars of Stanford University are members of SURPAS. Registered Postdoctoral Scholars of Stanford University shall be defined to include all Postdoctoral Scholars appointed by the Office of Postdoctoral Affairs of Stanford University. SURPAS recognizes that there are people working in similar positions [individuals who possess a doctoral degree (Ph.D., M.D., J.D., Ed.D., etc.) and conduct research under a Stanford faculty member's sponsorship or supervision), but are not appointed by the Office of Postdoctoral Affairs (such as Research Associates and Visiting Scholars)]. These individuals are not members of SURPAS, but are invited to participate in SURPAS events. SURPAS recognizes that Postdoctoral scholars may move into other non-tenure track trainee roles at Stanford upon expiration of the Postdoctoral scholar term limit or award of transitional funding. These former Postdocs may continue to be SURPAS members.

## **Section 3: Dissolution of the Organization.**

SURPAS will be dissolved when its mission is accomplished.

## **Section 4: Non-Discrimination and Diversity Statement**

These Bylaws, the Council, the elected officers, and all Committees, shall not discriminate against any individual or organization on account of race, gender, religion, ethnicity, nationality, sexual orientation, or physical or mental disability. SURPAS seeks to promote diversity and ensure equal opportunity and inclusion for all Postdoctoral Scholars, across all seven schools, in the membership, leadership, and activities of SURPAS.

## **Section 5: Conflict of Interest**

- A. The members of the Leadership Team, Council, and Committees are expected to avoid any actual or apparent conflict between their own individual personal or professional interests and the interests of SURPAS. The members of the Leadership Team, Council, and Committees shall act at all times in the best interests of SURPAS. This means setting aside personal self-interest and performing their duties in transaction of the affairs of SURPAS in such a manner that promotes confidence and trust in the integrity, objectivity and impartiality of the Leadership Team, the Council, and Committees.
- B. This Conflict of Interest policy is in place to protect both the individual and SURPAS from accusations of improper conduct. As such, all members of the Leadership Team, the Council, and Committees are expected to respect the Conflict of Interest policy and should feel personal responsibility for self-monitoring.



# Article II: Legislative Branch

## Section 1: Members of the Council

- A. SURPAS Council shall be composed of thirty (30) total seats.
- B. All members of SURPAS are eligible to run for vacant Council seats. Former Postdocs who have moved into non-tenure track roles may continue to serve on SURPAS Council.
- C. If the Council has more volunteers than open slots, new members will be recruited by elections with consideration given to the current needs of the Council.
- D. If all Council member slots become full, Council slots occupied by former Postdocs now in early career, non-tenure track roles must move into advisory roles to make Council seats available for new members.
- E. The membership of the Council is to be representative of the Postdoctoral Scholar distribution across the seven schools at Stanford. This will be achieved to the extent possible, by active recruitment by current council members and the leadership team.

## Section 2: Responsibilities

- A. The Council holds the overall responsibility for SURPAS' operations with guidance from, the Leadership Team (Article III, Section 1), its Advisory Board (Article VII, Section 2), and the Office of Postdoctoral Affairs. Council members have the right to openly discuss decisions made by the Leadership Team and request a motion to override such decisions with a simple majority vote.
- B. Council members must attend at least 9 (75%) council meetings in a year of service on council. Excused absences should be coordinated with the **Operations Manager** in advance of the meeting. Excused absences and canceled meetings will not be considered missed meetings. Council members missing 3 (25%) scheduled council meetings will be given a warning. Missing additional meetings thereafter will result in being removed from the roster and losing membership.
- C. In addition to attending council meetings, council members must significantly contribute to SURPAS activities and the well-being of postdocs at Stanford. For example, council members are required to either (a) serve on the leadership team (Article III), (b) serve as a Faculty Senate representative (Section 7), (c) be an active member of a SURPAS Committee (Sections 5 & 6) or (d) be an active member of a postdoc affinity group. The council will review each member's contribution to SURPAS and the well-being of postdocs at Stanford at the end of their one year term and can then vote on re-election to the SURPAS council.
- D. Council members must ensure that pertinent information is disseminated to the postdoctoral population at large. They will communicate concerns to the Council from those Postdoctoral Scholars that they represent, and hold informal meetings with Postdoctoral Scholars as necessary.

- E. Council members must inform Postdoctoral Scholars of special events and help organize as needed.

### **Section 3: Term Expiration**

- A. Appointments to the Council are for one year, confirmed by a letter of appointment or email.
- B. Members who are no longer able to execute their tasks shall notify the Co-Chairs in writing.
- C. If a member fails to attend 3 meetings in a row, without prior notification to the **Operations Manager**, he or she will be notified in writing by the **Co-Chairs** that they are no longer an active member of the Council.

### **Section 4: Meetings of the Council**

- A. The **Co-Chairs** and the Leadership Team may call meetings of the Council. Adequate public notice of meeting location and agenda items (defined as 3 business days) must be given for each meeting.
  - B. Quorum for Council meetings shall consist of at least half of the non-vacant seats. If a quorum is not present, following reasonable notification for a second meeting, proposed motions may be voted upon with fewer members than a full quorum attending.
  - C. Votes that concern SURPAS members will be done by Council members anonymously using paper voting slips or an online voting system, such as PollEverywhere. Council members can abstain from voting. Votes that concern missions, plans, and other impersonal items can be done by a show of hands, as the Council sees fit.
  - D. The **Co-Chairs** shall share responsibility of the Presiding Officer at each Council meeting.
  - E. Council meetings shall be scheduled the last week of each month, with the exception of November and December which may occur earlier in the month due to holidays. Additional Council meetings can be called, as the need arises. The Council shall be given adequate notice of planned meetings.
  - F. Council meetings shall take place throughout campus and/or on zoom to ease accessibility and improve participation from postdocs across all Stanford schools and departments.
- 
1. SURPAS Leadership members must actively be mindful of accessibility when scheduling Council meetings. This includes scheduling Council meetings in rooms that meet ADA requirements and which are located throughout campus, and/or via a web based platform (such as Zoom)

2. All SURPAS members are invited to attend meetings, but are eligible to vote only when they are members of the Council.
3. Council meetings last no longer than 1.5 hours. Unfinished business will be relegated to the next meeting.

**G. Order of Business**

1. Agendas and supporting documents will be distributed in advance of all scheduled meetings.
2. Determination of quorum by the **Co-Chairs** and/or the **Operations Manager**
3. Approval of previous Council meeting minutes by the Council, should there be comments on the draft.
4. Reports of special representatives and standing committees.
5. General orders or unfinished business.
6. Voting motions shall carry if they receive a majority vote.
7. Additional agenda items can be recommended to the **Co-Chairs** by any SURPAS member up to one day before the meeting.

## **Section 5: Committees**

The Council shall have the power to create Committees for specific purposes, to vest in them all appropriate powers of the Council, and to determine their composition.

- A. Committees shall be composed of volunteers from the Council and SURPAS. It is recommended that all committees have at least one council member involved. Committee members shall appoint or elect a chair (or co-chairs) to manage the Committee. This chair or co-chairs must be approved by simple majority vote (anonymous or show of hands) of the Council.
- B. The duties of a Committee and its power to act on certain decisions shall be outlined at its formation and shall be approved by the Council. Leadership, on behalf of Council, will assist committees in carrying out their duties whenever possible and deemed appropriate.
- C. The Council will retain final responsibility for the committee's actions and decisions. The members of the Committee and the Council have the power to remove a Committee Chair (or Co-Chairs) if necessary by a simple majority vote.
- D. Committees will submit a plan of action and a budget proposal to the **Treasurer/Financial Officer**, who will review it and present it to the Council. The Council can also decide to allocate a budget upon installment of a Committee, pending approval by the **Treasurer/Financial Officer**.
- E. All Committees shall regularly report to the Leadership Team, and, if suitable to the Council, at a Council meeting through the Chair (or Co-Chairs) or Committee Representative. The Committee Chair (or Co-Chairs) must submit a Project Plan outlining the Committee's goals and activities for the year to the Leadership

Team each January. Status reports from Committees may also be requested on an ad hoc basis by any Council member. If a Committee Chair or Representative is not a member of council, they will still be regulated under the same attendance requirements as Council members (Article II Section 2).

- F. A Committee will go out of existence when its goals have been met or task is complete, or can be terminated or merged with another Committee by majority vote of the Council.
- G. Committees of structural importance or that serve essential roles to postdoc well-being at Stanford will become standing committees with their own guidelines.
- H. Any SURPAS member may propose a Committee to the Co-Chairs, Leadership, or Council. The Council will then discuss and vote on the formation of the Committee at the next meeting. Committees can be created by the Leadership without a vote of the Council (Article III Section 1D).

## **Section 6: Standing Committees - SURPAS Postdoc Initiative Fund (SPIF)**

- A. Objectives and mandate of SPIF: to provide financial support and foster Postdoctoral Scholar initiatives that enrich the postdoctoral experience at Stanford. SPIF will consider a broad range of projects, and funding is targeted towards groups mostly specific to Postdoctoral Scholar affairs. Postdoctoral Scholars must be significantly involved in the organization of acceptable initiatives. In principle, any group can be considered for funding if the projects are organized mainly by and for Postdoctoral Scholars.
- B. The rules of operation are described in the general guidelines of SPIF.
- C. The chair of SPIF regularly reports to the **Treasurer/Financial Officer** about approved proposals, and the amount of funding that is awarded, and monthly to the Council about their progress.
- D. The annual operating budget of SPIF shall be set and agreed upon by the Council as part of the **Treasurer's/Financial Officer's** budget proposal for the upcoming year (Article III Section 5B).

## **Section 7: Postdoc Representative Seats**

- A. SURPAS has a voting seat on the Faculty Senate Committee on Library (C-LIB), Faculty Senate Committee on Academic Computing and Information Systems (C-ACIS), and Faculty Senate Committee on Research (C-RES). These prestigious seats must be filled by May-June to be effective by September of the same year and are elected by Council.
- B. The **Co-Chairs** are granted two non-voting seats on the Faculty Senate for the School of Medicine, but in the instance that one or both Co-Chairs do not come from the School of Medicine another SURPAS member may be appointed (at least one of the two seats should be occupied by a member of the Leadership Team).

