

Approved by the Regents
May 16, 2013

PROMOTION RECOMMENDATION
UNIVERSITY OF MICHIGAN
MEDICAL SCHOOL
DEPARTMENT OF HUMAN GENETICS

John Kim 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 [also being promoted to research associate professor, Life Sciences Institute].

Academic Degrees:

Ph.D.	2000	University of California, Davis
B.S.	1990	Yale University

Professional Record:

2006-present	Assistant Professor of Human Genetics and Research Assistant Professor, Life Sciences Institute, University of Michigan
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Summary of Evaluation:

Teaching: Dr. Kim's teaching activities consist of classroom instruction (guest lectures) and research instruction (working with undergraduate and graduate students on research projects). He has been course director since 2009 for Human Genetics 803, "Current Topics in Genetics," which is a small group discussion class that teaches critical evaluation of the literature. He was a discussion leader for PIBS 503, "Research Responsibility and Ethics," for three years, and is currently the pre-doctoral genetics training grant short course moderator. His teaching evaluations are outstanding.

Research: Dr. Kim has been a leader in the new field of small RNA biology. Small RNAs were discovered as part of the human genome project, and are now realized to be an important part of gene regulation. Thousands of small RNAs interact with mRNA transcripts and affect RNA stability and protein production. Dr. Kim has contributed to understanding how these molecules affect neuromuscular function and how they regulate gene expression during spermatogenesis and early development in *C. elegans*. In addition, he is a member and leader of an international team of researchers that produced two landmark papers that provide a genome wide analysis of small RNAs and their target sites. The impact and quality of Dr. Kim's research are outstanding, exceeding the usual expectations for an assistant professor.

Recent and Significant Publications:

Simon DJ, Madison JM, Connery AL, Thompson-Peer KL, Soskis M, Ruvkun GB, Kaplan JM, Kim JK: MicroRNA miR-1 regulates a MEF-2-dependent retrograde signal at neuromuscular junctions. *Cell* 133:903-915, 2008.

Han T, Manoharan AP, Harkins TT, Bouffard P, Fitzpatrick C, Chu DS, Thierry-Mieg D, Thierry-Mieg J, and Kim JK: 26G endo-siRNAs regulate spermatogenic and zygotic gene expression in *C. elegans*. *Proc Natl Acad Sci USA* 106:18674 -18679, 2009.

Mangone M, Manoharan AP, Thierry-Mieg D, Thierry-Mieg J, Han T, Mackowiak S, Mis E, Zegar C, Gutwein MR, Khivansara V, Salehi-Ashtiani K, Harkins T, Bouffard P, Suzuki Y, Sugano S, Kohara Y, Rajewsky N, Piano F, Gunsalus KC, and Kim JK: Landscape of *C. elegans* 3' UTRs. *Science* 329:432-435, 2010.

Gerstein MB, Lu ZJ, Van Nostrand EL... Kim JK (63/131)...Waterston RH: Integrative analysis of the *Caenorhabditis elegans* genome by the modENCODE Project. *Science* 330: 1775-1787, 2010.

Billi AC, Alessi AF, Khivansara V, Han T, Freeberg M, Mitani S, Kim JK: *Caenorhabditis elegans* HEN1 ortholog, HENN-1, methylates and stabilizes select subclasses of germline small RNAs. *PLoS Genetics* Apr;8(4):e1002617. Epub 2012 Apr 19., 2012.

Service: Dr. Kim has organized meetings and served on editorial boards and grant review committees. In 2010, he served on a NIH Special Emphasis Panel. Dr. Kim is an associate editor for *Genes/Genomes/Genetics*, a new journal of the Genetics Society of America, a guest editor for the *International Journal of Biochemistry and Cell Biology*, and he is extensively utilized as an ad hoc reviewer for many other journals. Dr. Kim was on the Organizing Committee for the 2011 Pew Research Scholars Annual Meeting in Cozumel, Mexico and for the 2010 *C. elegans* Aging, Metabolism, Stress, Pathogenesis, and Small RNAs Meeting at the University of Wisconsin, Madison, WI. In the Department of Human Genetics, Dr. Kim has been active on the Preliminary Exam Committee, the Ph.D. Admissions Committee, and the Faculty Search Committee.

External Reviewers:

Reviewer A: "...Dr. Kim studies mechanisms of gene silencing using the *C. elegans* model system. This is an extremely energetic field involving the full time effort of hundreds of laboratories internationally. In this extraordinarily fast-paced and competitive context, Dr. Kim's laboratory has succeeded in producing a set of high quality papers that make significant and original contributions to the field."

Reviewer B: "...I believe there are many reasons to be optimistic about Dr. Kim's career trajectory. He is attacking exciting biological questions using state-of-the-art genomic approaches. He is well published in this competitive area, he is a sought-after and energetic collaborator, and he has a great track record of productivity..."

Reviewer C: "The fifth paper, Gerstein et al., was truly a 'landmark study' as stated, but rather than being groundwork for the future, is a testament to another of John's great strengths, his collegiality, as a reflection of his own personal vision. The value of John's collegiality should

not be underestimated, and the high standard for quality he applies to these large endeavors makes his contributions in the global projects stand out from much of the rest.”

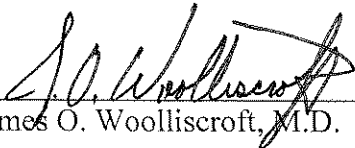
Reviewer D: “I find John to be a highly creative and accomplished scientist and precisely the type of individual whom a top tier institution should retain by granting tenure. Each one of John’s independent publications is of high quality and impact and many also represent technical innovations, which resonate broadly within his field.”

Reviewer E: “Overall Dr. Kim has a very impressive publication record for a faculty member at this stage of his career. This productivity is reflected in his funding record and shows that his selection as a Pew Scholar was the right choice. His national reputation is growing as shown by his list of invited talks and his role in organizing national meetings....It is clear that he will continue to be both productive and a visionary leader in this field.”

Reviewer F: “John is a rare individual who has the technical know how as well as the charisma and charm necessary for building integrated coalitions of researchers that can effectively take on biological problems on the genome-wide/system-wide scale. As his many high-profile multi-author papers attest, he has done a great job at this, and indeed he has been a key catalyst and driving force behind much of this work....Dr. Kim’s accomplishments and his trajectory place him among the leaders in his field....I am extremely impressed by Dr. Kim’s accomplishments, and by his vision for the future. I anticipate that his trajectory will continue to be stellar, and will no doubt lead to many exciting new discoveries.”

Summary of Recommendation:

Dr. Kim has received national and international recognition for his research in the field of RNA biology. He is a sought after mentor for graduate students and a charismatic leader. I am pleased to recommend John Kim, Ph.D. for promotion to associate professor of human genetics, with tenure, Department of Human Genetics, Medical School.



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

May 2013