

PROMOTION RECOMMENDATION
THE UNIVERSITY OF MICHIGAN
MEDICAL SCHOOL
DEPARTMENT OF SURGERY

Robert W. O'Rourke, M.D., associate professor of surgery, with tenure, Department of Surgery, Medical School, is recommended for promotion to professor of surgery, with tenure, Department of Surgery, Medical School.

Academic Degrees:

M.C.R.	2010	Oregon Health & Science University
M.D.	1993	University of California, Los Angeles
B.S.	1986	Massachusetts Institute of Technology

Professional Record:

2013-present	Associate Professor of Surgery, University of Michigan
2008-2013	Associate Professor of Surgery, Oregon Health & Science University
2003-2008	Assistant Professor of Surgery, Oregon Health & Science University

Summary of Evaluation:

Teaching: Dr. O'Rourke has a keen interest in teaching, is highly respected by students and residents, and is an excellent role model. He teaches such subjects as principles of clinical medicine, anatomy, suture and laparoscopic skills, and clinical and translational research, as well as general surgery clinical and operative care. Instruction takes place at both the Ann Arbor Veterans Administration (AAVA) Medical Center and UM Medical School Campus. Dr. O'Rourke spends over 800 hours yearly mentoring, lecturing and conducting instructional activities with undergraduate, graduate, medical students, residents, post-doctoral fellows, and junior faculty. Annual performance reports from residents and medical students rank him near excellent in knowledge, skills, interest and ability to teach and availability. Resident evaluations consistently rank Dr. O'Rourke in the superior range (7.65 out of 9) while medical student assessments average 4.4 out of 5. Dr. O'Rourke routinely volunteers as a faculty mentor for Department of Surgery Surgical Skill Animate Training Labs to teach laparoscopic and advanced surgical techniques to UM surgery residents. Dr. O'Rourke established a Laparoscopic Skills Simulator Training Program at the AAVA and developed the curriculum, practical and didactic content, and the skills and knowledge assessment tools, and now serves on the AAVA Education Committee. He recently assumed responsibility for the AAVA Medical Student Clerkship Director. In his research laboratory, Dr. O'Rourke has provided training for many undergraduate student research interns and is co-mentor for a UMHS post-doctoral research fellow.

Research: Dr. O'Rourke's research is focused on obesity-related metabolic disease and he is an internationally recognized expert in the field of adipose tissue inflammation, the pathophysiology of obesity and metabolic disease, and bariatric surgery. He is one of only a few bariatric surgeons in the U.S. with an NIH-funded basic science research program. Dr. O'Rourke's research is highly

collaborative and he works with many other UMHS researchers, including in the Departments of Pediatrics, Medicine, Molecular and Integrative Physiology, and Biomedical Engineering. These have led to multiple publications, two pilot grant awards, and numerous additional grant applications. Dr. O'Rourke obtained a master's degree in clinical research as well as a master's level certificate in epidemiology and statistics, both of which have enhanced his research program and mentorship of future researchers. His research has led to 67 publications in peer-reviewed professional journals, 11 invited publications and 11 book chapters. Dr. O'Rourke is currently the principal investigator on one NIH grant and co-principal investigator or co-investigator on four additional grants. He has a history of independent research funding from local and national organizations. To date, he has conducted 17 extramural invited presentations nationally, such as the keynote speaker at the American Society of Metabolic and Bariatric Surgeons; over a dozen regional presentations attest to his competence and national recognition in his field. Dr. O'Rourke is an editorial board member of *Obesity Surgery*, associate editor for *Surgery for Obesity and Related Diseases* and recently was invited as a scientific expert grant reviewer for the French National Research Agency.

Recent and Significant Publications:

O'Rourke RW, Gaston G, Meyer KA, White AE, Marks DL: Adipose tissue NK cells manifest an activated phenotype in human obesity. *Metabolism* 62:1557-61, 2013.

O'Rourke RW, Meyer KA, Gaston G, White AE, Lumeng CN, Marks DL: Hexosamine biosynthesis is a possible mechanism underlying hypoxia's effects on lipid metabolism in human adipocytes. *PLOS One* 8:e71165, 2013.

O'Rourke RW: Metabolic thrift and the genetic basis of human obesity. *Ann Surg* 259:642-648, 2014.

O'Rourke RW, Meyer KA, Neeley CK, Gaston G, Sekhri P, Szumowski M, Zamarron B, Lumeng CN, Marks DL: Systemic NK cell ablation attenuates intra-abdominal adipose tissue macrophage infiltration in murine obesity. *Obesity* (Silver Spring) 10:2109-2114, 2014.