- C. SURPAS has one voting seat on the School of Medicine Diversity Cabinet that can be filled by appointment of a member of the Council or the Leadership Team.
- D. The **Co-Chairs** are granted one non-voting seat on the University Faculty Senate.
- E. The Co-Chairs have two non-voting seats on the Provost Advisory Council on Postdoctoral Affairs (PACPA).
- F. SURPAS representatives to these Committees, Cabinets, and Senates will uphold these Bylaws and represent to their best ability the interests of the Council and all Postdoctoral Scholars at Stanford. They will provide any updates to the Council of pertinent information if possible at the monthly Council meeting.

## **Section 8: Special Advisors to the Council**

Former Council officers who remain in good standing with the Council have the option to become Special Advisors following their term in office. Special Advisors provide continuity from one Council administration to the next, and provide advice to the Council and Leadership Team as needed. They may be nominated by the Co-Chairs, Leadership Team, or Council for a one year term (with the option for renewal at the end of the term).

## **Section 9: Leave of Absence from Council**

A council member shall be permitted to take a leave of absence from SURPAS Council during parental/baby bonding leave, for physical or mental health reasons, family matters, or other extenuating circumstances. A council member on leave shall retain their position on council upon their return, but their seat is not counted towards quorum during their period of absence. The Council can appoint a substitute to serve on any committees or in any position that requires attendance while the council member is away on leave; however, the council member will resume all of these positions once he or she is back from leave. Notice for a leave of absence should be submitted to the **Co-Chairs** and the **Operations Manager**, should define the estimated period of absence (start and end dates), and identify any positions that would require a substitute during this absence (such requests do not require a vote of approval from Council or Leadership).

# **Article III: Executive Branch**

## **Section 1: Membership of Executive Branch (Leadership Team)**

- A. All members of the Council are eligible to run for vacant Leadership Team seats.
- B. The Leadership Team consists of two Co-Chairs, an Events Coordinator, an Advocacy Coordinator, a Financial Officer, an Operations Manager, a Community Engagement Liaison, a Social Media and Web Manager, and a Communications Manager.
- C. In the event that a position on the Leadership Team cannot be filled, the **Co-Chairs** must take on the responsibilities of that role until a nominee is found or

delegate the tasks to a member of the Leadership Team or Council. If either or both of the **Co-Chair** positions cannot be filled, the **Events and Advocacy Coordinators** will share the extra responsibilities and may delegate additional responsibilities among Leadership and Council. Significant decisions should be discussed and approved by a simple majority vote of Council.

- D. The Leadership Team shall be in charge of the Council and make sure the Council decisions are executed. The Leadership Team shall have those powers and responsibilities listed in these Bylaws. Unless otherwise specified, all Leadership Team decisions shall be made by consensus.
- E. The Leadership Team shall have the power to create committees of the Council and have oversight of these Committees, shared among the members of Leadership. The structure of this oversight will be determined each year by the Leadership team following review of the annual Committee Project Plans (Article II, Section 5).
- F. The Leadership Team has the discretionary power to handle incoming requests from SURPAS members or outsiders. They shall inform the Council of such decisions, or approach the Council when uncertain how to handle them.
- G. The Leadership Team shall ensure that the following information is available to all members of SURPAS: the Reimbursement procedures, these Bylaws, the approved minutes of Council meetings, the names and titles of all elected and appointed Council members. Any proprietary business information or employee information related to Stanford Student Enterprises shall not be made available to anyone other than the **Co-Chairs** or members of the Council without the consent of the Office of Postdoctoral Affairs or its designee.

## **Section 2: Responsibilities: Co-Chairs**

- A. Oversee the operations of the Council and SURPAS Committees. This includes coordinating with the **Treasurer/Financial Officer and Operations Manager** to produce the Association Annual Report, the financial statement and budget proposal (Article III Section 5B) and to schedule, set the agenda (Article III Section 6B), and facilitate Council and Leadership meetings.
- B. Serve as the primary contact for Stanford Administration. One of the **Co-Chairs** shall be listed as President and the other as Co-President on OrgSync, which does not recognize the term Co-Chair. The **Co-Chairs** serve as the liaisons to postdoctoral Associations at other Universities, especially at the annual meeting of the National Postdoctoral Association in March. They represent SURPAS at the quarterly Postdoctoral Scholar orientation sessions hosted by the Office of Postdoctoral Affairs (OPA), and represent SURPAS as ex officio members of the Provost Advisory Committee on Postdoctoral Affairs (PACPA) and the Faculty Senate of the School of Medicine (Article II Section 7B).
- C. Oversee the timely appointment and/or election of new members and notification of vacancies on the Council to the community at large.

- D. Conduct and report an annual or biannual survey on the state of postdoctoral life with the Office of Postdoctoral Affairs.
- E. Outline the current status of SURPAS and summarize its goals for the upcoming year in an address to the Council, to be given between August and September.
- F. The **Co-Chairs** may delegate any of these duties to other members of the Leadership, the Council or SURPAS.
- G. Co-Chairs should schedule quarterly meetings with OPA and Affinity group co-chairs

### **Section 3: Responsibilities: Events Coordinator**

- A. Work closely with SURPAS committees and committee chairs to establish a workflow for organizing events.
- B. Keep an updated list of volunteers (from the Council and outside members) and work to recruit more volunteers; ensure participation of SURPAS Council in the quarterly Postdoctoral Scholar orientation sessions hosted by OPA.
- C. Make and maintain contact with other postdoc associations at Stanford to organize events during National Postdoc Appreciation Week (NPAW) or at any other time during the year.
- D. Schedule or coordinate events on a monthly basis, checking for any coinciding event with OPA or other postdoc associations at Stanford.
- E. Work with the Co-chairs to plan events, the **Communications Manager** and **Social Media and Web Manager** for advertising, and the **Treasurer/Financial Officer** to determine allocated budget for each event.
- F. Outline and maintain a tentative yearly calendar of SURPAS events, including annual events (Wellness Fair, NPAW, Symposium) and monthly events (Happy Hours, Coffee Chats) for the Council's reference.

### **Section 4: Responsibilities: Advocacy Coordinator**

- A. Work closely to gather data to facilitate identification of the postdoc problems informally (anecdotal) or formally (survey).
- B. Work with data from survey on postdoc value from the OPA (Article III Section 2D).
- C. Keep an updated list of Special Advisors to the council (Article II Section 8) and identify allies in the faculty/administration (in addition to the Advisory Board - Article VII Section 2).
- D. Be informed about all the administrative committees and faculty senate committees and advise **Co-Chairs** concerning proposals to the PACPA and faculty senates.
- E. Coordinate efforts to gain more visibility for postdoc work/value across campus (i.e., features on Stanford Daily newspaper, etc.).
- F. Coordinate outreach and advocacy efforts with other communities on campus (i.e., graduate and undergraduate students, other postdoc groups at Stanford).
- G. Create and maintain a general workflow for directing advocacy efforts, updated at least annually by each outgoing **Advocacy Coordinator**.

- H. Work jointly with the **Operations Manager** to hold a short orientation for newly elected members of the Council at least quarterly.

## **Section 5: Responsibilities: Treasurer/Financial Officer**

- A. Manage the SURPAS budget and act as a liaison with the Office of Postdoctoral Affairs (OPA) for financial matters. The **Treasurer/Financial Officer** is responsible for financial oversight, compliance and disbursement, in accordance with the approved budget allocation limits and University policy. The **Treasurer/Financial Officer** must complete the ASSU Banking training session, before receiving authority to manage the ASSU account, and ensure that at least one **Co-Chair** has also completed the training to act as co-signer in cases when the **Treasurer/Financial Officer** must be reimbursed.
- B. Draft, negotiate (with the **Co-Chairs**), and present (with the **Co-Chairs**) an annual budget proposal to the Associate Dean for Postdoctoral Affairs, due March 1st. The **Treasurer/Financial Officer** will report the approved budget to the Council at the next Council meeting.
- C. Present annually to the Council the financial statement of the previous year and the budget proposal annually prior to evaluation by leadership and submission to the OPA (Article III Section 5B). The Council shall approve these documents by majority vote.
- D. Prepare a quarterly financial report of revenues and expenses of the account to the Council, which the Co-Chairs can present to the Associate Dean for Postdoctoral Affairs upon request.
- E. All monthly financial transactions shall be completed within SURPAS for each month prior to the 1st of the next month.

## **Section 6: Responsibilities: Operations Manager**

- A. Record minutes at each Council and Leadership Team meeting. Distribute minutes to Leadership Team and Council members prior to the next council meeting. Obtain approval of the Council meeting minutes from the Leadership Team, prior to distributing them to the Council as draft minutes. Ensure that approved minutes become generally accessible.
- B. Create the Council meeting agenda document for dissemination to Council members during the Leadership meeting with input and assistance from the **Co-Chairs** and Leadership Team.
- C. Organize, handle and coordinate SURPAS documents, including a record of Council meeting attendance. Refer to the Bylaws at elections. Schedule rooms and/or zoom meetings for Leadership Team and Council meetings. Handle letters of appointment and welcome packet for new members of the Council and Leadership Team. These letters shall be signed by **Operations Manager** and **Co-Chairs** and can be sent electronically.



- D. Ensure that voting is accessible to all council members (ie. all members have access to a phone or a computer if voting electronically or ballots, and writing utensils if voting by paper)
- E. Tabulate votes and report voting totals to the Co-Chairs and ensure that the Co-Chairs report voting results during the meeting in which voting took place.
- F. Work jointly with the Advocacy Coordinator to lead short orientations for new council members at least quarterly. This includes providing new members with the welcome packet and providing new members with avenues to volunteer their time as Council members.
- G. Ensure that information from Council meetings is communicated to all Postdoctoral Scholars. This includes, but is not limited to providing the **Social Media and Web Manager** with documents to post on the website and sending approved minutes by email to the listserv.
- H. Review and update Bylaws in consultation with the Leadership Team annually in December or January (Article VII Section 4A).

## **Section 7: Responsibilities: Social Media and Web Manager**

- A. Manage outgoing communications from the Leadership Team, specifically through the SURPAS social media accounts and website.
- B. Communicate information, events, and news related to the activities of the Council and SURPAS, in concordance with the **Communications Manager**. *(See Article 8, Section 4 for additional details)*
- C. Maintain the SURPAS website. To this end, the **Social Media and Web Manager** will update the Leadership Team and Council members' contact information and member profiles, maintain an agenda of activities, post important documents and photographs of events and keep the website up-to-date by adding new information and removing dated information.
- D. The **Social Media and Web Manager** will also pay the website renewal fee and request reimbursement from the **Treasurer/Financial Officer**.
- E. Update and maintain the SURPAS website and social media accounts (including Facebook, Twitter, Instagram, etc.).
- F. Coordinate event listings and advertising with the **Events Coordinator** and **Communications Manager**.
- G. It is the responsibility of the **Social Media and Web Manager, Communications Manager**, and the **Co-Chairs** to ensure that all Stanford postdocs are informed of any important current affairs relevant to postdoctoral scholars at Stanford.

