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Supporting and Uplifting New and Diverse Scientists in HIV Research (San Diego SUN): A research education and training program to promote the success of Black, Indigenous, and People of Color (BIPOC) pre- and postdoctoral fellows

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Abstract

Background: We implemented a mentored research education and training program for Underrepresented Minority (URM) and Black, Indigenous, and People of Color (BIPOC) pre- and postdoctoral fellows called San Diego SUN (SD SUN): Supporting and Uplifting New and Diverse Scientists in HIV Research. SD SUN aimed to prepare fellows for an academic career trajectory in HIV science focused on ameliorating HIV-related disparities in communities of color.

Setting: The program leveraged a strong inter-institutional collaboration between San Diego State University and the University of California San Diego who share commitments to diversity, equity, and inclusion, and an established history of training programs for URM/BIPOC investigators.

Methods: During a 9-month training period, launched in February 2022, fellows were supported by a mentoring team, completed ten 3-hour training sessions (core curriculum) and a mentored research project. The curriculum included seminars on building skills for a productive academic research career, and reflective discussions around issues uniquely faced by URM/BIPOC investigators. Standardized measures developed for CDEIPI (e.g., around benefits gained) were used to evaluate the program.

Results: Six fellows participated in SD SUN. Results demonstrated a successful first year. Fellows were highly engaged and reported: positive experiences; satisfaction with their mentor(s); various benefits gained from the program; and gains in numerous skillsets.

Conclusion: Challenges were faced during implementation (e.g., teaching grant writing to fellows at different skill levels). Time constraints were reported by some faculty mentors with

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limited bandwidth. We describe insights and solutions to the major challenges to sustaining the successful SD SUN program.

Keywords

Mentorship; Mentoring program; training program; URM; BIPOC; HIV

Introduction

As part of the Center for AIDS Research (CFAR) Diversity, Equity, and Inclusion Pipeline Initiative (CDEIPI), we implemented a mentored research education and training program for Underrepresented Minority (URM) and Black, Indigenous, and People of Color (BIPOC) pre- and postdoctoral fellows called, “San Diego SUN (SD SUN): Supporting and Uplifting New and Diverse Scientists in HIV Research”. The overarching goal of SD SUN was to prepare URM/BIPOC pre- and postdoctoral fellows for an academic career trajectory in HIV science that focuses on ameliorating HIV-related disparities. Mentored HIV training programs for underrepresented, early-career minority scientists who identify with and work directly with disproportionately affected communities have documented successes in advancing the state of the science in HIV research,¹⁻³ yet there are persistent disparities in the success rates for grants supporting URM scientists.^{4,5} Aligned with the National Institutes of Health’s commitment to ending structural racism in biomedical science,⁵ SD SUN sought to widen the pipeline of URM/BIPOC HIV scientists at the pre-academia level.

Leveraging our prior successes with similar programs, SD SUN was developed as a 9-month structured training program. The specific goals of the program were: 1) Provide URM/BIPOC pre- and postdoctoral fellows with research knowledge, skills, and mentored career development training to support a career path towards becoming a scientist in the field of HIV research, with an emphasis on ameliorating disparities in communities of color or other marginalized communities; 2) Describe and address complex issues often faced by URM/BIPOC students and investigators, including microaggressions, minority tax, and imposter syndrome;⁶⁻¹¹ and 3) Provide URM/BIPOC fellows with professional experience in HIV research through mentored ‘seed’ grants that provide critical, hands-on, applied research skills in HIV research.

In this paper, we review the institutional context of the program, describe its overall structure and content, and review a case study of outcomes stemming from the implementation and evaluation of the first year of the program. Overall, we predicted that building off our prior successes with similar programs and our commitments to diversity, equity, and inclusion (DEI), through our case study we would observe enthusiasm, engagement, and promising outcomes among SD SUN fellows.

