

Ancillary Study Proposal Form

Atherosclerosis Risk in Communities (ARIC)

I. Basic Study Information and Projected Impact on ARIC

1. Title of study:
 - **Global Pulse Wave Velocity Collaboration**

2. Principal investigator(s) (name, address, phone and fax numbers, e-mail address):
 - **Name:** Anna K Poon
 - **Address:** N/A
 - **Phone:** 312-804-1672
 - **Fax:** N/A
 - **E-mail:** apoon@hsph.harvard.edu

3. Collaborators (must include at least one ARIC investigator):
 - **Name:** Michelle L Meyer
 - **Address:** 170 Manning Dr., CB #7594, Chapel Hill, NC 27599
 - **Phone:** 919-966-6539
 - **Fax:** N/A
 - **E-mail:** mlmeyer@med.unc.edu

 - **Name:** Gerardo Heiss
 - **Address:** 123 W. Franklin St., Suite 410, CB #8030, Chapel Hill, NC 27516
 - **Phone:** 919-962-3253
 - **Fax:** N/A
 - **E-mail:** gerardo_heiss@unc.edu

4. Summary of ARIC centers and tasks involved – Leave cell blank if Not Applicable
 - **Response:** Not applicable

Center	Enroll or examine participants (N)	Assay samples (N participants)	Provide samples (N participants)	Analyze data (yes/no)
Forsyth Co. Field Center				
Jackson Field Center				
Minnesota Field Center				
Washington Co. Field Center				
DNA Central Lab				
MN Chem Lab				
Lipid Central Lab				

Hemostasis Central Lab				
ECG Reading Center				
Coordinating Center (UNC)				
Other (specify)				

5. ARIC participant and staff involvement:

A. Participants:

Describe number of subjects needed; special characteristics of study population; age and sex distribution. Will participants be contacted, interviewed, examined, or asked to provide specimens? Will the study involve radiation or administration of a drug or contrast? If so, describe participant involvement. Estimate time required of each participant.

Note that contacts with participants must be done in cooperation with field centers and all contacts must be recorded in the coordinating center's data system for tracking phone calls and contacts. [The latter requires data management updates by the ARIC coordinating center, to be reimbursed by the ancillary study.](#)

- **Response:** We have been invited to contribute data to a global pulse wave velocity collaboration that aims to characterize reference values for pulse wave velocity and trends in arterial stiffness across geographic regions. We have been asked to provide deidentified participant data or summary statistics, and have decided to provide summary statistics. No additional information is needed from participants other than extant pulse wave velocity measurements at Visit 5.

B. Stored ARIC specimens:

Describe materials to be used (e.g., stored plasma, urine, DNA). If blood samples are requested, please review the Criteria for Approval section of the Ancillary Study Policy (<http://www2.csc.unc.edu/aric/sites/default/files/public/listings/Ancillary%20StudiesPolicy%20NEW%2017Feb2014.pdf>) in consideration of your description of the following:

1. Study participants and material requested:

- **Response:** No stored specimens are requested.

Yes/No	Cohort	Total Number of Specimens	Full Cohort (or →)	Number of Cases	Number of Controls
	All parent study participants (or ↓)				

	Specify sample and specimens in each sample/stratum				

Type of Specimen	N	Volume Requested	Time point (e.g. visit*)	Specify proposed lab and analytes to be assayed at catch lab (be specific)
Serum		ul		
EDTA plasma		ul		
Citrate plasma		ul		
DNA		ug/ng		
Urine		ul		
Other (specify)				

* Please contact the ARIC in advance and indicate here how many tubes of each visit and type you are requesting:

2. Is the proposed work consistent with the stipulations in the ARIC informed consent form? Yes No (The informed consent forms can be obtained from the collaborating ARIC investigator).

3. Are thawed/re-frozen acceptable? Yes No

If No, specify reasons for specific assays:

4. Describe efforts to integrate sample needs with those of other studies to conserve sample and/or limit freeze-thaw cycles.

5. If approved, when will samples be requested for retrieval?

C. ARIC Field Centers:

Describe effort (and estimated time) required of ARIC staff at each participating center. Include consent, collection of samples, etc.

- **Response:** No additional effort or time is expected of ARIC staff.

D. ARIC Coordinating Center:

Describe effort (and estimated time) required of ARIC Coordinating Center staff. Specifically:

- **Response:** No additional effort from the ARIC Coordinating Center is anticipated.

** Unless you provide strong justification, the Coordinating Center must be included and its costs budgeted.*

- i. Will the Coordinating Center be involved in data collection, tracking, or preparation of forms or software? or Will these tasks be completed locally by the Ancillary Study, and a data file sent to the Coordinating Center? *Locally*
 - ii. If a Reading Center or laboratory is involved, will data be sent directly from the Reading Center or laboratory to the Coordinating Center for processing, or will processing be done locally (either by the Ancillary Study or at the Reading Center/Laboratory)? *Not applicable*
 - iii. Will analyses be done locally by the Ancillary Study or by analysts at the Coordinating Center? If analyses will be done locally, should Coordinating Center verify the analyses? *Locally*
6. Genomic information (defined as any data from a participant's DNA):
- A. Does your proposal include any genomic materials? (please check one)
 - No (go to question 7) Yes (see question 6B)
 - B. Name the gene(s), genotypes, SNPs to be investigated:
 - C. Is genetic information used to address a primary aim or secondary aim of ARIC? (please check one or both)
 - Primary aim (heart/vascular disease)
 - Secondary aim (other health conditions)
 List the conditions addressed:
 - D. Should DNA-based results be reported to patients' physicians? Base your response on your knowledge of existing literature and current practice regarding increased risk and availability of treatment for adverse outcomes associated with the gene mutations to be studied.
7. Proposed starting and ending dates:
- **Response:** January 1st, 2021 to January 1st, 2022
8. Estimated cost by year; number of years:
- **Response:** There are no anticipated costs.
9. Source of funding; date of submission:
- **Response:** The global collaboration is funded by VASCage, but we will not receive any funding.