## **Section 8: Responsibilities: Communications Manager**

- A. Manage the outgoing communications of the Leadership Team, specifically through email. The Leadership Team will communicate to the postdoctoral community from a centralized mailing account (surpas-announcements@lists.stanford.edu). All

active leadership team members will receive access to this account. Outgoing mail will be signed on behalf of the leadership team as “SURPAS”.

- B.** Communicate to the public, in concordance with the **Social Media and Web Manager**, information, events, and news related to the activities of the Council and SURPAS. *(See Article 8, Section 4 for additional details)*
- C.** Coordinate event listings and advertising (including printing and posting banners, flyers, etc. and electronic communications) with the **Events Coordinator** and **Social Media and Web Manager**.
- D.** Oversee all official outgoing email communications of the Leadership Team and the Council by managing the common email account and the email lists of SURPAS. Management entails ensuring timely and accurate replies to incoming emails by notifying responsible officers or via a meeting agenda item. The **Communications Officer** may reply in order to acknowledge the incoming email was received.
- E.** It is the responsibility of the **Communications Manager, Social Media and Web Manager**, and the **Co-Chairs** to ensure that all Stanford postdocs are up to date with any important current affairs relevant to postdoctoral scholars at Stanford.

## Section 9: Community Engagement Liaison

**Note:** This position is being created on a temporary basis and will be evaluated at 6 months and following the first 1 year appointment to determine whether it should be renewed going forward. (created 2019 session)

- A. Postdocs interested in obtaining SURPAS sponsorship for an event will work with the **Community Engagement Liaison** to help them meet all applicable rules and regulations.
- B. Be informed regarding SURPAS and Stanford policies regarding on campus events and update Council of any relevant changes or new policies.
- C. Coordinate the development of yearly SURPAS policies regarding Committee oversight and oversee an annual meeting of Committee representatives to discuss these and Stanford policies.
- D. Serve as the official representative of SURPAS to other postdoc groups as well as postdocs at large regarding SURPAS policies.
- E. Serve as the official SURPAS representative to the OSE and ASSU.
- F. Work with the Events Coordinator to optimize logistics for SURPAS sponsored events.
- G. Coordinate information exchange between Postdoc Representative Seats, the Leadership Team, and Council.
- H. Work with the **Leadership team and Council** to develop policies for postdoc community outreach.

## Section 10: Term Expiration

- A. Appointments to the Leadership Team are for one year, confirmed by a letter of appointment.
- B. A position in the Executive Branch of SURPAS shall become vacant upon resignation or disqualification. A member of the Executive Branch can resign by submission to the Council of a written statement of resignation. Any member of the Council may call for a vote of disqualification from the Council or Leadership Team and this must be seconded by a member of Leadership. The individual will be notified of the call for disqualification and the vote will occur at the next earliest Council meeting. Disqualification would occur with a two-thirds vote by Council
- C. No Council member can hold more than one Leadership position simultaneously; officers who are nominated and run for a second position on the Leadership team must resign from their previous position immediately upon election.

## **Article IV: Guidelines for Committee Meetings**

### **Section 1: General**

For the purpose of this section, Committee refers to Committees as well as the Leadership Team. Committees shall assign a chair or co-chairs and an Operations Manager (as needed) from among their members.

- A.** Committee members may meet in Committee meetings whenever needed.
  - 1. Committee meetings are led by the designated chair(s) who determine(s) the agenda upon gathering input from all members. The agenda with accompanying documentation shall be distributed prior to the meeting.
  - 2. The co-chairs or operations manager shall take notes during the meeting, and distribute the draft minutes within seven days after the meeting among the members. All members shall provide their feedback, and the final version shall be voted during the next meeting.
  - 3. Meetings can take place in person or via web-based communication platforms (Eg: Skype/zoom) and can be rescheduled when multiple Committee members indicate in advance that they cannot attend. It is recommended that Committees meet in preparation of Council meetings.
- B.** Decisions taken at Committee meetings are based on consensus and must be supported by all active members present.
  - 1. If opposing views exist the Committee is advised to defer the decision and look for a solution backed by all.
  - 2. If no resolution can be reached among members, committees can appeal to SURPAS Council or Leadership for advice and resolution.
- C.** Decisions are preferably taken during face-to-face meetings, either in person or via a web-based communication platform (Skype, Webex, Zoom, etc.).

1. If rapid action is required and a face-to-face meeting is not possible, the responsible member shall notify each member prior to action.
  2. Committee members may vote per email, with regards to Committee decisions.
  3. Committee members may vote per web tool, with regards to Committee decisions.
  4. All active Committee members have one vote each.
  5. Committee members cannot vote on behalf of absent members.
- D.** Committees may defer the rules stated in Article IV Section 1B and Article IV Section 1C in extreme cases, such as prolonged leave of absence (Article II Section 9). Should this occur, outward communication will state that the decision was not unanimous, the minutes will explain the extraordinary situation, and the reason shall be shared with all active Committee members. Moreover an active solution must be sought (Article IV Section 1B2).

## Article V: Elections

### Section 1: General

- A. SURPAS holds Council and Officer elections.
- B. Council elections shall occur when there are vacant Council seats. Officer elections shall occur in January for one of the two **Co-Chair** positions and the **Community Engagement Liaison** and June/July for the other Co-chair position and rest of the Leadership Team. The positions will be effective by February or August of the same year depending on when the election occurred. All elections shall be held during a regular Council meeting.
- C. In the case that an officer position becomes vacant mid-term, elections for that position shall be called within one month to create an interim officer.
- D. The positions shall be advertised to all SURPAS members and then selected by majority vote of the Council at an advertised Council meeting. All posts will be held for one year. Council members and officers may run for consecutive terms.
- E. The **Co-Chairs** shall present the election results to the Council, SURPAS, and Office of Postdoctoral Affairs.

### Section 2: Campaign Regulations

- A. Postdoctoral Scholars who are interested in running for a Council position shall notify the **Co-Chairs or the Operations Manager**.
- B. Eligible Postdoctoral Scholars shall have attended at least one prior Council meetings.
- C. Council members interested in running for an officer position shall notify the **Co-Chairs or the Operations Manager**.

- D. Candidates shall submit a written statement to the **Co-Chairs** so that it can be shared with the Council members and Leadership Team prior to voting.
- E. The **Co-Chairs** shall share the names of candidates with the Council prior to elections.

### **Section 3: Voting**

- A. Voting shall occur only at Council meetings, where each Council member present shall carry one vote. Results depend on a majority and the rules of quorum.
- B. In the case of a tie, elections are adjourned and the Council shall call for runoff elections.

### **Section 4: Invalidation of Election Results**

The Council shall have power to invalidate the results of an election if the election was not done in accordance with the Bylaws.

## **Article VI: Finances**

### **Section 1: General**

- A. The **Treasurer/Financial Officer** shall maintain all financial records and distribute the budget proposal and budget among the Leadership Team and the Council (Article III Section 6B).
- B. Any Council member may request insight into financial documentation by approaching the **Co-Chairs** or **Treasurer/Financial Officer**.
- C. The fiscal year of SURPAS shall begin on July 1 and end on June 30.

### **Section 2: SURPAS Operating Budget**

- A. No funds shall be expended, encumbered, or otherwise disbursed by SURPAS other than in accordance with the procedures for the authorization of expenditures or investments contained in these Bylaws.
- B. All funds expended by SURPAS shall be used for the basic operating expenses of SURPAS, or for programs initiated by and under the control of SURPAS and its agencies (including SPIF and requests from the Office of Postdoctoral Affairs).
- C. No funds shall be expended as salaries or wages by any SURPAS member, department or agency.
- D. The allocated SURPAS budget may be deposited in an account with the Capitol Group banking services of the Stanford Student Enterprises (SSE), a division of the ASSU or with SURPAS' PTA, under the authority of the Office of Postdoctoral Affairs.

- E. The Associate Dean for Postdoctoral Affairs will serve to oversee the accounts and holds authority to close them in case of financial malfeasance or non-compliance on the part of the Leadership Team or Council. The Associate Dean for Postdoctoral Affairs will facilitate any necessary mediation of disputes or problems regarding this account.
- F. Events and activities charged to the SURPAS accounts must comply with University Event Planning and Alcohol Policies as well as other applicable funding policies that pertain to student groups at Stanford, including those on sponsorships, unless a written authorization for a policy exception is received by the **Treasurer/Financial Officer** from the Associate Dean for Postdoctoral Affairs.
- G. At the end of the funding period (annually), unspent funds in the account may be carried forward to the next fiscal period upon discussion and approval of the following year's budget proposal with the Associate Dean for Postdoctoral Affairs, with the exception of funds designated to sponsor major events, which must be returned to the sponsors if unspent.
- H. Any funds specifically deposited in one funding period (e.g., University fiscal year) for an event in a later funding period (e.g., the subsequent University fiscal year) may be automatically rolled-over. The **Treasurer/Financial Officer** will confirm the roll-over ahead of time.

## Article VII: Review and Conflict Resolution

### Section 1: Conflict Resolution

- A. It is the policy of SURPAS to provide Postdoctoral Scholars with an opportunity to resolve disputes in a fair and collegial manner. These guidelines establish a formal process for SURPAS members, including council members and officers, to request, review and redress certain disputes arising out of their relationships within SURPAS. This section does not deal with conflict between Postdoctoral Scholars and their PIs or colleagues.
- B. Conflicts that cannot be resolved at local level should be brought to the attention of the **Co-Chairs**. The **Co-Chairs** will listen to the complaints and hear everyone involved. They should attempt to achieve a satisfactory solution by referring to these Bylaws. The **Co-Chairs** may seek advice from the Associate Dean for Postdoctoral Affairs.
- C. For disagreements that remain unresolved after the **Co-Chairs** are consulted, a grievance process will be initiated when the SURPAS member files a written grievance with the **Co-Chairs**. The parties in the grievance process shall be the person(s) filing the grievance and the person(s) responsible for the act or omission that gave rise to the grievance.
- D. In response to the written grievance, the **Co-Chairs** will seek advice from the Advisory Board. Should the dispute involve the **Co-Chairs**, Council members may approach the Advisory Board directly.

