

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

Daniel R. Wahl, M.D., Ph.D., assistant professor of radiation oncology, Department of Radiation Oncology, Medical School, is recommended for promotion to associate professor with tenure, Department of Radiation Oncology, Medical School.

Academic Degrees

M.D.	2012	University of Michigan
Ph.D.	2012	University of Michigan
B.A.	2004	Dartmouth College

Professional Record:

2017 – present Assistant Professor of Radiation Oncology, University of Michigan

Summary of Evaluation:

Teaching: Dr. Wahl instructs residents, graduate students, post-doctoral fellows and junior faculty. He teaches radiation oncology residents how to manage and treat patients with central nervous system cancers through the co-management of patients, weekly one on one teaching sessions, and yearly program-wide lectures on the management of brain metastases, low grade gliomas and high grade gliomas. Dr. Wahl also gives multiple yearly lectures on radiation biology to radiation oncology residents. His teaching excellence is evidenced by receipt of the Radiation Biology Teacher of the Year award in 2019, and the Association of Residents in Radiation Oncology (ARRO) Educator of the Year award in 2020. Dr. Wahl is also the primary mentor of two cancer biology graduate students, and two post-doctoral fellows whom he teaches by supervising their laboratory research efforts. With Dr. Wahl's guidance, his scientific mentees have successfully competed for multiple scholarships from the Rogel Cancer Center, a T32 training grant award, and a multi-year individual F32 grant from the National Cancer Institute. Dr. Wahl also mentors junior faculty that are beginning their research careers and his guidance has led to a successful application to the Gateway Foundation for Cancer Research by Dr. Yoshie Umemura to fund her collaborative work with Dr. Wahl.

Research: Dr. Wahl is a scholar whose research focuses on the links between abnormal metabolism and treatment resistance in aggressive brain tumors. He has published 39 peer-reviewed articles, three book chapters, and is the first author of the first book chapter focused on links between altered metabolism and radiation resistance in cancer, his field of expertise. He has acquired significant external grant funding to support his research efforts on altered metabolism and brain tumor treatment resistance, from the National Cancer Institute, the Damon Runyon Cancer Research Foundation, the Ivy Glioblastoma Foundation and the American Cancer Society. He has also received numerous internal grants from the Rogel Cancer Center, the Forbes Institute for Cancer Discovery and the Chad Carr Pediatric Brain Cancer Center as well as industry funding from Innocrin Inc. and Agios Pharmaceuticals, Inc.

Dr. Wahl's research is mechanistic, translational and of great clinical impact. He is a national leader in understanding how metabolism causes treatment resistance in brain cancers. He has been invited to present this work and serve as a visiting professor at several institutions including the University of Iowa and the University of Alabama, Birmingham. He has been an invited speaker at numerous national meetings to speak on metabolism and treatment resistance including the American Society of Radiation Oncology and the Radiation Research Society.

Recent and Significant Publications:

Zhou W, Yao Y, Scott AJ, Wilder-Romans K, Dresser JJ, Werner CK, Sun H, Pratt D, Sajjakulnukit P, Zhao SG, Davis M, Morgan MA, Rehemtulla A, Nelson BS, Halbrook CJ, Zhang L, Gatto F, Umemura Y, Walker AK, Kachman M, Sarkaria JN, Xiong J, Castro MG, Lowenstein P, Chandrasekaran S, Lawrence TS, Lyssiotis CA, Wahl DR: Purine Metabolism regulates DNA repair and therapy resistance in glioblastoma. *Nature Communications* (2020) July 30;11(1):3811. PMC7393131

Nelson BS, Lin L, Kremer DM, Sousa CM, Cotta-Ramusino CC, Myers A, Ramos J, Gao T, Kovalenko I, Wilder-Romans K, Dresser J, Davis M, Lee HJ, Nwosu ZC, Capit S, Mashadova O, Nicolay BN, Tolstyka ZP, Halbrook CJ, Chandrasekaran S, Asara JM, Crawford HC, Cantley LC, Kimmelman AC, Wahl DR, Lyssiotis CA: Tissue of Origin Dictates GOT1 Dependence and Confers Synthetic Lethality to Radiotherapy. *Cancer and Metabolism* (2020) Jan 2;8:1. PMC6941320.

