

May 17, 2007

PROMOTION RECOMMENDATION
 UNIVERSITY OF MICHIGAN MEDICAL SCHOOL
 DEPARTMENT OF OPHTHALMOLOGY AND VISUAL SCIENCES
 UNIVERSITY OF MICHIGAN SCHOOL OF PUBLIC HEALTH
 DEPARTMENT OF EPIDEMIOLOGY

Julia E. Richards, Ph.D., Associate Professor of Ophthalmology and Visual Sciences, with tenure, Department of Ophthalmology and Visual Sciences, Medical School, and Associate Professor of Epidemiology, without tenure, Department of Epidemiology, School of Public Health, is recommended for promotion to Professor of Ophthalmology and Visual Sciences, with tenure, Department of Ophthalmology and Visual Sciences, Medical School, and Professor of Epidemiology, without tenure, Department of Epidemiology, School of Public Health.

Academic Degrees:

Ph.D.	1983	University of Wisconsin
B.S.	1971	University of Washington

Professional Record:

2000-Present	Associate Professor of Ophthalmology and Visual Sciences, University of Michigan
1997-Present	Associate Professor of Epidemiology, University of Michigan
1997-2000	Senior Associate Research Scientist, Department of Ophthalmology and Visual Sciences, University of Michigan
1990-1997	Assistant Research Scientist, Department of Ophthalmology, University of Michigan
1989-1997	Assistant Professor of Epidemiology, University of Michigan

Summary of Evaluation:

Teaching: Dr. Richards has lectured in one of the methods courses in the School of Public Health (Epid 519, now 511), each year since 1993. Enrollment averages two dozen. She participates in other epidemiology courses as well, along with a course in the School of Business (BA 518), which numbers closer to 50 students. She has served on or chaired at least one thesis committee each year since being granted tenure. In addition, she supervises medical students, residents, graduate students, and postdoctoral fellows in her laboratory. She also mentors undergraduate students through the UROP and SROP programs. Many of her trainees have received awards and fellowships. Dr. Richards is the founder and faculty mentor for The Kelloggians, a diverse group of students from across the campus who are interested in vision research. The Kelloggians meet informally at the Eye Center every other Friday to share ideas and findings, deliver "chalk talks," and practice upcoming presentations.

In addition to having served on the departmental Education Committee for four years, Dr. Richards has had a significant effect on the scope and quality of teaching activities. She is critical to the departmental training of medical students, residents, fellows, and faculty in the

newest molecular genetics techniques as applied to eye diseases. She teaches this to graduate students in basic science departments, as well. Because of her ability to conceptualize and articulate complex issues, Dr. Richards helps provide the intellectual bridge between basic scientists and clinicians. She has acquired an international reputation in ocular molecular genetics, particularly in glaucoma; as such, she functions as an important female role model and mentor within the University of Michigan academic community. She has successfully engaged the nonscientific population with her popular book, *The Human Genome: A User's Guide*, which was featured on National Public Radio's "Fresh Air."

Research: Dr. Richards was the first scientist to receive an RO1 from the NIH to pursue positional cloning of human glaucoma genes. Glaucoma is the most common cause of blindness in African-Americans and the second leading cause of blindness in the U.S. As the population ages an ability to predict who will develop glaucoma becomes critical. Its prevalence and potential for severe visual disability make glaucoma a public health and economic issue. Dr. Richards mapped the first angle-closure glaucoma locus. Her successes include mapping of the *NNO1* locus for nanophthalmos, the first report of co-segregation of glaucoma and Nail-Patella Syndrome, gene expression studies that clarify the pathways involved in elevated intraocular pressure, and the first demonstration of the genetic heterogeneity in three different inherited eye diseases. She has designed and successfully executed a number of genotype-phenotype studies that have changed the way clinicians diagnose the many varied forms of glaucoma. This is an exceptional achievement in translational research.

Her reputation as a scientist and as an efficient, effective, and thoughtful reviewer has placed her on study sections, review boards, and advisory panels. She is known for complete adherence to strict ethics in all phases of her research and is uniformly considered to be a generous, trusted collaborator. Dr. Richards has an ability to apply techniques and concepts across disciplines and this creativity has resulted in notable results in her research efforts to uncover the causes of the inherited glaucomas. She is involved in many collaborative efforts with clinicians to define the clinical characteristics associated with particular genes and mutations. She is the perennial moderator for the prestigious annual Optic Nerve Rescue and Regeneration Think Tank.

Recent and Significant Publications:

Rozsa FW, Scott KM, Pawar H, Sample JR, Wirtz MK, Richards JE: Differential expression profile prioritization of positional candidate glaucoma genes: the *GLC1C* locus. *Arch Ophthalmol* 125:117-127, 2007.