Methods

Institutional environment and leadership

SD SUN leveraged an existing and strong inter-institutional collaboration between San Diego State University (SDSU), a federally designated Hispanic Serving Institution (HSI)

and Asian American Native American Pacific Islander-Serving Institution (AANAPISI), and the University of California San Diego (UCSD), an emerging HSI. Both institutions have a demonstrated history and commitment to supporting DEI. For example, owing to this history, in no other city have two institutions (SDSU and UCSD) received awards from the NIH FIRST program, a largescale prestigious funding initiative designed to promote DEI at biomedical and public health research institutions.^{12,13} The two universities also have strong track record in training and educational programs, including for URMs. Developed and led by the co-authors, two specific research education and training (R25) programs served as the foundation informing the design of SD SUN; each was designed to support the professional and research development and success of URM/BIPOC junior investigators (ASSET, MPIs: Pitpitan and Zúñiga, and CHAMPS, PI: Strathdee).

In addition to the strong institutional environment promoting DEI, SD SUN was co-directed by two investigators committed to DEI mentorship and to addressing disparities in HIV prevention and care, both of whom identify as URM/BIPOC themselves. Currently as of this writing, they also serve as Co-Directors of the San Diego CFAR Health Equity Sociobehavioral Science Core, thereby opening a gateway for SD SUN fellows to benefit from the mentorship and services provided by faculty across the core.

Recruitment, application, selection process

Eligibility, Number, and Level of Fellows.—The number and level of placements was decided upon by the steering committee (co-authors) based on different considerations including (a) current need for funding and HIV research training of high-caliber scholars at the pre- and post-doctoral levels; (b) enhancing feasibility of program implementation by leveraging program materials already developed in our previous programs for trainees at the same stages, (c) scholar ‘load’ that each mentor anticipates at any given time; and (d) the need to ensure a critical mass of scholars that can benefit from interactions with one another. Eligibility criteria included: 1) being a pre- or postdoctoral junior scholar enrolled in a degree program from SDSU or UCSD; 2) being a U.S. citizens or permanent resident; and 3) belonging to an underrepresented racial and ethnic group in academia or HIV sciences, and/or be Black, Indigenous, or a Person of Color. Due to the critical need to promote greater diversity by race and ethnicity in biomedical research and HIV science specifically, we elected not to expand eligibility by other definitions of URM status. SD SUN had the capacity to accept 6 fellows (3 predoctoral and 3 postdoctoral).

Recruitment and application process: We distributed program advertisements through our intra-institutional networks and program leaders were invited to nominate potentially eligible candidates. Interested candidates were asked to submit a current CV; letters of reference; a statement describing their HIV research interests, short term and long-term career goals, and personal expectations; and a letter of support from their primary mentor. Completed applications were forwarded to the Co-Directors for review. Each application was ranked on a scale of 0–100 with weight being given to the applicant’s prior accomplishments (curriculum vitae; 20%), letters of recommendation (20%), stated interest in HIV (30%); potential for a successful career in academics (20%) and personal statement (10%). Candidates with outstanding scores (>80%; which all applications fell above) were

discussed by the Steering Committee to identify mentor matches. Thus, each application package was reviewed as a whole, considering all application components and potential for a suitable mentor match.

Program Goals and Structure

The overall goal of the 9-month program was that by the end, each fellow would demonstrate proficiency in HIV research knowledge and skills for a productive academic career (e.g., publishing manuscripts and securing extramural grants). Founded off our prior programming, we designed the program around two structural components: 1) *Mentoring Teams* that provide fellows with guidance in their content area and research project; and 2) *Required Program Activities* consisting of *Mentored Research* and *Core Curriculum* activities to support fellows' research and professional development.

Program Intake and Self-Appraisal Survey

Accepted fellows were asked to complete a self-appraisal survey asking them to: 1) list their short and long-term career goals, and 2) rate their mastery of specific research and career development skills (e.g., grantpersonship, community-engaged research, time management, negotiation). They were also asked to rank the top 10 skills they were interested in developing during their SD SUN training. These data were reviewed by the co-directors and used to identify primary and secondary mentors. Responses were also used to develop a uniquely tailored curriculum that directly addressed the fellows' research interests and needs.

