

PROMOTION RECOMMENDATION

The University of Michigan
School of Public Health
Department of Epidemiology

Joseph N. Eisenberg, assistant professor of epidemiology, Department of Epidemiology, School of Public Health, is recommended for promotion to associate professor of epidemiology, with tenure, Department of Epidemiology, School of Public Health.

Academic Degrees:

Ph.D.	1992	University of California, Berkeley/San Francisco
M.P.H.	1991	University of California, Berkeley
M.S.	1986	University of California, Berkeley/San Francisco
B.S.	1982	University of California, Berkeley

Professional Record:

2006-present	Assistant Professor, School of Public Health, Department of Epidemiology, University of Michigan
2003-2005	Adjunct Associate Professor/Associate Research Scientist, School of Public Health, UC Berkeley (Divisions of Environmental Health Sciences and Epidemiology)
1998-2003	Adjunct Assistant Professor/Assistant Research Scientist, School of Public Health, UC Berkeley (Divisions of Environmental Health Sciences and Epidemiology)
1994-1996	Postdoctoral Fellow, Environmental Biology, National Science Foundation
1993-1995	Assistant Research Bioengineer, UC Berkeley, Mechanical Engineering
1992-1993	Postdoctoral Researcher, UC Berkeley

Summary of Evaluation:

Teaching: After joining the UM faculty, Professor Eisenberg developed and taught a new course, EPID 602, "Foundations in infectious disease transmission models." This three credit hour course was taught in winter 2006 and included both lecture and laboratory components with the objective of teaching students how to use mathematical models in epidemiologic studies. The course covered a variety of infectious disease transmission systems, such as respiratory, waterborne, vectorborne, and sexually transmitted diseases; and it provided a solid quantitative introduction to the basic concepts in infectious disease epidemiology. Professor Eisenberg's teaching of EPID 602 was considered very successful and he received high instructor scores on the student evaluations. Although he had been planning a new course for the winter of 2008, Professor Eisenberg graciously agreed to put that course on hold in order to teach EPID 503, the basic course in epidemiology that is taken by about 200 non-Epidemiology students in the School of Public Health.

Professor Eisenberg has a strong interest in mentoring students. He currently has five Ph.D. Epidemiology students for whom he serves (or is planning to serve) as chair or co-chair of their dissertation committees. He also continues to supervise the dissertation research of three Ph.D. students at UC Berkeley who are expected to complete their dissertations in 2007.

Research: Professor Eisenberg's research interests are microbial risk assessment and environmental determinants of infectious diseases, both of which focus on disease transmission modeling and a systems approach for the study of infectious-disease processes. His research involves a combination of theoretical work, empirical investigation and policy analysis, and it covers both domestic and international settings.

Professor Eisenberg is the principal investigator on three federally funded grants: 1) a five-year NIAID grant to conduct an observational study of 21 villages in northern coastal Ecuador focusing on diarrheal disease; 2) a three-year EPA-STAR grant to conduct an analysis of the risks associated with norovirus infection due to drinking water exposures; and 3) a five-year EPA-STAR grant to develop methods for examining risks associated with the exposure of pathogens in the environment. Publications from these studies have already appeared in several top-tier journals.

Professor Eisenberg is rapidly becoming recognized as an international expert in his field, as indicated by his presentations at four national and international conferences since 2006, plus requests to consult with the World Health Organization (WHO). He has an ongoing collaboration with the Water, Sanitation, and Hygiene group at the WHO. He contributed two of the book chapters for the coordinator of the Water, Sanitation, and Hygiene group—one chapter on a public health perspective for establishing water-related guidelines and standards, and a chapter on microbial risk assessment.

Professor Eisenberg has a total of 38 peer-reviewed publications in several top-tier journals, of which he is the first author on 24. Of the ten papers published or accepted since joining the UM, Professor Eisenberg is the first author on four and the senior author on another five. In addition, he has co-authored three proceedings papers (two as first author), two book chapters (one as first author), and eight technical reports. He has presented his work at 24 national and international conferences (five since January 2006).

Recent and Significant Publications:

Eisenberg, J.N.S., Lewis, B. L., Porco, T. C., Hubbard, A. H., Colford, J. M. Jr. (2003) Bias due to secondary transmission when estimating attributable risks reported from intervention trials. *Epidemiology*, 14(4): 442-450.

