



Students
Career Path Postbaccalaureate Predoctoral
Mentoring Opportunities
Grants Training Prevention
Research Internships Fellowships Clinical
Basic Science Collaboration Postdoctoral Diversity
Data Science Epidemiology Innovation



Funding for Training the Next Generation of Cancer Researchers

Nastaran (Nas) Zahir, PhD

Chief, Cancer Training Branch, Center for Cancer Training

[*nas.zahir@nih.gov*](mailto:nas.zahir@nih.gov)



DCB New Grantee Workshop
January 12, 2022

NCI Extramural Funding for Cancer Training

Cancer Training Branch (CTB) Center for Cancer Training

Awards intended for all cancer researchers

- Institutional Training Grants
- Research Education Grants
- Individual Career Development Awards
- Transition Awards
- Fellowships

Chief: Nas Zahir, PhD

<https://www.cancer.gov/grants-training/training/funding>

Diversity Training Branch (DTB) Center to Reduce Cancer Health Disparities

Awards intended for students and scientists from populations underrepresented in biomedical sciences

- Research Education Grants
- Individual Career Development Awards
- Transition Awards
- Fellowships
- Research Supplements to Promote Diversity

Acting Chief: Alison Lin, PhD

<https://www.cancer.gov/about-nci/organization/crhd/diversity-training/cure>

Center for Global Health

Awards intended for mentored training in global cancer research

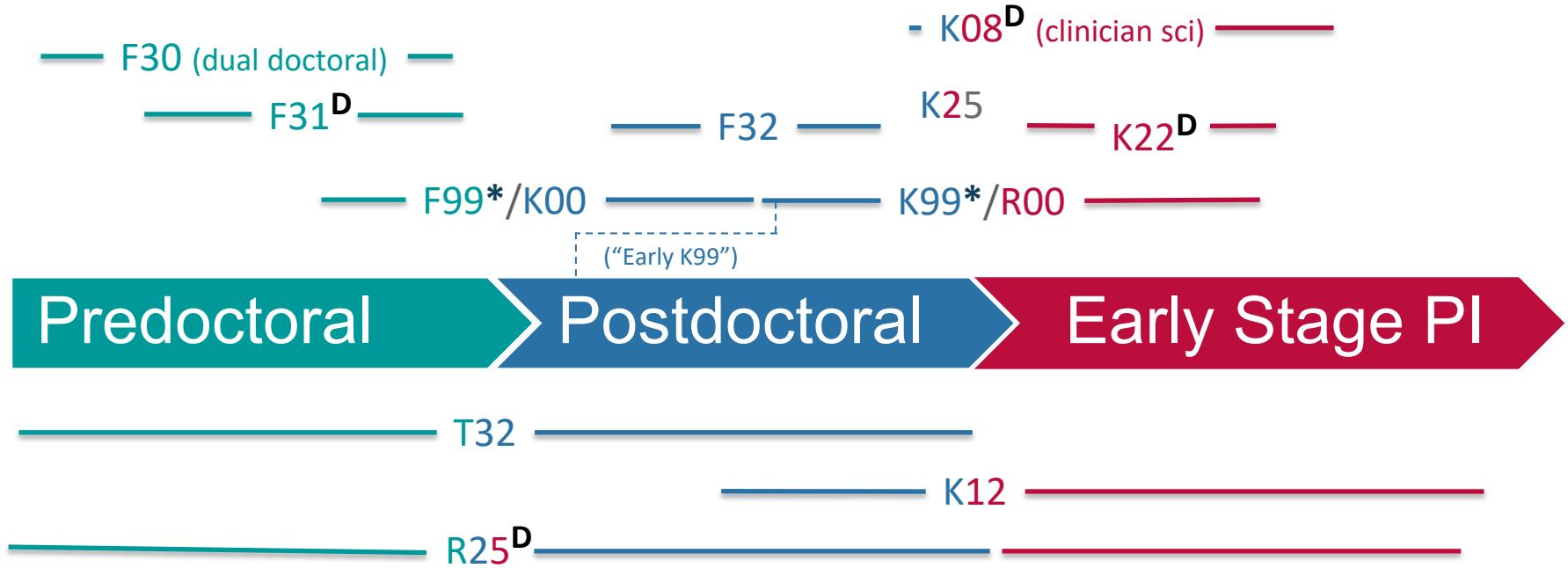
- Institutional Capacity Building and Mentored Training
- International Research Scientist Development Award