Mentoring Teams.—Fellows were assigned one primary mentor and one secondary mentor from a large (>30) list of SD SUN Faculty at SDSU or UCSD (including 66% women mentors and 40% URM/BIPOC mentors), as well a third mentor from their program. This mentoring structure allowed the fellow the opportunity to work directly with one member of the SD SUN faculty whose expertise and interests were most closely suited to their own, a second inter-disciplinary mentor, and a mentor from their doctoral or postdoc program. The primary and secondary mentors were expected to meet with the fellow on a biweekly basis, with the third mentor joining every month.

Required Program Activities

Mentored Research Project.—The program activities centered around supporting the fellow's completion of a hypothesis-driven research project in HIV research. The research project was deemed completed once the fellow prepared a manuscript suitable for publication within 12 months of completing the program. Flexibility was awarded such that the project could serve as formative research experience for a grant proposal, or to help develop their dissertation ideas.

Core Curriculum.—The SD SUN curriculum was delivered across a total of ten three-hour training sessions held biweekly across a 9-month period (meeting monthly towards the end to allow more time for the mentored research project). Each session was structured so that half the time was set aside for workshops on grant or scientific writing, with the remainder of the time alternating between other types of seminars (e.g., on intervention

research, networking skills, and responding to microaggressions). Descriptions of some of these curricular components are summarized in Table 1. It is important to note that these and other types of workshops and content area seminars were offered to fellows, but ultimately, we designed a tailored curriculum that met the interest and needs of fellows (informed by responses on the self-appraisal program intake form).

Financial supports

Lack of resources supporting training and pilot grants is a major stumbling block for many junior researchers, especially those from URM/BIPOC backgrounds.^{14,15} As such, SD SUN fellows received numerous financial supports during their time in training. This included a stipend/honorarium for their overall participation in the 9-month program; fees to cover registration costs to participate virtually in advanced statistical training through *Statistical Horizons*; and offerings of a grant to cover either conference attendance or pilot research. To request funds for statistical training or conference attendance, fellows were asked to submit a short description of the training/event and explain how participation would support their professional goals. For pilot research funds, fellows were asked to submit more formal applications.

Pilot grant program.—The SD SUN pilot grant program was based on the premise that fellows who receive research training, mentoring, academic enrichment experiences and seed funding along the HIV science training pipeline can compete successfully for peer-reviewed grants at NIH and other funding agencies. Applications were restricted to a total of \$10,000 for postdoctoral fellows, and \$6,000 for predoctoral fellows. Fellows were required to have a clear purpose and next step identified when submitting their application (e.g., to support the fellows' future dissertation research or provide preliminary data for a K-award). The budget was able to fund pilot grants for all SD SUN fellows who applied. The application was limited to a 4-page NIH-style grant. Reviews of proposals followed NIH guidelines, and criteria for funding proposals was based on scientific merit.

Evaluation plan

The CDEIPI Evaluation Core developed standardized measures to evaluate all the CDEIPI programs at each CFAR site. These measures captured data on fellows' experiences participating in the program, satisfaction with their mentor(s), benefits gained from their research experience, and knowledge gained on specific skills since participating in the program. The evaluation survey was completed by all SD SUN fellows from December 2022-January 2023.

For our own program-specific evaluation, in addition to collecting data on the above measures, we also tracked achievements of specific milestones (e.g., attendance and participation in >80% of sponsored training opportunities/core curriculum, abstract and grant submissions). This was not considered research and did not require review.

Results

Case study: First year of SD SUN

Cohort Description.—As a case study of implementing SD SUN, we began accepting application for the program in December 2021, and the program launched in February 2022. Six fellows (5 predoctoral and 1 postdoctoral) completed the first year of the program. Among five fellows who reported their age, two were aged 30–34 years, one was aged 22–25, one was aged 26–29, and one was aged 35–40. Each fellow self-identified a different gender identity from other fellows: one identified as a cisgender man, one as a cisgender woman, one as a man, one as nonbinary, one as a woman, and one as gender nonconforming. Fellows were racially and ethnically diverse, and often identified with more than one racial and ethnic group (three Latina/Latino/Hispanic; two White; one Black; one Asian; one Native Hawaiian/Pacific Islander; one ‘other’). Three fellows self-reported being from a disadvantaged background.

