

Approved by the Regents

May 14, 2009

PROMOTION RECOMMENDATION  
UNIVERSITY OF MICHIGAN  
MEDICAL SCHOOL  
DEPARTMENT OF PATHOLOGY

Nisha J. D'Silva, D.D.S., Ph.D., assistant professor of pathology, Department of Pathology, Medical School, is recommended for promotion to associate professor of pathology, without tenure, Department of Pathology, Medical School [also associate professor of periodontics and oral medicine, with tenure, School of Dentistry].

Academic Degrees:

Ph.D.	1997	University of Washington
M.S.D.	1990	Indiana University
B.D.S. (D.D.S.)	1987	University of Bombay, India

Professional Record:

2007-present	Associate Professor of Periodontics and Oral Medicine, University of Michigan
2006-present	Assistant Professor of Pathology, University of Michigan
1998-2007	Assistant Professor of Oral Medicine, Pathology and Oncology, University of Michigan

Summary of Evaluation:

Teaching: Dr. D'Silva is a dedicated teacher who has taught eight separate courses in the School of Dentistry and continues to teach in six of them. She has collaborated in developing a web-based virtual pathology laboratory for sophomore dental students that allows them to use their computers to access and view tissues. This novel approach enhances learning, saves tens of thousands of dollars spent to update microscopes, and negates the need for laboratory and storage space. This project was funded by three independent grants from the CRLT and one from the School of Dentistry. In addition, she has been a student research advisor for numerous undergraduate, graduate and dental school students, as well as medical school residents in head and neck surgery and plastic surgery. She has served on several thesis committees and was a qualifying examiner for four Ph.D. students. She is regarded as a dedicated, enthusiastic and highly effective educator.

Research: Dr. D'Silva has an active research program in mechanisms in carcinogenesis for head and neck squamous cell carcinoma. Her work has focused on the ras-like protein rap/1 and its signaling cascade, and her laboratory discovered that this protein is strongly expressed in the nuclei of squamous carcinomas and may be important for the transport of beta-catenin to the nucleus the subsequent triggering of genes that control proliferation, migration and invasion.

More recently, she has been evaluating the efficacy of a small molecular inhibitor of Bcl-x1 as an anti-tumor agent in vivo. The molecule inhibits proliferation and enhances apoptosis of oral cancer cells, all with an animal model for human head and neck cancer. She has also been collaborating with Dr. Arul Chinnaiyan of the Department of Pathology in profiling the immune response of head and neck cancer, specifically with the concept that antibodies to these cancers will eventually form the basis of a serum-based early detection assay. Her work has been consistently funded from external sources. She is currently the principal investigator on an NIH R01 analyzing the role of rap/1 in cadherin and integrin-mediated cross-talk in oral keratinocytes. She is also the principal investigator on an NIH R21 for the characterization of the immunomic profile of head and neck cancer. Her work has been published in high-quality peer-reviewed journals including the *Journal of Clinical Oncology*, *Cancer Research*, and the *American Journal of Pathology*. She has received awards in recognition of her contributions including a National Science Foundation Funded Crosby Grant at the University of Michigan for Women in Science and the Omicron Kappa Upsilon Society Membership for Faculty with Outstanding Contributions to the Dental Field.

#### Recent and Significant Publications:

Mitra RS, Goto M, Lee JS, Maldonado D, Taylor JMG, Pan Q, Carey TE, Bradford CR, Prince ME, Cordell K, Kirkwood KL and D'Silva NJ: Rap1GAP promotes invasion via induction of MMP-9 secretion, which is associated with poor survival in early N-stage squamous cell carcinoma. *Cancer Research* 68(10):3959-69, 2008.

Zhang Z, Mitra R, Henson B, Datta N, McCauley L, Kumar P, Lee J, Carey T and D'Silva NJ: Rap1GAP inhibits tumor growth in oropharyngeal squamous cell carcinoma. *Am J Pathol* 168(2):585-96, 2006.

Henson BS, Neubig RR, Jang I, Ogawa T, Zhang Z, Carey TE and D'Silva NJ: Galanin Receptor 1 has anti-proliferative effects in oral squamous cell carcinoma. *J Biological Chemistry* 280(24):22564-71, 2005.

