

ARIC Manuscript Proposal # 3437

PC Reviewed: 7/9/19

Status: _____

Priority: 2

SC Reviewed: _____

Status: _____

Priority: _____

1.a. Full Title: Association of urine bromotryptophan genetic signals in serum bromotryptophan

b. Abbreviated Title (Length 26 characters): bromotryptophan genetics

2. Writing Group:

Writing group members: Peggy Sekula, Bing, Yu, Adrienne Tin, Morgan Grams, Eric Boerwinkle, Josef Coresh, Anna Kottgen and others welcome.

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

First author: Peggy Sekula

Address: Institute of Genetic Epidemiology,
Faculty of Medicine and Medical Center - University of Freiburg,
Freiburg, Germany
E-mail: peggy.sekula@uniklinik-freiburg.de

ARIC author 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).

Name: **Adrienne Tin**

Address: 615 N. Wolfe Street
Room W6017
Baltimore, Maryland 21205
Phone: 443-287-4740
E-mail: atin1@jhu.edu

3. Timeline: Data analysis to start immediately. The manuscript will be completed in 3 months.

4. Rationale:

This is an addendum to the ARIC Manuscript Proposal #2084 [DNA Sequence Variation and the Human Metabolome in African Americans from the Atherosclerosis Risk in Communities (ARIC) Study].

Serum bromotryptophan was not measured in ARIC African American. Later in the European American samples, serum bromotryptophan was measured as an unnamed metabolite (X21739).

Recently, in the German Chronic Kidney Disease (GCKD) study, two genome-wide significant loci were detected for urine bromotryptophan. We are interested to evaluate whether these two loci were associated with serum bromotryptophan in European Americans in the ARIC study.

5. Main Hypothesis/Study Questions: Genetic loci associated with urine bromotryptophan levels in GCKD will be associated with serum bromotryptophan levels in European Americans in ARIC.

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).

Design: cohort study

Phenotype: serum bromotryptophan

Genetic data: 1000G imputed dosage

Inclusion: European Americans with serum bromotryptophan measured.

Other variables: age, sex, center, and genetic principal components to control for population stratification.

Analysis: linear regression with natural log transformed serum bromotryptophan levels as outcome and 1000G imputed dosage as exposure.

7.a. Will the data be used for non-CVD analysis in this manuscript? ___ 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? ___ 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? ___ 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”? ___ 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.csc.unc.edu/ARIC/search.php>

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)?

1379 GWAS of kidney function traits and chronic kidney disease

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

11.b. If yes, is the proposal

A. primarily the result of an ancillary study (list number* 2008.16__)

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.csc.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.csc.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.

13. Per Data Use Agreement Addendum, approved manuscripts using CMS data shall be submitted by the Coordinating Center to CMS for informational purposes prior to publication. Approved manuscripts should be sent to Pingping Wu at CC, at pingping_wu@unc.edu. I will be using CMS data in my manuscript Yes No.