Program Director: Sudha Sivaram, DrPH, MPH

<https://www.cancer.gov/about-nci/organization/cgh/research-training>

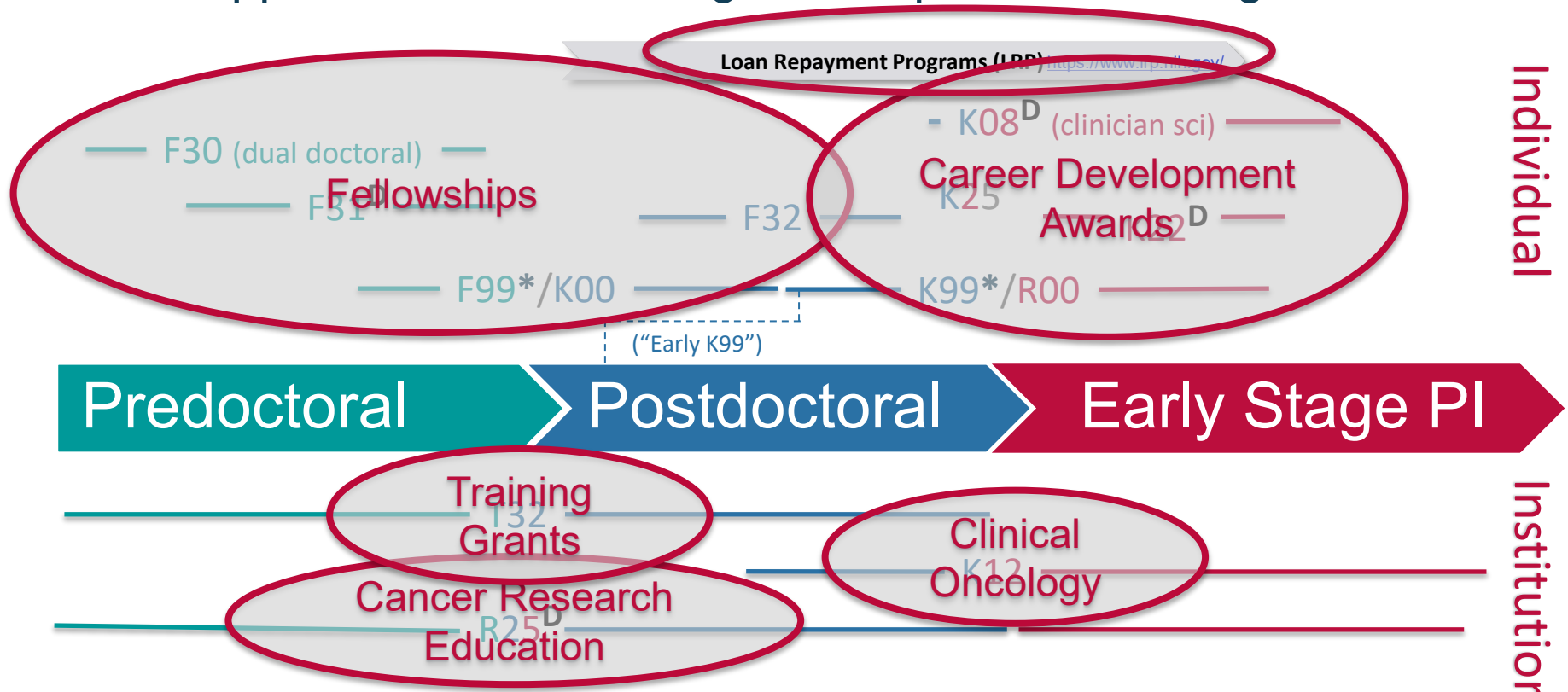
NCI Supports Cancer Training at Multiple Career Stages

Loan Repayment Programs (LRP) <https://www.lrp.nih.gov/>



F33 K01^D K18 K38

NCI Supports Cancer Training at Multiple Career Stages



F33 K01^D K18 K38

The NIH Loan Repayment Program Helps Pay Back Education Loans

- NCI Eligible Candidates: Researchers conducting cancer-focused studies in clinical translation, pediatric cancer, cancer health disparities, epidemiology, population sciences, and prevention.
- Award is up to \$50,000 per year and renewable as long as applicant continues to meet eligibility criteria and has eligible educational debt
- 2-year research commitment
- Application deadline: annually in November
- FY21: NCI funded 208 applications. Success rate: 69%
- NCI LRP Liaison: Mark Damico, PhD mark.damico@nih.gov