- E. The advice from the Advisory Board will be communicated to the Council, which will formally decide how to implement the advice.

## Section 2: Advisory Board

A. The purpose of the Advisory Board is to provide advice to the **Co-Chairs** and Council and thereby help them navigate through unforeseen situations which are not adequately covered by these Bylaws.

B. Membership & Member Qualifications:

1. The Advisory Board shall consist of three members, ideally:
  - i. The Associate Dean for Postdoctoral Affairs
  - ii. The Senior Associate Dean of Graduate Education and Postdoctoral Affairs (School of Medicine)
  - iii. The Vice Provost for Graduate Education.
2. Membership shall be recruited from Stanford staff and faculty, who are impartial to Postdoctoral Scholars.
3. The **Co-Chairs** of the Council organize the invitations to serve on the Advisory Board if they cannot be filled from the three positions listed above. Nominations will be discussed with and approved by the Council.
4. Advisory Board members agree to serve for two years, open to renewal.
5. Advisory Board membership is a volunteer role without compensation.
6. Advisory board members shall notify the **Co-Chairs** when they are no longer able to execute their functions, whereupon the **Co-Chairs** shall seek replacements.
7. Advisory Board members shall have experience with postdoctoral affairs, conflict resolution, or rules of conduct.

C. Operation:

1. The **Co-Chairs** of the Council will approach the Advisory Board with a written statement of grievance filed by the complainant, as well as a written account of attempts at reconciliation. The Board shall review the conflict and issue advice on future actions. Review may include meeting with the Postdoctoral Scholars involved, or soliciting feedback. The advice shall be two-fold:

- i. Advice aimed at helping the Council resolve the current conflict.
- ii. Advice aimed at preventing similar grievance from occurring again.

2. The Advisory Board is free to decide its mode of operation, but will communicate a timeline to the **Co-Chairs** upon receipt of the request.

3. The **Co-Chairs** will provide an annual update of affairs to the Advisory Board.

SURPAS Bylaws 16

## Section 3: The Untimely Removal of an Appointed Officer

- A. For the purpose of this guideline, an "appointed officer" shall be taken to mean any position whose occupant must be approved by the Council.
- B. Appointed Officers can be removed by the Council for failure to execute their responsibilities. Any individual or Committee subject to possible disciplinary action by the Council must be given written notice of the intended action at least 72 hours before the meeting at which the disciplinary action would be approved, so that they are allowed to speak in defense at the meeting. The council will vote by 2/3 majority.

## **Section 4: Review**

- A. The Council shall review these Bylaws annually in December and/or January (or as needed) under direction of the **Operations Manager** (Article III Section 6E) and Leadership Team or as an ad hoc committee.
- B. The portion of the SURPAS policies that affect the Council may be adopted, amended, or repealed by a 2/3 vote of the Council. Association policies not affecting the Council may be adopted, amended, or repealed by a majority vote of the Council, provided that consultation with the governing body of the affected SURPAS entity has occurred.
- C. Proposed changes to these Bylaws can be made at any time following discussion at a regularly scheduled Council meeting, and should be submitted in writing to the **Co-Chairs** and presented for discussion at the next scheduled Council meeting.
- D. Proposed changes must be submitted to the Council at least two weeks in advance to the Council meeting at which the vote shall occur, to allow for ample time for review.

# **Article VIII: External Communications**

## **Section 1: Announcements on behalf of Council**

In the event that a council member(s) wishes to make a statement on behalf of the Council, the member(s) should present the written statement to the Leadership Team. If the Leadership Team reaches consensus that the statement reflects the spirit and/or goals of the Council, they will share the statement with the Council prior to the next meeting. Council will then vote to approve the release of the statement to the Postdoctoral community, passed by simple majority. If the statement requires expedience (cannot or should not wait until the next Council meeting), the Leadership may distribute the statement to the Council electronically with a deadline of at least 24 hours for approval. The statement may be released once a majority of Council members approve.

## **Section 2: Communication with the Media**

In the event that a Council member(s) are contacted by a member(s) of the media external to the University (journalists, bloggers, etc...) to solicit opinions, it is highly recommended



that the member consult with the Office of Postdoctoral Affairs and/or the Office of the Vice Provost for Graduate Education about how to respond. Stanford *does not* set limitations for interactions with the media. However, Council members are advised to think carefully about the experiences they can speak to and to critically interrogate the motivations of those seeking comment. Any statement made must clearly be the opinion of the individual Council member(s) and not as Council or SURPAS or the Stanford postdoctoral community as a whole without prior approval and consent (as outlined in Article VIII Section 1).

### **Section 3: Interactions with other Postdoc Groups**

The Office of Student Engagement (OSE) at Stanford University recognizes SURPAS as the only official postdoctoral organization; however, SURPAS recognizes and works with any other group whose goal is to represent the diverse identities and interests of postdoctoral scholars at Stanford.

### **Section 4: Communications during the Fall and Winter Holidays**

Thanksgiving is a national holiday that is celebrated widely, most times without thought about the historical context. SURPAS, however, should be thoughtful about what Thanksgiving means both for Indigenous people and traditional family gatherings when messaging around this time. This could be an important opportunity for education about colonial violence and the centering of Indigenous heritage and sovereignty. Similarly, Winter brings a variety of holidays, each unique to their religion of origin and each celebrated by some and not others. Messaging around the Winter Holidays should be done with this in mind.

## **Appendices**

**Leadership Guide(s) Events Planning Guide**

**Important University Contacts**

# Appendix B: How to Run a Long Range Planning Focus Group

## Template Document for Focus Group Facilitation

*Document filename: "FocusGroup\_FACILITATION\_template.doc"*

*Document content:*

### 2021 "Vision 2030 for Postdocs" LRP Focus Group Facilitation Outline

Items in this document:

- A. Focus Group Running Sheet
- B. Post Focus Group Follow-up

#### **A. Focus Group Running Sheet:**

- 1. Welcome participants
  - a. Facilitator & Note-taker introduce themselves (1 min)
  - b. Read Acknowledgement Statement (1 min)

"I would like to begin by acknowledging that we meet today on the ancestral and unceded land of the Muwekma Ohlone Tribe. This land was and continues to be of great importance to the Ohlone people. As an uninvited guest on these lands, I am a beneficiary of the ongoing displacement of the Ohlone people. I pay my respects to the Native peoples, past and present.

I would like to acknowledge the suffering and resilience of all people whose lives and livelihoods were stolen by those with power, including but not limited to the millions of enslaved African American people. The devastating effects of these injustices continue to be felt today.

I would like to acknowledge everyone who has a lived experience of oppression, be it racism or sexism, classism or ableism, transphobia or homophobia, or any other form of oppression. To ignore oppression is to assent to oppression.

I appreciate and respect the knowledge and personal experiences of everyone gathered here and I thank you for choosing to share your time and energy to be here today."

- c. Run through mission of Long-Range Planning Committee (3 min)

SURPAS is engaging in a long range planning process to build a shared collective vision of the future of postdocs at Stanford. During this collaborative process, we are seeking participation and feedback from all interested postdocs as we formalize the expectations, hopes, and goals regarding life as a postdoc. This will be a community-oriented, bottom-up process to assess the broad vision and strategic goals of the postdoc community and provide clear communication of these to all postdocs now and into the future, as well as to other stakeholders. After synthesizing the feedback from our community, the Long Range Planning Committee will produce a publically accessible report detailing the positive aspects of being a postdoc at Stanford as well as where we would like to see change. This report will serve as a vehicle to coordinate advocacy for postdocs through time. Many issues brought before SURPAS require

sustained advocacy for a number of years to bring about change. The long range planning process is a means of detailing what work postdocs believe need to be done, providing recommendations for how to achieve change, and setting mile markers that future postdocs can use in their advocacy efforts.

d. Run through goals of consultation process (3 min)

We already have quite a lot of quantitative data from past surveys and past reports but what we are looking for through these consultations is:

- Getting qualitative feedback from current postdocs, including stories and personal experiences.
- Gain more detailed, descriptive background to the quantitative data.
- Crowdsourcing ideas for future efforts by SURPAS.

e. Run through our Consultation Principles (3 min)

Consultation Principles (what we are aiming for in our consultations):

- Open and accessible to all postdocs
- Transparent process
- All ideas welcome and encouraged
- Respectful space
- Promote thinking in the longer-term (i.e. beyond one's own time as postdoc)

f. Ask for permission and start recording Zoom session (1 min)

Facilitator and Notetaker (both for redundancy) start recording Zoom session.

2. Warm-up

a. Each participant introduces themselves & shares one way they like to de-stress (2 min each)

3. Allow opportunity for participants to contribute immediate ideas or thoughts that they might have at the outset of the session (10 min)

a. Primary question: What should the postdoc experience at Stanford look like in 2030?

4. If necessary, follow up with more specific questions e.g.

a. What do you expect from your postdoc and how is that changing?

b. What role does a postdoc fill in academia and where is that heading?

c. What has been good about your postdoc?

d. What would you change about your postdoc if you could?

e. What opportunities do you wish you had?

f. What challenges have you faced that you hope future postdocs will not have to face?

5. To get more ideas flowing, try using these brainstorming prompts:

a. What would you change if you had \$1B to spend on postdocs?

b. What would you change if you had no money to spend?

c. What is the worst idea in the world of how things should change?

d. Now make that worst idea into a good idea.

6. If the conversation has gone negative, try to bring it back to some positivity before the end by inviting participants to reflect on what are aspects of the postdoc experience that they would not change

- a. Pathways to get to the future (focusing on empowerment)
7. Conclude by thanking everyone for their time and participation and inform the instruction to get drink reimbursement.
  - a. Copy-and-paste into chat:
    - i. [link to GrantEd system to get meal reimbursement \(with receipt\) for \\$15](#)
    - ii. [link to written survey](#)

## **B. Post-Session follow-up:**

- *Write executive summary*

Immediately following the session, both Facilitator and Notetaker please write 2-3 sentences at the top of the Notes document that provide an executive summary of the session, highlighting the major themes/discussion points from that session.
- *Email the participants to thank them*

Facilitator to send follow-up email to all participants the day after session! This email should include:

  - thank you again,
  - GrantEd system details for reimbursement,
  - link to written survey for additional comments, and
  - request for them to forward the link to their lab mates.
- *Put notes into shared folder*

Notetaker please deposit notes document and session recording into shared SURPAS folder:  
SURPAS/Committee Docs/Long Range Planning/LRP\_Consultations\_NotesRecordings/

  - Create new folder using naming template:  
YYYYMMDD\_Consultation\_FacilitatorInitials  
E.g. 20210301\_Consultation\_EB

## Template Document for Focus Group Note Taking

*Document filename: "YYYYMMDD\_FocusGroup\_NOTES\_template.doc"*

*Document content:*

### **SURPAS LRP - Focus Group**

Date:

Time:

Facilitator:

Note-taker:

Participants:

**EXECUTIVE SUMMARY** (Please fill out immediately after the session; 2-3 sentences summarizing the main themes discussed.)

