

PROMOTION RECOMMENDATION
UNIVERSITY OF MICHIGAN
MEDICAL SCHOOL
DEPARTMENT OF RADIATION ONCOLOGY

Mukesh K. Nyati, Ph.D., assistant professor of radiation oncology, Department of Radiation Oncology, Medical School, is recommended for promotion to associate professor of radiation oncology, with tenure, Department of Radiation Oncology, Medical School.

Academic Degrees:

Ph.D.	1996	University of Rajasthan, Jaipur, India
M.S.	1991	Government College Kota, University of Ajmer, India
B.S.	1989	Government College Jhalawar, University of Ajmer, India

Professional Record:

2009-present	Assistant Professor of Radiation Oncology, University of Michigan
2005-2009	Research Assistant Professor, Department of Radiation Oncology, University of Michigan
2001–2005	Research Investigator, Department of Radiation Oncology, University of Michigan

Summary of Evaluation:

Teaching: Dr. Nyati is responsible for directing the course “Radiobiology for Residents” in the Department of Radiation Oncology. He also teaches radiobiology in three different courses: (1) Radiation Biology Course for therapists and nuclear physicists (Department of Radiation Oncology, eight lectures), (2) Radiation Biology Course for Residents (Department of Radiation Oncology, three lectures), and (3) Radiobiology for Radiology Residents (Department of Radiology, two lectures). Dr. Nyati’s lectures cover several aspects, including basics of radiation chemistry, biology and physics. His lectures also include translational aspects in radiobiology such as targeted cancer therapy and molecular therapy. He puts his laboratory experience and discoveries in translational research into his lectures which provides students with examples of the cutting-edge, up-to-date achievements in the field and the University of Michigan’s position in this highly competitive research field, thus stimulating students’ and residents’ interests in translational research to move the laboratory discoveries into clinical patient care.

Research: Dr. Nyati’s laboratory research has focused on the areas of EGFR antagonists and the treatment of head and neck cancer. He has investigated EGFR degradation after treatment with cetuximab, radiation, cisplatin, or gemcitabine. This has led into a study of the importance of the EGFR degradation that may take place during EGFR-targeted therapy given alone or when combined with radiation and chemotherapy. His main idea is that the degradation of EGFR rather than its simple inhibition will correlate with the outcome. Another area of interest is the

search for biomarkers and potential targets downstream of EGFR as potential predictors of response to radiation therapy. An additional important area that he has developed is related to development of a therapeutic peptide (Disruptin) to target EGFR based on the innovative idea of disruption of EGFR and HSP90 complex. His major research efforts are currently supported by grants including a project in the UM SPORE in Head and Neck Cancer, a Cancer Center Idea Award and an R01.

Recent and Significant Publications:

Feng FY, Lopez CA, Normolle DP, Varambally S, Li X, Chun PY, Davis MA, Lawrence TS, Nyati MK: Effect of epidermal growth factor receptor inhibitor class in the treatment of head and neck cancer with concurrent radiochemotherapy in vivo. *Clinical Cancer Research* 13:2512-2518, 2007. (Cover Article)

Feng FY, Varambally S, Tomlins SA, Chun PY, Lopez CA, Li X, Davis MA, Chinnaiyan AM, Lawrence TS, Nyati MK: Role of epidermal growth factor receptor degradation in gemcitabine-mediated cytotoxicity. *Oncogene* 26:3431-3433, 2007.

Chun PY, Feng FY, Scheurer AM, Davis MA, Lawrence TS, Nyati MK: Synergistic effects of gemcitabine and gefitinib in the treatment of head and neck carcinoma. *Cancer Research* 66:981-988, 2006.

Nyati MK, Feng FY, Maheshwari D, Varambally S, Zielske SP, Ahsan A, Chun PY, Arora VA, Davis MA, Jung M, Ljungman M, Canman CE, Chinnaiyan AM, Lawrence TS: Ataxia telangiectasia mutated down-regulates phospho-extracellular signal-regulated kinase 1/2 via activation of MKP-1 in response to radiation. *Can Res* 66:11554-11559, 2006.

Nyati MK, Morgan MA, Feng FY, Lawrence TS: Integration of EGFR inhibitors with radiochemotherapy. *Nature Reviews Cancer* 6:876-885, 2006.

Service: Dr. Nyati has been a member of professional societies such as the American Association for Cancer Research, the Radiation Research Society and University of Michigan Cancer Center for over a decade. He has also served as ad hoc reviewer for variety of journals, including *Nature Clinical Practice Oncology; International Journal of Radiation Oncology, Biology, Physics; Clinical Cancer Research; Cancer Research, Experimental Biology and Medicine; BMC Biotechnonology; The Cancer Journal: The Journal of Principles & Practice of Oncology; Neoplasia; Oncogene; Translational Oncology; and Journal of Clinical Investigation*. In addition, he has served as a scientific reviewer for the Dutch Cancer Society, the Breast Cancer Research Program (BCRP, DOD) and Small Business Innovation Research grants (SBIR, NIH). He has also served as an external reviewer for a Ph.D. thesis for the University of Manipal, India. Besides teaching, Dr. Nyati is serving on a committee in the head and neck tissue core which determine the merit of the requests for the patient's specimen that the tissue core contains. He has served on national committees such as AACR or AHNS as a panelist or a reviewer.

External Reviewers:

Reviewer A: "...I have been impressed with Dr. Nyati's contributions to the field and have witnessed his growth as an independent investigator...He consistently demonstrates a commitment to research and education and his work is impacting the field of EGFR inhibitors in head and neck cancer."

Reviewer B: "...Dr. Nyati has published several valuable papers describing the role of EGFR inhibitors in regulating radiation response. [These papers] provide new data and concepts regarding the interaction of molecular targeted agents with conventional chemotherapy drugs and/or radiation. These are high quality research publications with relevance to cancer therapeutics."

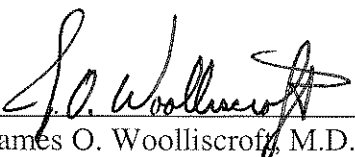
Reviewer C: "Mukesh is very actively involved in teaching radiation oncology, peer reviewing manuscripts and is often invited to present his research at various national and international workshops and meetings, which established him as independent and nationally recognized faculty. In short, Mukesh's experience and track record show that he will be a valuable asset to the future of the radiation oncology community in general and to his present institute in specific. He brings a unique background to the field of oncology, which will benefit the field for years to come."

Reviewer D: "Dr. Nyati is a productive scientist who continues to lead a dynamic laboratory on the cutting edge of science which is highly translational to the clinic and is also of interest to basic scientists."

Reviewer E: "...Dr. Mukesh Nyati is an extraordinarily talented scientist with a strong track record of outstanding contributions to cancer studies. In light of his importance to the field and the international recognition he has already received, I recommend to the highest degree Dr. Nyati as an outstanding researcher and thus support his promotion as a tenured Associate Professor."

Summary of Recommendation:

Dr. Nyati has developed a national reputation in the field of EGFR as it applies to cancer radiobiology. He has a strong publication and fund raising record, and is a highly regarded teacher. I strongly recommend Mukesh K. Nyati, Ph.D. for promotion to associate professor of radiation oncology, with tenure, Department of Radiation Oncology, Medical School.



James O. Woolliscroft, M.D.

Dean

Lyle C. Roll Professor of Medicine

May 2012