Approved by the Regents
May 20, 2021

PROMOTION RECOMMENDATION
THE UNIVERSITY OF MICHIGAN
MEDICAL SCHOOL
DEPARTMENT OF RADIATION ONCOLOGY

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

Academic Record:

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:

2012-present	Associate Professor of Radiation Oncology, University of Michigan
2009-2012	Assistant Professor of Radiation Oncology, University of Michigan
2005-2009	Assistant Research Professor of Radiation Oncology, University of Michigan
2001-2005	Research Investigator of Radiation Oncology, University of Michigan

Summary of Evaluation

Teaching: Dr. Nyati directs and teaches in the Radiobiology Course for residents in the Department of Radiation Oncology, in the Division of Cancer Biology. In this role, he designed the curriculum, delivers lectures, and obtains feedback from students, and works with teachers to ensure that the goals of the course are met. He has also taught radiobiology form more than 15 years in a Radiation Biology Course for therapists and nuclear physicists. Dr. Nyati's lectures cover several aspects, including the basics of radiation chemistry, biology, and physics. His lectures also include alternative modes of radiotherapy including proton and carbon ion therapy. He puts his research experience and discoveries in translational research into his lectures, which provides students with examples of cutting-edge, up-to-date insights, thus stimulating students' and residents' interests in translational research to move the laboratory discoveries into clinical patient care. In addition to classroom teaching, Dr. Nyati has trained over 40 students from the high school level to faculty. Many of his students have made remarkable progress and are now serving as faculty in academia or are working in the pharmaceutical industry.

Research: Dr. Nyati has authored 49 peer-reviewed articles, a majority of them as either the first or corresponding author. He is the principal investigator of an NIH R01, co-principal investigator of two institutional grants, and co-investigator of two NIH grants. Dr. Nyati's laboratory research has focused on two important aspects of cancer research. The first grant is to better understand the targets of radiation and chemotherapeutic agents currently used in the treatment of head and neck cancers to be able to optimize their uses in the clinic. The second grant is to find new ways to develop potential drug candidates based on the findings from his laboratory research. Dr. Nyati is well-known in the estimated glomerular filtration rate (EGFR) signal transduction field as reflected by the number of international and domestic lectures to which he has been invited. The most notable is the talk at the plenary session on Cancer Research in 108th Indian Science Congress in 2021. This is a prestigious International meeting with over 15,000 delegates, and, during the plenary session, the prime minister of India is expected to be present. He currently holds two patents.

Recent and Significant Publications:

Elaimy AL, Ahsan A, Marsh K, Pratt WB, Ray D, Lawrence TS and Nyati MK: ATM is the primary kinase responsible for phosphorylation of Hsp90alpha after ionizing radiation. *Oncotarget*, 2016, Vol. 7, (No. 50), pp: 82,450-82,457

Ray D, Cuneo KC, Rehemtulla A, Lawrence TS, Nyati MK: Inducing Oncoprotein Degradation to Improve Targeted Cancer Therapy. *Neoplasia* 2015, 17(9):697-703

Ahsan A, Ramanand SG, Bergin IL, Zhao L, Whitehead C, Rehemtulla A, Ray D, Pratt WB, Lawrence, TS, Nyati MK: Efficacy of an Epidermal Growth Factor Receptor (EGFR) Specific Peptide Against EGFR-Dependent Cancer Cell lines and Tumor Xenografts in Mice. *Neoplasia* 2014, 16:105-114.

Ahsan A, Ray D, Ramanand SG, Hegde A, Whitehead C, Rehemtulla A, Morishima Y, Pratt WB, Osawa Y, Lawrence TS, Nyati MK: Destabilization of the Epidermal Growth Factor Receptor (EGFR) by a Peptide that Inhibits EGFR Binding to Hsp90 and Receptor Dimerization. *J Biol Chem* 2013 (e-pub no 10.1074/jbc.M113.492280).

Ahsan A, Ramanand SG, Whitehead C, Hiniker SM, Rehemtulla A, Pratt WB, Gouveia C, Truong K, Van Waes C, Ray D, Lawrence TS, Nyati MK: Wild type EGFR is stabilized by direct interaction with HSP90 in cancer cells and tumors. *Neoplasia* 2012, 14:670-677.

Service: Dr. Nyati has been a member of professional societies such as the American Association for Cancer Research, the Radiation Research Society, and the University of Michigan Cancer Center for over two decades. He has also served as an ad hoc reviewer for several journals, including *Cancer Research*, *Clinical Cancer Research*, *EBioMedicine – The Lancet, Journal of Clinical Investigation*, and *Molecular Cancer Research*. He has been a scientific reviewer for national and international organizations, including the Dutch Cancer Society, Research Grants Council of Hong Kong. the Breast Cancer Research Program, and the Small Business Innovation Research grants. Dr. Nyati has served on international and institutional thesis and dissertation committees. Dr. Nyati is a member of several institutional committees, including the University Committee on the Use and Care of Animals and the Program Evaluation Committee that reviews the Radiation Oncology Residency Program annually. He also serves on the committee that manages Conflict of Interest for the Associate Vice President for Research - Technology Transfer and Innovation Partnerships institutionally. He has served on national committees for major conferences, such as AACR or AHNS as a panelist or a reviewer.

External Reviewers:

Reviewer A: "His work will inevitably be important for the new development of new therapeutics…His contributions to this SPORE program have led to multiple other independent grants assessing therapeutics for various malignancies. I'd rate him at the top 5% in his field."

Reviewer B: "Dr. Nyati has an incredibly productive career from a scholarly perspective…His research output is high quality with publications in impactful and influential journals. Also, Dr. Nyati has established significant grant funding from the National Institute[s] of Health, industry, and institutional sources, which is very impressive…Dr. Nyati has achieved an extraordinary list of accomplishments in his time as a faculty member."

Reviewer C: "He has 2 granted patents, 4 provisional applications and 1 patent application in the area of alternative EGFR inhibition…I will conclude with the comment that cancer research in the area of chemo-radiation combinations needs excellent scientists and Dr. Nyati can be counted among them."

Reviewer D: "Mukesh is also an outstanding citizen in the academic and scientific communities serving on international, national and institutional committees. His interactions with both academia and industry, as clearly illustrated by his manuscripts and patents, should be of benefit to his department and institution."

Reviewer E: "Dr. Nyati's academic output as evidenced from papers, grants, and seminars has been excellent…The last 20 papers on his CV indicate that he is making outstanding progress to accomplishing these goals and he has commercialize [sic] a strategy to degradation EGFR as a practical therapeutic strategy I should note these papers are in very high quality journals and are well regarded."

Summary of Recommendations:
Dr. Nyati is nationally renowned 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 am pleased, therefore, to recommend Mukesh Nyati, Ph.D. for promotion to professor of radiation oncology, with tenure, Department of Radiation Oncology, Medical School.

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

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