...

**SESSION NOTES** (Please fill out as the session is proceeding.)

- ...

## **Appendix C: Communication Strategy of Report**

### **Feedback Seeking**

Upon completion of a draft of this Report, the Committee sent a copy to members of the SURPAS Leadership Team for feedback on January 27, 2023. An updated draft incorporating suggestions from the Leadership Team was sent to the full SURPAS Council and all postdoc Affinity Groups on February 10, 2023 in advance of discussion at the February 23, 2023 SURPAS Council meeting. At the February Council meeting, members of the Committee gave a presentation on the structure of the Report along with key findings (see slides at the end of this Appendix). The Committee asked for feedback from the full Council and the general postdoc population within the period February 10 to March 10, 2023. Beginning on March 13, 2023, the Committee began incorporating feedback from the general postdoc community for a final draft version sent out to SURPAS Council on March 24, 2023.

### **Adoption of Report**

At the SURPAS Council meeting on March 30, 2023, Committee members proposed a motion for SURPAS Council to officially adopt the Report (motion included at the end of this Appendix). Officially adopting the Report allowed for the SURPAS name and logo to be utilized on the Report and included posting a publicly accessible version online,<sup>134</sup> advertising the Report across social media channels, and empowering the Committee to share the results beyond the postdoctoral community at Stanford as outlined in the following paragraphs.

### **Report Distribution**

A copy of the Report was sent to the Stanford Graduate Student Council and Undergraduate Senate with a request that they officially pass a resolution to bring the report to the agenda of the Stanford Faculty Senate. Committee members presented key findings and recommendations to the Faculty Senate. The full Report was sent to the following administrators directly: (1) Sofie Kleppner, Associate Vice Provost and Associate Dean, head of the Office of Postdoctoral Affairs; Stacey Bent, Vice Provost of Graduate Education and Postdoctoral Affairs; and Kam Moler, Vice Provost and Dean of Research; (2) Lloyd Minor, Dean of the School of Medicine; Debra Satz, Dean of the School of Humanities and Sciences; Jennifer Widom, Dean of the Engineering School; Arun Majumdar, Dean of the Doerr School of Sustainability; Daniel Schwartz, Dean of the School of Education; Jonathan Levin, Dean of the Graduate School of Business; and Jennifer Martinez, Dean of the Law School; (3) Persis Drell, Provost; and Marc Tessier-Lavigne, President; and (4) the Board of Trustees of Leland Stanford Junior University.

A full copy of the Report was sent to postdoc associations across the United States. The Report was submitted to NIH Request for Information NOT-OD-23-084, Re-envisioning U.S. Postdoctoral Research Training and Career Progression within the Biomedical Research

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<sup>134</sup> Link to natively online version of the Report when finalized.

Enterprise.<sup>135</sup> The Report was sent to Lightoller LLC, a non-profit dedicated to supporting the people who make up the research enterprise.<sup>136</sup> A copy of the Report was submitted to the Board of Supervisors of Santa Clara County with a request that the County proactively include Postdocs in their outreach to stakeholders within the community during any future discussions about adoption of a new General Use Permit to govern any expansion of Stanford University.

The Committee is directed to write a press release with a link to the report to be sent to local (The Stanford Daily, Embarcadero Media), Regional (San Jose Mercury News, San Francisco Chronicle), and National (The New York Times, The Boston Globe) newspapers.

The Committee is empowered to write follow up articles for publication, describing and advertising the Report more broadly. The strategy outlined here is a minimum of steps to be taken but is not an exhaustive enumeration of all actions the Committee is empowered to make.

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<sup>135</sup> <https://grants.nih.gov/grants/guide/notice-files/NOT-OD-23-084.html>

<sup>136</sup> <https://lightoller.org/>

# Slides presented at February 23, 2023 Council Meeting

## Long Range Planning Report Presentation to SURPAS Council

By the Long Range Planning Committee  
At the SURPAS Council Meeting, Feb 23, 2023

### Purpose of this presentation

\*\*\*We want feedback from you on the Long Range Planning Report.\*\*\*

#### Timing:

- Presentation for 15 min
- Conversation for 15 min

### Presentation outline

1. Introducing the Report (Tim)
2. Structure of the Report (Eamon)
3. Some key charts from the Report (Usman, Samyuktha)
4. Dialogue around key points and seeking feedback from you (Aranyak)

### Presentation outline

1. Introducing the Report (Tim)
2. Structure of the Report (Eamon)
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### Long Range Planning: History - how & why it started

The idea started with various conversations with then present and past postdoc representatives in 2019.

#### Realized:

- Many current issues had been raised before.
- Limited record of past issues and advocacy around those issues.
- No coherent shared vision of the future of postdocs (from postdocs, or from anyone really).
- The University had recently completed a long-range planning process (2017-2018) but it did not adequately address postdocs' needs.

### Long Range Planning: Purpose

To build a shared collective vision of the future of postdocs at Stanford.

- **Communicate** a vision for the future of postdocs.
- **Snapshot-in-time** record of postdoc advocacy efforts at Stanford.
- **Collect & record** the **conditions** and **thoughts** of postdocs.

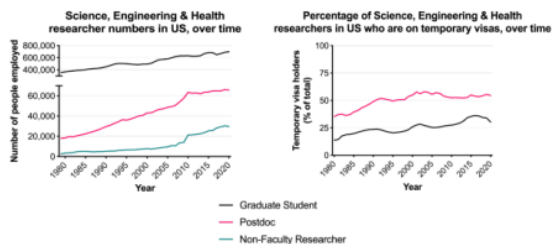




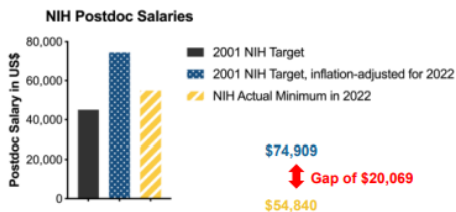
Some charts from the **Competitive Landscape** section

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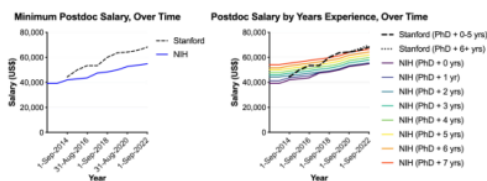
### Postdoc demographics in the US



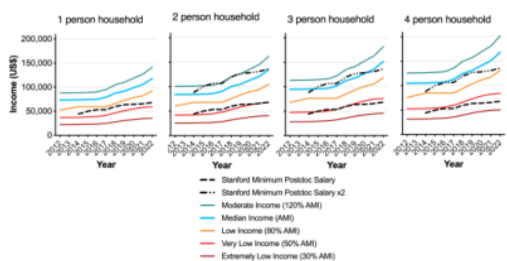
### Academic Salaries in the US



### Academic Salaries in the US, compared to Stanford



### Stanford Postdoc Salary vs Santa Clara County Income

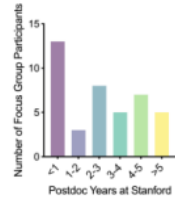
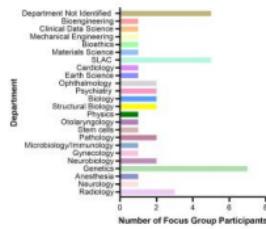


Some charts from the **Focus Groups** section

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## Conversations with Postdocs at Stanford - Focus Groups

- 12 Focus Groups with 60 postdocs in total
- We conducted in-depth, hour-long, open-ended conversations about the present and future of the postdoctoral experience with groups between two and ten postdocs.



## Themes that Emerged from Focus Groups



## RECOMMENDATIONS - Key actions to be implemented

- How to address the issues identified in the Report?
- For each identified issue, specific recommendations are provided for various stakeholder groups.

### Stakeholders to take action:

- Postdocs themselves (as individuals)
- SURPAS (postdocs collectively)
- Stanford Faculty
- Stanford Admin
- Funding Bodies
- Publishing and Professional Organizations
- Local Community
- Santa Clara County Board of Supervisors
- State and National Governments

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## Presentation outline

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3. Some key charts from the Report (Usman, Samyuktha)
4. Dialogue around key points and seeking feedback from you (Aranyak)

## What do we want from you?

\*\*\*PLEASE look over the Report and read through any sections of particular interest to you.\*\*\*

\*\*\*PLEASE look at one issue heading under the RECOMMENDATIONS section and comment for changes or additions for that issue.\*\*\*

## Next steps

- Receive feedback from you (comments on the Report) before Mar 10.
- LRP Committee incorporates feedback into next draft of the Report
- At the next Council Meeting in March, seek formal adoption of the finalized Report by the Council (i.e. by voting on a motion).
  - "Formal adoption" meaning: approval and endorsement of the Report by the SURPAS Council, such that the adopted Report may be subsequently distributed beyond SURPAS Council with the name "SURPAS" on the Report.
- Distribute the Report widely ("please join the LRP Committee to assist")
  - For example, send to the President and Provost, OPA, VPGPEA, Faculty Senate, etc.
  - Make pdf version of the Report publicly available online for download.
  - Submit Report to NIH Request for Information (NOT-OD-23-084) by April 14
- Draft follow-up articles for publication

### Key issues identified already

- How general or specific should the EXECUTIVE SUMMARY and RECOMMENDATIONS be? (e.g. use of specific numbers vs more general principles)
- Definition of "postdoc" at Stanford vs other institutions (e.g. Harvard, MIT).
- What to advocate for with respect to status of postdocs? (i.e. "trainees" vs employees? 5-year time limit vs no limit?)
- Postdoc info tracking: demographics (e.g. IDEAL categories) and career outcomes (e.g. data sharing)

## Motion to Adopt Long Range Planning Report

### Introduced at March 30, 2023 SURPAS Council Meeting

Author: Tim M on behalf of the Long Range Planning Committee

WHEREAS postdocs play an integral role in the research and teaching missions of the university,