Program engagement and testimonials.—Overall, enthusiasm and engagement in the program was high across all six fellows, with >80% participating in sponsored activities/ training sessions. The CDEIPI evaluation survey asked fellows to describe what they believed to be the *most* helpful or valuable component of the program. Responses were as follows, “*A safe space, protected time for professional development, funded one-on-one mentorship; “I find that the support and feedback I receive from other peers who are like me has been the most valuable component;” “Grant writing training and conversations about navigating being a person of color in this field;” “The knowledge gained by participating in SD SUN is immeasurable. [The co-directors] create such an inviting space to learn and participate;”* and “*Mentorship.*”

All six fellows strongly agreed that they were satisfied with components of the program (e.g., trainings sessions, journal club). Four fellows strongly agreed, and two fellows agreed that the program provided helpful networking and career development opportunities.

Experience in the program.—Fellows were asked about their experiences participating in the program (Table 2). On 0 to 100 scale (from a little to a lot), fellows endorsed on average a 90% rating about the following experiences: the program supports career goals, knowledge about HIV, feel supported and cared for by mentor(s), and the program has increased their interest in working in the field of HIV. Lower average ratings were endorsed for the program’s ability to help identify what is wanted professionally (mean, 76.17; standard deviation, 26.53) and the support received by peers in the program (mean, 75.50, standard deviation, 22.69).

Mentor satisfaction.—Mentorship was an important aspect to the program. All six fellows strongly agreed that they were satisfied with the mentorship provided in the program, their mentor(s) put effort into establishing a professional relationship with them, their mentor(s) provided timely and effective feedback on their performance, and their mentor(s) treated them with respect. Five participants strongly agreed that their mentor(s) were accessible when they needed assistance or advice.

Benefits gained.—All fellows responded that at least “some” to an “extensive” level of experience was gained from the program in the following: clarification of a career path, tolerance for obstacles faced in research, readiness for more demanding research, understanding that scientific assertions require supporting evidence, ability to analyze data, understanding of ethical conduct in the field, scientific writing skills, and the ability to work independently (Table 3). Few fellows gained only some experience in skills in interpreting results, understanding the grant writing process, and oral presentations.

Knowledge/skills gained.—Since becoming part of the program, fellows reported a range in the level of knowledge gains on select skills (Table 4). Most fellows reported large or very large gains in the following skills: defining a research question, forming a hypothesis, data analysis, interpreting results, self-confidence in research, confidence in working independently, and grant writing. Moderate gains were reported by most fellows in data collection methods, communication of results, and manuscript writing.

Milestones achieved included abstract submissions, conference presentations, manuscript and grant submissions, and new academic appointments (summarized in Table 5). At the end of the first year of the program, four fellows remained as predoctoral students, one predoctoral student became a postdoctoral fellow, and one postdoctoral fellow became an Assistant Professor.

Discussion

Overall, evaluation results demonstrated a highly successful first year of the SD SUN program. Across the board fellows were highly engaged, viewed their experiences as positive, reported satisfaction with their mentor(s), reported a variety of benefits gained from the program, and reported gains in numerous skillsets. In this section we summarize three major lessons learned from our first year implementing SD SUN. Each may provide insights into anticipated challenges and solutions when implementing similar research education and training programs for URM/BIPOC junior investigators.

While we cast a wide net marketing the program across SDSU and UCSD, we faced a challenge with receiving sufficient applications (less than the number of placements available), and ultimately conducted some targeted outreach and recruitment of URM/BIPOC fellows through our networks in order to fill two additional placements. Facing such a challenge did not come as a surprise, as it has been well-established that underrepresentation of URM/BIPOC researchers becomes even more stark at higher rungs of the academic ladder.^{16–18} While our goal was to design a program specifically for investigators at the pre- and postdoctoral phases, we anticipate that application numbers may be higher when focused on earlier academic phases like the undergraduate or master’s level.

