Approved by the Regents May 15, 2014

PROMOTION RECOMMENDATION
The University of Michigan
School of Public Health
Department of Environmental Health Sciences

Dana Dolinoy, assistant professor of environmental health sciences, Department of Environmental Health Sciences, School of Public Health, is recommended for promotion to associate professor of environmental health sciences, with tenure, Department of Environmental Health Sciences, School of Public Health.

Academic Degrees:

Ph.D.	2007	Duke University, Genetics and Genomics & Integrated Toxicology and Environmental Health
M.S.	2003	Harvard University, Environmental Health & Risk Management
B.A.	1998	Duke University, Environmental Sciences & Policy
B.A.	1998	Duke University, Spanish

Professional Record:

2008-present	John G. Searle Assistant Professor and Assistant Professor, Environmental Health Sciences, University of Michigan School of Public Health
2009-present	Faculty, Reproductive Sciences Program, University of Michigan
2009-present	Member, Metabolomics and Obesity Center, University of Michigan
2009-present	Member, Comprehensive Cancer Center, University of Michigan
2007-2008	Fellow in Radiation Oncology, Duke University

Summary of Evaluation:

Teaching: Professor Dolinoy has consistently demonstrated a high level of ability and excellence in teaching during her time with the department. In the courses she has developed and taught, she has shown a high aptitude for effective teaching, and has consistently received very high student evaluation scores (frequently between 4.5 and 5.0 on the quality of the course and the instructor). Professor Dolinoy currently has full responsibility of the department's introduction to environmental health course that is required by all first year MPH EHS students. This is a critical course as it introduces all MPH EHS students to the breadth of disciplines associated with the environmental health sciences, and establishes how they integrate to provide a holistic perspective on environmental health challenges. Feedback on this course has been very positive.

As a requirement of her ONES award, Professor Dolinoy has had an enforced reduced teaching load. However, even with this restriction she has been able to demonstrate significant capacity for developing strong courses and lectures, and excelling as an extremely able educator. She has followed department convention in providing considerable support to a wide number of courses – this is in part a product of the extreme breadth of the environmental health sciences, and the need to pull in specific expertise from within the department in courses. While these occasional lectures do not carry the same weight as being primary instructor on a course, they nevertheless demonstrate her enthusiasm and ability to provide effective didactic instruction to students.

Professor Dolinoy has supervised and continues to supervise the work of a number of graduate students. She has had one Ph.D. student graduate, and is currently primary advisor to four others. She is also a committee member for a further six Ph.D. students. In addition, she has been the Master of Science thesis or field experience mentor for four students.

Research: Since joining the department, Professor Dolinoy has developed a highly regarded program addressing the role and nature of epigenetic mechanisms in influencing health and disease susceptibility throughout the life course. She is currently considered by many of her peers to be a rising leader in the field. Her academic achievements and potential are amply reflected in her grant support and publications record.

Specifically, Professor Dolinoy is pursuing research into developing an integrated approach to explore the impact of exposures to specific agents on human health and disease. Her research draws heavily, but not exclusively, on approaching health and disease through the lens of epigenetics, and integrates data from *in vivo* mouse studies, an ongoing longitudinal epidemiology study, and data from human clinical trials. Her research began looking at the effects of perinatal exposure to agents such as lead and Bisphenol-A (BPA), and she is currently considered a leading authority on perinatal/epigenetic interactions with BPA. Building on a solid base and within the model she is developing, she is continuing to expand her research to consider new agents, exposed populations and endpoints; including Alzheimer's disease and cardiovascular disease in ageing populations.

In 2009, Professor Dolinoy was awarded a prestigious NIEHS Outstanding New Environmental Scientist (ONES) R01 award. She is also a project PI on a NIH/EPA Children's Environmental Health and Disease Prevention Formative Center (P20) focused on perinatal exposures, epigenetics, child obesity and sexual maturation. Currently, Professor Dolinoy is the PI, co-PI or co-investigator on six active grants. She is the PI or co-PI on five pending grants, including two R01's.

Professor Dolinoy has to date had 44 peer review papers published, 32 of these since she joined the University of Michigan. On 20 of these she is either lead author, or the lead author is a student or researcher working under her direct supervision. She has published in some of the leading journals in her field. According to the Scopus database, she has an H index of 15, indicating that 15 of her peer review papers have been cited at least 15 times. Her publications have been cited over 1200 times. Professor Dolinoy has been invited to speak at over 60 meetings and events related to her research, and has been an author on over 50 conference proceedings or abstracts. Professor Dolinoy follows the convention of encouraging her students, trainees and collaborators to be the first author on papers that report work that was conducted as part of her research program.

Recent and Significant Publications:

Weinhouse C., Anderson O.S., Bergin I.L, Vandenbergh D.J., Gyekis J.P., Dingman M.A., Yang J., Dolinoy D.C. (2014) Dose-dependent incidence of hepatic tumors following perinatal bisphenol A exposure. *Environmental Health Perspectives.* In Press.

