Mark C. Herzberg, D.D.S., Ph.D.
President, American Association for Dental Research
Chair, Board of Directors, American Association for Dental Research
Written Testimony
House Appropriations Subcommittee on Labor, Health and Human Services, Education and Related Agencies
May 17, 2021

On behalf of the American Association for Dental Research (AADR), I am pleased to submit testimony describing AADR's funding requests for fiscal year (FY) 2022. I currently serve as the chair of the Board of Directors and president of the Association. I am a professor in the Department of Diagnostic and Biological Sciences at the University of Minnesota School of Dentistry, where I also serve as the director emeritus of the Minnesota Craniofacial Research Training Program (MinnCResT).

For FY 2022, the American Association for Dental Research—along with our colleagues in the oral health community—is seeking at least **$520 million for the National Institute of Dental and Craniofacial Research (NIDCR)** and at least **$46.111 billion for all of the Institutes and Centers at the National Institutes of Health (NIH)**. Funding at these recommended levels will allow for the entities' base budgets to keep pace with the biomedical research and development price index (BRDPI) and provide meaningful growth of 5%.

As our nation continues to respond to the global COVID-19 pandemic, we are reminded of the importance of the federal investment in science, and in particular, biomedical research. AADR is grateful to Congress for consistently prioritizing this research at NIH by providing steady and meaningful funding increases, which will be more important than ever to carry forward in the wake of the pandemic. While we recognize there will be funding challenges in FY 2022 given the tremendous resources allocated to COVID-19 relief, we cannot afford to underfund our nation's research agencies now. Underfunding will leave us ill-equipped to

complete our exit from the current pandemic, deal with future pandemics, and risk losing the progress that has been made by congressional investment in biomedical research.

The requested 5% growth above BRDPI would provide critical support for these research agencies, which have been among the many enterprises negatively impacted by this public health crisis. The ongoing pandemic caused closures of university campuses and forced laboratories to scale back or halt research projects. It also required research agencies to shift existing resources and funding to coronavirus-related research at the expense of other important scientific inquiries about health and disease.

NIDCR—the largest institution dedicated exclusively to research to improve dental, oral and craniofacial (skull and face) health—is one the NIH Institutes and Centers that has prioritized COVID-19 research. To date, NIDCR has funded approximately **$3.9 million of immediate and high impact research to protect and ensure the safety of personnel and patients in dental practices during the COVID-19 pandemic**. The Institute will soon release a second round of funding related to COVID-19.[1] Funding for NIDCR's COVID-19 research is critical to the nation's public health, supporting work that includes the use of personal protective equipment (PPE) in dental settings, aerosol and droplet transmission in dental settings, the infection of salivary glands and oral tissues by SARS-CoV-2, and the use of biosensors to detect SARS-CoV-2 in saliva.

This important research agenda with broad public health impact notwithstanding, NIDCR was not included among the NIH Institutes and Centers to receive targeted supplemental funding in COVID-19 relief legislation – nor has the annual investment in NIDCR

[1] National Advisory Dental and Craniofacial Research Council - January 2021. National Institutes of Health, 2021. https://videocast.nih.gov/watch=38984.

kept pace with the overall funding increases provided to NIH over the past several years. Funding of at least $520 million in FY 2022 would help bring NIDCR funding into alignment with the overall NIH request and allow NIDCR to build on its myriad successes in its mission to improve dental, oral and craniofacial health.

Oral health—too often considered in isolation—is integral to overall health. The research being conducted at, and supported by, NIDCR impacts the lives of millions of Americans. Oral health can affect activities that may be taken for granted: the ability to eat, drink, swallow, smile, speak, and maintain proper nutrition. The oral cavity also serves as a window into potential health issues, including but not limited to systemic diseases, such as diabetes, HIV/AIDS and Sjögren's, an autoimmune disease that causes one's immune system to attack parts of its own body.

Coronavirus research shows that the virus can infect more than the upper airways and lungs, but also cells in other parts of the body. In fact, recent NIDCR-supported research has also shown that the novel coronavirus can infect cells in the mouth. As the study's authors explain.[2] :

> "The potential of the virus to infect multiple areas of the body might help explain the wide-ranging symptoms experienced by COVID-19 patients, including oral symptoms such as taste loss, dry mouth and blistering. Moreover, the findings point to the possibility that the mouth plays a role in transmitting SARS-CoV-2 to the lungs or digestive system via saliva laden with virus from infected oral cells."

---

[2] Scientists Find Evidence that Novel Coronavirus Infects the Mouth's Cells. Press Release, NIDCR. https://www.nidcr.nih.gov/news-events/nidcr-news/2021/scientists-find-evidence-novel-coronavirus-infects-mouths-cells; Huang, N., Pérez, P., Kato, T. *et al.* SARS-CoV-2 infection of the oral cavity and saliva. *Nat Med* **27,** 892–903 (2021). https://doi.org/10.1038/s41591-021-01296-8

According to NIDCR's press release on the study, this research is contributing to our understanding of COVID-19, including oral transmission, and could inform interventions to help combat the virus and alleviate the associated oral symptoms. Indeed, this seminal research may have important implications to explain why super-spreader events occur in places where people sing, speak loudly, or party.

Dental, oral and craniofacial research presents vast research opportunities, and we know NIDCR will continue to be the key player in advancing our understanding of the role of the mouth and oral tissues in many scientific frontiers going forward. One path to highlighting the Institute's work and the future of this research in the United States is through the U.S. Surgeon General's Report on Oral Health, a critical update to the seminal "Oral Health in America" report from July 2000. The report—originally set to be released in the fall of 2020—will document the progress in the improvement of oral health since 2000, provide insight into issues currently affecting oral health, and identify opportunities and challenges that have emerged over the past 20 years. The 2000 report shifted perspectives among the public and policymakers by showing that oral health goes beyond healthy teeth and gums and that it is essential to our general health and well-being. We believe the 2020 report will also have a significant impact, and we have encouraged the administration to swiftly review and release the report. The long-awaited report is a critical public health document and is essential to moving our nation's health forward.

In addition to the important work of NIDCR, AADR recognizes that federal research and public health efforts work in concert and that success in one area can benefit another. Therefore, we encourage Congress—in addition to supporting NIH and NIDCR in FY 2022, to support the full breadth of federal agencies supporting oral health. Complementing our NIDCR

and NIH requests, we urge you to provide **$30 million for the CDC's Division of Oral Health**, **$46 million for the Title VII Health Resources and Services Administration (HRSA) programs** that train the dental health workforce, **at least $500 million for the Agency for Healthcare Research and Quality (AHRQ)**, and **at least $200 million for the National Center for Health Statistics (NCHS)**.

The COVID-19 crisis shook our nation and reminded us of the critical role biomedical and public health research play in our society. Over the course of 2020 and 2021, we saw how the research enterprise can safeguard public health, national security and economic growth. We urge Congress to continue to prioritize biomedical research, including dental, oral and craniofacial research in FY 2022 so our nation's citizens can continue to enjoy the benefits of state-of-the-art, world-leading health care.

We appreciate the opportunity to submit this testimony and thank the Subcommittee for considering our request of **at least $520 million in funding for NICDR and at least $46.111 billion for the Institutes and Centers at NIH**. AADR stands ready to assist the Congress in any way we can and to answer any questions you may have.