Written Statement in support of the National Institutes of Health (NIH) and the National Institute of Dental and Craniofacial Research (NIDCR)

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Subcommittee on Labor, Health and Human Services, Education, and Related Agencies

Chair Baldwin, Ranking Member Moore Capito, and members of the Subcommittee, thank you for the opportunity to submit this testimony on behalf of the American Association for Dental, Oral, and Craniofacial Research (AADOCR). For Fiscal Year (FY) 2025, AADOCR is seeking at least **$559 million for the National Institute of Dental and Craniofacial Research (NIDCR)** and a total of **$51.3 billion for all of the Institutes and Centers at the National Institutes of Health (NIH).** Funding at these levels is necessary for these entities to sustain and build on the tangible progress they have made combatting a wide range of diseases and conditions facing American families and communities.

AADOCR deeply appreciates Congress' longstanding and bipartisan support for NIH and the entire public health research enterprise. We recognize the difficult budget decisions facing Congress as it attempts to fund our national priorities while remaining compliant with the *Fiscal Responsibility Act of 2023.* We urge you to consider the enormous benefits of investment in biomedical research – spurring medical discoveries that save and improve lives as well as reducing long-term health care expenditures – despite health research and development investments accounting for less than 6% of overall health spending in the United States.

The NIH is America's most vital and trusted government-funded medical research enterprise helping save countless lives in the U.S. and around the world. Its 27 Institutes and Centers fund cutting-edge biomedical research in every state across the nation and maintain the human and scientific resources that enable America to continue to lead the world in medical discoveries. Sustained investment in the NIH will ensure that our nation has the tools it needs to accelerate life-saving research, train new scientists, and discover therapies and cures for the debilitating diseases and illnesses that millions of American families battle every day.

The NIDCR, which is celebrating its 75th anniversary this year, is the largest institution in the world exclusively dedicated to researching ways to improve dental, oral, and craniofacial (skull and face) health. In FY 2024, the Institute provided nearly 700 competitive research and institutional training grants to about 200 U.S. universities, hospitals, research centers and small businesses. The Institute also helps cultivate a vibrant and inclusive workforce by funding aspiring scientists, at all stages of their careers, through individual research training and career development awards.

NIDCR intramural scientists conduct cutting-edge basic, translational, and clinical research on the biology of pain, itch, and taste; oral and craniofacial genetics and development; immunology of the mucosal system; salivary gland development and function; and stem cell

biology and tissue regeneration. The Institute shares its research findings and health information with the public, health care professionals, researchers, and policymakers to promote oral health for all.

Over the last year, NIDCR has issued 26 awards, totaling $14.1 million, as part of a series of bold new initiatives to tackle unsolved clinical challenges, including head and neck cancer and temporomandibular disorders. One of these initiatives has extended practice-based research into dental school clinics so that faculty and students are equipped to conduct patient-oriented clinical research in real-world dental practices. The Practice-Based Research Integrating Multidisciplinary Experiences in Dental Schools (PRIMED) initiative fosters clinical research that is relevant to practitioners and patients in dental clinics and helps train the next generation of oral health researchers.

The research supported by NIDCR does not just impact the teeth, mouths, and oral health of the population. We now know that oral health—too often considered in isolation—is integral to overall wellbeing. Numerous studies have demonstrated associations between oral health and systemic disease. Periodontal (gum) disease, for example, can make chronic conditions, such as diabetes and heart disease, more difficult to treat. Dental disease also raises the risk of oral cancer and contributes to mental health challenges. In fact, it's estimated that over 100 systemic diseases have oral manifestations.

NIDCR's work uncovering the link between the oral microbiome and systemic diseases has been a critical part of its research portfolio for nearly its entire existence. Much of what we know today about the role of inflammation in overall health is built on research supported by NIDCR. Recent NIDCR-funded science shows that oral microbiota can help predict or identify a diverse range of oral and systemic diseases, including dental caries, periodontal diseases, oral cancer, colorectal cancer, pancreatic cancer, and inflammatory bowel syndrome.