Rozsa FW, Reed DM, Scott KM, Pawar H, Moroi SE, Kijek TG, Krafchak CM, Othman MI, Vollrath D, Elner VM, Richards JE: Gene expression profile of human trabecular meshwork cells in response to long-term dexamethasone exposure. *Mol Vis* 12:125-141, 2006.

Woodroffe A, Krafchak C, Fuse N, Lichter PR, Moroi SE, Schertzer R, Downs CA, Duren WL, Boehnke M, Richards JE: Ordered subset analysis supports a glaucoma locus at *GLC1I* on chromosome 15 in families with earlier adult age at diagnosis. *Exp Eye Res* 282:1068-1074, 2006.

Krafchak CM, Pawar H, Moroi SE, Sugar A, Lichter PR, Mackey DA, Mian S, Nairus T, Elner V, Schteingart MT, Downs CA, Kijek TG, Jhnson JM, Trager EH, Rozsa FW, Mandal MNA, Epstein MP, Vollrath D, Ayyagari R, Boehnke M, Richards JE: Mutations in *TCF8* cause posterior polymorphous corneal dystrophy and ectopic expression of *COL4A3* by corneal endothelial cells. *Am J Hum Genet* 77:694-708, 2005.

Shimizu S, Krafchak C, Fuse N, Epstein MP, Schteingart MT, Sugar A, Eibschitz-Tsimhoni M, Downs CA, Rozsa F, Trager ED, Reed DM, Boehnke M, Moroi SE, Richards JE: A locus for posterior polymorphous corneal dystrophy (PPCD3) maps to chromosome 10. *Am J Med Genet* 130A:372-377, 2004.

Service: Dr. Richards has been a member of the department's Research Committee since she joined our faculty in 1990. She has also been Director of the Glaucoma Research Center for the past five years. Since 2001 she has also been a member of the Core Directors Committee. Nationally, she serves annually on the organizing committee of the Glaucoma Foundation's international Think Tank. She is an active reviewer for the major funding agencies, as well as for all the major journals in her field. She was a guest editorial board member for *Investigative Ophthalmology and Visual Science* from 1999 to 2001. She is asked regularly to participate in national conferences, meetings, and workshops that act as catalysts for setting research priorities.

External Review:

Reviewer A: "In the past fifteen years, Dr. Richards has established herself as one of the world's major pioneers in the field of glaucoma genetics and a leading authority on the genetics of glaucoma and related diseases....She has established herself as one of the leading authorities on glaucoma genetics and established important national and international collaborations to move the work forward."

Reviewer B: "...[she] has had a significant impact on the field of glaucoma genetics (she is in the top three in the world, and in many ways has defined the field)..."

Reviewer C: "Julia is a major international figure in glaucoma genetics, and has published extensively and lucidly in the major eye and general journals on this subject. Her opinion is sought by all in the field and she is an active and useful collaborator for a number of research groups."

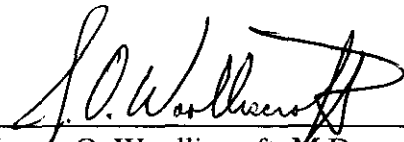
Reviewer D: "...Julia Richards, Ph.D. has a long-standing track record of superior publications, which has cemented her reputation as a leader in the field of Ophthalmic Genetics, with particular expertise in the area of glaucoma. She is one of a handful of individuals who have had an enduring effect in this very important area."

Reviewer E: "...I think Dr. Richards is a very good researcher, and is making excellent contributions to service and administration. She is already at the standing of other full professors in the field. She is an internationally recognized and respected expert in the area of glaucoma genetics."

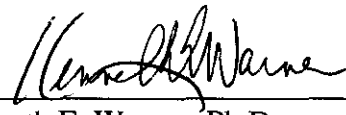
Reviewer F: "...I have no hesitation to say that Dr. Richards is highly regarded in this field and she is viewed as one of the top 5 major researchers, at least, in the field of glaucoma genetics research."

Summary of Recommendation:

In an exceptionally competitive scientific environment, Dr. Julia Richards stands out as a sought-after collaborator. She is a valued member of our faculty whose expertise and energy add immeasurably to our academic mission. Dr. Richards combines the technical expertise that we expect from a highly skilled scientist with the excitement of a creative thinker who is not necessarily limited by convention. Her ideas, her collegiality, and her efforts have helped build an internationally respected program in glaucoma genetics. She is a model university citizen whose promotion we wholeheartedly support.



James O. Woolliscroft, M.D.
Interim Dean, Medical School
Lyle C. Roll Professor of Medicine



Kenneth E. Warner, Ph.D.
Dean, School of Public Health

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