

Ana María Rule, PhD

Environmental Health and Engineering
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PROFESSIONAL PREPARATION

B.Sc., Biomedical Engineering, Universidad Iberoamericana, Mexico City, 1983
MHS, Industrial Hygiene / Environmental Health Sciences, Johns Hopkins University, Baltimore MD, 1998
Ph.D., Environmental Health Sciences, Johns Hopkins University, Baltimore MD, 2005

PROFESSIONAL APPOINTMENTS

2015 Research Scientist Faculty, Department of Environmental Health Sciences, Johns Hopkins University, School of Hygiene and Public Health, Baltimore MD
2008-2015 Research Associate Faculty, Department of Environmental Health Sciences, Johns Hopkins University, School of Hygiene and Public Health, Baltimore MD
2005-2008 Post-Doctoral Fellow, Department of Environmental Health Sciences, Johns Hopkins University, School of Hygiene and Public Health, Baltimore MD 1983-1985
2002-2005 Research Assistant, Department of Environmental Health Sciences, Johns Hopkins University, School of Hygiene and Public Health, Baltimore MD
2000-2002 Associate Professor. Universidad Iberoamericana, Mexico City
1998-2000 Research Assistant. Department of Environmental Health Science, Johns Hopkins University, School of Public Health, Baltimore, MD
1994-1996 Assistant Professor (1994- 1995). Program coordinator (1995-1996) Universidad Iberoamericana, Mexico City.
1985-1992 Product Manager (1985-1987), Production Manager (1987-1990), Development Manager (1990-1992). Industrial Electromédica de México, SA de CV. Mexico City.
1983-1985 Design engineer. Biotron SA de CV., Mexico City

TEN RECENT PUBLICATIONS (OUT OF 27)

Stephanie Jarmul, Angela Aherrera, **Ana M. Rule**, Ana Navas-Acien. Lost in E-cigarette Clouds: a Culture on the Rise. *American Journal of Public Health*. **2017**; 107(2):265-266

C. Hess, P. Olmedo, **A. Rule**, A. Navas-Acien. E-cigarettes as a source of exposure to toxic and carcinogenic metals. *Environmental Research*, **2017**; 152:221-225. doi: 10.1016/j.envres.2016.09.026

Nyall R. London Jr, Anuj Tharakan, **Ana M. Rule**, Andrew P. Lane, Shyam Biswal, Murugappan Ramanathan. Air pollutant-mediated disruption of sinonasal epithelial cell barrier function is reversed by activation of the Nrf2 pathway. *Journal of Allergy and Clinical Immunology*. **2016**; 138(6):1736-1738.

Olmedo, C. Hess, A. Navas-Acien, **A. Rule**. A direct method for e-cigarette aerosol sample collection. *Environmental Research* **2016**; 149:151-156.

Undarmaa Enkhbat, **Ana M. Rule**, Carol Resnick, Chimedsuren Ochir, Purevdorj Olkhanud B, D'Ann Williams. Exposure to PM2.5 and blood lead level in two populations in Ulaanbaatar, Mongolia. *Int. J. Environ. Res. Public Health* 2016, 13(2), 214; doi:10.3390/ijerph13020214.

Zhou, Sherry, Behrooz, Leili, Weitzman, Michael, Pan, Grace, Vilcassim, Ruzmyn, Mirowsky, Jaime, Breysee, Patrick, **Rule, Ana**, Gordon, Terry. "Secondhand hookah smoke: an occupational hazard for hookah bar employees" *Tob Control* **2017** Jan;26(1):40-45

Markus Hilpert, Bernat Adria Mora, Jian Ni, **Ana M. Rule**, Keeve E. Nachman. Hydrocarbon Release during Fuel Storage and Transfer at Gas Stations: Environmental and Health Effects. *Current Environmental Health Reports*, **2015** Dec;2(4):412-22. doi: 10.1007/s40572-015-0074-8.

Katherine A. Moon^{1,2}, Hoda Magid^{1,2}, Christine Torrey¹, **Ana M. Rule**¹, Jolie Susan¹, Salahaddin Abubaker¹, Vladimir Levshin³, Aslı Çarkoğlu⁴, Ghada Nasr Radwan⁵, Maha El-Rabbat⁵, Joanna Cohen^{1,6}, Paul Strickland¹, Ana Navas-Acien^{1,2}, Patrick N. Breyse. Secondhand Smoke in Water Pipe Tobacco Venues in Turkey, Russia, and Egypt. *Environmental Research*, **2015** Aug 19;142:ER15926. doi: 10.1016/j.envres.2015.08.012.

Veena Muralidharan, Tom Sussan, Sneha Limaye *, Kirsten Koehler, D'Ann L Williams, **Ana Rule**, Sanjay Juvekar, Patrick Breyse, Sundeep Salvi, Shyam Biswal*. Field testing of alternative cookstove performance in a rural setting of western India. *International Journal of Environmental Research and Public Health*. 12(2), 1773-1787; **2015** doi:10.3390/ijerph120201773

SYNERGISTIC ACTIVITIES

Director, Environmental Exposure Assessment Lab, Environmental Health Sciences, Johns Hopkins University; since 2015
Member, American Industrial Hygiene Association, 1996- present
Member, American Association for Aerosol Research, 2008- present
Member, American Society of Agricultural and Biological Engineers, 2004- present
Member, International Society of Exposure Analysis, 1999 - present
Student Councilor, International Society of Exposure Analysis 2004 -2005.
Member of the Scientific and Organization committees, International Society of Exposure Analysis, annual meeting 2005
Academic councilor, International Society of Exposure Analysis, 2009-2011.
Member, Mexican Society of Biomedical Engineers (SOMIB). 1983- 2010
Board member, Mexican Society of Biomedical Engineers (SOMIB). 1986-88, 1995-96 and 2000-2002.

COLLABORATORS and CO-EDITORS WITHIN THE PAST 48 MONTHS

Dr. Stephen Ahrenholz, NIOSH Morgantown
Dr. Mark A. Borchardt, USDA, Agricultural Research Service, Wisconsin
Dr. Joanna Cohen, Institute for Global Tobacco Control, Johns Hopkins University
Dr. Terry Gordon, New York University School of Public Health
Dr. Howard Katz, Material Science and Engineering, Johns Hopkins University
Dr. Kirsten Koehler, Johns Hopkins University
Dr. Elizabeth C. Matsui, Johns Hopkins School of Medicine
Dr. Ana Navas-Acien, Mailman School of Public Health, Columbia University
Dr. John Shaffer, NIOSH NPPTL, Pittsburgh PA
Dr. Ellen Silbergeld, Johns Hopkins Bloomberg School of Public Health

GRADUATE ADVISORS AND POSTDOCTORAL SPONSORS

Dr. Patrick Breyse (currently at the CDC); Dr. Timothy Buckley (Currently at EPA); Dr. Burt Bronk, US Army ECBC (retired)

GRADUATE STUDENTS AND POSTDOCS (LAST 5 YEARS)

Graduate Students: Hayoung Jun, Kellarai Varsha Malli, Otis Apau, Nandin-Erdene Bayart, Joe Williamson, Harry Luu, Vicky Tay, Craig Terwilliger, Cynthia Cheatwood, Dora Chang, Robin Kalinch, Ray Colliton, Denisse Scheller

Ph.D.: Angela Aherrera (in progress)

Total number of graduate students advised: 21