

Section: Contact Information

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Section: Project Requirements and Description

Group: Requirements to submit AOI

A comprehensive review of previously published data has been completed. : **Yes**

The specific aims are clear and focused. : **Yes**

The investigator has appropriate experience and expertise to develop the concept proposal; if not, has identified a mentor or senior co-investigator. : **Yes**

The investigator agrees to develop an initial draft of the concept proposal within 6 weeks of approval of the AOI and to finalize the concept proposal within 6 months. : **Yes**

Project Title : **Integration of Dental Conditions in Public Genetic Compendiums with Data Infrastructure Development and In Vitro Follow-up**

Planned research population (eligibility criteria) :

CCSS and SJLIFE participants with genetic data and oral health data available.

Proposed specific aims :

Aim 1. Discover variants and genes associated with periodontitis and loss of teeth using SJLIFE and the UK Biobank as two independent discovery cohorts. We will test variants across both datasets while using the time to periodontitis and time to loss of teeth as survival outcomes.

Aim 2. Validate associations discovered in Aim 1 using the independent CCSS cohort. We will select single nucleotide polymorphisms (SNPs) and genes that are highly associated in at least one of the discovery cohorts and test them for association in CCSS. When variants do not exist in CCSS, we will perform imputation. We will assess replication using a novel Bayesian approach for inference on composite outcomes that we will develop.

Aim 3. Develop a portal to host all summary results generated from project and provide all developed statistical methodology as open-source software.

Will the project require non-CCSS funding to complete? : **Yes**

If yes, what would be the anticipated source(s) and timeline(s) for securing funding? :

We will apply an R01 grant with this proposal

Group: Does this project require contact of CCSS study subjects for:

Additional self-reported information : **No**

Biological samples : **No**

Medical record data : **No**

If yes to any of the above, please briefly describe. :

Group: What CCSS Working Group(s) would likely be involved? (Check all that apply)

Second Malignancy :

Chronic Disease : **Secondary**

Psychology / Neuropsychology :

Genetics : **Secondary**

Cancer Control :

Epidemiology / Biostatistics : **Primary**

Section: Outcomes or Correlative Factors

Late mortality :

Second Malignancy :

Group: Health Behaviors

Tobacco :

Alcohol :

Physical activity :

Medical screening :

Other :

If other, please specify :

Group: Psychosocial

Insurance :

Marriage :

Education :

Employment :

Other :

If other, please specify :

Group: Medical Conditions

Hearing/Vision/Speech :

Hormonal systems :

Heart and vascular :

Respiratory :

Digestive :

Surgical procedures :

Brain and nervous system :

Other :

If other, please specify : **dental disease (gum disease and losing teeth)**

Group: Medications

Describe medications :

Group: Psychologic/Quality of Life

BSI-18 :

SF-36 :

CCSS-NCQ :

PTS :

PTG :

Other :

If other, please specify :

Group: Other

Pregnancy and offspring :

Family history :

Chronic conditions (CTCAE v3) :

Health status :

Group: Demographic

Age :

Race :

Sex :

Other :

If other, please specify :

Group: Cancer treatment

Chemotherapy :

Radiation therapy :

Surgery :

Section: Anticipated Sources of Statistical Support

CCSS Statistical Center :

Local institutional statistician :

If local, please provide the name(s) and contact information of the statistician(s) to be involved. :

Will this project utilize CCSS biologic samples? : **No**

If yes, which of the following? :

If other, please explain :

Section: Other General Comments

Other General Comments :

We will perform secondary data analysis on existing datasets.

I agree to share this information with St. Jude : **Yes**