

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

Rafael Meza Rodriguez, associate professor of epidemiology, with tenure, Department of Epidemiology, and associate professor of global public health, without tenure, School of Public Health, is recommended for promotion to professor of epidemiology, with tenure, Department of Epidemiology, and professor of global public health, without tenure, School of Public Health.

Academic Degrees:

Ph.D.	2006	University of Washington
B.Sc.	2000	Instituto Tecnológico Autónomo de México

Professional Record:

2019-Present	Associate Chair, Department of Epidemiology, University of Michigan School of Public Health
2018-Present	Associate Professor of Global Health, University of Michigan School of Public Health
2017-Present	Associate Professor, Department of Epidemiology, University of Michigan School of Public Health
2016-Present	Co-Leader, Cancer Epidemiology and Prevention Program, University of Michigan Rogel Cancer Center
2011-2017	Assistant Professor, Department of Epidemiology, University of Michigan School of Public Health
2008-2011	Post-Doctoral Fellow, Division of Mathematical Modeling, University of British Columbia Centre for Disease Control
2006-2008	Post-Doctoral Fellow, Program in Biostatistics and Biomathematics, Fred Hutchinson Cancer Research Center
2002-2006	Research Associate, Fred Hutchinson Cancer Research Center
1998-2000	Risk Analyst, Mexican Pension Funds Regulation Agency (CONSAR)

Summary of Evaluation:

Teaching – Professor Meza has been integral in developing and extending coursework to train students to use mathematical and complex systems modeling in conjunction with epidemiologic methods to address chronic diseases and cancer. These courses include EPID 636: Cancer Risk and Epidemiology Modeling (formerly EPID 670) and EPID 637: Systems Modeling of Behavior, Social Processes and Chronic Disease (formerly EPID 618) which he co-developed with another faculty member. Professor Meza's courses have been well received based on student evaluations (Q1 average 3.92 and Q2 average 4.56 since his promotion to associate professor), providing a unique opportunity for students to learn about the applications of modeling in public health. Professor Meza also has an extensive track record of mentoring, with a notable 47 papers published with students or trainees. He has served as the chair or co-chair of 10 dissertation committees, and mentored numerous master's students.

Research – The overall goal of Professor Meza's research program is to characterize the impact of disease prevention and control interventions, informing stakeholders and policy makers as to the most effective and efficient ways to improve population health. Professor Meza has extended his research to address the effect of public policies on the growing population burden of diabetes in Mexico. These activities have taken advantage of his expertise in mechanistic modeling of disease, advanced computational and simulation modeling techniques, and longitudinal methods in epidemiology. This impactful work has

resulted in him being appointed as an Honorary Research Professor at the Mexico National Institute of Public Health (INSP), and a member of Mexico's National System of Investigators (SNI). His work on lung cancer screening supported the development of new guidelines by the United States Preventive Services Taskforce (USPSTF) and the Center for Medicare and Medicaid Services (CMS) in 2013 and again in 2020, and the decision web tool he developed has been critical to make lung cancer screening implementation a reality. This work has been showcased in Surgeon General's Reports and has informed policy at the national and state level.

Professor Meza has excelled in obtaining external funds to pursue his research interests. He is currently the principal investigator (PI) of a \$19 million Center for the Assessment of Tobacco Regulations (CAsToR), and a coordinating PI of the \$8.4 million National Cancer Institute (NCI) Cancer Intervention and Surveillance Modeling Network (CISNET) lung group. Professor Meza has been awarded a U54 grant as the contact PI, two large U01 grants as the contact PI, three R01 grants as a co-investigator, and three more U01 grants as a co-investigator, in addition to internal funding from the University of Michigan. He has the honor of being the contact PI and coordinator of the UM TCORS Center (CAsToR) and the CISNET Lung Group. Overall, Professor Meza has published 111 peer-reviewed papers. Since his promotion to associate professor, he has published 60 papers, six as first or second author and 22 as senior/corresponding author. His papers have appeared in leading scientific and public health journals including the *New England Journal of Medicine*, *American Journal of Preventive Medicine*, *Annals of Internal Medicine*, *Cancer Research*, *Cancer Epidemiology, Biomarkers, and Prevention*, *Epidemiology*, and the *Journal of the American Medical Association*. His research has been widely cited and many of his papers have received widespread coverage in the international press media. Professor Meza has delivered numerous invited lectures, including 13 since his promotion to associate professor.

