PROMOTION RECOMMENDATION
The University of Michigan
School of Public Health
Department of Epidemiology

Sara D. Adar, associate professor of epidemiology, with tenure, and associate professor of global public health, without tenure, School of Public Health, is recommended for promotion to professor of epidemiology, with tenure, and professor of global public health, without tenure, School of Public Health.

Academic Degrees:
Sc.D.   2005   Harvard University, Cambridge, MA
M.H.S.   1998   Johns Hopkins School of Public Health, Baltimore, MD
B.S.   1996   Massachusetts Institute of Technology, Cambridge, MA

Professional Record:
2024 - Present   Associate Professor, Global Public Health, School of Public Health
2021 - Present   Associate Chair, Department of Epidemiology, School of Public Health, University of Michigan, Ann Arbor, MI
2017 - Present   Associate Professor, Department of Epidemiology, School of Public Health, University of Michigan, Ann Arbor, MI
2017 - 2018   Visiting Associate Professor, Department of Environmental and Occupational Health, School of Public Health, University of Washington, Seattle, WA
2011 - 2017   John G. Searle Assistant Professor, Department of Epidemiology, School of Public Health, University of Michigan, Ann Arbor, MI
2010 - 2011   Research Assistant Professor, Department of Epidemiology, School of Public Health, University of Michigan, Ann Arbor, MI
2008 - 2009   Assistant Professor, Department of Epidemiology and Department of Environmental and Occupational Health Sciences, School of Public Health, University of Washington, Seattle, WA
2005 - 2008   Senior Fellow, Department of Environmental and Occupational Health, School of Public Health, University of Washington, Seattle, WA
1997   Environmental Scientist, United States Environmental Protection Agency, Washington, D.C.

Summary of Evaluation:
Teaching: Professor Adar has taught four courses on epidemiological methods since 2017. These collectively make foundational contributions to the master's and doctoral programs and the online Master of Public Health (M.P.H.) program. Professor Adar prioritizes and consistently incorporates antiracist and inclusive teaching practices in her courses. Her courses consistently have received positive evaluations, with scores ranging from 4.0 to 5.0, with most domains falling in the range of 4.7 to 5.0, particularly for residential courses.

Professor Adar has had an excellent record as a mentor at all levels of training. During her time in rank, she has chaired five dissertation committees and served as a member of six additional committees for students at the University of Michigan, the University of Washington, and Boston University. She has mentored six post-doctoral fellows, 17 M.P.H. students, and two undergraduate students and supervised five summer internships. Professor Adar's trainees have first-authored 14 peer-reviewed manuscripts, with seven additional manuscripts under review. In her role as the graduate program director and co-chair of the doctoral committee, Professor Adar has played a major role in administering the competency exam and managing the student experience.

Research: Professor Adar's research portfolio includes policy-relevant work on modifiable environmental risk factors for accelerated aging. Among her research grants, she documented sizable improvements in attendance, educational performance, and air pollution attributable to the Environmental Protection Agency's (EPA)'s national investment in lower-emission school buses. This work has been highly impactful, with findings accepted for publication in *Nature Sustainability*. Additionally, Professor Adar has presented the findings to the national program director of the Air and Energy Research Program at the EPA, and advised U.S. Vice President Kamala Harris's office during the drafting of the Clean School Bus Act, which was signed into law as part of the Bipartisan Infrastructure Law of 2021. The significance of her work is underscored by the fact that 18 of Professor Adar's publications were cited nearly 70 times in the EPA's 2019 Particulate Matter Integrated Science Assessment. Professor Adar also has conducted substantial research examining how exposures to chemical and nonchemical stressors affect aging. On this theme, she has assembled a collaborative global team that is harmonizing environmental exposures and statistical analyses across multiple nationally representative cohorts representing 11 countries. This line of research included a randomized crossover intervention trial, which demonstrated that air purifiers improve the cardiovascular health of older adults with high exposures to traffic-related air pollution, and one of the first studies to demonstrate that community noise levels are associated with poorer cognitive functioning in older adults.

Professor Adar has published 35 peer-reviewed articles at rank, including 15 as first or senior author, four as second author and 16 manuscripts with mentees as first author. She has published in high impact journals, such as *JAMA*, *Nature Sustainability*, *Stroke, Hypertension*, and *Environmental Health Perspectives*. Of note, Professor Adars's publications have been selected for the *Environmental Health Perspectives* Editor's Choice Collection of 2021 and for the Best Environmental Epidemiology Paper of the Year Award from the International Society of Environmental Epidemiology.

Professor Adar has an excellent record of external funding as a principal investigator (PI) and as a co-investigator, pointing to her independence in research but also the high value placed on her expertise in large research collaborations. Professor Adar's work examining how exposures to chemical and non-chemical stressors affect aging has been supported by $25 million in funding from National Institutes of Health (NIH). Since 2017, Professor Adar has served as the PI on one R01 and multiple principal investigator (MPI) on three R01 awards and the PI on a grant from the Health Effects Institute on EPA's School Bus program. She also is a subcontract PI on

three current and two completed R01 awards, co-investigator on four R01 awards, and a co-investigator on one UG3 award.

