

PROMOTION RECOMMENDATION
UNIVERSITY OF MICHIGAN
MEDICAL SCHOOL
DEPARTMENT OF INTERNAL MEDICINE

Venkateshwar G. Keshamouni, Ph.D., assistant professor of internal medicine, Department of Internal Medicine, Medical School, is recommended for promotion to associate professor of internal medicine, with tenure, Department of Internal Medicine, Medical School.

Academic Degrees:

Ph.D.	1996	University of Hyderabad, Hyderabad, India
M.Sc.	1989	Osmania University, Hyderabad, India
B.Sc.	1987	Osmania University, Hyderabad, India

Professional Record:

2008-present	Assistant Professor of Internal Medicine, University of Michigan
2005-2008	Research Assistant Professor of Internal Medicine, University of Michigan
2003-2005	Research Investigator, Department of Internal Medicine, University of Michigan

Summary of Evaluation:

Teaching: Dr. Keshamouni's teaching activities extend from the classroom to the laboratory. This past winter semester, he co-directed a three credit course in experimental immunology for first-year graduate students in the Immunology Program. He will continue to co-direct this course every winter. Dr. Keshamouni also teaches a session on "TGF-beta and Cancer" in a Molecular Basis of Cancer course for first and second-year graduate students in the Cancer Biology Program. Since his appointment as assistant professor, two post-doctoral fellows, two research technicians, one graduate student and six undergraduate students from various programs have completed their training in his laboratory. Dr. Keshamouni strives to emphasize ethical and responsible research, the design and execution of hypothesis-driven experiments, and meticulous interpretation and evaluation of data. He also uses his expertise in state-of-the-art technologies to train research groups within the University on the use and capabilities of a live cell imaging system and a six color table-top flow cytometer with acoustic focusing technology.

Research: Dr. Keshamouni's scholarly focus is on the role of TGF- β in the tumor microenvironment, particularly the interactions between tumor cells, tumor associated macrophages and fibroblasts. His research interests also encompass immunoevasive mechanisms in cancer, epithelial-mesenchymal transitions in cancer, lung cancer therapeutics and systems biology approaches for investigating the tumor microenvironment. He is the principal investigator for a NIH R01 grant studying the regulation of tumor associated macrophages by TGF- β and the principal investigator on two additional studies, one funded by the American Cancer Society and the second funded by a Johnson & Johnson Minority Post-Doctoral Training Grant. Dr. Keshamouni also serves as a co-investigator on a NIH R01 grant, he has published 12 peer-reviewed articles, with six as first or senior author, one book, and two book chapters. This year Dr. Keshamouni was an ad hoc member for both the Tumor Cell Biology and Tumor Microenvironment NIH study sections. He is also a current member of the

study section for the Early Detection Research Panel, Tobacco-Related Disease Research Program in the State of California.

Recent and Significant Publications:

Reka A, Kuick R, Kurapati H, Standiford TJ, Omenn GS, Keshamouni VG: Identifying inhibitors of epithelial-mesenchymal transition by connectivity map-based systems approach. *J Thorac Oncol* 6:1784-1792, 2011.

Standiford TJ, Kuick R, Bhan U, Chen J, Newstead M, Keshamouni VG: TGF- β -induced IRAK-M expression in tumor-associated macrophages regulates lung tumor growth. *Oncogene* 30:2475-2484, 2011.

Reka AK, Kurapati H, Narala VR, Bommer G, Chen J, Standiford TJ, Keshamouni VG: Peroxisome proliferator-activated receptor-gamma activation inhibits tumor metastasis by antagonizing Smad3-mediated epithelial-mesenchymal transition *Mol Cancer Ther* 9:3221-3232, 2010.

Keshamouni VG, Jagtap P, Michailidis G, Strahler JR, Kuick R, Panagiotis P, Krishnapuram R, Srirangam A, Standiford TJ, Andrews PC, Omenn GS: Temporal quantitative proteomics by iTRAQ 2D-LC-MS/MS and corresponding mRNA expression analysis identify post-transcriptional modulation of actin-cytoskeleton regulators during TGF-beta-induced epithelial-mesenchymal transition. *J Proteome Res* 8:35-47, 2009.

Abstract

Reka A, Chen G, Jones R, Kim S, Michailidis G, Kuick R, Pisano M, Beer D, Omenn GS, Keshamouni VG: Integrative protein and transcriptomic analysis identified an EMT-associated secretory phenotype that correlates with metastasis and predicts survival in lung adenocarcinoma patients. April 2-6 2011, *American Association for Cancer Research 102nd Annual Meeting*, Orlando, FL. *Cancer Res* Apr 2011; 71: LB-52.

Service: In addition to his research and teaching activities, Dr. Keshamouni is active on committees both on the national level and on the institutional level. Nationally, he recently served as a judge for the Annual Biomedical Research Conference for Minority Students and he was also part of the Lung Cancer Working Group, Respiratory Cell and Molecular Biology Assembly at the American Thoracic Society. Institutionally, he is currently a full member on the University Committee on Use and Care of Animals and last year he sat on the Admissions Committee for the Cancer Biology Ph.D. Program. Additionally, Dr. Keshamouni serves on the Ph.D. dissertation committee for a student at Michigan State University and he serves on a Research Advisory Committee for a fellow in the University of Michigan, Department of Internal Medicine.

External Reviewers:

Reviewer A: "Dr. Keshamouni has been actively involved in areas highly relevant to important issues in lung cancer and pulmonary fibrosis particularly his studies of TGF- β in the tumor micro environment and the process of Epithelial-mesenchymal transitions are highly relevant topics to the field of lung cancer investigation....Consistent with his academic contributions, Dr. Keshamouni has participated in peer review for journals as well as study sections including those at the regional and

national level. He has been an invited speaker for several international meetings and invited lectureships at other academic institutions.”

Reviewer B: “Dr. Keshamouni’s work is nationally recognized, as indicated by his selection to serve on several ad-hoc NIH Study Section committees and by his speaking at seminars in Florence, San Francisco CA, Aurora CO, San Diego CA, Hyderabad, Sydney, and Rootstown OH. In summary, Dr. Keshamouni is a talented investigator with a strong track record of independent investigation in lung carcinogenesis. His studies have provided important information about lung cancer and have moved the field forward.”


Reviewer C: “Some of his research findings will be of high significance and importance in the field of cancer cell progression and I frequently follow his publications....In addition to his excellent productive research activity, he continues to demonstrate his ability in establishing scientific interactions with various research scientists within your institution and outside the campus.”

Reviewer D: “He has made important contributions in this area and his work has been well-received by the scientific community as highlighted by his publications in top peer-reviewed journals. Importantly, this work is funded by an independent ROI grant from the National Cancer Institute / NIH, and funds from the American Cancer Society and another private foundation.”

Reviewer E: “The sheer expanse of Dr. Keshamouni’s skillset is second to none. Moreover, Dr. Keshamouni clearly possesses an uncanny ability to set and achieve well-defined goals through hard work and unwavering determination; he is unafraid of learning, setting up, and perfecting new and complex technologies, which he then performs himself or teaches to others with tremendous care and precision.”

Summary of Recommendation:

Dr. Keshamouni is a talented and productive researcher who is dedicated to the education of future scientists. He has greatly contributed to the advancement of lung cancer research and will continue to do so in the future. For these reasons, it is with great enthusiasm that I recommend Venkateshwar G. Keshamouni, Ph.D. for promotion to associate professor of internal medicine, with tenure, Department of Internal Medicine, Medical School.


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

May 2013