

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

Alon Kahana, M.D., Ph.D., associate professor of ophthalmology and visual sciences, without tenure, Department of Ophthalmology and Visual Sciences, Medical School, is recommended for the granting of tenure to be held with his title of associate professor of ophthalmology and visual sciences, Department of Ophthalmology and Visual Sciences, Medical School.

Academic Degrees:

M.D.	2001	The University of Chicago
Ph.D.	1998	The University of Chicago
B.A./M.A	1991	Brandeis University

Professional Record:

2014–present	Associate Professor, without tenure, Department of Ophthalmology and Visual Sciences, University of Michigan
2007-2014	Assistant Professor of Ophthalmology and Visual Sciences, University of Michigan
2005-2007	Clinical Instructor, Department of Ophthalmology and Visual Sciences, University of Wisconsin

Summary of Evaluation:

Teaching: Dr. Kahana has a passion for teaching and has a particular talent for mentoring younger learners in high school, college, and medical school in science and scientific investigation. He teaches health care providers throughout the region as well as nationally and internationally through lectures and skills transfer courses. He is routinely invited to major conferences to give lectures on specific topics at various national and international organizations such as the Asia-Pacific Academy of Ophthalmology Congress (APAP) and the Association for Research in Vision and Ophthalmology (ARVO). Dr. Kahana has trained a number of graduate and medical students, as well as post-docs, in his lab. As a member of the Graduate Program in Cellular and Developmental Biology, he interacts with graduate students on a regular basis. He participates in the Undergraduate Research Opportunity Program, as well as employing and training several medical students, graduate students and research interns. On the clinical side, Dr. Kahana mentors and teaches residents in the ACGME approved program as well as oculoplastic surgery fellows through two ASOPRS-approved fellowships. Dr. Kahana recently applied to ASOPRS to become a program director for a 3rd oculoplastic surgery fellowship at Michigan, which would be unique among all training programs. Dr. Kahana teaches, guides and supervises the fellows in clinic and the OR. He also helps to facilitate and supervise their clinical research projects, and provides career mentoring. Dr. Kahana is also active in patient education initiatives. Whether these are local, as with the thyroid disease, pediatric ophthalmology and low vision support groups, or national such as the Graves Foundation, he

lends his expertise to these support group meetings. Finally, Dr. Kahana regularly gives in-service presentations to allied health professionals, to help with their professional growth and performance.

Research: Dr. Kahana's laboratory research has focused on understanding the biology of eye development and animal models of congenital eye disorders, tissue regeneration around the eye (in the orbit), and neuro-regeneration in the context of oculomotor control. His interests thus encompass the fields of molecular embryology, regenerative biology, stem cells and cancer. In addition, the lab utilizes human tissue to evaluate the reactivation of embryonic pathways in adult-onset thyroid eye disease. Dr. Kahana chose to work with zebrafish since he considered that to be an ideal model organism because of its particular strengths for studying embryology and regenerative biology. It was for this reason that he chose to come to the University of Michigan, in large part because of the opportunity to be mentored by Daniel Goldman and Peter Hitchcock in the use of the zebrafish model, and the long and successful history of zebrafish research at the University of Michigan.

Dr. Kahana is the principal investigator of an investigator-initiated clinical trial VISORB (VISmodegib for Orbital and periocular Basal cell carcinoma) on the utility of the hedgehog inhibitor vismodegib (Genentech, Inc.) as a neo-adjuvant in the treatment of basal cell carcinomas around the eye. This trial will be funded collaboratively by Genentech, UM Cancer Center (CTRAC), UM Head and Neck Oncology, and the Department of Ophthalmology and Visual Sciences. The project has both clinical and translational bench science elements that build on the expertise of a multi-disciplinary team of co-investigators that includes a team of ophthalmologists, oncologists, dermatologists, pathologists and molecular biologists.

Dr. Kahana is a member of the Vascular Anomaly Program, based at Mott Children's Hospital, and also a member of the International Society for the Study of Vascular Anomalies (ISSVA) – the international organizing body for classification and research on this topic. He is also a member of the American Society for Cell Biology. He has been very successful in establishing many productive collaborations across the UM campus, as well as with other institutions. Dr. Kahana has carved a unique niche for himself. He is one of a very few clinician-scientists in the field of oculofacial plastic surgery. Dr. Kahana is a major contributor to the department's unique status as a science-based oculoplastics program, with multiple faculty with current and /or past R01 funding. He is a leader in the field with his science. Even while a busy clinician, Dr. Kahana has been very successful in winning grants and his research lab is funded by the NIH as well as private foundations. He is also a departmental leader in working constructively with industry and in bringing in investigator-initiated industry research funding.

Recent and Significant Publications:

Kahana A, Worden F, Elnor VM: Vismodegib as eye-sparing adjuvant treatment for orbital basal cell carcinoma. *JAMA Ophthalmology* 131:1364-1366, 2013.

