

November 13, 2023

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Re: Request for Information on National Institute of Dental and Craniofacial Research's Proposed Research Initiatives.

via website: https://www.nidcr.nih.gov/grants-funding/funding-priorities/future-research-initiatives-concept-clearances/nidcr-requests-input-september-2023-proposed-research-initiatives?utm_medium=email&utm_source=govdelivery

The American Association for Dental, Oral, and Craniofacial Research (AADOOCR) is the leading professional community for multidisciplinary scientists who advance dental, oral, and craniofacial research. We appreciate the opportunity to share our thoughts on the National Institute of Dental and Craniofacial Research's (NIDCR) fiscal year (FY) 24 proposed research initiatives. AADOOCR recognizes and applauds NIDCR's effort to support research in significant and understudied areas of science and to continually build upon NIDCR's research portfolio. To respond to this request for comments, AADOOCR engaged its Science Information Committee and its Board of Directors.

AADOOCR would like to congratulate NIDCR on a very comprehensive scope for the FY24 research initiatives that covers a wide breadth of considerations needed for the advancement of dental, oral, and craniofacial (DOC) research. The seven proposed research initiatives outlined by the NIDCR addresses current research gaps, tackles diversity, equity, and inclusion workforce challenges, defines critical public health measures, and presents sustainable mechanisms for community-based knowledge transfer. The defined specific areas of interest adequately and appropriately provide suggestive streams of research that would fill existing research gaps within DOC research. AADOOCR would like to specifically provide suggestions for two of the proposed research initiatives outlined below.

Determining the Tri-directional Relationship Between Oral Health, Nutrition, and Comprehensive Health

The interactions between variables, and between classes of variables in the scientific areas of nutrition, systemic health, behavioral health, and oral, dental, and craniofacial health, are very important but difficult to tease out. A potential gap in the proposed specific areas of interest would be a consideration of how nutrition and oral health care

coincide with aging specific to the transitions in an individual's life such as retirement with a likely transition to a different level of health insurance, changes to diet because of reduced income, or reduced mobility making it difficult to self-select groceries. Tooth loss, lack of or ill-fitting dentures also influence dietary choices and nutrition⁶. Poor oral health, difficulty chewing, toothache and embarrassment about dental esthetics can cause people to avoid eating as a social activity, particularly important for older adults, and can lead to more social isolation and loneliness, a risk factor for many diseases⁶. These factors are all closely intertwined and need to be studied together. **Therefore, AADOCR supports the inclusion of research that assesses longitudinal data** in addition to a cross-sectional approach. The inclusion of this level of granularity by additionally collecting and reviewing longitudinal data may provide better discernment regarding the variation seen in cross-sectional studies and will increase the feasibility of designing effective nutritional interventions for the dental setting.

NIDCR Mentoring Networks for Underrepresented and Early-Career Investigators (Reissue)

This proposed research initiative aligns well with the goals and mission of NIDCR and increases the visibility of the opportunities being offered to fund, train, and support early career researchers and scholars from underrepresented groups. NIDCR's investment in establishing networks for underrepresented and early-career investigators is essential for the progress of DOC that addresses issues for all individuals. These programs offer supplementary infrastructure in instances where local mentoring is insufficient and where lack of representation or generational knowledge about our career path hinders progress. The success of AADOCR's Mentoring an Inclusive Network for a Diverse Workforce of the Future (MIND the Future) program begets the re-issuance of this research initiative. MIND The Future offers structured interactions for both mentees and mentors following formal mentor and mentee training and provides participating scholars the opportunity to broaden their networks beyond their home institutions and across an array of DOC research topics. The program has resulted in 50% of cohort 1 scholars receiving R01, R03, or R21 awards; whilst 45% of cohort 2 scholars receiving the same. Although cohort 3 concluded in September 2023, already, 18% of scholars have received a R01, R03, or R21 award. Thereby indicating the program's success rate in fortifying the skillset of participants. This continues to move the needle forward towards an equitable approach to affording opportunities for all researchers. Therefore, **AADOCR supports the re-issuance of this research initiative.**

