

PROMOTION RECOMMENDATION  
UNIVERSITY OF MICHIGAN  
MEDICAL SCHOOL  
DEPARTMENT OF HUMAN GENETICS

Approved by the Regents  
May 14, 2009

Julie A. Douglas, Ph.D., assistant professor of human genetics, Department of Human Genetics, Medical School, is recommended for promotion to associate professor of human genetics, with tenure, Department of Human Genetics, Medical School.

Academic Degrees:

Ph.D.	2001	University of Michigan
M.S.	1998	University of Michigan
B.A.	1990	University of Akron

Professional Record:

2001-present	Assistant Professor of Human Genetics, University of Michigan
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Summary of Evaluation:

Teaching: Dr. Douglas is an outstanding teacher. She revamped the curriculum in Human Genetics to include a rigorous course in statistical and population genetics that is taken by graduate students from diverse life science backgrounds in LSA, the School of Public Health, and the Medical School (HG542, HG544). In addition to didactic teaching at the University of Michigan, Dr. Douglas was recruited to teach at the Mathematical and Theoretical Biology Institute at Cornell University. Finally, she has mentored two postdoctoral fellows and seven graduate students in her laboratory and been highly sought after by graduate students in Human Genetics, Epidemiology, and Bioinformatics for participation in preliminary exams and thesis committees (16).

Research: Dr. Douglas is an accomplished statistical geneticist with the ability to develop new biostatistical methods and contribute to study design and analysis of large patient samples. Her passion is in genetic risk factors for cancer, particularly those that are hormonally influenced like breast and prostate cancer. She is an outstanding team player, having been a key contributor to several large studies at the University of Michigan in collaborations with Drs. Gruber, Cooney, and Peyser. In addition, she has launched a large, well-funded study on the genetic risk factors for breast density, a risk factor for breast cancer. By identifying breast density as a trait proximal to breast cancer and selecting the Old Order Amish, a founder population with few environmental variables, she is likely to identify novel breast cancer susceptibility genes that have not been tractable in outbred populations.

Dr. Douglas has an outstanding record of external funding as a key co-investigator on several collaborative R01 grants, a U01, and prostate SP0RE grants, in addition to being principal investigator of a large R01 from the National Cancer Institute. She has a strong record

of publication, listing 25 peer-reviewed papers in high impact journals like *JAMA* and *Cancer Research*. Eighteen of her papers were published after her appointment as an assistant professor, and are independent of her Ph.D. mentor. Either Dr. Douglas or one of her trainees is the first or senior author on 11 of these 18 papers. Dr. Douglas receives accolades from external reviewers for her future potential in contributing to the field. There is no doubt that she is on an upward trajectory with great promise.

Recent and Significant Publications:

Douglas JA, Roy-Gagnon MH, Zhou C, Mitchell BD, Shuldiner AR, Chan HP, Helvie MA: Mammographic breast density – Evidence for genetic correlations with established breast cancer risk factors. *Cancer Epidemiol Biomarkers Prev* 2008, accepted.

Levin AM, Ray AM, Zuhlke KA, Cooney KA, Douglas JA: Chromosome 17q12 variants contribute to risk of early-onset prostate cancer. *Cancer Res* 68:6492-6495, 2008.

Douglas JA, Sandefur CI: PedMine – A simulated annealing algorithm to identify maximally unrelated individuals in population isolates. *Bioinformatics* 24:1106-1108, 2008.

Douglas JA, Levin AM, Zuhlke KA, Ray AM, Johnson GR, Lange EM, Wood DP, Cooney KA: Common variation in the *BRCA1* gene and prostate cancer risk. *Cancer Epidemiol Biomarkers Prev* 16:1510-1516, 2007.

Douglas JA, Gruber SB, Meister KA, Bonner J, Watson P, Krush AJ, Lynch HT: History and molecular genetics of Lynch syndrome in family G – A century later. *JAMA* 294:2195-2202, 2005.