The decision to implement a mentoring team structure was based on our experience leading and developing similar programs. The list of potential SD SUN mentors included 66% women mentors and 40% URM/BIPOC mentors. All mentors who were asked to be paired with a SD SUN fellow were eager to support the program, but many expressed difficulties with investing as much mentoring time as they would have liked. This was

especially the case among URM/BIPOC mentors, who often face a “minority tax” (e.g., service overburden) and are overburdened with shouldering the mentorship of URM/BIPOC mentees. To relieve these burdens, we decided that in the future, all SD SUN mentors should receive healthy honorariums to compensate and demonstrate the value of their time. We also sought the support of SD CFAR leadership to provide letters of recognition to all SD SUN mentors, which mentors can use as evidence of their commitment to DEI in their retention, tenure, and/or promotion files.

As a program designed for both pre- and postdoctoral fellows, curriculum material needed to be delivered in a way that was mindful of the different trainee levels and existing skillsets. For most of the training content, the difference in levels did not pose an issue. However, the difference was apparent in the Grant Writing Workshop. We originally intended for fellows to complete a NIH-style grant proposal that could be submitted to the SD SUN pilot grant program, or an actual NIH funding opportunity. Two fellows were able to develop and submit a proposal to either or both the pilot grant program and/or NIH. For other fellows who entered the program with very limited familiarity or experience in grant writing or NIH, we soon discovered that the Grant Writing Workshop should focus on simply teaching the elements of grantspersonship. We focused on orienting fellows to the process for developing, writing, and submitting a NIH grant, without actually requiring them to write their own proposal. By the end of the 9-month program, all fellows reported being prepared to independently develop a proposal with the support of their mentoring team.

Despite a few challenges that offered valuable lessons for the future, the launch of the first year of the San Diego SUN program demonstrated promising outcomes. Overall, fellows were highly enthusiastic about the program, highly engaged, and achieved major milestones. Other institutions or initiatives may follow a similar approach to cultivate and bolster a culture of DEI excellence, and to advance the retention, well-being, and advancement of a diverse trainee pipeline in HIV or other fields.

Conflicts of Interest and Source of Funding:

Drs. Pitpitan and Stockman have received funding from the Center for AIDS Research Equity Inclusion Pipeline Initiative (CDEIPI), and Drs. Pitpitan, Campbell, Strathdee, and Stockman currently (as of this writing) receive funding from the San Diego Center for AIDS Research (SD CFAR) (P30AI036214). CDEIPI was funded by the NIH through a supplemental award to the District of Columbia Center for AIDS Research (P30AI117970). There are no other conflicts to declare among the co-authors.

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References

1. Sutton MY, Lanier YA, Willis LA, et al. Strengthening the network of mentored, underrepresented minority scientists and leaders to reduce HIV-related health disparities. *Am J Public Health*. 2013;103(12):2207–2214. doi:10.2105/AJPH.2013.301345 [PubMed: 24134360]