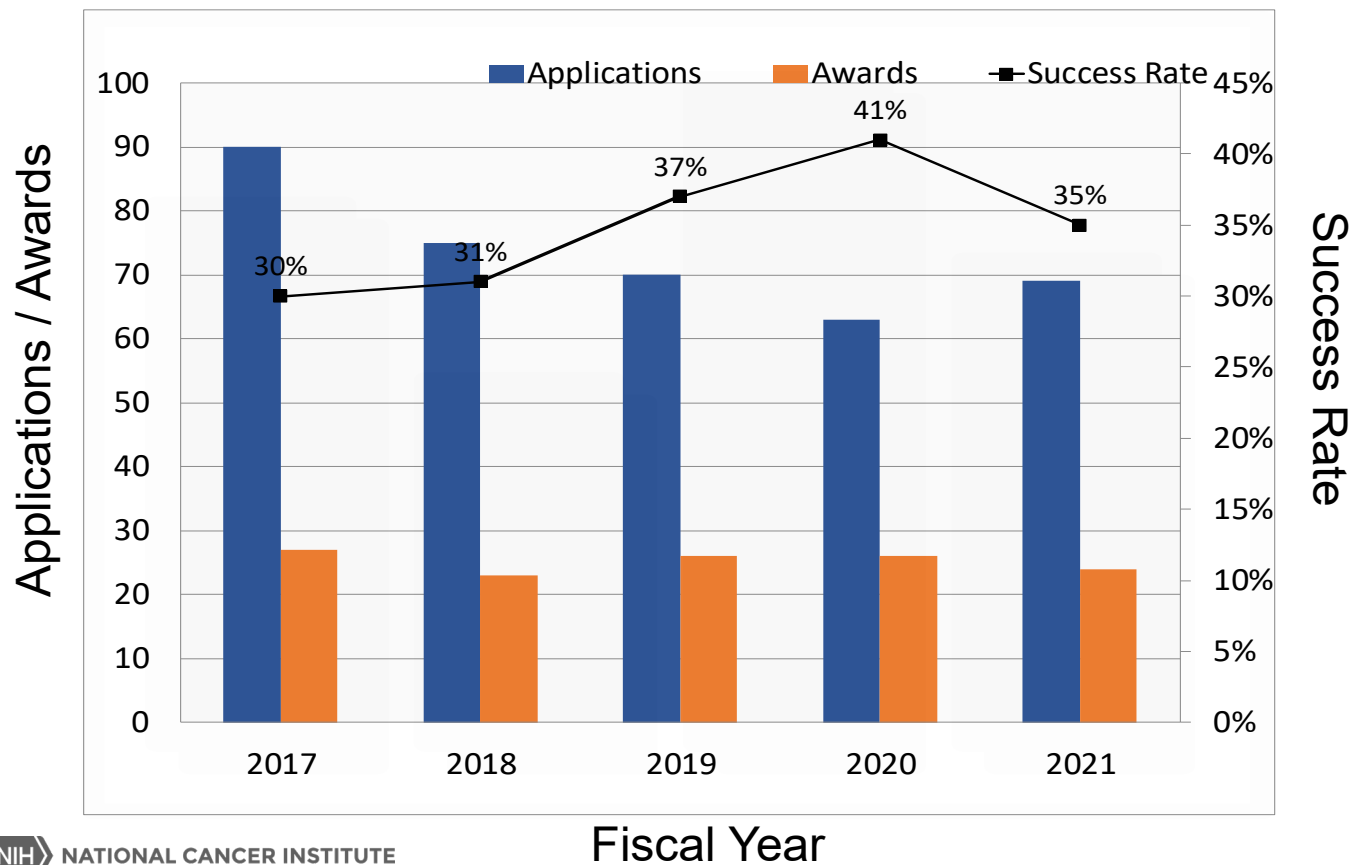


F99/K00 Predoc to Postdoc Fellow Transition Award



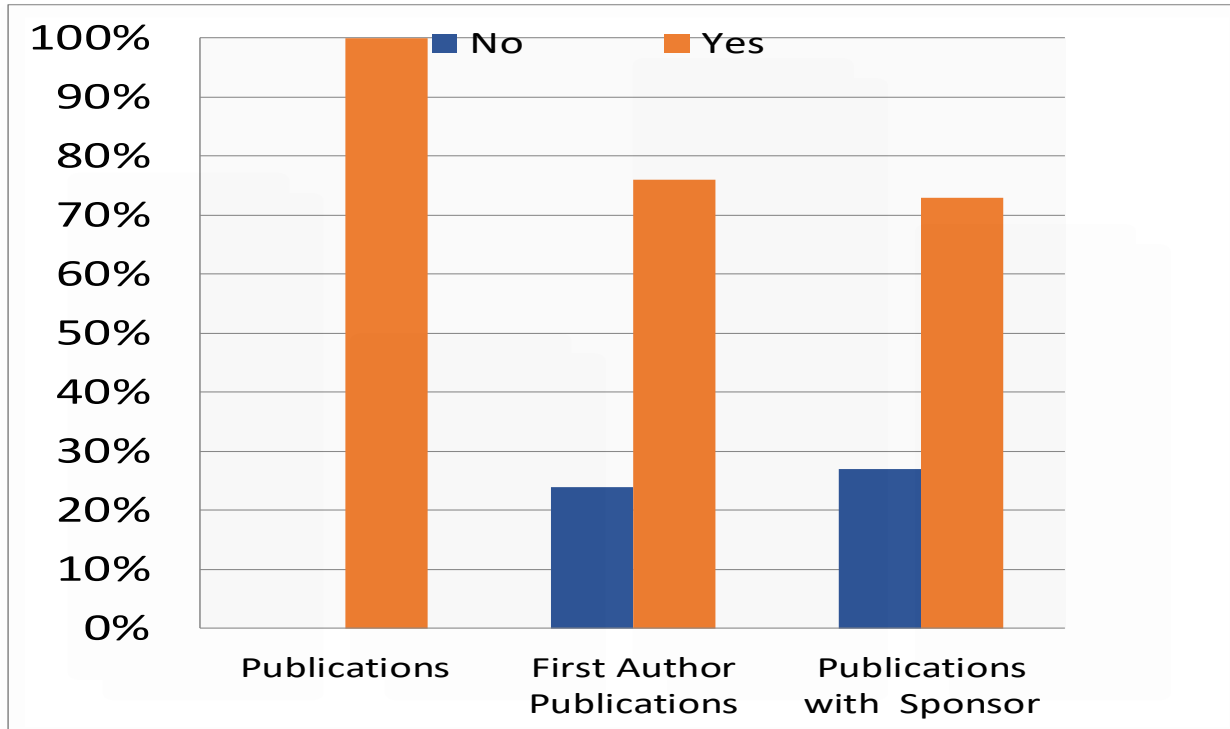
- Goal: Encourage outstanding late-stage graduate students to pursue careers in cancer research as independent investigators by facilitating transition to cancer-focused postdoctoral appointments.
 - Graduate students may apply in 3rd or 4th year
 - Not NRSA; student visas are eligible
 - Non-clinical PhD or other research degree program
 - Only 1 nominee per institution
 - Annual application deadline around November
- Dual-phase funding
 - **F99** phase = 1-2 years; similar to F31
 - Fellow completes dissertation research, secures a postdoctoral fellowship
 - Transitions to **K00** phase (mentored K award) = 4 years
 - Higher salary than F32 postdoc stipend + \$3,000 for research expenses

