ARIC Manuscript Proposal #2326

PC Reviewed: 3/11/14 **Status: A** **Priority: 2**
SC Reviewed: _____ **Status: _____** **Priority: ____**

1.a. Full Title: Leucocyte telomere length and chronic periodontitis: a nested case-control study
b. Abbreviated Title (Length 26 characters): LTL and periodontitis

2. Writing Group:
Writing group members: Drs. Anne Sanders, Kimon Divaris, Supawadee Naorungroj and Rosa Risques

I, the first author, confirm that all the coauthors have given their approval for this manuscript proposal. AES  **[please confirm with your initials electronically or in writing]**

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ARIC investigator to be contacted if there are questions about the manuscript and the first author does not respond or cannot be located (this must be an ARIC investigator).

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3. Timeline: This study was approved as an ARIC Ancillary study in 2010 (2010.18 Telomere Attrition Rate and Periodontitis: a nested case control study in the ARIC Study) and was funded by NIDCR as an R03 project in 2012 (1R03DE022555-01). It also drew on an ancillary study conducted at Visit 4 in which a dental examination was conducted (1996.01 Dental Study (Dental) Beck JD (PI)).

4. Rationale:
This nested case control study sought to investigate whether cases with chronic severe periodontitis experienced a faster rate of leukocyte telomere length (LTL) shortening over time than did controls with mild or no periodontitis.

5. Main Hypothesis/Study Questions:
We hypothesized that severe periodontitis was associated with increased LTL attrition and that rates of attrition would be greater among African Americans than among whites.

6. Design and analysis (study design, inclusion/exclusion, outcome and other variables of interest with specific reference to the time of their collection, summary of data analysis, and any anticipated methodologic limitations or challenges if present).
This was a nested case-control investigation in the Dental ARIC ancillary study of the Atherosclerosis Risk in Communities (ARIC) study; 178 participants with severe chronic periodontitis and 178 age- sex- race- and study site matched controls with mild/no chronic periodontitis. LTL was measured with qPCR using DNA samples obtained at

two ARIC study visits 6 years apart: Visit 2 and Visit 4. LTC was the main exposure and chronic severe periodontitis was the dependent variable. Key covariates were known risk factors for periodontitis: number of retained teeth, smoking, diabetes, BMI, alcohol consumption, socioeconomic status. The measure of effect was the odds ratio and logistic regression was the main form of statistical analysis. A limitation was that DNA from Visit 1 could not be used as it was extracted using a different method to that used at subsequent Visits.

7.a. Will the data be used for non-CVD analysis in this manuscript? __x__ Yes ____ No

b. If Yes, is the author aware that the file ICTDER03 must be used to exclude persons with a value RES_OTH = "CVD Research" for non-DNA analysis, and for DNA analysis RES_DNA = "CVD Research" would be used? __x__ Yes ____ No
(This file ICTDER has been distributed to ARIC PIs, and contains the responses to consent updates related to stored sample use for research.)

8.a. Will the DNA data be used in this manuscript?
__x__ Yes ____ No

8.b. If yes, is the author aware that either DNA data distributed by the Coordinating Center must be used, or the file ICTDER03 must be used to exclude those with value RES_DNA = "No use/storage DNA"? __x__ Yes ____ No

9. The lead author of this manuscript proposal has reviewed the list of existing ARIC Study manuscript proposals and has found no overlap between this proposal and previously approved manuscript proposals either published or still in active status. ARIC Investigators have access to the publications lists under the Study Members Area of the web site at: http://www.cscc.unc.edu/ARIC/search.php

__x__ Yes _____ No.

10. What are the most related manuscript proposals in ARIC (authors are encouraged to contact lead authors of these proposals for comments on the new proposal or collaboration)?

ARIC ms#1702	Bressler, J.	Sequence variation in telomerase reverse transcriptase (TERT) as a determinant of lifespan and risk of cardiovascular disease: The ARIC study

11.a. Is this manuscript proposal associated with any ARIC ancillary studies or use any ancillary study data? _x_ Yes ____ No

11.b. If yes, is the proposal
_x_ A. primarily the result of an ancillary study (list number* 2010.18 and 1996.01 **)**
___ B. primarily based on ARIC data with ancillary data playing a minor role (usually control variables; list number(s)* _____ _____ _____)

*ancillary studies are listed by number at http://www.cscc.unc.edu/aric/forms/

12a. Manuscript preparation is expected to be completed in one to three years. If a manuscript is not submitted for ARIC review at the end of the 3-years from the date of the approval, the manuscript proposal will expire.

12b. The NIH instituted a Public Access Policy in April, 2008 which ensures that the public has access to the published results of NIH funded research. It is **your responsibility to upload manuscripts to PUBMED Central** whenever the journal does not and be in compliance with this policy. Four files about the public access policy from http://publicaccess.nih.gov/ are posted in http://www.cscc.unc.edu/aric/index.php, under Publications, Policies & Forms. http://publicaccess.nih.gov/submit_process_journals.htm shows you which journals automatically upload articles to Pubmed central.