2. Vermund SH, Hamilton EL, Griffith SB, et al. Recruitment of Underrepresented Minority Researchers into HIV Prevention Research: The HIV Prevention Trials Network Scholars Program. *AIDS Res Hum Retroviruses*. 2018;34(2):171–177. doi:10.1089/AID.2017.0093 [PubMed: 29145745]
3. Milburn NG, Hamilton AB, Lopez S, Wyatt GE. Mentoring the next generation of behavioral health scientists to promote health equity. *Am J Orthopsychiatry*. 2019;89(3):369–377. doi:10.1037/ort0000415 [PubMed: 31070422]
4. Analyses of Demographic-Specific Funding Rates for Type 1 Research Project Grant and R01-Equivalent Applications – NIH Extramural Nexus. Published March 16, 2023. Accessed March 27, 2023. <https://nexus.od.nih.gov/all/2023/03/16/analyses-of-demographic-specific-funding-rates-for-type-1-research-project-grant-and-r01-equivalent-applications/>
5. Collins FS, Adams AB, Aklin C, et al. Affirming NIH’s commitment to addressing structural racism in the biomedical research enterprise. *Cell*. 2021;184(12):3075–3079. doi:10.1016/j.cell.2021.05.014 [PubMed: 34115967]
6. Sue DW, Capodilupo CM, Torino GC, et al. Racial microaggressions in everyday life: implications for clinical practice. *Am Psychol*. 2007;62(4):271. [PubMed: 17516773]
7. Ackerman-Barger K, Jacobs NN, Orozco R, London M. Addressing microaggressions in academic health: a workshop for inclusive excellence. *MedEdPORTAL*. 2021;17:11103. [PubMed: 33598543]
8. Rodríguez JE, Campbell KM, Pololi LH. Addressing disparities in academic medicine: what of the minority tax? *BMC Med Educ*. 2015;15(1):6. doi:10.1186/s12909-015-0290-9 [PubMed: 25638211]
9. Campbell KM, Rodríguez JE. Addressing the Minority Tax: Perspectives From Two Diversity Leaders on Building Minority Faculty Success in Academic Medicine. *Acad Med J Assoc Am Med Coll*. 2019;94(12):1854–1857. doi:10.1097/ACM.0000000000002839
10. Bravata DM, Madhusudhan DK, Boroff M, Cokley KO. Commentary: Prevalence, predictors, and treatment of imposter syndrome: A systematic review. *J Ment Health Clin Psychol*. 2020;4(3). 2019;322(5):403–404. [PubMed: 31386138]
11. Mullangi S, Jagsi R. Imposter syndrome: treat the cause, not the symptom. *Jama*. 2019;322(5):403–404. [PubMed: 31386138]
12. Faculty Institutional Recruitment for Sustainable Transformation (FIRST). Published July 8, 2020. Accessed March 29, 2023. <https://commonfund.nih.gov/first>
13. Home - Faculty Institutional Recruitment for Sustainable Transformation. Accessed March 29, 2023. <https://www.first-cec.net/>
14. Gruppen LD, Durning SJ. Needles and Haystacks: Finding Funding for Medical Education Research. *Acad Med*. 2016;91(4):480–484. doi:10.1097/ACM.0000000000000983 [PubMed: 26556292]
15. Shavers VL, Fagan P, Lawrence D, et al. Barriers to racial/ethnic minority application and competition for NIH research funding. *J Natl Med Assoc*. 2005;97(8):1063–1077. [PubMed: 16173321]
16. Dominici F, Fried LP, Zeger SL. So few women leaders. *Academe*. 2009;95(4):25–27.
17. Gasman M, Abiola U, Travers C. Diversity and senior leadership at elite institutions of higher education. *J Divers High Educ*. 2015;8:1–14. doi:10.1037/a0038872
18. Trejo J The burden of service for faculty of color to achieve diversity and inclusion: the minority tax. *Mol Biol Cell*. 2020;31(25):2752–2754. doi:10.1091/mbc.E20-08-0567 [PubMed: 33253072]

Table 1.

Sample Elements of the San Diego SUN Core Curriculum

<p>Grant Writing Workshop. Elements of a successful grant proposal and its components (e.g., Specific Aims/Hypotheses, Research Strategy), as well as the elements of grantspersonship. Mock study sections were available to give fellows who developed a proposal to receive constructive feedback from topical experts as they would in a real NIH grant review, and to learn the NIH review process. Fellows were encouraged to submit a version of their proposal to the SD SUN <i>Pilot Grant Program</i>.</p>
<p>HIV Research Seminars. Covering core methods that are useful in the design or analysis of studies on HIV, but are typically not taught in PhD level course work, and that can be applied to their research project.</p>
<p>Peers and Pláticas/Reflection Circles. Peers and Pláticas (“chats” in Spanish) or sometimes called, “Reflection Circles” were designed to provide fellows with a more informal opportunity to get to know each other as peers and to discuss and process what they were learning during training. During these discussions we covered ‘soft skills’ training such as network-building and managing issues commonly faced by BIPOC investigators (e.g. impostor syndrome, minority tax or service overburden, microaggressions).</p>

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Table 2.