F99 Applications, Awards and Success Rates



- 5-year average success rate 35%
- Higher than F31 average success rate of 25%

F99 Awardee Profiles



Characteristics

- F99 awardees are typically in the 4th year of the PhD program
- Many of them were F31 fellows
- F31 awardees generally have fewer publications (39% have 1st author pubs and 43% have pubs with their sponsor)

Ruth L. Kirschstein National Research Service Award (NRSA)

Individual Fellowships

F30 Predoc

- Support predocs during clinical & graduate training leading to a **combined** doctoral degree (e.g., MD/PhD, DDS/PhD, DVM/PhD, AuD/PhD, DO/PhD)
- Enrolled in a **dual degree clinical program no more than 48 months prior to initial application** & must have identified a dissertation project & sponsor
- At least 50% of the award period must be devoted to full-time graduate research training leading to the research doctoral degree

[Learn more](#)

F31 Predoc

- **F31** supports PhD research candidates who have identified a mentor & will be performing dissertation research
- **Diversity F31:** supports both dual degree and PhD only predocs from diverse groups under-represented in the biomedical or behavioral sciences
- Typical time to apply for an F31 is when a thesis proposal has been approved

[Learn more](#)

F32 Postdoc

- Supports mentored postdoctoral training under the guidance of a faculty sponsor
- Fellows must have a research or clinical doctoral degree from an accredited US or foreign institution
- Integrated program of research & mentored training to enhance potential to develop into an independent researcher
- Currently limited to total of 3 years but extensions can be requested

[Learn more](#)

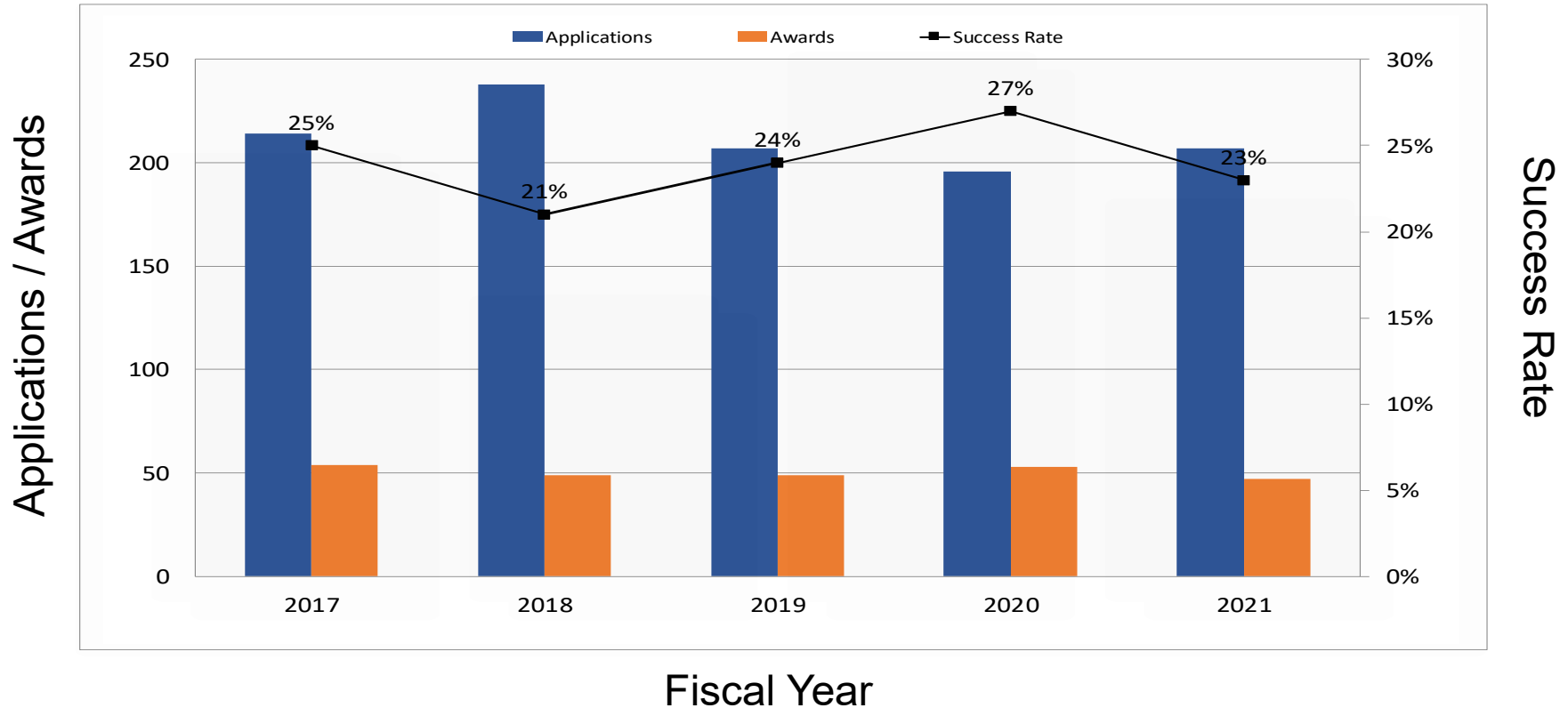
All fellowships require references from individuals *other than* primary mentor(s)