10. Does this study involve the support or collaboration of a for-profit corporation, or do you intend to use the data to patent any process, aspect or outcome of the analysis?

- **Response:** No

11. What is the advantage, both to ARIC and yourself, of conducting the study within the ARIC cohort versus another population?

- **Response:** We were invited to contribute data to this global collaboration. The ARIC Study is a good candidate because it has a large sample of pulse wave velocity measurements on men and women living in four communities across the U.S.

12. Impact on ongoing ARIC studies (main study or other Ancillary Studies):

- **Response:** There will be no impact on ongoing ARIC studies.

13. Provide the following assurances (answer each):

(1) Who (name and position) will report progress of the study in the fall of each year?
(Ancillary Study PI or designate preferred)

- **Response:** Anna Poon

(2) How will confidentiality of ARIC participants be maintained?

- **Response:** Only summary statistics will be provided, which cannot be used to identify individual participants.

(3) Data collected by the Ancillary Study, will be provided to the ARIC Coordinating Center for integration into the main database. This will include documentation of newly collected data with labels, and/or laboratory results as well as documentation on methods, visits and units used with specific instructions for using the data in analyses. such as exclusions that were applied. After that has been done the Ancillary Study investigators will receive the integrated file containing data from the main study.

The Ancillary Study PI will be given the first and exclusive opportunity to analyze, present and publish data collected under the auspices of the Ancillary Study. After a reasonable time (in general, 12 months after data cleaning is complete or 12 months after acceptance of primary manuscript, whichever is earlier), Ancillary Study data will be made available for additional uses by other ARIC investigators. It is the responsibility of the Ancillary Study PI to state in writing to the ARIC Steering Committee any special circumstances that would warrant an exception to these guidelines for data sharing. In the spirit of encouraging collaboration, reasonable and justified requests for limiting Steering Committee access to the data will be honored, or a compromise will be worked out.

Will the Coordinating Center be receiving data from your ancillary study?

- **Response:** No data will be received from this ancillary study. The goal of this ancillary study is to contribute data to a publication based on a wider collaboration.
- (4) How many papers do you estimate will be written from the Ancillary Study?
- **Response:** Based on the invitation, the collaboration intends to produce a meta-analysis of pulse wave velocity measurements across geographic regions.
- (5) Variables/measurements from the ARIC main study database to be analyzed:
- **Response:** Based on the data requested, summary statistics will be provided for the following variables from ARIC Visit 5. The abbreviations are standard but their meanings have been included in full to communicate clearly with the collaboration.
 - cf-PWV (carotid-femoral pulse wave velocity)
 - ba-PWV (brachial-ankle pulse wave velocity)
 - Age
 - Sex (reference: male)
 - BMI (body mass index)
 - Diabetes
 - Fasting blood glucose
 - Hypertension
 - SBP (systolic blood pressure)
 - DBP (diastolic blood pressure)
 - Mean arterial pressure
 - TC (total cholesterol)
 - TG (triglyceride)
 - HDL-C (high-density lipoprotein cholesterol)
 - LDL-C (low-density lipoprotein cholesterol)
 - Heart rate
 - Current smoking
 - Current drinking

14. If the study will have clinical implications, explain and describe the plan for reporting results to participants and providing recommendations for follow up:

- **Response:** There are no clinical implications

II. Abbreviated Ancillary Study Proposal

Please provide a brief (2 to 4 page) description of the proposed study. Include the following:

Purpose/Aims: *To contribute data to a global research project on reference values of pulse wave velocity and frequencies and trends in arterial stiffening in different geographical regions.*

Background: *Not applicable*

Hypotheses: *Not applicable*

Experimental Design (include sample size justification): *This ancillary study will provide data on pulse wave velocity measurements at Visit 5.*

Methods, including: *The methods will include summary statistics (age, sex, race-specific means, SD) of pulse wave velocity measurements at Visit 5.*

Participant involvement (if any): *None*

Data to be collected by the ancillary study (attach questionnaires and forms): *None*

Analysis Methods: *Summary statistics*

Literature References

Lu Y, Pechlaner R, Cai J, Yuan H, Huang Z, Yang G, et al. Trajectories of Age-Related Arterial Stiffness in Chinese Men and Women. *J Am Coll Cardiol.* 2020;75(8):870-80. Epub 2020/03/05. doi: 10.1016/j.jacc.2019.12.039. PubMed PMID: 32130922.

Please send an electronic copy of the completed proposal to:

Aaron R. Folsom, M.D. (Principal Investigator) folso001@umn.edu

CC: ARIC-AS@unc.edu

For Coordinating Center Use Only

Approved? Yes No

Date:

If approved, ancillary study #