

**Subject: NIDCR Requests Public Input on Development of Proposed Research Initiatives for FY 2012**

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**MESSAGE SENT ON BEHALF OF**

**Dr. Bjorn Steffensen**

**Associate Dean for Research – Dental School**

<http://dental.uthscsa.edu/research/>

Dear Colleagues:

Please see this request for input as NIDCR is defining its research initiatives for FY12.

This is a good time to help shape the directions and initiatives.

Thanks,

Bjorn S.

## **NIDCR Requests Public Input on Development of Proposed Research Initiatives for FY 2012**

Dear Colleagues:

NIDCR is identifying topical themes for development into research initiatives as part of the budget planning process for Fiscal Year 2012. During the development process, we welcome input from our scientific advisory boards, the extramural community, interested organizations, and the public at large.

**This call for public comment will remain open through May 13, 2010.** Please send your comments and suggestions for specific theme areas to us at [FY2012Comments@nidcr.nih.gov](mailto:FY2012Comments@nidcr.nih.gov).

If you want to suggest additional topic areas, or comment on the process for developing research initiatives, please send those suggestions to the same e-mail. Your comments will receive prompt review and consideration. Below, we provide background about the initiatives process and a description of the proposed themes

for 2012. Thank you for your continued interest and valuable input.

Larry

Lawrence A. Tabak, D.D.S., Ph.D.

Director

National Institute of Dental and Craniofacial Research

## **What are Initiatives?**

Initiatives are a vehicle used by the Institutes and Centers to showcase future research goals to NIH, the Department of Health and Human Services, and Congress. The NIDCR begins the initiative development process each year by identifying broad research topic areas, or themes. We then develop a specific initiative proposal for each theme, taking into consideration the input received. The themes we have identified for FY 2012 are listed below.

It is important to remember that initiatives are not a complete picture of the Institute's planned portfolio of supported work for the year indicated, nor do they signal that those themes highlighted in previous years have been abandoned. When identifying themes for consideration as funding initiatives, NIDCR considers many factors, including: scientific opportunity, alignment with the mission and goals of the Institute's strategic plans, and robustness of the existing portfolio in a particular theme area both currently and in the year under consideration.

## **Proposed NIDCR FY 2012 Research Themes (alphabetical by title)**

### **Dental Practice-Based Research Networks**

The goal of this initiative is to support the most effective and efficient infrastructure for the conduct of clinical research that addresses questions of everyday relevance to dental and oral health practitioners. In 2005, NIDCR began supporting three regional dental practice-based research networks, or PBRNs, thereby establishing clinical research networks that link treatment approaches and outcomes in private practice settings. This initiative builds upon the knowledge gained and lessons learned from the current PBRN networks. The PBRNs link practicing clinicians with a core of investigators experienced in clinical and health services research, at the same time enhancing the research skills of the practicing clinician network members. Moreover, because a PBRN uses the existing personnel and infrastructure of established dental practices, it facilitates rapid subject recruitment for certain types of clinical research. Practice-based research networks are expected to provide robust clinical evidence to inform treatment decisions made by practicing dentists in the daily care of their patients.

### **Developing Research Capacity for TMJD and Orofacial Pain Research**

The overall goal of this initiative is to attract, develop, and retain young investigators who will pursue careers in temporomandibular disorders and orofacial pain research. This research field is relatively small and while the number of investigators in this area funded by the NIDCR has increased modestly through solicitations for targeted research, the retention of these individuals is not as robust as we would like. In order to meet new research challenges, this field would benefit from an influx of new, well-trained investigators with innovative approaches and complementary scientific expertise. An initiative focused on attracting and retaining a group of young investigators is an important approach to form the personnel infrastructure and expand this research community.