Experiences in the San Diego SUN Program, 2022 (n=6)

Experience	Mean (SD)
Feel a sense of belonging with other participants in program.	86.17 (14.36)
Program supports my career goals.	96.83 (4.07)
Learning about the field of HIV.	95.17 (9.43)
Feel good about my future career goals.	84.50 (11.02)
Know how to get what I want professionally.	76.17 (26.53)
Feel supported by my mentor(s).	97.83 (2.64)
Feel my mentor(s) care about me.	97.50 (3.39)
Support I received from faculty or mentors in program.	96.17 (4.17)
Support I received from peers in this program.	75.50 (22.69)
Participating in this program has increased my interest in working in an area related to HIV	91.33 (11.93)

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Table 3.

Benefits gained from research experience, San Diego SUN Program, 2022 (n=6)

Benefit	Level of Gain					
	No experience or feel inexperienced n (%)	Little experience n (%)	Some experience n (%)	Much experience n (%)	Extensive experience or mastered n (%)	Prefer not to answer or n/a n (%)
Clarification of a career path			1 (16.7)	2 (33.3)	3 (50.0)	
Skill in interpretation of results			2 (33.3)	2 (33.3)	1 (16.7)	1 (16.7)
Tolerance for obstacles faced in the research process				6 (100.0)		
Readiness for more demanding research			1 (16.7)	4 (66.7)	1 (16.7)	
Understanding of the grant writing process			2 (33.3)	2 (33.3)	2 (33.3)	
Understanding that scientific assertions require supporting evidence				2 (33.3)	3 (50.0)	1 (16.7)
Ability to analyze data and other information*				4 (66.7))		1 (16.7)
Understanding of ethical conduct in field			1 (16.7)	2 (33.3)	3 (50.0)	
Oral presentation skills			2 (33.3)	3 (50.0)	1 (16.7)	
Scientific writing skills			1 (16.7)	4 (66.7)	1 (16.7)	
Ability to work independently				4 (66.7)	2 (33.3)	

* missing data from one fellow.

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Table 4.

Knowledge gains on research skills, San Diego SUN Program, 2022 (n=6)

Research Skill	Level of Gain						
	No Gain n (%)	Very small gain n (%)	Small Gain n (%)	Moderate Gain n (%)	Large Gain n (%)	Very Large Gain n (%)	Not applicable n (%)
Defining a research question				2 (33.3)	3 (50.0)		1 (16.7)
Forming a hypothesis				2 (33.3)	3 (50.0)		1 (16.7)
Data collection methods				3 (50.0)	2 (33.3)		1 (16.7)
Data analysis				2 (33.3)	2 (33.3)	1 (16.7)	1 (16.7)
Interpreting results				2 (33.3)	3 (50.0)		1 (16.7)
Communication of results				4 (66.7)	2 (33.3)		
Self-confidence in research				2 (33.3)	3 (50.0)	1 (16.7)	
Confidence in working independently					4 (66.7)	2 (33.3)	
Grant writing					4 (66.7)	2 (33.3)	
Abstract development				2 (33.3)	2 (33.3)	1 (16.7)	1 (16.7)
Manuscript writing				3 (50.0)	1 (16.7)	1 (16.7)	1 (16.7)

Table 5.

Milestones achieved among SD SUN fellows (n=6)

Milestone	N
Fellows who submitted a conference abstract	4 (submitted 9 total abstracts)
Accepted oral presentation	5
Accepted poster presentation	4
Fellows who submitted a manuscript for publication	3 (submitted 5 total manuscripts)
Manuscript accepted for publication	3
Fellows who submitted a NIH grant	2 fellows (submitted 2 total grants) *
Funded grants	1

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