WHEREAS postdocs have been self-organized at Stanford since at least 1998, with SURPAS Council being our elected representatives,

WHEREAS there has not been a comprehensive vision of the past, present, and future of postdocs at Stanford,

WHEREAS SURPAS Council created the Long Range Planning Committee as outlined in Article II Section 5 of our bylaws to build a community-oriented vision for the present and future of postdocs at Stanford,

WHEREAS the Long Range Planning Committee released a final Report on the results of that process and has worked to incorporate feedback from the broader postdoctoral community,

WHEREAS Stanford has a commitment to shared governance as demonstrated by the existence of mechanisms for undergraduates and graduate students to raise a topic to the Faculty Senate agenda via a joint resolution by GSC and the Undergraduate Senate,

WHEREAS postdocs have no official mechanism to raise a topic to the Faculty Senate agenda,

THEREFORE BE IT RESOLVED BY THE 2022-2023 SURPAS COUNCIL:

THAT SURPAS Council officially adopts the Report of the Long Range Planning Committee and commits to publicizing it as outlined in Appendix C: Communication Strategy of Report,

THAT adoption of the Report enables the use of the SURPAS name, logo, and social media accounts in publicizing the Report,

THAT we call on GSC and the Undergraduate Senate to pass joint resolutions in support of postdocs to bring the Report to the agenda of the Faculty Senate,

THAT we call on the Faculty Senate to create a structure whereby postdocs are formally able to raise topics on the body's agenda,

AND BE IT FINALLY RESOLVED THAT we call on Stanford University to work together in good faith with postdocs to achieve the vision laid out in the entirety of the Report and highlighted in the Executive Summary.

## Appendix D: Data Tables

The data included below were used to generate graphs used in this Report.

**Table 1: Science, Engineering & Health researcher numbers in US, over time**

| Year | Graduate Student | Postdoc | Non-Faculty Researcher |
|------|------------------|---------|------------------------|
| 1979 | 357578           | 18101   | 2687                   |
| 1980 | 367078           | 18399   | 3260                   |
| 1981 | 375130           | 19634   | 3559                   |
| 1982 | 382291           | 19363   | 4026                   |
| 1983 | 390432           | 20712   | 4896                   |
| 1984 | 394670           | 21535   | 5042                   |
| 1985 | 404021           | 22387   | 5103                   |
| 1986 | 415520           | 23721   | 4846                   |
| 1987 | 421497           | 24881   | 4597                   |
| 1988 | 424523           | 26123   | 4869                   |
| 1989 | 434478           | 27932   | 4908                   |
| 1990 | 452113           | 29565   | 5255                   |
| 1991 | 471212           | 30865   | 5478                   |
| 1992 | 493522           | 32747   | 5482                   |
| 1993 | 504304           | 34322   | 6001                   |
| 1994 | 504399           | 36377   | 6209                   |
| 1995 | 499640           | 35926   | 6534                   |
| 1996 | 494079           | 37107   | 6604                   |
| 1997 | 487208           | 38481   | 6722                   |
| 1998 | 485627           | 40086   | 7100                   |
| 1999 | 493256           | 40800   | 7573                   |
| 2000 | 493311           | 43115   | 7879                   |

| <b>Year</b> | <b>Graduate Student</b> | <b>Postdoc</b> | <b>Non-Faculty Researcher</b> |
|-------------|-------------------------|----------------|-------------------------------|
| 2001        | 509607                  | 43311          | 7531                          |
| 2002        | 540404                  | 45034          | 7906                          |
| 2003        | 567121                  | 46728          | 8473                          |
| 2004        | 574463                  | 47240          | 9075                          |
| 2005        | 582226                  | 48555          | 9527                          |
| 2006        | 597643                  | 49343          | 10814                         |
| 2007        | 619499                  | 50840          | 10752                         |
| 2008        | 631489                  | 54164          | 13747                         |
| 2009        | 631645                  | 57805          | 14059                         |
| 2010        | 632652                  | 63439          | 21345                         |
| 2011        | 626820                  | 62639          | 21498                         |
| 2012        | 627243                  | 62851          | 21908                         |
| 2013        | 633010                  | 61942          | 22465                         |
| 2014        | 666586                  | 63593          | 23706                         |
| 2015        | 685397                  | 63861          | 25292                         |
| 2016        | 684825                  | 64712          | 25747                         |
| 2017        | 649112                  | 64733          | 28180                         |
| 2018        | 668307                  | 64783          | 29284                         |
| 2019        | 690117                  | 66247          | 30349                         |
| 2020        | 697813                  | 65681          | 29661                         |

Source:

Table 1-1, Graduate students, postdoctoral appointees, and doctorate-holding nonfaculty researchers in science, engineering, and health: 1975–2020. From the NSF, “Survey of Graduate Students and Postdoctorates in Science and Engineering: Fall 2020”. <https://nces.nsf.gov/pubs/nsf22319>

**Table 2: Percentage of Science, Engineering & Health researchers in US who are on temporary visas, over time**

| Year | Graduate Student | Postdoc |
|------|------------------|---------|
| 1980 | 13.7             | 35.4    |
| 1981 | 14.5             | 37.1    |
| 1982 | 17.7             | 37.4    |
| 1983 | 18.8             | 36.3    |
| 1984 | 19               | 37.1    |
| 1985 | 19.8             | 39.6    |
| 1986 | 21               | 40.8    |
| 1987 | 21.9             | 43.2    |
| 1988 | 22.9             | 44.8    |
| 1989 | 23.5             | 46.8    |
| 1990 | 23.7             | 48.9    |
| 1991 | 24               | 51      |
| 1992 | 23.1             | 51.8    |
| 1993 | 21.9             | 51.3    |
| 1994 | 21.1             | 50.6    |
| 1995 | 20.6             | 49.5    |
| 1996 | 20.8             | 50.4    |
| 1997 | 21.3             | 50.8    |
| 1998 | 22               | 50.8    |
| 1999 | 23.4             | 53.7    |
| 2000 | 26               | 54.9    |
| 2001 | 27.6             | 57.6    |
| 2002 | 28.3             | 56.3    |
| 2003 | 27.3             | 57.9    |
| 2004 | 26.3             | 57.3    |
| 2005 | 25.3             | 55.7    |



| Year | Graduate Student | Postdoc |
|------|------------------|---------|
| 2006 | 25.3             | 57.1    |
| 2007 | 25.7             | 56.5    |
| 2008 | 26.6             | 54      |
| 2009 | 27.2             | 53.1    |
| 2010 | 27.5             | 52.5    |
| 2011 | 28.1             | 52.6    |
| 2012 | 29.3             | 52.5    |
| 2013 | 31.1             | 52.3    |
| 2014 | 34.1             | 52.7    |
| 2015 | 35.5             | 55      |
| 2016 | 36.3             | 53.9    |
| 2017 | 35.8             | 53.5    |
| 2018 | 34.4             | 54.3    |
| 2019 | 33.9             | 55.5    |
| 2020 | 30.2             | 54.5    |

Source:

Table 1-3a, Citizenship of graduate students and postdoctoral appointees in science, engineering, and health: 1980–2020. From the NSF, “Survey of Graduate Students and Postdoctorates in Science and Engineering: Fall 2020”. <https://nces.nsf.gov/pubs/nsf22319>

**Table 3: Annual mean wages for professional scientists in academic & non-academic roles in May 2021 (US\$).**

| Discipline              | Academic (US\$) | Non-Academic (US\$) |
|-------------------------|-----------------|---------------------|
| Biochemist/biophysicist | 66060           | 121310              |
| Physical scientist      | 70580           | 130680              |
| Life scientist          | 85770           | 107740              |
| Physicist               | 104050          | 162240              |

Sources:

U.S. Bureau of Labor Statistics, “Occupational Employment and Wages, May 2021: 19-1021 Biochemists and Biophysicists” Accessed Dec 9, 2022 at <https://www.bls.gov/oes/current/oes191021.htm>

U.S. Bureau of Labor Statistics, “Occupational Employment and Wages, May 2021: 19-2099 Physical Scientists, All Other” Accessed Dec 9, 2022 at <https://www.bls.gov/oes/current/oes192099.htm>

U.S. Bureau of Labor Statistics, “Occupational Employment and Wages, May 2021: 19-1099 Life Scientists, All Other” Accessed Dec 9, 2022 at <https://www.bls.gov/oes/current/oes191099.htm>

U.S. Bureau of Labor Statistics, “Occupational Employment and Wages, May 2021: 19-2012 Physicists” Accessed Dec 9, 2022 at <https://www.bls.gov/oes/current/oes192012.htm>

**Table 4: NIH Postdoc Salaries**

| 2001 NIH Goal (US\$) | 2001 NIH Goal, inflation-adjusted for 2022 (US\$) | NIH Actual Minimum in 2022 (US\$) |
|----------------------|---------------------------------------------------|-----------------------------------|
| 45000                | 74909                                             | 54840                             |

Sources:

For 2001 NIH Goal: National Institutes of Health, (Mar 22, 2001) “NIH Statement in Response to the NAS Report: Addressing the Nation’s Changing Needs for Biomedical and Behavioral Scientists”. <https://grants.nih.gov/grants/guide/notice-files/NOT-OD-01-027.html>

Inflation adjustment performed using the US Bureau of Labor Statistics Inflation Calculator. Accessed Jan 22, 2023 at [https://www.bls.gov/data/inflation\\_calculator.htm](https://www.bls.gov/data/inflation_calculator.htm)

For NIH Minimum Salary for fiscal year 2022: “Correction to Stipend Levels for Ruth L. Kirschstein National Research Service Award (NRSA) Stipends, Tuition/Fees and Other Budgetary Levels Effective for Fiscal Year 2022” <https://grants.nih.gov/grants/guide/notice-files/NOT-OD-22-132.html>