Muir LA, Neeley CK, Meyer KA, Baker NA, Brosius AM, Washabaugh AR, Varban OA, Finks JF, Zamarron BF, Flesher CG, Chang JS, DelProposto JB, Geletka L, Martinez-Santibanez G, Kaciroti N, Lumeng CN, O'Rourke RW. Adipose tissue fibrosis, hypertrophy, and hyperplasia: correlations with diabetes in human obesity. *Obesity* (Silver Spring) 24:597-605, 2016.

Service: Dr. O'Rourke serves on the AAVA Simulation Center Committee and assisted in its development and "Go-Live" in the past year. He recently assumed the responsibility of AAVA Medical Student Clerkship Facilitator. His professional contributions at the national level include his work for two dominant bariatric surgery journals, *Surgery for Obesity and Related Diseases* (SOARD) and *Obesity Surgery*. He is an associate editor for SOARD and serves on the Editorial Board for *Obesity Surgery*. Dr. O'Rourke participates as an ad hoc journal reviewer for *Annals of Surgery*, *Diabetes*, *Clinical Cytometry*, *Clinical and Experimental Immunology*, *JAMA Surgery*, *Metabolism*, *Immunology*, *Obesity*, *Surgery for Obesity and Related Diseases*, *Surgical Innovation*, *World Journal of Surgery* and *Cell Metabolism*, and he is a standing member of the

Society of Metabolic and Bariatric Surgery Research Committee. Dr. O'Rourke has served on the bylaws and research committees for the Society of American Gastrointestinal and Endoscopic Surgeons and the small bowel research abstract review sub-committee for the Society for Surgery of the Alimentary Tract. He is also a member additional national professional organizations, including: Society of University Surgeons, American College of Surgeons, Society for Surgery of the Alimentary Tract, Society of Laparoendoscopic Surgeons, Society of Gastrointestinal Endoscopic Surgeons, and The Obesity Society.

Professional Work: Dr. O'Rourke relocated to UMHS to assist in establishing a new bariatric surgery program at the AAVA, which officially started in July 2014 and is now currently estimated to be the largest VA bariatric program in the country. Dr. O'Rourke specializes in bariatric surgery for morbid obesity. As an accomplished general surgeon, he also has expertise in esophageal and gastric surgery including the treatment of gastroesophageal reflux disease, paraesophageal hernia, and achalasia. His combined interest in these areas position him as an expert in the treatment of esophageal disease in the morbidly obese. Dr. O'Rourke also has extensive experience in laparoscopic and open inguinal hernia repair.

External Reviewers:

Reviewer A: "Dr. O'Rourke's contributions to the field of both basic biological sciences and surgical research have been numerous. It is quite exceptional for an individual to combine quality basic science and clinical research together successfully over a long time, and Dr. O'Rourke has achieved this."

Reviewer B: "In comparing his accomplishments to those of a typical Professor of Surgery at my institution, his success with federal grant support is far superior. His quantity and quality of research publications is comparable or superior. Similarly, his teaching and mentoring history is equal or superior. He is an academic surgeon with both national and international presence with a sustained record of the highest academic achievement."

Reviewer C: "It is also remarkable and deserving of commendation that Dr. O'Rourke's academic work focuses on the basic science of obesity and related inflammation. For a busy clinical surgeon to maintain the scientific expertise and stay at the top of his game, as evidenced by NIH R01 funding for bench work, is extremely unique, even in academic surgical circles today. This clearly distinguishes him as a superior academic surgeon and is at the very top of a very small group of peers in this and related fields."

Reviewer D: "Bob is recognized and acknowledged to be a prominent authority in the cellular and molecular mechanisms in obesity-related inflammatory and neoplastic processes... Dr. O'Rourke is also an accomplished educator, having trained surgeons who now occupy prominent faculty positions at major medical centers."

Reviewer E: "His academic productivity is extremely strong in a subspecialty of general surgery that has few innovative basic and translational surgical researchers. He is probably among the top 10 academic bariatric surgeons nationally with respect to his track record of scholarship and peer-reviewed funding."

Reviewer F: “Dr. O’Rourke’s publication record is outstanding. His work spans the spectrum from basic science to clinical research, but his contributions to obesity-related basic science are particularly unique and impactful. Dr. O’Rourke is a committed academician and surgeon who is nationally and internationally recognized for his research and academic clinical accomplishments. I would rank Dr. O’Rourke among the top 2-3% of his peers in the field.”

Summary of Recommendation:

Dr. O’Rourke is well-recognized by his peers as an excellent clinician, surgeon and teacher and is internationally respected for his seminal contributions in the area of obesity-related research. I am pleased to recommend Robert W. O’Rourke, M.D. for promotion to professor of surgery, with tenure, Department of Surgery, Medical School.



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

May 2017