### **Functional Restoration of Salivary Glands**

Loss of salivary gland function is a serious medical problem associated with a number of conditions, including medication use, Sjögren's syndrome, and external beam head and neck radiation. Restoration of salivary gland function must tackle the underlying mechanisms of tissue damage. Unfortunately, despite a wealth of knowledge generated in basic salivary gland biology, few breakthroughs have been made to restore salivary gland function. Targeted research is needed utilizing cell-, protein/peptide-, small molecule-, gene-, and material-based approaches coupled with bioengineering studies to advance studies on stimulating fluid secretion. As an example, these studies could concentrate on increasing the activities of channels and transport proteins, or repairing defective acinar and ductal cells in secretory units. There is a compelling need for multidisciplinary studies that would utilize a variety of approaches to be tested in *in vivo* models and/or *ex vivo* multiple tissue constructs, and assessments of salivary gland performance with functional assays and endpoints. An approach that includes teams of investigators from a variety of disciplines, including but not limited to researchers experienced in soft/glandular tissue repair, could propel salivary research to address clinical needs in tangible and meaningful ways.

## Immunopathogenesis of HIV/AIDS-Related Oral Manifestations and Host Immunity

The goal of this initiative is to support studies focused on gaps regarding the immunopathogenesis of HIV/AIDS-related oral opportunistic infections and oral host immunity. AIDS-related oral manifestations occur in almost all HIV/AIDS cases, are present even after ART treatment, and continue to be a major public health problem. Further research is needed to understand oral immunopathogenic mechanisms of infection, disease progression, changes in the oral microenvironment, pathogen-pathogen and pathogen-host interactions, and host immunity against these oral pathogens. The outcome of this initiative will be the generation of knowledge that addresses key biological mechanisms of AIDS-related oral infections and host immunity in order to guide the development of novel therapies and prophylactic vaccines against these oral pathogens.

## Individual Tailoring and Community Targeting of Behavioral or Social Interventions to Improve Oral Health

Despite a large body of evidence that there are individual differences associated with differential oral health - and the widely-held belief that interventions need to be tailored to meet individuals' specific needs, or targeted to meet the needs of communities or populations - there is little empirical data about how best to target behavioral or social interventions to the needs of various individuals and communities. The purpose of this initiative is to support research that identifies aspects of behavioral and social interventions that require tailoring for individuals, or targeting for communities; and to support research that identifies general principles of behavior change that could be leveraged across individuals and/or communities. The expected outcome of this initiative is a stronger empirical basis for intervening on behavioral and social factors that affect oral health, so that key aspects of behavioral and social interventions are tailored appropriately to meet the oral health needs of individuals and communities.

## Molecular Characterization of Salivary Gland Tumors

Currently, there are limited therapeutic options for salivary gland tumors, a group of deadly, albeit rare cancers. The overall goal of this initiative is to promote basic and translational research on salivary gland tumors. The initiative aims to support: a) systematic, comprehensive, and high-throughput "omics" approaches to better understand the molecular signatures of tumor formation and progression; and b) development of appropriate animal models for preclinical testing of the newly identified biomarkers. The NIDCR encourages investigators to leverage the Institute's current support for a biorepository of primary salivary gland tumors in these studies. This initiative holds the promise of generating new knowledge by facilitating basic scientific discoveries, as well as developing critical mass of knowledge needed to build on advances emanating from similar studies of other tumor types, thus paving the way to translational medicine for this orphan and understudied group of tumors.

## Treatment Outcomes of Medically Complex Patients

The goal of this initiative is to stimulate research to determine treatment outcomes for oral diseases in persons with complex medical conditions that complicate oral health. Many systemic diseases are associated with compromised oral health including: diabetes, depression, Sjögren's syndrome, head and neck cancers, cleft lip/palate, and Ectodermal Dysplasias. Despite the finding that caries and periodontal diseases are more concentrated in certain patient groups such as these listed, most evidence supporting various therapies for these diseases is derived from clinical trials/studies that enroll otherwise healthy subjects. As a result, the long-term successes of different treatment and restorative approaches have not been assessed in these compromised patient groups. This initiative will provide important evidence to inform both patients and providers recommending treatment options for oral diseases.

*This message is sent to you on behalf of Dr. Steffensen, Associate Dean for Research at the UTHSCSA Dental School. If you wish to be removed from this distribution list or know of someone who would like to be added to the list, please contact Gloria Abdin at [abdin@uthscsa.edu](mailto:abdin@uthscsa.edu) <blocked::BLOCKED::mailto:abdin@uthscsa.edu>. We welcome suggestions that you may have to enhance our research communications. To access previous announcements click the following link: <http://dental.uthscsa.edu/research/announcements.php>*