NRSA Fellowships Provide

Levels are from FY21 since currently under Continuing Resolution

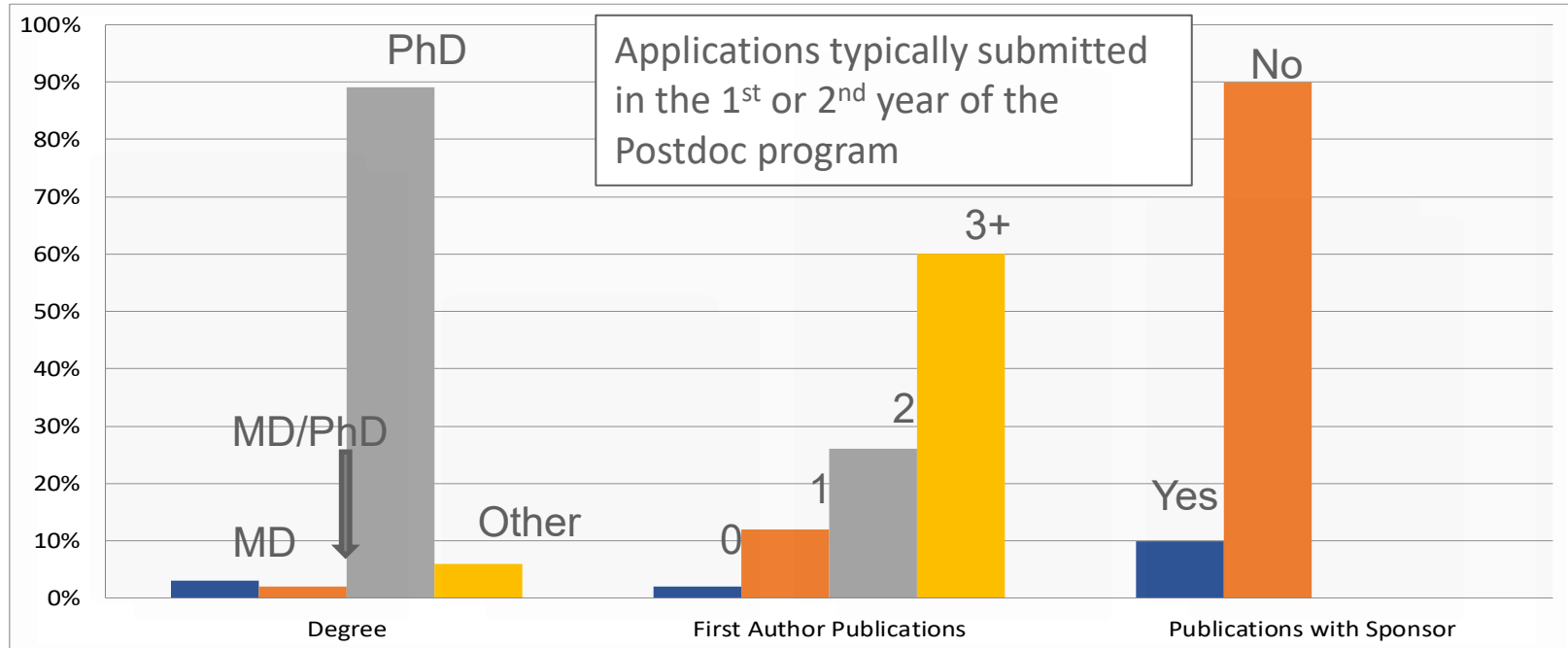
- **Stipend (full-time effort required)**
 - Predocs (F30 or F31): \$25,836 per year for up to 5 or 6 years
 - Postdocs (F32): \$53,760—\$65,292 per year for up to 3 years
 - Stipend level depends on number of years of postdoctoral experience
- **Partial tuition and fees**
 - 60%, up to \$21,000 (in a degree program) or \$4500 (postdocs)
- **Funds for training-related expenses** (mostly health insurance, travel)
 - \$4,200 for a predoc trainee; \$11,850 for a postdoc trainee

F32 Applications, Awards and Success Rates



F32 Post-doctoral Fellow Characteristics

- US Citizens or Permanent Residents



Characteristics

Fellowship Applications: Factors to Consider

- NCI requires that the sponsor have research funding (R01 or equivalent) because fellowships do not fund the research project
- Research training that has a clear cancer focus
- Typical timing of submission
 - F30: year 4 of a dual-degree program
 - F31: year 3 of a PhD program
 - F99/K00: year 4 of PhD program
 - F32: 1st (30%) or 2nd (60%) year of postdoctoral fellowship
- NCI expects the applicant to have intellectual input in the project