**Table 5: Minimum Postdoc Salary Over Time**

| Year | Date       | Stanford (US\$) | NIH (US\$) | Difference (US\$) | Stanford min as Percentage of NIH min (%) |
|------|------------|-----------------|------------|-------------------|-------------------------------------------|
| 2000 | 1-Sep-2000 |                 | 26916      |                   |                                           |
| 2001 | 1-Sep-2001 |                 | 28260      |                   |                                           |
| 2002 | 1-Sep-2002 |                 | 31092      |                   |                                           |
| 2003 | 1-Sep-2003 |                 | 34200      |                   |                                           |
| 2004 | 1-Sep-2004 |                 | 35568      |                   |                                           |
| 2005 | 1-Sep-2005 |                 | 35568      |                   |                                           |
| 2006 | 1-Sep-2006 |                 | 36996      |                   |                                           |
| 2007 | 1-Sep-2007 |                 | 36996      |                   |                                           |

| Year | Date       | Stanford (US\$) | NIH (US\$) | Difference (US\$) | Stanford min as Percentage of NIH min (%) |
|------|------------|-----------------|------------|-------------------|-------------------------------------------|
| 2008 | 1-Sep-2008 |                 | 36996      |                   |                                           |
| 2009 | 1-Sep-2009 |                 | 37368      |                   |                                           |
| 2010 | 1-Sep-2010 |                 | 37740      |                   |                                           |
| 2011 | 1-Sep-2011 |                 | 38496      |                   |                                           |
| 2012 | 1-Sep-2012 |                 | 39264      |                   |                                           |
| 2013 | 1-Sep-2013 |                 | 39264      |                   |                                           |
| 2014 | 1-Sep-2014 | 44310           | 42000      | 2310              | 106%                                      |
| 2015 | 1-Sep-2015 | 50000           | 42840      | 7160              | 117%                                      |
| 2016 | 1-Sep-2016 | 53406           | 43692      | 9714              | 122%                                      |
| 2017 | 1-Sep-2017 | 53406           | 47484      | 5922              | 113%                                      |
| 2018 | 1-Sep-2018 | 60000           | 48432      | 11568             | 124%                                      |
| 2019 | 1-Sep-2019 | 63618           | 50004      | 13614             | 127%                                      |
| 2020 | 1-Sep-2020 | 64268           | 52704      | 11564             | 122%                                      |
| 2021 | 1-Sep-2021 | 65568           | 53760      | 11808             | 122%                                      |
| 2022 | 1-Sep-2022 | 68238           | 54840      | 13398             | 125%                                      |

Source for Stanford Minimum Salaries:

OPA website (<https://postdocs.stanford.edu/funding-rates-and-guidelines>) and email correspondence.

Sources for NIH Salaries:

For fiscal year 2022: "Correction to Stipend Levels for Ruth L. Kirschstein National Research Service Award (NRSA) Stipends, Tuition/Fees and Other Budgetary Levels Effective for Fiscal Year 2022" <https://grants.nih.gov/grants/guide/notice-files/NOT-OD-22-132.html>

For fiscal year 2021: "Ruth L. Kirschstein National Research Service Award (NRSA) Stipends, Tuition/Fees and Other Budgetary Levels Effective for Fiscal Year 2021" <https://grants.nih.gov/grants/guide/notice-files/NOT-OD-21-049.html>

For fiscal year 2020: "Ruth L. Kirschstein National Research Service Award (NRSA) Stipends, Tuition/Fees and Other Budgetary Levels Effective for Fiscal Year 2020" <https://grants.nih.gov/grants/guide/notice-files/NOT-OD-20-070.html>

For fiscal year 2019: "Ruth L. Kirschstein National Research Service Award (NRSA) Stipends, Tuition/Fees and Other Budgetary Levels Effective for Fiscal Year 2019" <https://grants.nih.gov/grants/guide/notice-files/NOT-OD-19-036.html>

For fiscal year 2018: "Ruth L. Kirschstein National Research Service Award (NRSA) Stipends, Tuition/Fees and Other Budgetary Levels Effective for Fiscal Year 2018" <https://grants.nih.gov/grants/guide/notice-files/NOT-OD-18-175.html>

For fiscal year 2017: "Ruth L. Kirschstein National Research Service Awards (NRSA) Postdoctoral Stipends, Training Related Expenses, Institutional Allowance, and Tuition/Fees Effective for Fiscal Year 2017" <https://grants.nih.gov/grants/guide/notice-files/not-od-17-003.html>

For fiscal year 2016: “Ruth L. Kirschstein National Research Service Award (NRSA) Stipends, Tuition/Fees and Other Budgetary Levels Effective for Fiscal Year 2016”  
<https://grants.nih.gov/grants/guide/notice-files/not-od-16-047.html>

For fiscal year 2015: “Ruth L. Kirschstein National Research Service Award (NRSA) Stipends, Tuition/Fees and Other Budgetary Levels Effective for Fiscal Year 2015”  
<https://grants.nih.gov/grants/guide/notice-files/NOT-OD-15-048.html>

For fiscal year 2014: “Ruth L. Kirschstein National Research Service Award (NRSA) Stipends, Tuition/Fees and Other Budgetary Levels Effective for Fiscal Year 2014”  
<https://grants.nih.gov/grants/guide/notice-files/not-od-14-046.html>

For fiscal year 2013: “NIH Fiscal Policy for Grant Awards – FY 2013”  
<https://grants.nih.gov/grants/guide/notice-files/NOT-OD-13-064.html>

For fiscal year 2012: “Ruth L. Kirschstein National Research Service Award (NRSA) Stipends, Tuition/Fees and Other Budgetary Levels Effective for Fiscal Year 2012”  
<https://grants.nih.gov/grants/guide/notice-files/NOT-OD-12-033.html>

**Table 6a: Average postdoc incomes by location, absolute & adjusted for local cost of living, 2016, all US states**

| State                | Absolute Income (\$) | Income Adjusted for Local Cost of Living (\$) |
|----------------------|----------------------|-----------------------------------------------|
| Alabama              | 42960                | 48394                                         |
| Alaska               | 48750                | 37305                                         |
| Arkansas             | 42030                | 45127                                         |
| Arizona              | 45748                | 48305                                         |
| California           | 48576                | 32036                                         |
| Colorado             | 47184                | 42778                                         |
| Connecticut          | 45776                | 36975                                         |
| Delaware             | 45179                | 41988                                         |
| District of Columbia | 49947                | 33521                                         |
| Florida              | 44394                | 45283                                         |
| Georgia              | 43362                | 43933                                         |
| Hawaii               | 54375                | 28603                                         |
| Idaho                | 45313                | 51668                                         |
| Illinois             | 45889                | 39032                                         |

| <b>State</b>   | <b>Absolute Income (\$)</b> | <b>Income Adjusted for Local Cost of Living (\$)</b> |
|----------------|-----------------------------|------------------------------------------------------|
| Indiana        | 45655                       | 49669                                                |
| Iowa           | 44938                       | 46935                                                |
| Kansas         | 43422                       | 47075                                                |
| Kentucky       | 39125                       | 43049                                                |
| Louisiana      | 45012                       | 46491                                                |
| Maine          | 45500                       | 40661                                                |
| Maryland       | 49901                       | 39862                                                |
| Massachusetts  | 47908                       | 33058                                                |
| Michigan       | 45321                       | 45011                                                |
| Minnesota      | 43996                       | 42254                                                |
| Mississippi    | 41650                       | 48922                                                |
| Missouri       | 44388                       | 48509                                                |
| Montana        | 47850                       | 47517                                                |
| Nebraska       | 42132                       | 46043                                                |
| Nevada         | 42313                       | 40520                                                |
| New Hampshire  | 43975                       | 41369                                                |
| New Jersey     | 48026                       | 39398                                                |
| New Mexico     | 56736                       | 59848                                                |
| New York       | 48356                       | 26027                                                |
| North Carolina | 44986                       | 47325                                                |
| North Dakota   | 43313                       | 45005                                                |
| Ohio           | 44869                       | 49493                                                |
| Oklahoma       | 44333                       | 52660                                                |
| Oregon         | 45900                       | 42015                                                |
| Pennsylvania   | 45361                       | 43685                                                |
| Rhode Island   | 47266                       | 38743                                                |
| South Carolina | 44494                       | 44244                                                |
| South Dakota   | 41250                       | 43977                                                |

| State         | Absolute Income (\$) | Income Adjusted for Local Cost of Living (\$) |
|---------------|----------------------|-----------------------------------------------|
| Tennessee     | 47787                | 54644                                         |
| Texas         | 44766                | 47202                                         |
| Utah          | 44959                | 48033                                         |
| Vermont       | 40667                | 48183                                         |
| Virginia      | 44880                | 46967                                         |
| Washington    | 47508                | 33181                                         |
| West Virginia | 39875                | 41710                                         |
| Wisconsin     | 44424                | 41791                                         |
| Wyoming       | 53750                | 58679                                         |

Source:

Table S6 in McConnell, Westerman, Pierre, Heckler, Schwartz, (Dec 18, 2018) "Research: United States National Postdoc Survey results and the interaction of gender, career choice and mentor impact" *eLife*. <https://doi.org/10.7554/eLife.40189>

**Table 6b: Average postdoc incomes by location, absolute & adjusted for local cost of living, 2016, US counties with more than 50 respondents**

| Counties (more than 50 respondents) | Absolute Income (\$) | Income Adjusted for Local Cost of Living (\$) |
|-------------------------------------|----------------------|-----------------------------------------------|
| Maricopa, AZ                        | 46230                | 47709                                         |
| Pima, AZ                            | 45237                | 48642                                         |
| Alameda, CA                         | 48646                | 32780                                         |
| Los Angeles, CA                     | 52427                | 38302                                         |
| Yolo, CA                            | 46183                | 39711                                         |
| San Diego, CA                       | 45368                | 31462                                         |
| San Francisco, CA                   | 47490                | 26800                                         |
| Santa Clara, CA                     | 52723                | 23653                                         |
| Denver, CO                          | 44993                | 40792                                         |

| <b>Counties (more than 50 respondents)</b> | <b>Absolute Income (\$)</b> | <b>Income Adjusted for Local Cost of Living (\$)</b> |
|--------------------------------------------|-----------------------------|------------------------------------------------------|
| New Haven, CT                              | 45758                       | 36932                                                |
| Alachua, FL                                | 43460                       | 44392                                                |
| Clarke, GA                                 | 41619                       | 42168                                                |
| DeKalb, GA                                 | 45104                       | 45699                                                |
| Cook, IL                                   | 45611                       | 38840                                                |
| Tippecanoe, IN                             | 42806                       | 49487                                                |
| Johnson, IA                                | 45083                       | 46718                                                |
| Douglas, KS                                | 42815                       | 46588                                                |
| Baltimore City, MD                         | 46718                       | 40448                                                |
| Montgomery, MD                             | 53631                       | 39993                                                |
| Prince George's, MD                        | 50331                       | 37532                                                |
| Middlesex, MA                              | 48433                       | 34325                                                |
| Suffolk, MA                                | 47454                       | 32085                                                |
| Ingham, MI                                 | 44165                       | 47901                                                |
| Washtenaw, MI                              | 45757                       | 43745                                                |
| Hennepin, MN                               | 43955                       | 41663                                                |
| Boone, MO                                  | 43030                       | 45343                                                |
| St. Louis, MO                              | 44916                       | 49741                                                |
| Los Alamos, NM                             | 60000                       | 63291                                                |
| Monroe, NY                                 | 47311                       | 46797                                                |
| New York, NY                               | 50811                       | 22304                                                |
| Orange, NC                                 | 45461                       | 47404                                                |
| Franklin, OH                               | 43978                       | 48919                                                |
| Hamilton, OH                               | 46443                       | 50981                                                |
| Benton, OR                                 | 46996                       | 46030                                                |
| Jackson, OR                                | 45777                       | 44836                                                |
| Multnomah, OR                              | 45426                       | 35378                                                |
| Allegheny, PA                              | 44561                       | 47480                                                |