Additionally, **AADOCR would support expanding the key features of this research initiative to include targeted upstream efforts to the undergraduate level.** Decades of data have shown that more diverse research initiatives yield more impactful science and better clinical outcomes¹. Thus, NIDCR's investment in creating infrastructure to support diverse new investigators is important for the scientists it impacts and the

research institutions, clinics, and patients that benefit from our science. According to a recent publication by Salsberg et al., the mean diversity index for persons of Black, Hispanic, and Native American descent in the current workforce of health professions is 0.54, 0.34, and 0.54 respectively². The mean diversity index for these ethnicities in the educational pipeline is 0.54, 0.48, and 0.57 respectively². The data indicates that the current pool of potential clinical scientists from which we may recruit for research training is and will continue to be significantly underrepresented in the foreseeable future². To address this major obstacle, more upstream approaches are needed. The avenues to address the pipeline are complex and therefore partnerships with stakeholders as outlined in this research initiative, will be advantageous to securing investments in mentorship and early career development programs for DOC at the undergraduate levels primarily at minority-serving institutions.

AADOCR also supports specific safeguards for the mentorship of post-doctoral participants within this initiative. Effective mentoring is critical for postdoctoral training³. In addition to the research mentor, postdoctoral appointees are encouraged to seek advice and input from multiple individuals who can provide feedback about personal and professional development⁴. Researchers who incorporate ideas and techniques from multiple mentors while still forging their own paths are the most likely to succeed in academia⁵. Post-doctoral researchers that participate in this research initiative with an increased number of mentors may be exposed to undue pressures arising from conflicts of interest with their primary mentor, particularly if there is a need to provide or supervise clinical care that decreases time available for research. Therefore, it is critical that primary mentors also express buy-in to this research initiative and the expectations of participation are clear.

As AADOCR hosts the only funded cooperative agreement award of the previous issue of this grant, we saw it fit to include a direct quotation from a current participant of this program. Dr. Kimberly Jasmer is a 2023-2024 Mentee for the MIND the Future Program and currently serves on the AADOCR Committee on Diversity and Inclusion (paying it forward). She expressed *“Through the MIND the Future program, I was matched with a mentor in my field who is exquisitely suited to guide me through my transition to independence, job search, and upcoming funding applications and manuscripts. They have both subject area expertise and career path similarities that will undoubtedly assist my career development. The ability to prepare a funding application and have it reviewed in a mock study section with the guidance of experienced investigators and peer mentors is invaluable. Further, the community that this program has created will outlast the specific exercises we complete over the course of this year. That community includes future collaborators, advocates, and colleagues.”* Her comments underscore the impact of this research initiative and provide further fodder for the re-issuance of this initiative.

AADOOCR appreciates the opportunity to provide comments on NIDCR's proposed research initiatives for FY24. AADOOCR stands ready to work with NIDCR to promote the continuous quality and improvement of dental, oral, and craniofacial research programs but also to further move the needle on the transfer of knowledge from these research initiatives to policy making processes.

If you have any further questions, please contact Dr. Makyba Charles-Ayinde, Director of Science Policy, at mcayinde@iadr.org.

Sincerely,



Christopher H. Fox, DMD, DMSc
Chief Executive Officer



Alexandre Vieira, DDS, MS, PhD
President

¹Swartz et al. (2019). The Science and Value of Diversity: Closing the Gaps in Our Understanding of Inclusion and Diversity. *J Infect Dis.* 220(Suppl 2): S33-S41.

²Salsberg E et al. (2021). Estimation and Comparison of Current and Future Racial/Ethnic Representation in the US Health Care Workforce. *JAMA Open Network.* 4(3):e213789.

³Both MB. (2015). Mentoring for the Postdoctoral/Early Career Researcher: Key Elements and Broader Impacts. Retrieved from: <https://files.eric.ed.gov/fulltext/ED590478.pdf>. Accessed on October 31, 2023.

⁴Vornhagen J et al. (2023). Secondary Mentors Boost the Postdoctoral Experience. *The POSTDOCKET.* 16(8).

⁵Woolston C. (2019). Postdoctoral Mentorship Key to Career Success. *Nature.* 565(7741):667.

⁶Weintraub JA et al. (2023). Geroscience: Aging and Oral Health Research. *Advances in Dental Research.* 31(1):2-15.