Individual Research Career Development Awards (Ks)

Fostering the transition of new investigators to research independence

	“Early” K99/R00	Parent K99/R00	K01 Diversity (NCI-CRCHD)	K22 and K22 Diversity	K08 and K08 Diversity
Mentored vs non-mentored (independent)	Mentored phase / Non-mentored phase	Mentored phase / Non-mentored phase	Mentored	Non-mentored	Mentored Clinical Scientist
Citizenship	U.S. citizens or non-U.S. citizens	U.S. citizens or non-U.S. citizens	U.S. citizens or permanent residents	U.S. citizens or permanent residents	U.S. citizens or permanent residents
Eligibility	≤ 2 years postdoc training	≤ 4 years postdoc training	2 – 5 years postdoc training	2 – 8 years postdoc training	Postdoc and early career
Duration of Award	1-2 years K99 1-3 years R00	1-2 years K99 1-3 years R00	Support for 3 – 5 years protected time	Support for 3 years activated when independence begins	Support for 3 – 5 years protected time
Budget	Salary up to \$100K Fringe benefits Research \$30K (K99 portion)	Salary up to \$100K Fringe benefits Research \$30K (K99 portion)	Salary up to \$100K Fringe benefits Research \$30K	Salary up to \$100K Fringe benefits Research \$50K	Salary up to legislative cap Fringe benefits Research \$50K

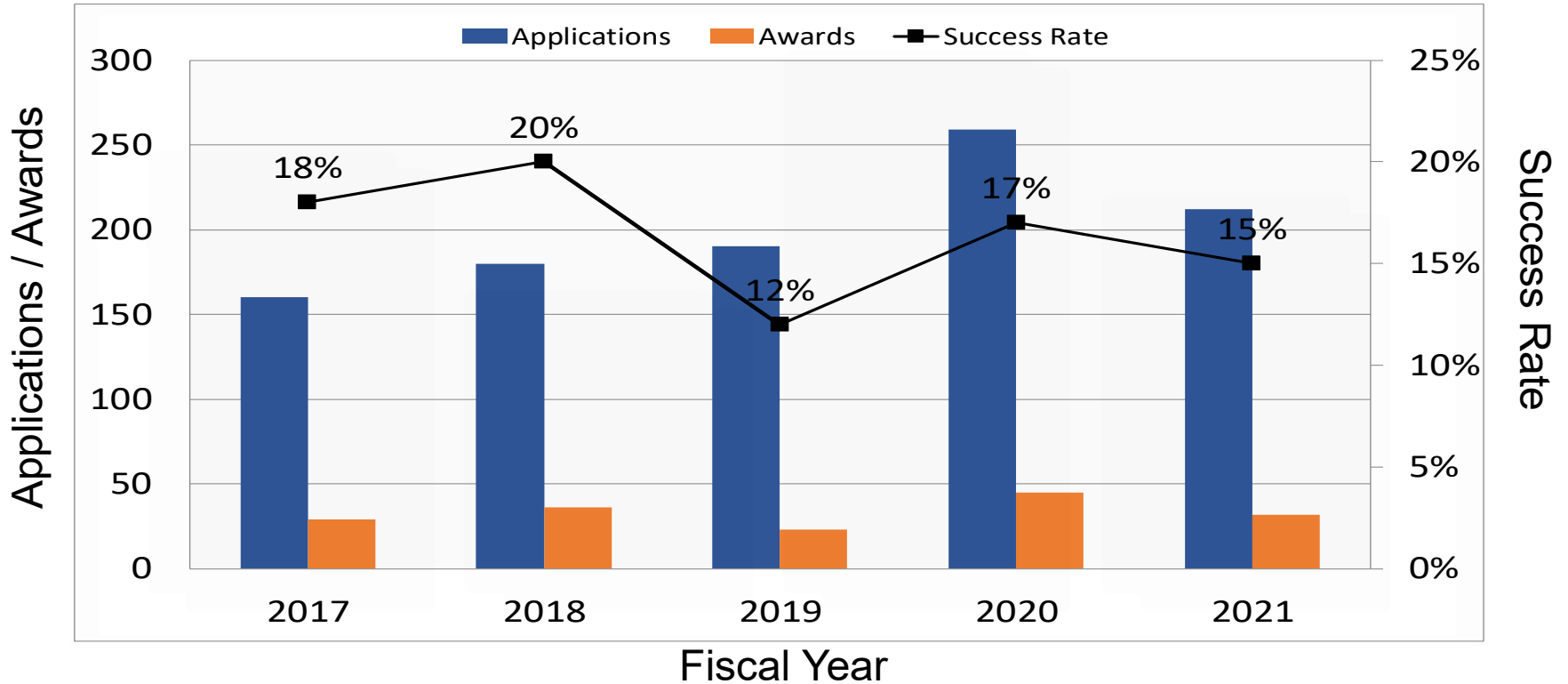
Criteria for Successful Mentored Career Award Applications