Further research in this area is needed but requires a sustained federal investment in NIDCR so that it can continue utilizing advanced technologies and traditional research methods, including bench research, clinical trials, and secondary data analysis, to better understand the association between systemic conditions and oral health.

NIDCR is also expanding into new cutting-edge areas of research. The Institute has invested more than $80 million to develop evidence-based regenerative medicine therapies drawing on research in the fields of bioengineering, stem cell and developmental biology, and gene editing. These projects have the potential to transform the way we treat a variety of injuries and conditions, including repair or replacement of teeth, cartilage, joints, bone, and other tissues.

NIDCR also supports research into salivary diagnostics – the use of biomarkers in saliva samples to test for a variety of diseases and conditions. The concept offers great promise to utilize a portable device that can quickly, safely and cost effectively monitor disease indicators, such as stress hormone cortisol, that affect the mouth and the whole body. Past and current research has explored HPV-related oral cancer biomarkers in saliva, an orally implanted device to

monitor hourly levels of the sleep hormone melatonin, and a compact sensor to capture and analyze salivary biomarkers for Sjögren's syndrome, a chronic, systemic autoimmune disease.

Reducing the deep disparities that exist in oral health is central to NIDCR's mission. NIDCR's Strategic Plan (2021-2026) lays out a variety of strategies to reduce oral health inequities and disparities, leverage partnerships across sectors, and build a diverse and highly skilled workforce. It has also established the Oral Health Disparities and Inequities Research Program to study potential interventions tailored to underserved and vulnerable populations and determinants of disparities in oral health status and care at multiple levels.

Rural populations are disproportionally affected by oral disease and face various barriers to accessing oral health care. NIDCR aims to serve these and other medically underserved communities by funding projects that develop tools to increase access to oral health care, such as smartphone-based imaging systems for the detection of oral cancer, and new microscopy platforms enabling rapid and precise tissue examination.

The Institute is also investing in the development of innovative delivery methods aimed at reaching rural communities and reducing caries-related disparities, such as targeted text messaging campaigns delivered to smartphones to improve oral health behaviors, remote coaching sessions for language interventions after cleft palate repair, and speech therapy interventions administered through telemedicine.

NIDCR has long been dedicated to building an inclusive and diverse community in its research training and employment programs. Its career development programs span the career stages of scientists to help build a vibrant and inclusive community of researchers. It funds "MIND the Future" (Mentoring an Inclusive Network for a Diverse Workforce of the Future), a program implemented by AADOCR to provide mentored research career development and grant writing activities for postdoctoral and junior faculty scientists from traditionally underrepresented groups in biomedical research to help support their pursuit of academic research careers.

Finally, AADOCR is grateful to the U.S. Senate for formally recognizing many of these accomplishments through a bipartisan resolution (S. Res. 605) that was passed by unanimous consent on March 20, 2024. The resolution applauds NIDCR for 75 years of advancing a better understanding of dental, oral, and craniofacial health and disease, promoting American public health, and training generations of dentist-scientists. It commends the Institute for fostering translational research across the biomedical sciences, including work in microbiology, immunology, cell biology, mineralized tissues, dental and orofacial pain, head and neck cancers, health disparities, and other fields. It also lauds NIDCR for pioneering epidemiological and preventive research that was instrumental to eradicating the nation's epidemic of rampant tooth decay and dental caries during the second half of the 20th century.

Again, we call on the Subcommittee to provide at least $559 million for NIDCR and a total of $51.3 billion for the NIH base budget overall (not including ARPA-H). In recognition of the fact that public health programs and federal research are complementary (i.e. a discovery in one

area benefits another), we encourage the Subcommittee to support all federal research—from discovery to care delivery—and the federal agencies that promote oral health awareness, education, training, and preventive care in FY 2025.

We appreciate the opportunity to submit this testimony and thank the Subcommittee for its support of biomedical research, including dental, oral, and craniofacial research, in FY 2025 so that our nation's citizens can continue to enjoy the benefits of state-of-the-art and world-leading medical and dental care. We stand ready to assist the members of this Subcommittee in any way we can and are happy to answer any questions you may have.

Thank you.