Faulk C., Barks A., Liu K., Goodrich J.M., Dolinoy D.C. (2013) Early life lead exposure results in dose and sex-specific effects on weight and epigenetic gene regulation in weanling mice. *Epigenomics.* 5(5):487-500.

Kim J.H., Rozek L.S., Soliman A.S., Sartor M.A., Hablas A., Seifeldin I.A., Colacino J.A., Weinhouse C., Nahar M.S., Dolinoy, D.C. (2013) Bisphenol A-associated epigenomic changes in prepubescent girls from Gharbiah, Egypt. *Environmental Health.* 12(1):33. [PMCID: 3655072]

Goodrich J.M., Basu N., Franzblau A., Dolinoy D.C. (2013) Mercury biomarker levels and gene specific methylation in the Michigan Dental Association Cohort. *Environmental and Molecular Mutagenesis.* 54(3):195-203. [PMCID: 3750961]

Faulk C., Barks A., Dolinoy D.C. (2013) Phylogenetic and DNA methylation analysis reveal novel regions of variable methylation in the mouse IAP class of transposons. *BMC Genomics.* 14(1):48. [PMCID: 3556122]

Anderson O.S., Sant K.E., Dolinoy D.C. (20102) Nutrigenomics: An interspecies review of dietary methyl donors, one-carbon metabolism and DNA methylation. *Journal of Nutritional Biochemistry*. 23(8):853-859. Invited Review. [PMCID: PMC3405985]

Dolinoy D.C., Weinhouse C., Jones T.R., Rozek L.S., Jirtle R.J. (2010) Variable histone modifications at the A^{vy} metastable epiallele. *Epigenetics*. 5(7): 637-644. [PMCID: 3052847]

**In each of the examples given, underscored authors are UM trainees mentored by Professor Dolinoy. In each case, Professor Dolinoy is the intellectual lead on the publication.*

Service: Professor Dolinoy has been an active member of her academic community within the department and university, as well as more widely. Specifically, she served on the departmental admissions committee, the professional degree programs committee, and the executive committee. Here, she has been a highly responsive and responsible committee member, taking a lead on key activities as needed to ensure the success of the department. Professor Dolinoy was also a member of the small group established to explore and implement innovations within the School of Public Health. She continues to be active in promoting innovation within the school.

In 2011, Professor Dolinoy was elected as vice chair of the Gordon Research Conference on Cellular and Molecular Mechanisms of Toxicology, and she will take over as chair for the term 2013-2015. In addition, she is committed to advancing environmental and nutritional sciences within broader scientific and public communities. In 2011, she was part of a select group informing the NIEHS Strategic Visioning process, and in 2012, she was an invited contributor to the NIH Roadmap working group on epigenomic surrogate samples. She serves on a number of journal editorial boards, and is a regular reviewer for several journals.

External Reviewers:

Reviewer (A): "Some letters are difficult to write, and some are easy – this one is remarkably easy! I could go on and on about the number of excellent publications and the impact that they had on an exceedingly important new field. Seldom does one use the word 'pioneer' for someone [of her generation]."

Reviewer (B): "The strongest possible letter in support Dr. Dolinoy's promotion. [She] has made unique and seminal contributions to our understanding of molecular epigenetic mechanisms and their relationship to health and disease. She is at the very pinnacle of her profession – in the top 1%."

Reviewer (C): "Dr. Dolinoy appears to be ahead of time in her research field. …[She] truly fulfills all the criteria to be eligible for this promotion, such as being an excellent teacher and mentor, being preeminent in her research field, having made most outstanding contributions to the field of environmental health and epigenetics."

Reviewer (D): "I have written many tenure letters, but few as pleasurable as this one. Her ability to combine mouse models with both clinical and epidemiological studies is a sound strategy that places her in a unique position to rapidly translate the results of her experimental studies. No question that [she] deserves promotion."

Reviewer (E): "Rare ability among scientists to not only do outstanding science, but also to communicate it well…a 'no brainer' decision of clear promotion."

Reviewer (F): "Impressive rise in scientific standing in a short period of time and a stellar record of professional accomplishments. Highly deserving of promotion."

Reviewer (G): "Dr. Dolinoy is an outstanding researcher who has already… made significant contributions to our understanding of changes in DNA methylation over the life course. There is no question in my mind that Dr. Dolinoy would receive tenure at our school."

Reviewer (H): "Dr. Dolinoy's research publication and grant record are outstanding and exceed the requirement for promotion with tenure at nearly any institution or medical school."

Summary of Recommendation

Professor Dolinoy is well on her way to being one of the foremost academics of her generation in her field. She is an outstanding researcher and a dedicated teacher. Her productivity has provided research and training opportunities to numerous students. It is with the support of the School of Public Health Executive Committee that I recommend Dana Dolinoy for promotion to associate professor of environmental health sciences, with tenure, Department of Environmental Health Sciences, School of Public Health.

Martin A. Philbert, Ph.D.
Dean, School of Public Health

May 2014