- Candidate: motivated, well-trained, productive
- Mentor(s): strong mentoring and funding track record, highly qualified, committed to support the candidate
- Career development/ training plan: meaningful training in research and professional development
- Research plan: innovative, good training platform/ vehicle for transition to independence (high feasibility/ high impact; niche for applicant's own lab)
- Convince reviewers that: the research qualifications are appropriate (training/experience); there is potential for independence (collaborations, teaching, mentoring); there is potential to make important contributions to the field

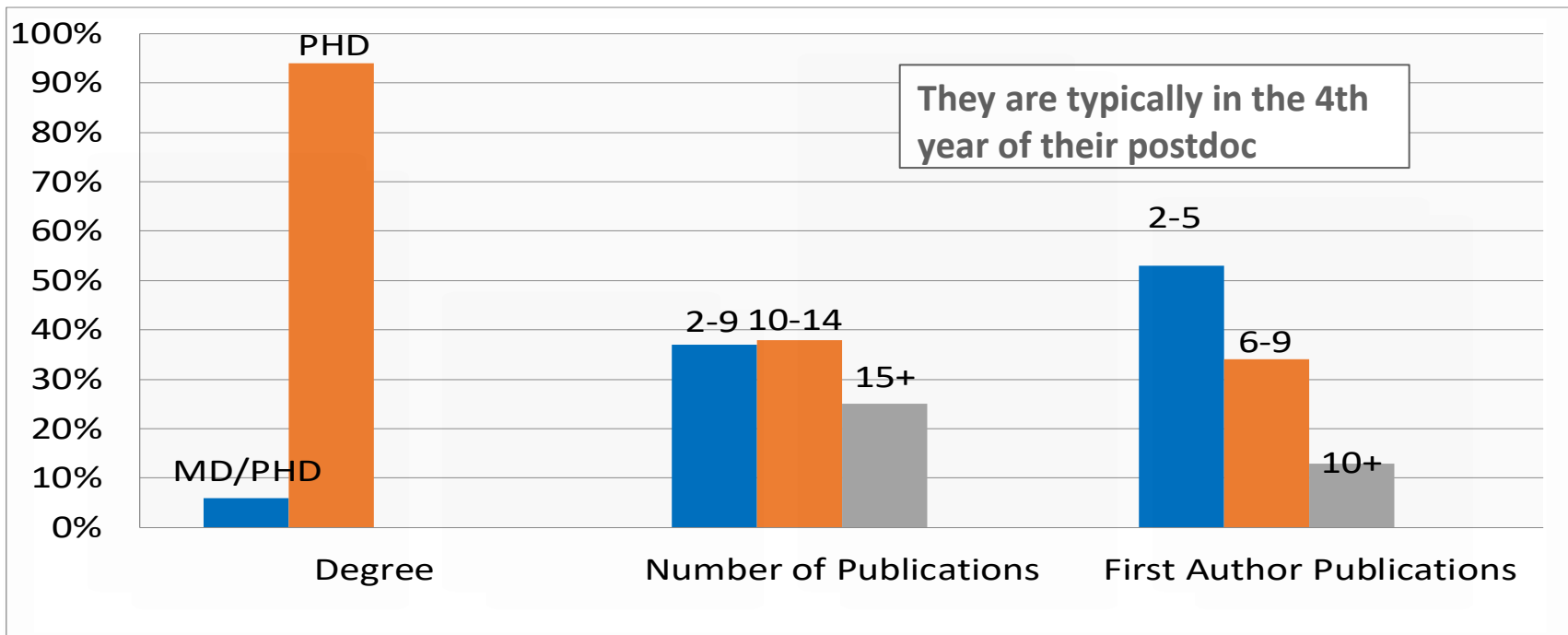
Tips for Mentors/Sponsors on Career Award Applications

- Identify co-mentor(s)/ co-sponsor(s)
- Co-mentor(s) should have a clearly defined role in the application
- Develop a training plan/career development plan that is tailored to the needs of the applicant/candidate.
- Be actively involved in the grant preparation process
 - grantsmanship issues = poor mentoring
- Avoid scientific overlap + no text duplication from R01

K99 Applications, Awards and Success Rates



K99 Awardee Profile



Characteristics

Ruth L. Kirschstein National Research Service Award (NRSA) Institutional Research Training (T32): [PA-20-142](#)

<https://www.cancer.gov/grants-training/training/funding/t32>

- Congressionally mandated training program, est. in 1974.
- To enhance predoctoral and postdoctoral research training
- Research training programs are expected to incorporate **didactic**, **research**, and **career development elements** to prepare trainees for careers in the Nation's biomedical, behavioral, and clinical research needs.
- Trainee must be US Citizen or a non-citizen National /permanent Residence

NCI-Specific Information:

<https://grants.nih.gov/grants/guide/contacts/nrsa-institutional-research-training-grant-parent-t32.html>

- NCI T32 training programs must be cancer focused.
- The Principal Investigator (PI) must hold an R01, or R01-equivalent, peer-reviewed cancer-focused research grant at the time of application. The PI is expected to maintain such grant support during the project period.
- Mentors are expected to have independent R01, or R01-equivalent, research funding.
- New and Early Stage Investigators with no such funding may serve as co-mentors.
 - For the NCI T32, R01-equivalent research funding includes peer-reviewed research grants from other federal sources and private foundations. The award duration is expected to be for at least 3 years with a minimum of \$150,000 direct costs per year. Grants under a no-cost extension do not qualify.