#### Recent and Significant Publications:

- Cao, P., Jeon, J., Levy, D. T., Jayasekera, J., Cadham, C., Mandelblatt, J., Taylor, K. and Meza, R. (2020) Potential impact of cessation interventions at the point of lung cancer screening on lung cancer and overall mortality in the US. *Journal of Thoracic Oncology*. 15(7):1160-1169
- Jeon, J., Holford, T. R., Levy, D. T., Feuer, E. J., Cao, P., Tam, J., Clarke, L., Clarke, J., Kong, C. K., and Meza, R. (2018) Smoking and lung cancer mortality in the US from 2015-2065: a comparative modeling approach. *Ann Intern Med*. 169(10):684-693
- ten Haaf, K., Jeon, J., Tammemägi, M. C., Han, S. S., Kong, C. Y., Plevritis, S. K., Feuer, E. J., Koning, H. J., Steyerber, E. W., and Meza, R. (2017) Risk prediction models for selection of lung cancer screening participants: a retrospective validation study. *PLoS Medicine*. 14(4): e1002277
- Caverly, T. J., Cao, P., Hayward, R. A., and Meza, R. (2018) Identifying patients for whom lung cancer screening is preference-sensitive. *Ann Intern Med*. 169(1):1-9
- ten Haaf, K., Bastani, M., Cao, P., Jeon, J., Toumazis, I., Han, S. S., Plevritis, S. K., Blom, E. F., Kong, C. Y., Tammemägi, M. C., Feuer, E. J., Meza, R., de Koning, H. J. (2020) A comparative modeling analysis of risk-based lung cancer screening strategies. *Journal of the National Cancer Institute*. 112(5)

Service – Within the department, Professor Meza currently serves as the associate chair and has taken a lead role during the COVID-19 pandemic to reach out to faculty and students addressing their concerns and needs. At the school level, Professor Meza has had important involvement in the school's Global Health Program serving on the Global Health Program committee and the Global Public Health steering committee. He was also a member of the Department of Health Management and Policy chair search committee, the Council on Education for Public Health Accreditation Task Force, the steering committee for the Training Program in Cancer Research in the Department of Biostatistics, and chair of the Recruitment Committee in the Department of Epidemiology. At the university level, Professor Meza serves at the University of Michigan Rogel Cancer Center as the co-lead of the Cancer Epidemiology and Prevention Program, as a member for the Community Outreach and Engagement Internal Advisory

Board, and as a member of the Executive Committee. At the national level, Professor Meza is a member of the steering committee of the CISNET consortium, and he served as a member of the Institute of Medicine (IOM) committee on the Health Implications of Raising the Minimum Age for Purchasing Tobacco Products. He is also a member of numerous professional societies including the Society for Research in Nicotine and Tobacco, the International Association for the Study of Lung Cancer, the Michigan Institute for Computational Discovery and Engineering, and the Models of Infectious Disease Agent Study Network. Professor Meza has reviewed grants for the NIH/NCI, University of Michigan School of Public Health Global Public Health program, and the University of Michigan International Institute, and has reviewed articles for several journals including the *American Journal of Epidemiology*, *American Journal of Preventive Medicine*, *Annals of Internal Medicine*, *Cancer Causes and Control*, *Cancer Research*, *Epidemiology*, *Journal of the American Medical Association*, *Nicotine and Tobacco Research*, and *Preventive Medicine and Tobacco Control*.

