



Tennessee & National Institute of Dental and Craniofacial Research



FY20 Total Funding: **\$2,042,937**

Number of Institutions Funded: **3 (University of Memphis; Vanderbilt University; Vanderbilt University Medical Center)**

Number of Grants Awarded: **7**

Number of Congressional Districts with NIDCR Grants: **2**

Improving Tennessee's Oral Health through NIDCR Funding:

- The human oral cavity hosts over 600 microbial species, many of which are uncultivated and whose roles in human health or disease remain unclear. Researchers at the UT-Battelle LLC Oak Ridge National Lab are using microbial genomic information to culture previously undiscovered oral microbes. These studies will advance our understanding of the intimate interactions between microbes inhabiting the subgingival environment and their role in disease.
- Patients with craniomaxillofacial injuries or periodontal disease requiring dental implant procedures often experience bone loss resulting in complications that impact health and the ability to function in society. Guided bone regeneration membranes are widely used in these applications to augment bone healing/regeneration by protecting bone grafted sites. Researchers at University of Memphis are creating a bioactive membrane composed of electrospun chitosan loaded with raspberry ketone and simvastatin that will augment bone healing in dental/craniomaxillofacial defects.
- Over 300,000 deaths occur every year due to Head and Neck Squamous Cell Carcinoma (HNSCC). Researchers at Vanderbilt University are characterizing the mutation associated neoantigen landscape in head and neck cancer patients. Based on these findings, they will develop novel neoantigen based cancer vaccines for head and neck cancer patients.

