



# Texas & National Institute of Dental and Craniofacial Research



FY20 Total Funding: **\$21,993,180**

Number of Institutions Funded: **12** (Baylor College of Medicine; Methodist Hospital Research Institute; Rice University; Texas A&M University; Texas A&M Health Sciences Center; Texas Engineering Experiment Station; Texas Woman's University; University of Texas, Dallas; University of Texas Health Science Center Houston; University of Texas Health Science Center; University of Texas, Austin; University of Texas MD Anderson Cancer Center)

Number of Grants Awarded: **68**

Number of Congressional Districts with NIDCR Grants: **7**

## Improving Texas' Oral Health Through NIDCR Funding:

- Long-term prognosis for patients with oral cancer remains poor, with 5-year survival rate at approximately 50%. Oral cancer remains one of the most deadly and most expensive cancers to treat. However, when detected early, the prognosis for oral cancer patients is more than 90% five-year survival. SENSODX II, LLC is developing a "lab-on-a-chip-based" system for detection and monitoring of oral cancer in dental settings. This new technology will afford single cell analysis at the point-of-care. These powerful chip-based tools, along with new diagnostic models, have promise to improve the way screening and diagnosis of oral cancer is completed on a global basis.
- The UT Health Science Center at Houston is researching genetic causes of cleft lip with or without cleft palate (CLCP), a common complex orofacial birth defect affecting 4,000 newborns in the United States. It is associated with significant morbidity and increased mortality. The results will add important new information to the developing knowledge base of genetic variation responsible for NSCLP, which will translate into genetic counseling for at-risk families.
- Defects in oral and craniofacial tissues, resulting from trauma, congenital abnormalities, oncological resection or diseases, are associated with a reduction in the quality of life due to aesthetic deformities, discomfort, pain, and reduced function. The field of stem cell-based regenerative medicine holds promise in the restoration and treatment of damaged tissues including craniofacial defects. Researchers at UT Health Science Center are looking into reconstructing human oral mucosal tissue from bone marrow-derived mesenchymal stem cells for treatment of oral mucosal defects and potentially can serve as a model system for engineering other tissues or organs of the body.

