

PROMOTION RECOMMENDATION  
THE UNIVERSITY OF MICHIGAN  
MEDICAL SCHOOL  
DEPARTMENT OF HUMAN GENETICS  
DEPARTMENT OF COMPUTATIONAL MEDICINE AND BIOINFORMATICS

Jun Z. Li, Ph.D., associate professor of human genetics, with tenure, Department of Human Genetics, and associate professor of computational medicine and bioinformatics, without tenure, Medical School, is recommended for promotion to professor of human genetics, with tenure, Department of Human Genetics, and professor of computational medicine and bioinformatics, without tenure, Department of Computational Medicine and Bioinformatics, Medical School.

Academic Degrees:

Ph.D.	1998	California Institute of Technology
B.Sc.	1989	Beijing University, Beijing, China

Professional Record:

2014-present	Associate Professor of Computational Medicine and Bioinformatics, University of Michigan
2013-present	Associate Professor Human Genetics, University of Michigan
2007-2013	Assistant Professor of Human Genetics, University of Michigan
2001-2007	Senior Scientist, Stanford University

Summary of Evaluation:

Teaching: Dr. Li's teaching efforts extend from local to national and international. He has contributed to formal teaching in the Departments of Human Genetics and Computational Medicine and Bioinformatics. He is a lead teacher in the Human Genetics core course, Human Genetics 544, "Concepts in Population and Statistical Genetics." He is highly sought after as a guest lecturer, mentor, co-mentor, and thesis committee member. He has mentored five doctoral students as primary advisor. He has participated in outreach activities that will increase diversity and inclusion at Michigan, with teaching in Arizona (MTBI) and Flint, MI. He obtained Rackham funding for a course and seminar series with external speakers that represented "Who's Who" in genetics and genomics. He also participated in a short course for the Genetics Pre-doctoral Training Grant, which serves the Departments of Human Genetics, Pharmacology, Microbiology, Biochemistry and Molecular, Cellular and Developmental Biology (LSA). He has contributed to graduate student admissions in both Human Genetics and Computational Medicine and Bioinformatics.

Research: Dr. Li studies the patterns of genetic variation across the human genome and in human populations and the evolution of the genome in cancer. His work has impact in a wide range of complex human disorders, including cancer, neuropsychiatric disorders, and metabolism. Advances in modern human genetics are now driven by strategies to extract meaning from large volumes of DNA sequences in populations. Dr. Li is a pioneer in methods development and applications using genomic data to understand genes and variants in disease. In addition, Dr. Li serves in a leadership role as an associate chair for research in the Department of Computational Medicine and Bioinformatics. Dr. Li has distinguished himself as an independent developer of new statistical approaches and as a team scientist. He has won three awards that recognize his contributions and potential: Ellison New Scholar in Aging, Johnson and Johnson Rising Star in Translational Research, and NARSAD Young Investigator Award (schizophrenia and depression). He has leadership roles in the Cancer Genome Atlas (TCGA) consortium and GENEVA (Gene, Environment Association Studies) Consortium. These are international groups of the best human geneticists. The fact

that Dr. Li has leadership roles in these consortia is clear evidence that he is connected with and appreciated by geneticists globally. Locally, Dr. Li has earned the 2014 Dean's Basic Science Research award and the Endowment for the Basic Sciences 2015 award.

Dr. Li has a tremendous impact on research and is involved in a wide range of complex team-based science. He is an active member of the Center in Statistical Genetics, the Comprehensive Cancer Center, the Diabetes Center, the Depression Center, and the Metabolomics and Obesity Center. His collaborations include leadership roles in the Pritzker Neuropsychiatric Disorders Research Consortium and the UMHS-Peking University Health Science Center Joint institute (both with funded effort). His work is currently supported through eight separate funding streams, both collaborative and as a principal investigator. Dr. Li is an outstanding foundation for advanced genetics and genomics.

#### Recent and Significant Publications:

Ren YY, Overmyer KA, Qi NR, Treutelaar MK, Heckenkamp L, Kalahar M, Koch LG, Britton SL, Burant CF, Li JZ: Genetic analysis of a rat model of aerobic capacity and metabolic fitness. *PLoS ONE* 8 (10), 2013.