NCI-Specific information updated July 2020

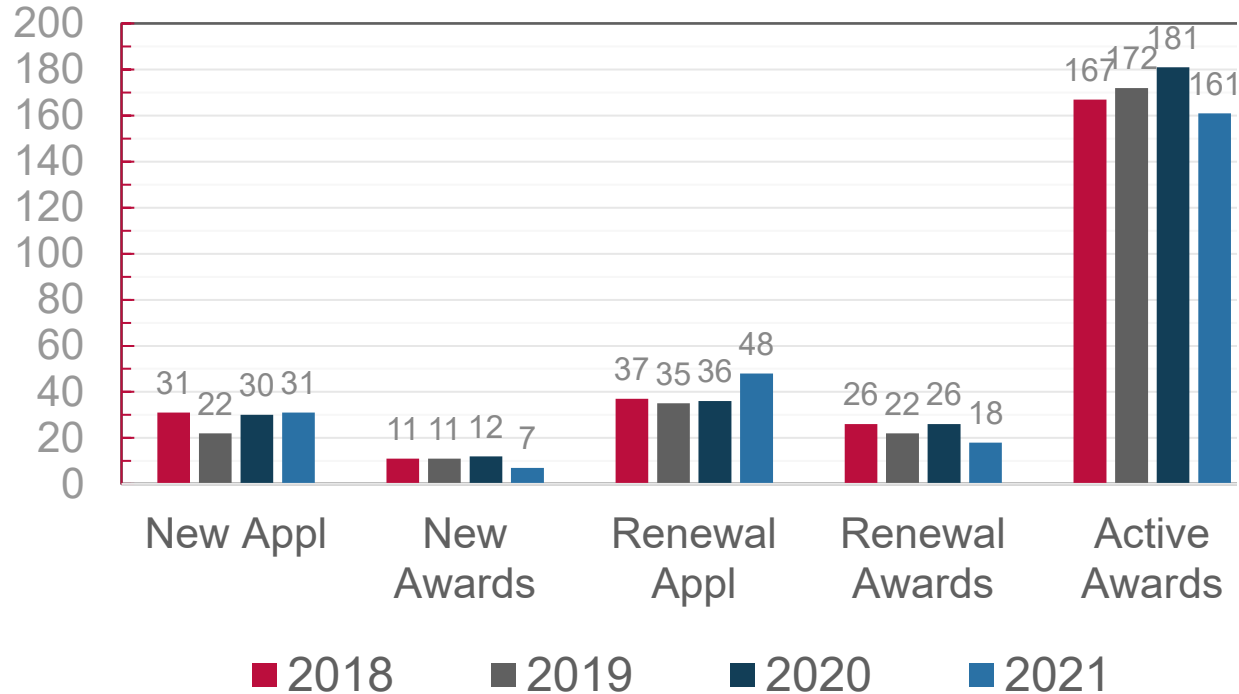
Program	<ul style="list-style-type: none">➤ May support predoctoral only, postdoctoral only, or combined predoctoral and postdoctoral training.➤ For new programs NCI will give funding priority to programs that do not overlap substantially with existing program at the applicant institution. <i>(Predoc only vs. Postdoc only are not considered substantially different)</i>
Budget (Direct Costs)	<p>New T32 Training Programs:</p> <ul style="list-style-type: none">• May request up to 6 trainee slots <p>Competing renewal T32 Training Programs:</p> <ul style="list-style-type: none">• May request changes in types of trainee slots• May not request more than 8 trainee slots in any budget year at the time of competitive renewal; a program with more than 11 current trainee slots may request a stepwise reduction.

T32 Allowances

- 1. Stipend:** a subsistence allowance to help defray living expenses during the research training experience.
- 2. Tuition & Fees:** Offset the cost for Degree vs. non-Degree Tuition
- 3. Travel**
- 4. Training Related Expenses:** to help defray other research training expenses, such as health insurance, staff salaries, consultant costs, equipment, research supplies, and faculty/staff travel directly related to the research training program.

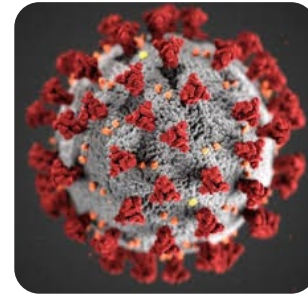
T32 Funding FY2018-2021

FY21 success rate: 32%



For early-stage investigators whose research productivity has been impacted by COVID-19 during their NIH ESI period

- Submit a request for an extension to NIH ESI status and describe the nature of the disruption to research productivity in the request.
- Link in the Education section of the PI's Personal Profile in [eRA Commons](#).
- NIH will consider requests to extend the ESI status period for reasons that can include the following, as determined on a case-by-case basis at the sole discretion of NIH.
 - Medical concerns
 - Disability
 - Family care responsibilities
 - Natural disasters
 - Active duty military service



- <https://nexus.od.nih.gov/all/2020/04/09/can-esi-status-be-extended-due-to-disruptions-from-covid-19/>
- https://era.nih.gov/erahelp/ESIE_ext/Default.htm#cshid=4

Thank you for your attention

Email: nas.zahir@nih.gov
Twitter: @NCI_Training
@nas_zahir | @nci_bogler



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