Eisenberg, J.N.S., Lei, X., Hubbard, A.H., Brookhart, M.A., Colford, J. M. Jr. (2005) The role of disease transmission and conferred immunity in outbreaks: Analysis of the 1993 Cryptosporidium outbreak in Milwaukee. *American Journal of Epidemiology*, 161: 62-72.

Eisenberg, J.N.S., Cevallos, W., Ponce, K., Levy, K., Bates, S., Scott, J., Hubbard, A., Viera, N., Segovia, R., Espinel, M., Trueba, G., Riley, L., Trostle, J. (2006) Environmental change and infectious disease: How roads affect the transmission of diarrheal pathogens in rural Ecuador. *Proceedings of the National Academy of Sciences*, 103(51): 19460-19465.
<http://www.pnas.org/cgi/reprint/103/51/19460>

Eisenberg, J.N.S., Hubbard, A., Wade, T.J., Sylvester, M.J., LeChevallier, M.W., Levy, D.A., Colford, J.M. Jr. (2006) Inferences Drawn from a Risk Assessment Compared Directly to a Randomized Trial of a Home Drinking Water Intervention. *Environmental Health Perspective*, 114(8): 1199-1204.

Eisenberg, J.N.S., Scott, J.B.L., Porco, T. C. (2007) Integrating public health control strategies: Balancing water sanitation, and hygiene interventions to reduce diarrheal disease burden. *American Journal of Public Health*, 97: 846-852.

Service: Professor Eisenberg has served on the Epidemiology Admissions Committee since 2006 and helped to mentor UM undergraduates interested in international health issues from UROP and the School of Public Policy. He has reviewed papers for such journals as *Environmental Health Perspectives*, *Epidemiology*, and the *American Journal of Epidemiology*. He has served as a consultant to the EPA, the WERF, and the WHO to help develop research and regulatory agendas. For example, Professor Eisenberg was a member of a small group of experts that met in Surrey, UK to develop a WHO guidance document for developing countries to use as a public health policy tool for planning interventions associated with water, sanitation, and hygiene.

External Reviewers:

Reviewer (A): "...several dozen significant publications in leading general and specialty scientific journals. ... clear from Joe's CV that he is more than ready for tenure."

Reviewer (B): "His work has had a major impact within WHO and has influenced the way WHO has gone about their own assessments of both risk and disease burdens at the global level. I would judge that this meets the criteria of a scientist making a strong international impact. ...Overall this man is a top class scientist."

Reviewer (C): "National and international agencies hold Prof. Eisenberg's contribution to the field of microbial assessment in very high regard....I would definitely rate his research work and productivity as being superior and nationally and internationally recognized."

Reviewer (D): "...his substantial and growing body of work has appeared in an array of excellent journals. [He] has developed into an excellent researcher, teacher and mentor who is making important contributions to our understanding of infectious diseases, their transmission and their prevention. I am confident he would be promoted here."

Reviewer (E): "Dr. Eisenberg is an outstanding scientist and public health practitioner and without a doubt is a national expert in microbial risk assessment and waterborne infectious disease epidemiology. [His] studies have placed Dr. Eisenberg into the top cadre of international public health waterborne infectious disease researchers. ... He is without doubt an outstanding scientist."

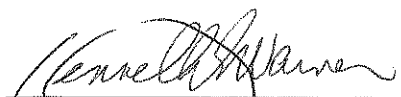
Reviewer (F): "The research in which he is engaged in the international area is enormously important to health in developing countries....Joe's work is being published in the best journals in several fields....it is clear that Joe has gained an international reputation – one that might be equal to his national reputation."

Reviewer (G): "I have great regard for the quality and importance of [his] research work. ... His contributions to national and international public health policy are also exceptional for someone at the academic level he currently holds. ... [He] has achieved substantial international recognition."

Reviewer (H): "Prof. Eisenberg's systems approach to modeling the dynamics inherent in environmentally-related infectious disease problems is a major innovation in the field of risk assessment.... he has a strong and sustained record of high-quality research awards, which attests to the superior ranking he enjoys among his peers."

Summary of Recommendation:

Professor Eisenberg has demonstrated a remarkable capacity to integrate his teaching and mentoring with his research, and has provided important contributions to the department through his dedication and research collaborations. Therefore, I enthusiastically recommend Joseph N. Eisenberg for promotion to associate professor of epidemiology, with tenure, Department of Epidemiology, School of Public Health.



Kenneth E. Warner
Dean, School of Public Health

May 2008