Recent and Significant Publications:

Pedde M, Szpiro A, Hirth R, Adar SD. Attendance benefits of the EPA's School Bus Rebate Program: A randomized design. *Nature Sustain. 2023.* doi:10.1038/s41893-023-01088-7

Saenz J, Adar SD, Zhang Y, Wilkens J, Chattopadhyay A, Lee J, Wong R. Household Use of Polluting Cooking Fuels and Late-Life Cognitive Function: A Harmonized Analysis of India, Mexico, and China. *Env Internat.* 2021. 156:106722. doi.org/10.1016/j.envint.2021.106722

Weuve J, D'Souza J, Beck T, Evans DA, Kaufman JD, Mendes de Leon C, Adar SD. Long-term community noise exposure in relation to dementia, cognition, and cognitive decline in older adults. *Alzheimer's Dement.* 2021. 2020:00:1-9. doi:10.1002/alz.12191

Filigrana P, Milando C, Batterman S, Adar SD. Spatiotemporal variations in traffic activity and their influence on air pollution levels in communities near highways. *Atmos Environ.* 2020. 242(1):117758. doi:10.1016/j.atmosenv.2020.117758.

Adar SD, Chen YH, D'Souza J, O'Neill MS, Szpiro AA, Auchincloss AH, Park SK, Daviglus ML, Diez-Roux AV, Kaufman JD. Longitudinal analysis of long-term air pollution exposures and blood pressure: A cautionary tale from the Multi-Ethnic Study of Atherosclerosis. *Environ Health Perspect.* 2018. 126(10):107003-1-11. doi.org/10.1289/EHP2966

Service: Professor Adar has an excellent record of service. At the departmental level, she has served as the co-chair of the Doctoral Committee, a member of the Strategic Planning Committee, and a member of the 2022-2023 Junior Faculty Search Committee. Currently, Professor Adar serves as one of the associate chairs, where she oversees the doctoral program and contributes to the didactic teaching planning process. At the school and university level, Professor Adar has served on a search committee in the Department of Environmental Health Sciences and as a faculty ally in the Rackham Faculty Allies for Diversity program.

Externally, Professor Adar has served as secretary-treasurer of the International Society of Environmental Epidemiology (ISEE), which is an elected position on the ISEE executive committee. She also has been a member of the organizing committee for the ISEE annual conference and served as a member of the mentorship committee for the North American chapter of ISEE. Professor Adar is an associate editor for the National Institute of Environmental Health Sciences-sponsored journal, *Environmental Health Perspectives*—the preeminent journal in environmental epidemiology--and is a member of the editorial board for the journal *Environment International*.

Professor Adar's external service also includes serving as a member of the Health Effects Institute's Review Committee and a member of the NIH Cardiovascular and Respiratory Diseases Study Section. She has also served as an ad-hoc reviewer for numerous U.S. and global organizations, including the NIH, Wellcome Trust, Heinrich-Heine University, New York University, and the University of Southern California.

External Reviewers:

Reviewer A: "She has addressed novel research questions, has applied innovative and very elegant study designs to investigate these research questions, has been very productive in terms of publication and grant acquisition, is an outstanding reviewer, supervisor and advisor, and has had an enormous impact on the field over the years. ... I cannot imagine someone more able of being a full professor and fully support Dr. Adar's promotion to full professor."
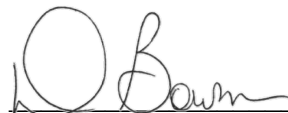
Reviewer B: "Dr. Adar has been a leader and innovator in the field of air pollution epidemiology for many years. ... I have no doubt that Dr. Adar would meet the requirements for promotion with tenure at peer institutions."

Reviewer C: "Overall, Sara has made outstanding contributions to the Department of Epidemiology and the University of Michigan, the field of environmental epidemiology, and to the research of how air pollution exposures and other environmental toxicants impact health. Therefore, I enthusiastically recommend Sara Adar for promotion to Professor."

Reviewer D: "She is working at the challenging and important intersection of sophisticated methodologic approaches in epidemiology and environmental exposure and clinical assessments in vulnerable elderly populations. In these areas, she has contributed to some of the most important work published today. ... I enthusiastically support her appointment to Professor with tenure in the Department of Department of Epidemiology in the School of Public Health of the University of Michigan."

Reviewer E: "I consider Sara Adar's research to be exceptional. ... Her work on school bus retrofits and neurological effects of air pollution and noise is highly relevant and well respected…I highly recommend her promotion to Full Professor."

<u>Summary of Recommendation:</u> Professor Adar conducts highly impactful research that examines the health effects of environmental pollution and community noise. She has an excellent record in research, teaching and service. It is with the support of the School of Public Health Executive Committee that I recommend Sara D. Adar be promoted to the rank of professor of epidemiology, with tenure, and professor of global public health, without tenure, School of Public Health.

F. DuBois Bowman, Ph.D.
Dean, School of Public Health

May 2024