Werner CK, Nna UJ, Sun H, Wilder-Romans K, Dresser J, Kothari AU, Zhou W, Yao Y, Rao A, Stallard S, Koschmann C, Bor T, Debinski W, Hegedus AM, Morgan MA, Venneti S, Baskin-Bey E, Spratt DE, Colman H, Sarkaria JN, Chinnaiyan AM, Eisner JR, Speers C, Lawrence TS, Strowd RE, Wahl DR: Expression of the of the androgen receptor governs radiation resistance in a subset of glioblastomas vulnerable to anti-androgen therapy. *Mol Cancer Ther.* (2020) Aug 12; molcanther.0095.(2020). PMC7842184

Zhao SG, Yu M, Spratt DE, Chang SL, Feng FY, Kim MM, Speers CW, Carlson BL, Mladek AC, Lawrence TS, Sarkaria JN, Wahl DR: Xenograft-based platform-independent gene signatures to predict response to alkylating chemotherapy, radiation, and combination therapy for glioblastoma. *Neuro Oncology.* (2019) Sep 6;21(9):1141-1149. PMC6736132

Wahl DR, Kim MM, Aryal MP, Hartman H, Lawrence TS, Schipper MJ, Parmar HA, Cao Y: Combining Perfusion and High B-value Diffusion MRI to Inform Prognosis and Predict Failure Patterns in Glioblastoma. *Int J Radiat Oncol Biol Phys.* (2018) Jun 2 pii: S0360-3016. PMID: 29980414.

Service: Dr. Wahl is a member of the Radiation Oncology Residency Admissions Committee, the Cancer Biology Graduate Program Steering Committee, the Capital Equipment Committee for the Biomedical Research Core Facilities. Nationally, Dr. Wahl is a member of the Low Grade Glioma Guidelines Committee for the American Society of Radiation Oncology, as an ad-hoc reviewer for dozens of medical journals including *Nature Communications*, *Neuro-Oncology* and *Cancer Research* and is a topic editor for *Cancers*. He has served on numerous study sections at the National Cancer Institute, including for K08 career development awards, SPORE grants and the

Radiation and Tumor Biology standing study section. He cares for patients with tumors of the central nervous system in one full-day clinic weekly. He is a member of the Brain Tumor Board multidisciplinary conference where a multidisciplinary team of radiation oncologists, neurosurgeons, neuro-oncologists, pathologists and radiologists make management decisions regarding complex brain tumor cases. Dr. Wahl also founded a multidisciplinary brain tumor clinic with Dr. Wajd Al-Holou and Dr. Yoshie Umemura.

External Reviewers:

Reviewer A: “He has attained a regional and national stature in the field of metabolism and radiotherapy and has been recognized by his peers for his scholarly contributions. I predict that his research portfolio will have substantial implications for patients with brain tumors that are highly resistant to our therapies.”

Reviewer B: “Dr. Wahl is very well known in the field of cancer metabolism and brain tumors, even at this early stage in his career, and he has made numerous important contributions to the field...Overall, he has been enormously successful early on in his career, and I expect to see him continue to secure larger and larger grants in the future...Based on his publication record, his funding history, and his standing in the field, he would have no problem being appointed to a similar rank at my institution.”

Reviewer C: “I have been extremely impressed with the quality of Dr. Wahl’s work and view him as a long-term leader in our field...His work has resulted in very impactful publications...I would rank Dr. Wahl’s current academic status as outstanding compared to others at his level of time in the field. He has shown that he is extremely productive with publishing novel research findings and his extramural funding production is terrific...Dr. Wahl is considered an outstanding radiation oncologist on a local, regional, and an international basis. I would be delighted to have him on my faculty.”


Reviewer D: “...he has established many successful collaborations that enables the impact of his work to extend to other types of cancer in addition to those of the central nervous system. Not only has Dr. Wahl been an extremely prolific scientist, but his work is of the highest scientific quality and he routinely publishes in top-level journals, including *Nature Communications* and *Neuro-Oncology*...Dr. Wahl is very well-respected for his scientific and clinical productivity... Dr. Wahl exemplifies the triple-threat physician scientist. Given the highly productive and significant impact of his scholarly activity, his excellence in clinical service and teaching and dedicated service at the institutional and national levels, I wholeheartedly support his promotion to Associate Professor with tenure at the University of Michigan.”

Reviewer E: “Dr[.] Wahl has made important contributions with first author papers and more recently senior-author publications from his independent research and with collaborators... Dr. Wahl recently received a prestigious Damon Ruyon Cancer Research Foundation Clinical Research Award, which puts him in the upper echelon of all early career cancer researchers... Dr. Wahl excels in the different facets that make up the Associate Professor, with tenure rank and I anticipate he will continue to succeed at this level in the future.”

Reviewer F: "...Dr. Wahl is exceptionally well-positioned to make many important contributions both on the basic science discovery as well as the translation of these approaches into new clinical approaches to enhance therapy responses...Overall, I believe Dr. Wahl is an outstanding physician scientist who has made several highly significant translationally relevant contributions to the field of cancer metabolism and GBM therapy."

Summary of Recommendation:

Dr. Wahl has proven to be an outstanding physician-scientist and a highly regarded teacher. He has developed a national reputation with an emphasis on developing metabolic pathways in radiation and chemotherapy resistance of gliomas and methods of overcoming this resistance. I am pleased to recommend Daniel R. Wahl, M.D., Ph.D. for promotion to associate 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, University of Michigan Medical School

May 2022