Grzegorski SJ, Chiari E, Robbins A, Kish PE, Kahana A: Natural variability of Kozak sequences correlates with function in a zebrafish model. *PLoS One* 9:e108475, 2014.

Kauh C, Gupta S, Douglas RS, Nelson CC, Elner VM, Kahana A: Compressive optic neuropathy and repeat orbital D\decompression: A case series. *Ophthalmic Plastic and Reconstructive Surgery* 31:385-390, 2015.

Kiang L, Kahana A: Images in clinical medicine. Orbital Varix. *New England Journal of Medicine* 372:e9, 2015.

Saera-Vila A, Kasprick DS, Chiari EF, Grzegorski SJ, Junttila TL, Louie KW, Kish PE, Kahana A: Myocyte dedifferentiation drives adult extraocular muscle regeneration in zebrafish. *Investigative Ophthalmology and Visual Sciences*, in press.

Service: Dr. Kahana provides excellent clinical care to his patients in the Eye Plastic and Orbital Surgery Service at the Kellogg Eye Center as well as at Mott Hospital in the operating room and the VA Medical Center. He has a successful surgical practice that draws patients from throughout Michigan as well as from out of state, as far as Antarctica, to receive care for their complex oculoplastic disorders. Dr. Kahana serves on the editorial board of *Ocular Surgery News*, Oculoplastic Surgery Section as well as a reviewer for several peer-reviewed journals. He is also the section editor for *Smith's Ophthalmic Plastic and Reconstructive Surgery*, Orbital Surgery Section. He is on numerous committees in the department, university and on the national level. Dr. Kahana is a full member of the Cancer Center and the Head and Neck SPORE, the Michigan Diabetes Research Center, the Center for Organogenesis, the Vision Research Training Program, and the Graduate Program in Cellular and Developmental Biology.

External Reviewers:

Reviewer A: “Alon is somewhat unique in this field, being a true physician scientist within an area dominated by clinicians. His history of funded research is quite impressive. Dr. Kahana’s basic science research interests have the potential to not only make a positive impact in ophthalmology, but also in medicine as a whole. His clinical research on medical management of unresectable basal cell carcinoma of the orbit has contributed to our ability to preserve vision in patients who would otherwise require radical, disfiguring surgery. The quality of work has been acknowledged through several prestigious awards, including the Marvin Quickert Award and the RPB Physician-Scientist Award.”

Reviewer B: “...I am impressed by his breadth of his work and the number of clinical papers he has published in addition to his zebrafish work....Alon also is clearly a superb mentor with an exceptionally impressive list of those who he has taught, from clinical fellow, graduate students, and postdoctoral fellows to undergraduates. His committee work both nationally and institutional is extensive as is his editorial work both on Boards and as a journal reviewer (for 11 journals). Alon also has a most impressive track record in obtaining grants from both the NEI and foundations.”

Reviewer C: “Through his intellectual curiosity and scholarship, Dr. Kahana has made significant and lasting contributions to the field of oculofacial and orbital surgery. Dr. Kahana dares to ask hard questions, has the intellectual rigor to pursue innovative lines of thought, and the creative grit to achieve answers to those questions. Altogether, these traits make him a

powerhouse of translational medicine in our field, which has largely been focused more on surgical procedures than basic research.”

Reviewer D: “His research is extraordinary. In the field of Orbital and ophthalmic Plastic Surgery, there are only a handful of individuals in the country who have NEI funding...He writes well and is recognized by his peers nationally and internationally as an innovative, clear thinker....At any comparable top research institution, he would meet the criteria for promotion and in fact, because of his rare combination of teaching ability, masterful clinical expertise, and innovative, sustainable, grant funded research, Dr. Kahana is a prime candidate for recruitment into many top-10 academic programs. The University of Michigan is fortunate to have him on their faculty.”

Reviewer E: “Dr. Kahana has made a large impact in the area of basic science research...his extensive research with zebrafish and extraocular muscle regeneration has been important in advancing knowledge that will most likely provide translational benefits to our patients with diseases involving these muscles.”

Reviewer F: “It is quite noteworthy the large number of honors and awards won by Dr. Kahana over his career. Most recently these include several very prestigious awards, including the ARVO/Alcon early career clinician-scientist research award, a Career Development Professorship in Ophthalmology and in 2013 the American Academy of Ophthalmology’s Achievement Award. This is really quite impressive.”

Reviewer G: “His performance in Teaching is worthy of ranking in the EXCELLENT category....It is hard to overemphasize the importance of this type of outreach to the academic community. His engagement with students will likely provide the spark of inspiration to high achieving trainees who will look back to their experience with him as a life changing point in their education.”

Summary of Recommendation:

Dr. Kahana has shown excellence and productivity in his clinical work, teaching, research and service and we believe he will continue to establish himself as a leading academic clinician-scientist, nationally and internationally. I am pleased to recommend Alon Kahana, M.D., Ph.D. for the granting of tenure to be held with his title of associate professor of ophthalmology and visual sciences, 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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