Service: Dr. Douglas has done more than her share of service nationally and locally. She is on the editorial board of *Cancer, Epidemiology, Biomarkers and Prevention*, has served on two different NIH study sections “Genome” and “Genetic variation and evolution,” and was recruited as an external reviewer by the MD Anderson Cancer Center, University of Texas. She was a reviewer for the program for the annual meeting of the American Society of Human Genetics. Further evidence of her national reputation is her service on both the International Haplotype Map Project and the Gene by Environment Interaction Program for the NIH. At the institutional level, Dr. Douglas has been an exemplary colleague and citizen, having served on faculty search committees in Statistics and Bioinformatics, and numerous departmental committees, including graduate admissions, awards, annual research retreat, and curriculum. She serves actively on the Genome Sciences Training Grant.

### External Review:

Reviewer A: “She writes and presents very clearly and is an excellent speaker. In addition, she is addressing important areas of research in genetics and genetic epidemiology.... She is recognized nationally and internationally in areas of medical genetics and genetic epidemiology of cancer-related endpoints....her papers have been cited about 400 times/ year for the last 4 years or so. This reflects an excellent level of impact of her work.”

Reviewer B: “Dr. Douglas is also a good ambassador for UM’s Department of Human Genetics for the genetic epidemiology and statistical genetics communities. The genetic epidemiology and statistical genetics communities are small....it is a feather in the Department’s cap that you have been able to recruit and retain her. Her success in her chose [sic] field of research is well-appreciated. I hope that you will also appreciate it....I can assure you that Dr. Douglas would be promoted and awarded tenure in my Department and this School.”

Reviewer C: “I genuinely believe that the University of Michigan is lucky to have such a competent quantitative geneticist working in the field of cancer as that is an area in which such specialists are becoming ever more critical for the team science projects that are where real progress in cancer is being made.”

Reviewer D: “I have read several of her papers and consider them to be original, substantive contributions to the field....Julie serves on the editorial board of Cancer Epidemiology, Biomarkers and Prevention, she has served as an ad hoc reviewer for two NIH study sections, and she has been invited to give several presentations at other major institutions in the past two years. All of these activities attest to her excellent reputation as an accomplished statistical geneticist.”

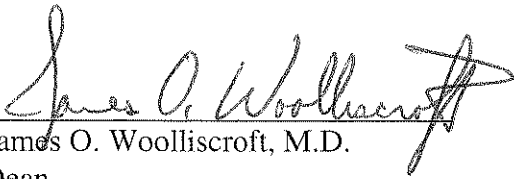
Reviewer E: “I believe that her work on genes that control variation in breast density will be extremely important as a means of uncovering pathways that lead to breast cancer. In the 'old days', we demonstrated that breast density was heritable, but now Julie has the means to actually find the genes....Julie has served on many committees and performed mentorship and lecturing in the graduate program. She has a passion for teaching, a quality that is critical for a well-defined graduate training program.”

Reviewer F: “Since her appointment as Assistant Professor in 2001, Dr. Douglas has established a national reputation in her field of statistical and applied genetics....it is clear that she is now in a leadership position and is directing the design and implementation of large genetic epidemiological projects.”

### Summary of Recommendation:

I am pleased to recommend Dr. Douglas for promotion to Associate Professor, with tenure, based on her research accomplishments as a statistical geneticist in understanding the genetic risk factors for common cancers. She is a critical member of several large cancer research teams at the University of Michigan, and has established a large interdisciplinary team

of researchers to study the genetics of breast density, engaging researchers and clinicians in several states. She has the ability to sustain a well-funded research operation and to be a leader in the genetics of complex disease. In addition to her research program, Dr. Douglas is an outstanding teacher, communicator and colleague.

A handwritten signature in cursive script, reading "James O. Woolliscroft". The signature is written in black ink and is positioned above a horizontal line.

James O. Woolliscroft, M.D.

Dean

*Lyle C. Roll Professor of Medicine*

May 2009