D'Silva NJ; Mitra R, Kurnit DM, Zhang Z, Babcock CR, Polverini PJ and Carey TE: Rap1B, a small GTP-binding protein is upregulated during arrest of proliferation in human keratinocytes. *J Cellular Physiol* 196(3) 532-40, 2003.

Mitra R, Zhang Z, Henson B, Kurnit DM, Carey TE and D'Silva NJ: Rap1A and rap1B ras-family proteins are prominently expressed in the nucleus of squamous carcinomas: Nuclear translocation of GTP-bound active form. *Oncogene* 22(40): 6243-56, 2003.

Service: Dr. D'Silva was the director of the Head and Neck Cancer SPORE Tissue Core at the University of Michigan from 2002–2007. She is responsible for developing that tissue core which included identification and implementation of a specimen tracking system, development and implementation of standardized protocol for specimen collection and processing, establishment of optimal conditions for specimen storage and coordination of tissue distribution. Her work was critical in developing this resource as one of the foremost such resources in the

country. She retired from that position in order to devote more time to her own research and teaching. She is a member of all the important societies for her profession. She is on the editorial board of the *Journal of Oral Surgery, Oral Medicine, and Oral Pathology* and she has been an ad-hoc reviewer for a number of other journals including *Cancer Research, Neoplasia, Clinical Cancer Research* and the *Journal of Oral and Maxillofacial Surgery*. Within the School of Dentistry, she has held a number of administrative positions including director of the Oral and Maxillofacial Pathology Biopsy Service, and, she is currently the associate chair of the Division of Oral Medicine, Pathology and Radiology in the Dental School as well as the Donald A. Kerr Endowed Collegiate Professor of Oral Pathology. Dr. D'Silva has been an active member of the biopsy service and directs that service for three months every year, dealing with hundreds of cases. She and her colleagues have streamlined the function of the service and increased speed and accuracy of reports. Her expertise is well known in the Department of Pathology of the Medical School which has constantly sought her advice and input on difficult diagnostic problems in head and neck pathology.

External Review:

Reviewer A: "Dr. D'Silva has demonstrated a superb record as an investigator and an educator. Her contributions to the arena of head and neck cancer detection have been significant, and are well recognized in the field. She has demonstrated leadership that is recognized consistently on a national level ..."

Reviewer B: "She has taught at all levels: clinical, professional and scientific. Based on the response and awards her student[s] have received she has been very successful in these activities. She has also showed an innovative approach creating new teaching methods....Dr. D'Silva has founded and leads successfully a laboratory of her own showing independence. She has been able to attract several students and received a continuous and impressive funding for her and her groups' research."

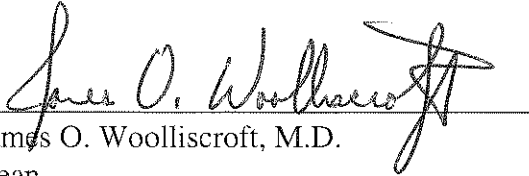
Reviewer C: "...Dr. D'Silva has successfully established herself as one of the rare triple threat oral pathologists who is NIH funded, educates and performs diagnostic pathology. There are fewer than 10 of these individuals in the United States and the University of Michigan is certainly fortunate to count her as a member of their faculty."

Reviewer D: "She has had an excellent academic track record in obtaining peer reviewed funding for her research in oral cancer and has been an important contributor to the Head and Neck SPORE, which is an important program within the National Cancer Institute portfolio and she has played major administrative and service roles as well as scientific roles within the SPORE program."

Reviewer E: "She has a vibrant research portfolio, an active lab, good publication and funding records and a very promising research career, including excellent interdisciplinary collaborations. Her standing in the research community is excellent. She is a rising star."

Summary of Recommendation:

Dr. Nisha D'Silva has made great contributions to oral pathology at the University of Michigan, not just in the School of Dentistry, but in the Medical School as well. She is an expert in oral and maxillofacial pathology, an able and creative scientist whose work has been consistently funded from external sources, and a dedicated and innovative educator. She has been promoted to associate professor, with tenure, in the School of Dentistry, and she is certainly deserving of the promotion to associate professor in the Medical School.

A handwritten signature in cursive script, reading "James O. Woolliscroft", written over a horizontal line.

James O. Woolliscroft, M.D.

Dean

*Lyle C. Roll Professor of Medicine*

May 2009