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Department of Environmental Health Sciences
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EDUCATION

- 2015 **Harvard School of Public Health** | Boston, MA
Doctor of Science in Environmental Health
Department of Environmental Health | Concentration in Exposure, Epidemiology, and Risk
Major: Environmental exposure assessment; Minors: Biostatistics; Spatial methods
Dissertation title: Poverty, energy use, air pollution and health in Ghana: a spatial analysis
Committee: Majid Ezzati (Chair), Marcia C Castro, John D Spengler, James H Ware
- 2009 **Cyprus International Institute for the Environment and Public Health** in association
with **Harvard School of Public Health** | Nicosia
Master of Science in Environmental Health
- 2007 **University of Ghana** | Legon, Accra
Master of Philosophy in Geography
Department of Geography and Resource Development
- 2003 Bachelor of Science in Geology
Department of Earth Science

PROFESSIONAL EXPERIENCE

- 2018- **Assistant Professor**, Department of Environmental Health Sciences, School of Public
Health and Health Sciences, University of Massachusetts Amherst
- 2015-2017 **Post-Doctoral Fellow**, Occupational and Environmental Health Division, School of
Population and Public Health, University of British Columbia
Global assessment of air pollution and cardiovascular and respiratory diseases within the
Prospective Urban and Rural Epidemiological Study (PURE)

AWARDS AND HONOURS

- 2015-2017 Michael Smith Foundation for Health Research (MSFHR) Post-Doctoral Research Trainee
Award, University of British Columbia
- 2013-2014 University of Ghana Research, Innovation and Development Grant, University of Ghana
- 2010-2015 President's scholarship, Harvard School of Public Health
- 2010-2015 Thorley Briggs Fellow and Mitchel Don Fellow, Harvard School of Public Health

PROFESSIONAL ACTIVITIES

- 2007- Member, International Society for Environmental Epidemiology
- 2010- Member, International Society of Exposure Science

PUBLICATIONS

Refereed research and review articles

* Equal contributions

17. Hystad P, Brauer M, Duong M, Larkin A, Arku RE, Rangarajan S, Koon T, Yusuf S, and the PURE team. Household air pollution, cardiovascular disease and mortality. *In preparation*

16. Arku RE, Birch A, Shupler M, Hystad P, Brauer M, Yusuf S, and the PURE team. Characterizing household air pollution exposure in rural communities in low- and middle-income countries within the Prospective Urban Rural Epidemiology (PURE) Study. **Submitted**
15. Arku RE, Majid Ezzati, Baumgartner J, Fink G, Bin Zhou, Hystad P, Brauer M. Elevated blood pressure and household solid fuel use in premenopausal women: Analysis of 12 Demographic and Health Surveys (DHS) from 10 countries. **Environmental Research** 2017; 160:499–505
14. Arku RE, Dionisio KL, Hughes AF, Spengler JD, Agyei-Mensah S, Ezzati M. Occupational and traffic-related particulate matter exposure in Accra, Ghana. **In preparation**
13. Arku RE, Hystad P, Brauer M, Yusuf S, and the PURE team. Outdoor and household air pollution exposure and blood pressure in the Prospective Urban and Rural Epidemiological (PURE) Study. **Submitted**
12. Arku RE, Bennett JE, Castro MC, Agyeman-Duah K, Mintah SE, Ware JH, Nyarko P, Spengler JD, Agyei-Mensah S, Ezzati M. Geographical inequalities and social and environmental risk factors for under-five mortality in Ghana in 2000 and 2010: Bayesian spatial analysis of census data. **Plos Medicine** 2016; 13(6): e1002038
11. MacNaughton P*, Adamkiewicz G*, Arku RE*, Vallarino J, Levy DE. The impact of a smoke-free policy on environmental tobacco smoke exposure in public housing developments. **Science of the Total Environment** 2016; 557–558:676–680
10. Arku RE*, Adamkiewicz G*, Vallarino J, Spengler JD, Levy DE. Seasonal variability in environmental tobacco smoke exposure in public housing developments. **Indoor Air** 2015; 25(1):13-20
9. Arku RE, Dionisio KL, Hughes AF, Spengler JD, Agyei-Mensah S, Ezzati M. Personal particulate matter exposures and locations of students in four neighborhoods in Accra, Ghana. **Journal of Exposure Science and Environmental Epidemiology** 2014; 25:557-566
8. Zhou Z, Dionisio KL, Thiago GV, Americo SK, Coull B, Howie S, Arku RE, Koutrakis P, Spengler JD, Fornace K, Hughes AF, Vallarino J, Agyei-Mensah S, Ezzati M. Chemical characterization and source apportionment of household fine particulate matter in rural, peri-urban, and urban West Africa. **Environmental Science and Technology** 2014; 48 (2):1343-1351
7. Zhou Z, Dionisio KL, Verissimo TG, Kerr AS, Coull B, Arku RE, Koutrakis P, Spengler JD, Hughes AF, Vallarino J, Agyei-Mensah S, Ezzati M. Chemical composition and sources of particle pollution in affluent and poor neighborhoods of Accra, Ghana. **Environmental Research Letters** 2013; 8:044025
6. Rooney MS*, Arku RE*, Dionisio KL*, Paciorek C, Friedman AB, Carmichael H, Zhou Z, Hughes AF, Vallarino J, Agyei-Mensah S, Spengler JD, Ezzati M. Spatial patterns of particulate matter sources and pollution in four communities in Accra, Ghana. **Science of the Total Environment** 2012; 435-436:107-114
5. Fink G, Arku RE, Montana L. The health of the poor: women living in informal settlements. **Ghana Medical Journal** 2012; 46(2):104-112
4. Zhou Z, Dionisio KL, Arku RE, Quaye A, Hughes AF, Vallarino J, Spengler JD, Hill A, Agyei-Mensah S, Ezzati M. Household particulate matter pollution in neighborhoods of Accra, Ghana. **Proceedings of the National Academy of Sciences USA** 2011; 108:11028-33
3. Dionisio KL, Arku RE, Hughes AF, Vallarino J, Carmichael H, Friedman AB, Agyei-Mensah S, Spengler JD, Ezzati M. Air pollution in Accra neighborhoods: spatial, socioeconomic, and temporal patterns. **Environmental Science and Technology** 2010; 44:2270-2276
2. Dionisio KL*, Rooney MS*, Arku RE*, Friedman AB, Paciorek C, Hughes AF, Vallarino J, Carmichael H, Agyei-Mensah S, Spengler JD, Ezzati M. Within-neighborhood patterns and sources of particle pollution: mobile monitoring and geographic information system analysis in four communities in Accra, Ghana. **Environmental Health Perspectives** 2010; 118:607-613
1. Arku RE, Vallarino J, Dionisio KL, Willis R, Choi H, Wilson JG, Hemphill C, Agyei-Mensah S, Spengler JD, Ezzati M. Characterizing air pollution in two low-income neighborhoods in Accra, Ghana. **Science of the Total Environment** 2008; 402:217-231

WORK EXPERIENCE

- 2005 Mineral exploration geologist; Wyoming-Newhaven; Ghana
 2004 Mineral exploration geologist; KAM & Associates; Ghana

PRESENTATIONS

Oral presentations at the International Society for Environmental Epidemiology and International Society of Exposure Science annual conferences. List of other presentations available upon request.