

## NIH & NIDCR FY17 Funding Recommendations

Agency	FY12	FY15	FY16	FY17 House	FY17 Senate	FY17 Rec
<b>NIH</b>	\$30.7b	\$30.31b	\$32.084b	\$33.3b	\$34b	\$34b
<b>NIDCR</b>	\$410.3m	\$397.7m	\$413.4m	\$425.6m	\$430.5m	\$430.5m

The American Association for Dental Research (AADR) and the Friends of National Institute of Dental and Craniofacial Research (FNIDCR) call on Congress to prioritize funding for the National Institutes of Health and the National Institute of Dental and Craniofacial Research (NIDCR) by approving an omnibus appropriations bill for FY2017.

NIDCR is the largest institution in the world dedicated exclusively to research to improve dental, oral and craniofacial health. The health of the mouth and surrounding craniofacial (skull and face) structures is central to a person's overall health and well-being. Left untreated, oral diseases and poor oral conditions make it difficult to eat, drink, swallow, communicate and maintain proper nutrition. Scientists also have discovered important linkages between gum (periodontal) disease and heart disease, stroke, diabetes, and pancreatic cancer.

Treating oral health conditions is costly: the nation spent \$113.5 billion on dental services in 2014. While tooth decay and gum disease are the most prevalent threats to oral health, complete tooth loss, oral cancer, and craniofacial congenital anomalies, such as cleft lip and palate, impose heavy health and economic burdens on Americans. Below are examples of the important research supported by NIDCR:

- **Point of Care Diagnostics:** Salivary diagnostics are devices that draw and analyze saliva to test for conditions and infections such as HIV, human papillomavirus (HPV), substance abuse, caries, periodontitis and oral cancer. As a result of research supported by NIDCR over the last decade, diagnostics are also showing great promise in screening for systemic diseases such as diabetes, heart disease, lung cancer, ovarian cancer and pancreatic cancer.
- **E-Cigarettes** According to the CDC the use of e-cigarettes has tripled among middle and high school students in one year. Currently, there is no scientific evidence to support the safety of electronic cigarettes and initial studies indicate that a variety of chemicals and metal particles are produced during the vaporization of nicotine and additives by these devices. To help address this research gap, in 2016 NIDCR launched a new initiative to encourage investigation of the biological impact of e-cigarettes on oral health, including the development of new tools and clinically-relevant model systems to assess their effects on oral and periodontal tissues.
- **Precision Medicine:** Precision medicine is an emerging approach for disease prevention and treatment that takes into account people's individual variations in genes, environment, and lifestyle. NIDCR supports a diverse precision medicine research portfolio related to diseases and conditions of the dental, oral, and craniofacial region including research on cancer; craniofacial developmental disorders; salivary diagnostics and practice based networks.

- **Oral Microbiome:** NIDCR funds a community resource providing comprehensive information on over 700 different microbial species present in the oral cavity. To reduce and eliminate oral health disparities, research on the oral microbiome in children will help identify those at increased risk of developing early childhood caries (tooth decay).
- **Enhanced Tissue Regeneration:** NIDCR-funded scientists have developed effective techniques to reduce inflammation and enable the use of stem cells to form bone and cartilage for oral, dental and craniofacial purposes. The isolation and enrichment of stem cells is also being explored, which would enhance the cells' ability to regrow bone and cartilage. NIDCR recently funded a tissue engineering consortium that uses multidisciplinary teams to translate basic research into innovative tools and strategies to regenerate damaged and diseased tissues.
- **HPV-Related Oral Cancer:** Scientists predict that oral cancer will be the most common HPV-related cancer by 2020. In fact, HPV is now causing more oral cancers than smoking. But simply identifying the presence of HPV in a mouth swab or a blood draw does not definitively indicate the presence of cancer. More research is needed for the early detection of HPV-related oral cancer, as well as prevention and treatment approaches.
- **Cleft Lip and/or Cleft Palate:** Craniofacial anomalies such as cleft lip and/or cleft palate are among the most common birth defects. Both genetic and environmental factors contribute to oral clefts. Studies supported by NIDCR are providing important new leads about the role genetic factors and gene-environment interactions play in the development of these conditions.
- **Evidenced-Based Practice:** NIDCR supports a National Dental Practice Based Research Network (NDPBRN) is headquartered at the University of Alabama at Birmingham School of Dentistry. A dental practice-based research network is an investigative union of practicing dentists and academic scientists. The network provides practitioners with an opportunity to propose or participate in research studies that address daily issues in oral health care. These studies help to expand the profession's evidence base and further refine care.
- **Oral Health Disparities:** NIDCR supports a broad portfolio of research strategies to reduce and eliminate oral health disparities. The Institute recently funded a new consortium that will combine health promotion and disease prevention, community-based participation, and multilevel interventions to take decisive action to reduce oral health disparities in vulnerable children. Some of the innovative strategies include the use of interactive parent text-messaging, social networks, and financial incentives.

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