

PROMOTION RECOMMENDATION  
THE UNIVERSITY OF MICHIGAN  
MEDICAL SCHOOL  
DEPARTMENT OF OPHTHALMOLOGY AND VISUAL SCIENCES

Maria A. Woodward, M.D., assistant professor of ophthalmology and visual sciences, Department of Ophthalmology and Visual Sciences, Medical School, is recommended for promotion to associate professor of ophthalmology and visual sciences, with tenure, Department of Ophthalmology and Visual Sciences, Medical School.

Academic Degrees

M.S.	2016	University of Michigan
M.D.	2004	Columbia University
B.S.	1999	Yale University

Professional Record:

2014–present	Assistant Professor of Ophthalmology and Visual Sciences, University of Michigan
2010-2014	Clinical Lecturer of Ophthalmology and Visual Sciences, University of Michigan
2009-2010	Assistant Professor of Ophthalmology and Visual Sciences, Emory University

Summary of Evaluation:

Teaching: Dr. Woodward instructs all types of learners: cornea fellows, research fellows, residents, medical students, undergraduates, and public health graduate students. She teaches health care providers throughout the region as well as nationally through lectures and skills transfer courses. Dr. Woodward has presented nationally for the American Academy of Ophthalmology (AAO) and the Eye Bank Association of America. She has supervised research projects with all levels of trainees, including undergraduate, medical and graduate students, ophthalmology residents and ophthalmology cornea fellows. Her trainees present their research at national meetings and contribute to peer-reviewed manuscripts, and have published 18 peer-reviewed manuscripts, three review articles, and presented at over 30 national meetings. Her teaching excellence is evidenced through receipt of the Bartley R. Frueh Surgical Teaching Award, and the Token of Appreciation from Medical Students Award. A significant portion of Dr. Woodward's teaching activities occur in the clinic. She created, developed, implemented and leads the University of Michigan-Eversight Eye Bank fellowship. She secured financial support for the fellowship from Eversight in 2013, the fellowship began in 2014 where she provides primary supervision. Since 2014, six cornea fellows have completed this program with one former fellow already serving as a medical director at an eye bank. Dr. Woodward is also active in patient education initiatives by conducting refractive surgery seminars and discussing her research in eye banking with the public.

Research: Dr. Woodward is recognized as a leader regionally, nationally and internationally for her work in corneal disease, eye banking and e-health and telemedicine. She has focused her research on identifying and monitoring corneal disease to improve patient outcomes and on

scientific goals that dramatically extend high-quality, affordable eye care for anterior eye diseases to underserved and under-represented communities. Dr. Woodward's research involves maximizing corneal transplant tissue quality for end-stage cornea patients, primary and secondary prevention of disease via eHealth (electronic/digital health) methods, and personalizing management for patients' active corneal diseases through the application of e-health and technology embedded within e-health. She has published more than 75 peer-reviewed articles, and is a strong participant in team science. She has become a leader in eye banking. Dr. Woodward identified that tissue procurement practices were not uniform across eye banks and initiated research to improve these practices. Funded by an Anthony P. Adamis award and support from Eversight eye bank, Dr. Woodward created a set of best eye practices for eye bank services focused on tissue processing, tissue quality, and minimizing tissue waste. Her research is unique and innovative because the focus is on the value of preserving the pool of eligible donors and donor tissue to improve quality and simultaneously lower costs. She is well-funded through the National Institutes of Health, the Center for Disease Control, the Veterans Administration Office of Rural Health, institutional and foundation awards.

Recent and Significant Publications:

Maganti N, Tan H, Niziol LM, Amin S, Hou A, Singh K, Ballouz D, Woodward MA: Natural Language Processing to Quantify Microbial Keratitis Measurements. *Ophthalmol.* 2019.

Newman-Casey P, Woodward M, Niziol L, Lee P, De Lott L: Brand medications & Medicare Part D: How eye care providers' prescribing patterns influence costs. *Ophthalmology* 125:332-339, 2018.

Patel T, Prajna N, Farisu S, Valikodath N, Niziol L, Dudeja L, Kim K, Woodward M: Novel image-based analysis for reduction of clinician-dependent variability in measurement of corneal ulcer size. *Cornea* 37: 331-339, 2018.

Valikodath N, Newman-Casey P, Lee P, Musch D, Niziol L, Woodward M: Agreement of ocular symptom reporting between patient-reported outcomes and medical records. *JAMA Ophthalm.* 135(3):225-231, 2017.