#### External Reviewers:

Reviewer A: “Dr. Meza has established an incredibly strong track record of peer-reviewed funding, one deserves tremendous weight in considering whether he is worthy for promotion to full Professor...Overall, Dr. Rafael Meza is an exceptionally skilled scholar who is fully realizing his potential and has developed into a leader in his field. Dr. Meza’s record of scholarly productivity to date represents the career of a scholar who is no longer a rising star but who had become an established research star.”

Reviewer B: “There are only a very few modelers who demonstrate this versatility; Dr Meza reminds me of Sylvia Plevritis, a CISNET trailblazer who models both breast and lung cancer. I would rate him as one of the top three modelers in the CISNET consortium and on a par with Dr. Plevritis at this point in her career...I wholeheartedly support his appointment to the rank of full professor and believe that his case would be an open and shut one here at (my institution).”

Reviewer C: “I have personally found 2 of Rafael’s papers particularly useful in my own work, and these also happened to both be included in the set of 5 submitted with his application package. In short, Rafael’s work is amazing. His approach brings humanity to complex mathematics because he uses these techniques to understand and address some of the most important public health problems we face today. He is widely recognized as a national and international leader in mathematical medical modeling...In all categories I would rate Rafael equal to or exceeding others at similar career stages and certainly sufficient to meet the criteria for promotion to Full Professor.”

Reviewer D: “My estimate of Dr. Meza’s standing in relation to others in his peer group is that he is above most who are going up for promotion to full Professor... Dr. Meza’s contributions to the discipline regarding service are appropriate...Perhaps one area that could be enhanced is Dr. Meza’s service in NIH study sections; it appears that he serves on an ad hoc basis and it is unclear how often this occurs... Dr. Meza’s productivity and contributions to the field of research would meet the requirements for a candidate being considered for promotion to full Professor at my institution.”

Reviewer E: “Dr. Meza is an outstanding investigator who has made many notable contributions to the field of tobacco control and cancer prevention research. He is one of the few researchers who is able to successfully bridge basic epidemiological research and modeling to directly inform policy and practice at a population level...Dr. Meza excels with his rigorous and thoughtful approach to addressing complex questions in cancer prevention and predictive modeling. He is among the very top international leaders in this area...In sum, Dr. Meza is well deserving of promotion to Professor with tenure. His career trajectory has been one of rapid rise with notable impact on the field.”

Reviewer F: “Since my prior review in 2016, Dr. Meza has shown an outstanding level of productivity in peer reviewed publications as well as related scholarly chapters, presentations, and leadership within the CISNET research team and more recently with the FDA funded Center for the Assessment of Tobacco Regulations (CAsToR)... In summary, as noted above, in my review of Dr. Meza scholarly publications, external funding for research, teaching, and service, I would recommend Dr. Meza for promotion to Professor with tenure without reservation and with enthusiasm.”

Reviewer G: “For a still early mid-career academician, he has a notably strong portfolio of funding from the National Institutes of Health... If I were to evaluate him for promotion solely on what he has accomplished, I would find his record to date to be at the margin for success. At my current institution, ..., he likely would be successful for promotion because we give emphasis to public health practice, the domain where much of his work fits.”

Reviewer H: “In summary, Dr. Meza is an outstanding research of modeling in health care whose work is seminal in the field and influences both other researchers and policy makers. He has many peers, but few are truly his equal. There is no question in my mind that he would be appointed as a Professor at this institution...I was surprised to learn that he was not already at that rank.”

Summary of Recommendation:

Professor Meza’s impactful work has led him to be an international leader in applying systems modeling to cancer and chronic disease questions. His work has translated into major public health legislation changes in the United States and Mexico. He has been integral in contributing to the Department of Epidemiology’s mathematical modeling curriculum, and his service to the department, school, university, and profession at the regional and national levels has been outstanding. It is with the support of the School of Public Health Executive Committee that we recommend Rafael Meza Rodriguez for promotion to professor of epidemiology, with tenure, Department of Epidemiology, and professor of global public health, without tenure, School of Public Health.



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

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