Approved by the Regents
May 16, 2013

PROMOTION RECOMMENDATION
UNIVERSITY OF MICHIGAN
MEDICAL SCHOOL
DEPARTMENT OF HUMAN GENETICS

Jun Z. Li, 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, Department of Computational Medicine and Bioinformatics].

Academic Degrees:

Ph.D.	1998	California Institute of Technology
B.S.	1989	Beijing University

Professional Record:

2007-present	Assistant Professor of Human Genetics and Research Assistant Professor, Department of Computational Medicine and Bioinformatics, University of Michigan
2001-2007	Senior Scientist, Stanford Human Genome Center, Department of Genetics

Summary of Evaluation:

Teaching: Dr. Li has taught graduate students and post-doctoral fellows in didactic lectures (HG 542) and in the research laboratory setting at the University of Michigan. He taught graduate level bioinformatics (BIOINF 527) and developed a popular short course for graduate students (HG 620) on next-generation sequencing technologies. He taught for three years at the Mathematical and Theoretical Biology Institute at Arizona State University which reaches under-represented minority students. Because of his expertise in statistical genetics, and the increasing importance of statistics in medicine and biology, he is highly sought after as a co-mentor (10 different K99 and/or K01 grant applications). He served on 19 preliminary exam committees for Ph.D. students, 14 Ph.D. thesis committees and has hosted 14 rotation students. He is the primary mentor or co-mentor for three Ph.D. students, two of whom have graduated, and three post-doctoral fellows.

Research: Dr. Li has been a prolific contributor to team science at the University of Michigan, and he has developed new methods for statistical genetics analysis and applied them to one of his major interest areas, the study of cancer. Of his 54 peer-reviewed publications, 32 have been published since his appointment as an assistant professor in the Department of Human Genetics. There are three themes for his team science: population genetics, genetics of Mendelian and complex disease, and the microbiome. He is first or last author on five of the recent 32 papers and on three that have been submitted. Dr. Li's work is well funded. He is the co-principal investigator on three NIH grants and a co-investigator on three. In addition, he is the principal investigator on three prestigious national awards: the Ellison Medical Foundation New Scholar in Aging Award, the IMHRO Johnson & Johnson Rising Star Translational Research Award, and the National Alliance for Schizophrenia

and Depression Scholar Award. Evidence of his growing national recognition are invitations to speak (National Eye Institute, University of Southern California, and Boston), review grants (MRC in UK and AAAS), and service on editorial boards (*Genome Research,* impact factor 13.6, number two ranked genetics journal for primary research).

Recent and Significant Publications:

Zhang N, Senbabaoglu Y, Li JZ: Joint estimation of DNA copy number from multiple platforms. *Bioinformatics* 26:153-160, 2010.

Zhao J, Schloss PD, Kalikin LM, Carmody LA, Foster BK, Petrosino JF, Cavalcoli JD, VanDevanter DR, Murray S, Li JZ, Young VB, LiPuma JJ: Decade-long bacterial community dynamics in cystic fibrosis airways. *Proceedings National Academy of Sciences* 109:5809-5814, 2012.

Majczenko K, Davidson AE, Camelo-Piragua S, Agrawal PB, Manfready RA, Li X, Joshi S, Xu J, Peng W, Beggs AH, Li JZ, Burmeister M, Dowling JJ: Dominant mutation in CCDC78 in a unique congenital myopathy with prominent internal nuclei and atypical cores. *American Journal of Human Genetics* 91:365-371, 2012.

Pemberton TJ, Absher D, Feldman MW, Myers RM, Rosenberg NA, Li JZ: Genomic patterns of homozygosity in worldwide human populations. *American Journal of Human Genetics* 91:275-292, 2012.

Li B, Senbabaoglu Y, Peng W, Yang M, Xu J, Li JZ: Genomic estimates of aneuploid content in Glioblastoma Multiforme and proposal of a new integrated classification. *Clinical Cancer Research* published online August 21, 2012.

Service: Dr. Li is active in PIBS Ph.D. admissions and has improved the quality of our international student recruiting. He has organized seminars for Human Genetics and the Genetics Training Grant, and obtained funding for Rackham for an interdisciplinary seminar series on DNA sequencing technologies. He also participates in community outreach such as the Flint High School "Genetics Day." He reviews grants and manuscripts and is a member of international consortia for large scale genome analysis, serving as chair of the analysis committee for The Gene, Environment Association Studies (GENEVA) Consortium and a member of The Cancer Genome Atlas (TCGA).

External Reviewers:

Reviewer A: "It is clear that Jun Li is the key team player 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....in the field of genomics, statistical genetics and computational biology, collaborative contributions should be valued as much as individual papers or grants, particularly when this person is the sole investigator with quantitative skills....Dr. Li is an outstanding computational biologist and an extremely resourceful and dedicated member of the genomics, complex genetics and computational biology community."

Reviewer B: "My assessment is that individuals like Dr. Li are the real jewels in genetics research or any similar data-rich research fields, and must be evaluated outside of the typical standards criteria.

I can tell from Dr. Li's CV that the candidate is very collaborative. Dr. Li is listed on many funded grants, and probably many of these grants would not have been funded without Dr. Li's affiliation and important contribution."

Reviewer C: "His first-authored paper in Science in 2007 describing worldwide patters of genetic variation was a very important contribution to human population genetics....Dr. Li is currently on 5 NIH grants as co-PI and co-Investigator. Dr. Li holds two grants as PI, including one with the Ellison Medical Foundation and one with the International Mental Health Research Organization."

Reviewer D: "In my judgment, he has found a perfect balance between leadership in developing new statistical methods and collaboration with other investigators in the analysis of genetic and genomic data....I believe that Jun Li has done outstanding scientific research during his appointment at the University of Michigan. From my own experience, I know that statistical geneticists of his quality are not easy to find or to keep. We would promote him and give him tenure at our institution, and I strongly urge you to do the same."

Reviewer E: "Dr. Li's international reputation is reflected by his invitation to review grants for AAAS and for the MRC and the U.K. His expertise is also recognized by invitations to review manuscripts in journals of his field and to sit on the editorial board of Genome Research. In addition, he served as chair of the Analysis Committee for the GENEVA Consortium in 2010-2011. He has also presented his work at various conferences....He works at the cutting-edge of his field and his funding portfolio will ensure that he will remain there and contribute greatly to the field of human genetics."

Summary of Recommendation:

Dr. Li is an invaluable member of the University of Michigan community because of his exemplary statistical genetics research contributions to multiple interdisciplinary teams and his scholarship in developing novel statistical approaches. Collaborative scholars like Dr. Li are essential for the success of many of our established and beginning investigators, and the future will likely require even more of this interdisciplinary, statistical work. I am pleased to recommend Jun Z. Li, 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