Woodward M, Musch D, Hood C, Greene J, Niziol L, Jeganathan V, Lee P: Tele-ophthalmic approach for detection of corneal diseases: accuracy and reliability. *Cornea.* 36:1159-1165, 2017.

Service: Dr. Woodward serves on the American Academy of Ophthalmology's Research, Regulation, and Scientific Relations committee and the Telemedicine Task Force. She was a panelist on the Ophthalmic Digital Health Workshop for the Federal Drug Administration, and has lectured on corneal diseases at invited lectures and courses. She is the medical director of the Michigan Eye Bank of Eversight Eye Banks, serves on numerous committees for the Eye Bank Association of American and has chaired their research committee since 2016. She is the lead editor for the Cornea and External Disease section of *EyeWiki*, an online resource for the ophthalmology community on a global basis administered by the AAO. Dr. Woodward created the Kellogg Eye Center for eHealth where she currently serves as the co-director of Clinical Programs and Telemedicine. This unique program provides telemedicine based clinical care for ophthalmic patients. Institutionally, she serves on the Early Career Faculty Advisory Council for

the Institute for Healthcare Policy and Innovation (IHPI), and has co-led a well-attended IHPI research leadership workshop for junior faculty and will advise on the curriculum for this year's workshop. Dr. Woodward similarly serves on numerous school and departmental committees, including the REACH committee, Faculty Career Advisor, and the Goldsmith Medical Student Award committee. She has served as an associate editor for the *International Journal of Eye Banking*, and is a member of the editorial board for *Cornea Journal*. She has been a reviewer for numerous journals, including *JAMA Ophthalmology*, the *British Journal of Ophthalmology*, *Cornea*, and *Ophthalmology*.

Summary of Reviewers:

Reviewer A: "Dr. Woodward's credentials as an educator and mentor are excellent...She knows how to transmit her knowledge clearly and concisely to the audience...Dr. Woodward's professional abilities and technical skills are outstanding. I know that she would rate for a similar position at our institution."

Reviewer B: "Dr. Woodward has had a growing impact on understanding imaging and artificial intelligence in detecting corneal diseases and thus expanding the growing field of telemedicine for specific use in corneal evaluation. This is a challenging area to study and her work represents clear innovation as she expands telemedicine to anterior segment disease. Corneal disease is a leading cause of world blindness and use of telemedicine would be a major advance in addressing unmet medical needs worldwide."

Reviewer C: "I would consider her to be a national expert in ophthalmic telemedicine and health services research...Overall, she has done an excellent job in developing a research niche and become [sic] a leader...I have always been impressed that she has been able to develop a group of multidisciplinary clinical and research collaborators in ophthalmology (across multiple subspecialties), engineering, information technology, and health services research."

Reviewer D: "Dr. Woodward's telemedicine research and her subsequent papers and presentations in this area have already had tremendous impact on the field of cornea. Her seminal papers in this area have laid the groundwork to guide the eventual wide-spread clinical application of this technology and certainly qualify as outstanding. Dr. Woodward has recently received funding from the Department of Veterans Affairs to develop and deliver eye screening visits for veterans via telemedicine. Additionally, she has received foundation funding to develop eye screening programs for the diagnosis of anterior segment eye diseases in primary care settings. This is the future of ophthalmology and Dr. Woodward is certainly one of the innovators in this area."

Reviewer E: "The potential impact of her line of research is tremendous...The processes being developed by Dr. Woodward have the potential to provide desperately needed access to expert care for millions of underserved individuals around the world...From an academic standpoint, amongst her peers who are a similar number of years out from training, she sits on the top with only 1 or 2 others across the country who are leading the younger generation of academic cornea specialists."

Reviewer F: "What I think one of the remarkable aspects of Dr. Woodward's contributions is that she is not locked into the silo of corneal disease. She obviously thinks deeply about many issues

and has made contributions in a range of areas that are of value not only to ophthalmology but in fact to other medical specialties...Her curriculum vitae reads like that of one who might be applying to full professor rather than associate professor...She would easily be appointed to associate professor with tenure at [my institution].”

Summary of Recommendations:

Dr. Woodward is a physician-scientist with a strong clinical commitment and significant achievements in research and leadership related to two unique scholarly focuses in eye banking and telemedicine to serve underserved populations. I am pleased, therefore, to recommend Maria A. Woodward, M.D. for promotion to associate professor of ophthalmology and visual sciences, with tenure, Department of Ophthalmology and Visual Sciences, Medical School.



Marschall S. Runge, M.D., Ph.D.  
Executive Vice President for Medical Affairs  
Dean, Medical School

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