| Counties (more than 50 respondents) | Absolute Income (\$) | Income Adjusted for Local Cost of Living (\$) |
|-------------------------------------|----------------------|-----------------------------------------------|
| Philadelphia, PA                    | 46293                | 39066                                         |
| Charleston, SC                      | 45634                | 43921                                         |
| Dallas, TX                          | 44910                | 44776                                         |
| Harris, TX                          | 44896                | 45441                                         |
| McLennan, TX                        | 45446                | 51527                                         |
| Salt Lake, UT                       | 44873                | 47941                                         |
| King, WA                            | 47374                | 32694                                         |

Source:

Table S6 in McConnell, Westerman, Pierre, Heckler, Schwartz, (Dec 18, 2018) "Research: United States National Postdoc Survey results and the interaction of gender, career choice and mentor impact" *eLife*. <https://doi.org/10.7554/eLife.40189>

**Table 7: Postdoc Salary by Years Experience, Over Time**

| Year       | Stanford (PhD + 0-5 yrs) | Stanford (PhD + 6+ yrs) | NIH (PhD + 0 yrs) | NIH (PhD + 1 yr) | NIH (PhD + 2 yrs) | NIH (PhD + 3 yrs) | NIH (PhD + 4 yrs) | NIH (PhD + 5 yrs) | NIH (PhD + 6 yrs) | NIH (PhD + 7 yrs) |
|------------|--------------------------|-------------------------|-------------------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| 1-Sep-2012 |                          |                         | 39264             | 41364            | 44340             | 46092             | 47820             | 49884             | 51582             | 54180             |
| 1-Sep-2013 |                          |                         | 39264             | 41364            | 44340             | 46092             | 47820             | 49884             | 51582             | 54180             |
| 1-Sep-2014 | 44310                    |                         | 42000             | 43680            | 45432             | 47244             | 49128             | 51096             | 53148             | 55272             |
| 1-Sep-2015 | 50000                    |                         | 42840             | 44556            | 46344             | 48192             | 50112             | 52116             | 54216             | 56376             |
| 1-Sep-2016 | 53406                    |                         | 43692             | 45444            | 47268             | 49152             | 51120             | 53160             | 55296             | 57504             |
| 1-Sep-2017 | 53406                    |                         | 47484             | 47844            | 48216             | 50316             | 52140             | 54228             | 56400             | 58560             |
| 1-Sep-2018 | 60000                    |                         | 48432             | 48804            | 49188             | 51324             | 53184             | 55308             | 57528             | 59736             |
| 1-Sep-2019 | 63618                    |                         | 50004             | 50376            | 50760             | 52896             | 54756             | 56880             | 59100             | 61308             |
| 1-Sep-2020 | 64268                    | 64268                   | 52704             | 53076            | 53460             | 55596             | 57456             | 59580             | 61800             | 64008             |
| 1-Sep-2021 | 65568                    | 66888                   | 53760             | 54144            | 54540             | 56712             | 58608             | 60780             | 63036             | 65292             |
| 1-Sep-2022 | 68238                    | 69695                   | 54840             | 55224            | 55632             | 57852             | 59784             | 61992             | 64296             | 66600             |

Source for Stanford Minimum Salaries:

OPA website (<https://postdocs.stanford.edu/funding-rates-and-guidelines>) and email correspondence.



Sources for NIH Salaries: As for Table 5.

**Table 8a: Area Median Income (AMI) Levels for Santa Clara County over time, 1-person household (US\$)**

| Year | Moderate income (120% AMI) | Median Income (AMI) | Low Income (80% AMI) | Very Low Income (50% AMI) | Extremely Low Income (30% AMI) | Acutely Low Income (15% AMI) |
|------|----------------------------|---------------------|----------------------|---------------------------|--------------------------------|------------------------------|
| 2012 | 88200                      | 73500               | 53000                | 36750                     | 22050                          |                              |
| 2013 |                            |                     |                      |                           |                                |                              |
| 2014 | 88600                      | 73850               | 59400                | 37150                     | 22300                          |                              |
| 2015 |                            |                     |                      |                           |                                |                              |
| 2016 | 89950                      | 74950               | 59400                | 39100                     | 23450                          |                              |
| 2017 | 95150                      | 79300               | 59400                | 41800                     | 25100                          |                              |
| 2018 | 105200                     | 87650               | 66150                | 46550                     | 27950                          |                              |
| 2019 | 110400                     | 92000               | 72750                | 51250                     | 30750                          |                              |
| 2020 | 118950                     | 99100               | 78550                | 55300                     | 33150                          |                              |
| 2021 | 127100                     | 105900              | 82450                | 58000                     | 34800                          | 15900                        |
| 2022 | 141550                     | 117950              | 92250                | 59000                     | 35400                          | 17700                        |

**Table 8b: Area Median Income (AMI) Levels for Santa Clara County over time, 2-person household (US\$)**

| Year | Moderate income (120% AMI) | Median Income (AMI) | Low Income (80% AMI) | Very Low Income (50% AMI) | Extremely Low Income (30% AMI) | Acutely Low Income (15% AMI) |
|------|----------------------------|---------------------|----------------------|---------------------------|--------------------------------|------------------------------|
| 2012 | 100800                     | 84000               | 60600                | 42000                     | 25200                          |                              |
| 2013 |                            |                     |                      |                           |                                |                              |
| 2014 | 101300                     | 84400               | 67900                | 42450                     | 25500                          |                              |
| 2015 |                            |                     |                      |                           |                                |                              |
| 2016 | 102800                     | 85700               | 67900                | 44650                     | 26800                          |                              |
| 2017 | 108750                     | 90650               | 67900                | 47800                     | 28650                          |                              |
| 2018 | 120200                     | 100150              | 75600                | 53200                     | 31950                          |                              |
| 2019 | 126150                     | 105100              | 83150                | 58550                     | 35150                          |                              |

| Year | Moderate income (120% AMI) | Median Income (AMI) | Low Income (80% AMI) | Very Low Income (50% AMI) | Extremely Low Income (30% AMI) | Acutely Low Income (15% AMI) |
|------|----------------------------|---------------------|----------------------|---------------------------|--------------------------------|------------------------------|
| 2020 | 135900                     | 113300              | 89750                | 63200                     | 37900                          |                              |
| 2021 | 145250                     | 121050              | 94200                | 66300                     | 39800                          | 18150                        |
| 2022 | 161750                     | 134800              | 105400               | 67400                     | 40450                          | 20250                        |

**Table 8c: Area Median Income (AMI) Levels for Santa Clara County over time, 3-person household (US\$)**

| Year | Moderate income (120% AMI) | Median Income (AMI) | Low Income (80% AMI) | Very Low Income (50% AMI) | Extremely Low Income (30% AMI) | Acutely Low Income (15% AMI) |
|------|----------------------------|---------------------|----------------------|---------------------------|--------------------------------|------------------------------|
| 2012 | 113400                     | 94500               | 68150                | 47250                     | 28350                          |                              |
| 2013 |                            |                     |                      |                           |                                |                              |
| 2014 | 113950                     | 94950               | 76400                | 47750                     | 28650                          |                              |
| 2015 |                            |                     |                      |                           |                                |                              |
| 2016 | 115650                     | 96400               | 76400                | 50250                     | 30150                          |                              |
| 2017 | 122350                     | 101950              | 76400                | 53750                     | 32250                          |                              |
| 2018 | 135250                     | 112700              | 85050                | 59850                     | 35950                          |                              |
| 2019 | 141950                     | 118250              | 93550                | 65850                     | 39550                          |                              |
| 2020 | 152900                     | 127450              | 100950               | 71100                     | 42650                          |                              |
| 2021 | 163400                     | 136150              | 106000               | 74600                     | 44750                          | 20450                        |
| 2022 | 182000                     | 151650              | 118600               | 75850                     | 45500                          | 22750                        |

**Table 8d: Area Median Income (AMI) Levels for Santa Clara County over time, 4-person household (US\$)**

| Year | Moderate income (120% AMI) | Median Income (AMI) | Low Income (80% AMI) | Very Low Income (50% AMI) | Extremely Low Income (30% AMI) | Acutely Low Income (15% AMI) |
|------|----------------------------|---------------------|----------------------|---------------------------|--------------------------------|------------------------------|
| 2012 | 126000                     | 105000              | 75700                | 52500                     | 31500                          |                              |
| 2013 |                            |                     |                      |                           |                                |                              |
| 2014 | 126600                     | 105500              | 84900                | 53050                     | 31850                          |                              |
| 2015 |                            |                     |                      |                           |                                |                              |
| 2016 | 128500                     | 107100              | 84900                | 55800                     | 33500                          |                              |
| 2017 | 135950                     | 113300              | 84900                | 59700                     | 35800                          |                              |
| 2018 | 150250                     | 125200              | 94450                | 66500                     | 39900                          |                              |
| 2019 | 157770                     | 131400              | 103900               | 73150                     | 43900                          |                              |
| 2020 | 169900                     | 141600              | 112150               | 78950                     | 47350                          |                              |
| 2021 | 181550                     | 151300              | 117750               | 82850                     | 49700                          | 22700                        |
| 2022 | 202200                     | 168500              | 131750               | 84250                     | 50550                          | 25300                        |

Source:

California Department of Housing and Community Development “State and Federal Income, Rent, and Loan/Value Limits.” Accessed Feb 10, 2023 at <https://www.hcd.ca.gov/grants-and-funding/income-limits/state-and-federal-income-rent-and-loan-value-limits>