Li JZ, Bunney BG, Meng F, Hagenauer MH, Walsh DM, Vawter MP, Evans SJ, Choudary PV, Cartagena P, Barchas JD, Schatzberg AF, Jones EG, Myers RM, Watson SJ, Akil H, Bunney WE: Circadian patterns of gene expression in the human brain and disruption in major depressive disorder. *Proc Natl Acad Sci USA* 110:9950-9955, 2013.

Schaibley VM, Zawistowski M, Wegmann D, Ehm MG, Nelson MR, St Jean PL, Abecasis GR, Novembre J, Zöllner S, Li JZ: The influence of genomic context on mutation patterns in the human genome inferred from rare variants. *Genome Res* 23:1974-1984, 2013.

Senbabaoğlu Y, Michailidis G, Li JZ: Critical limitations of consensus clustering in class discovery. *Sci Rep* 4:2014.

Li B, Li JZ: A general framework for analyzing tumor subclonality using SNP array and DNA sequencing data. *Genome Biol* 15:473, 2014.

Service: Dr. Li's national and international service activities include leadership roles in the Cancer Genome Atlas (TCGA) and GENEVA (Gene, Environment Association Studies) consortia, and international grant review activities for the Medical Research Council of the United Kingdom and the American Association for the Advancement of Science (AAAS). In addition, he is on the editorial board of *Human Genomics*, one of the top five journals in human genetics and genomics. He also serves as an editor for *BMC Genetics* and for *Scientific Reports*. In the past four years, Dr. Li has served on six NIH grant review panels. Frequently, his role has been as the statistical and computation science "resource" for the entire panel. In these cases, he is asked to review dozens of grant proposals at a single session. The NIH Center for Scientific Review understands and appreciates his analytical clarity and breadth of scientific knowledge. This provides clear evidence that leaders in the field appreciate his judgment on the quality of statistical genetics research, on a national and international level.

#### External Reviewers:

Reviewer A: "I have been extremely impressed with the quality of Dr. Li's scientific output over the years and am particularly struck by the novelty and value of his seminal work on rare variants... He is clearly influential in the area of rare variants and the genetic basis of psychiatric diseases and has done substantive work in multiple other areas."

Reviewer B: “It is clear that Jun Li is one of the key team players in the genomics community at the University of Michigan at Ann Arbor and that he continues to play an important role in several large multi-center collaborative efforts... Dr. Li is an outstanding computational biologist and an extremely resourceful and dedicated member of the genomics, complex genetics and computational biology community.”

Reviewer C: “Dr. Li’s collaborators include many exceptional scientists so the importance of Dr. Li’s work and his contributions is clearly recognized and sought after.”

Reviewer D: “Importantly, Jun is the PI or co-PI on several funded NIH R01 grants. His funding (past, present, and future) is excellent, so he will continue to be a major asset for his department and his institution. He has also served on major study sections, such as the NIH GVE review panel, which attests further to his standing in our field.”

Reviewer E: “As expected, Dr. Li is also well-funded. He has two R01s, and, in addition, he is also highly collaborative. He is co-investigator and contributing to a number of actively funded projects at the University of Michigan. Talented scientists like Dr. Li are always in demand. Clearly, he has been highly integrated into many successful programs at the University of Michigan and beyond... Scientists with Dr. Li’s expertise and collaborative abilities are rare, and the University of Michigan is lucky to have him on their faculty.”

Summary of Recommendation:

Dr. Li’s impact on research and education in the Medical School has been transformative. He is a unique and powerful scientist and a valued community resource. He has flourished as a primary investigator, educator, and collaborative colleague who has partnered with a range of established and new investigators at University of Michigan, from basic to clinical scientists. Dr. Li will continue to build his research group and enhance the work of many others around him in the fields of statistical genetics and computational analysis. I enthusiastically support Jun Z. Li, Ph.D. for promotion to professor of human genetics, with tenure, Department of Human Genetics, and professor of computational medicine and bioinformatics, without tenure, Department of Computational Medicine and Bioinformatics, Medical School.



---

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

May 2017