

December 29, 2023

National Institutes of Health
9000 Rockville Pike
Bethesda, Maryland 20892

RE: Request for Information (RFI): Inviting Comments and Suggestions on the National Cancer Institute's Support of Early Career, Mentored Cancer Researchers and Trainees (NOT-CA-24-007)

Submitted electronically at: nci_earlycareer_rfi@mail.nih.gov

The Association of American Medical Colleges (AAMC) appreciates the opportunity to provide feedback to the National Cancer Institute (NCI) on potential approaches and innovations to support early career, mentored cancer researchers, students, and postdoctoral scholars. The NCI's current efforts align with the AAMC's strategic plan, which seeks in part to attract and advance a diverse workforce and foster more inclusive, equitable research environments throughout academic medicine.¹ The AAMC notes the timely discussion on cancer research workforce issues at a time of transition for NCI leadership and welcomes W. Kimryn Rathmell, M.D., Ph.D., as the 17th Director of the NCI into this critical conversation. The AAMC leadership and AAMC member community are looking forward to working with Dr. Rathmell and her team to advance our shared goals.

The AAMC is a nonprofit association dedicated to improving the health of people everywhere through medical education, health care, medical research, and community collaborations. Its members are all 157 U.S. medical schools accredited by the Liaison Committee on Medical Education; 13 accredited Canadian medical schools; approximately 400 teaching hospitals and health systems, including Department of Veterans Affairs medical centers; and more than 70 academic societies. Through these institutions and organizations, the AAMC leads and serves America's medical schools and teaching hospitals and the millions of individuals across academic medicine, including more than 193,000 full-time faculty members, 96,000 medical students, 153,000 resident physicians, and 60,000 graduate students and postdoctoral researchers in the biomedical sciences. Following a 2022 merger, the Alliance of Academic Health Centers and the Alliance of Academic Health Centers International broadened the AAMC's U.S. membership and expanded its reach to international academic health centers.

The AAMC commends the NCI – the nucleus for driving national cancer research – for prioritizing the training and development of the 21st century cancer research workforce. This is a vital and timely mission for several reasons. First, NCI's investment in the cancer workforce will fortify new and ongoing efforts to reduce the death and burden caused by cancer, such as the Biden Administration's Cancer Moonshot, which aims to “end cancer as we know it.”² Second, over the last several years, the NIH has re-imagined and launched efforts to diversify the national biomedical workforce, including the establishment of the NIH's first strategic plan for diversity, equity, and inclusion and accessibility (DEIA). We believe that NCI has a prime opportunity to synergize with and amplify agency-wide DEIA efforts. All cancer research efforts,

¹ AAMC Strategic Plan, *available at*: <https://www.aamc.org/about-us/strategic-plan/healthier-future-all-aamc-strategic-plan>

² White House Cancer Moonshot, *available at*: <https://www.whitehouse.gov/cancermoonshot/>

whether in prevention, treatment, or diagnostics, fundamentally rely on a diverse, well-supported research workforce.

Our comments reflect additional input from the academic medicine community, namely leaders of PhD, MD-PhD and postdoctoral programs, research deans, and other research leaders. We provide comments in each of the three areas for which NCI has identified opportunities for improvement.

1. *Improvements to current funding mechanisms offered by the NCI, including eligibility criteria, duration of the award, components of the award, and whether the award provides other types of support beyond funding:*

- **Diversify NCI’s funding portfolio by coupling Congress-appropriated NIH funding streams with alternative funding sources; thereby bolstering the amount of cancer-related research.** Though the NCI payline has increased every year since 2019³, its payline – currently in the 12th percentile – prohibits the funding of some of the most innovative research projects in the field. Moreover, the low probability of receiving funding might deter individuals from viewing academic research careers in cancer as attractive. We encourage NCI, for example, through the Foundation for NIH (FNIH), to seek further opportunities for collaborations with non-governmental funders of research. This may allow NCI to fund a greater number of research projects. The AAMC encourages the NCI to pilot and adopt new grant review policies that allow these other funders to take part in the review process and contribute to the selection of meritorious applicants for funding. The AAMC also recommends that NCI promote **downstream** institutional culture change by highlighting the value of all funding mechanisms (e.g., when evaluating productivity during promotion and tenure processes).
- **Continue mechanisms for supporting staff scientists and disseminate outcomes to potential IC partners.** A portion of NCI-funded researchers want to meaningfully contribute to cancer research without entering the tenure-track investigator path. We commend the NCI for funding the staff scientist awards for core-based and laboratory scientists,⁴ a key mechanism that can recruit and retain talent in the cancer research workforce. We encourage NCI to **disseminate outcomes and successes/challenges so that other NIH institutes and centers (ICs)** can either develop their individual mechanisms for supporting staff scientists or collaborate with the NCI’s mechanism. As stated previously in a AAMC response letter⁵, a defined staff scientist role that stands alone as a bona fide academic career path (distinct from an amorphous, extended postdoctoral position) is crucial for making academic medicine an attractive career choice.
- **Continue to invest in mechanisms that help with career transition stages, such as the K99/R00.** Career transition points (e.g., postdoc to early faculty) are a ‘vulnerable’ stage where individuals can drop out of the academic research pathway. The NIH, and specifically NCI, has several *pre-existing transition* awards, such as the K99/R00 Pathway to Independence Award⁶ and newly launched Pathway to Independence Award for Early-Stage Postdoctoral Researchers, that support individuals during such transition points. **The AAMC recommends that the NCI continue to invest in such awards** as well as ensure that these awards are rewarded to a diverse group of applicants. We further recommend that the NCI **modify pre-existing eligibility requirements on certain awards that limit nomination to one application (individual) per institution.**⁷

³ NCI Funds More Research Grants Thanks to Action by Congress, *available at*: <https://www.cancer.gov/grants-training/nci-bottom-line-blog/2023/nci-funds-more-research-grants-thanks-to-congress>

⁴ NCI Research Specialist, *available at*: <https://grants.nih.gov/grants/guide/pa-files/PA-23-242.html>

⁵ AAMC Response to NIH Request for Information (RFI) on Re-envisioning U.S. Postdoctoral Research Training and Career Progression within the Biomedical Research Enterprise, *available at*: <https://www.aamc.org/media/66136/download?attachment>

⁶ NIH K99/R00 - The Pathway to Independence Award, *available at*: <https://www.cancer.gov/grants-training/training/funding/k99>

⁷ The NCI Predoctoral to Postdoctoral Fellow Transition Award (F99/K00), *available at*: <https://grants.nih.gov/grants/guide/rfa-files/RFA-CA-19-057.html>.

2. *Opportunities to develop new award mechanisms that would meet the needs of early career, mentored cancer researchers:*

- **Invest in the person, not simply the project.** The AAMC encourages the NCI to continue building funding mechanisms that are ‘person-centric,’ rather than ‘project-centric.’ The NCI has launched its Outstanding Investigator Award and other NIH Institutes have also launched ‘person-centric’ mechanisms such as the NIGMS Maximizing Investigators Research Award (MIRA)/R35. We encourage the NCI to continue developing such awards that could promote the advancement of individuals throughout their career.

3. *Approaches to supporting the development of a diverse cancer research workforce that NCI is currently not pursuing:*

- **Provide resources to close the information gap among institutions.** The disparities in research proposal funding rates among institutions is well-supported by data. For example, applicants from institutions that submit low numbers of R01 and fellowship applications have worse review outcomes. Concomitantly, applications are highly concentrated in a small number of institutions, and review outcomes improve as the academic rank of the sponsor rises. As AAMC has previously recommended,⁸ we urge NCI to **provide standardized resources to account for the variance in application preparedness and expertise across institutions.**
- **Continue funding cohort-based programs, particularly those that connect multiple institutions.** Cohort-based programs, such as the Maximizing Opportunities for Scientific and Academic Independent Careers (MOSAIC) program, for which AAMC is a UE5 awardee, brings together a cohort of K99/R00 postdoctoral scholars from diverse backgrounds as they transition from postdocs into academic research faculty positions, thereby providing valuable networking, peer-to-peer mentoring, and access to additional career and professional development opportunities. The AAMC encourages the NCI, the sole NIH funding institute who does not participate in MOSAIC, to join the other NIH institutes in the MOSAIC program. NCI’s continued participation in the Faculty Institutional Recruitment for Sustainable Transformation (FIRST) program, another excellent cohort-based model, is also essential for bolstering the inclusive excellence of the national cancer workforce.
- **Formalize mentoring requirements for NCI-funded graduate students, postdoctoral scholars, and early career investigators.** Effective mentoring is an invaluable component of a successful career in academic research. In order to codify and standardize effective mentoring across NIH-funded institutions, the NCI could require that all graduate students and postdocs supported on any type of research grant have a mentorship plan. Moreover, the NCI could ensure that mentors report on the progress of that plan as part of their progress reports.
- **Synergize with and complement NIH-wide efforts to amplify diversity, equity, inclusion, and accessibility.** Partnering with the NIH’s Chief Officer for Scientific Workforce Diversity (COSWD) Office, UNITE, and the NIH-wide strategic plan for DEIA is vital to amplify diversity, equity, inclusion, and accessibility.

⁸ AAMC Response to NIH RFI on Recommendations for Improving NRSA Fellowship Review, *available at:* <https://www.aamc.org/media/68376/download?attachment>.

The AAMC appreciates the opportunity to submit these comments to the NCI in order to support early career, mentored cancer researchers, students, and postdoctoral scholars. If you have any questions regarding this response, please contact me or my colleagues Jodi Yellin, PhD, Director, Research Workforce, Training, and Science Policy ([jyellin@aamc.org](mailto: jyellin@aamc.org)) or Julia Omotade, PhD, Senior Specialist, Science Policy ([jomotade@aamc.org](mailto: jomotade@aamc.org)).

Sincerely,

A handwritten signature in blue ink that reads "Heather H. Pierce". The signature is fluid and cursive, with the first name being the most prominent.

Heather H. Pierce, JD, MPH
Acting Chief Scientific Officer

cc: David J. Skorton, MD, President and Chief Executive Officer