

PROMOTION RECOMMENDATION
THE UNIVERSITY OF MICHIGAN
MEDICAL SCHOOL
DEPARTMENT OF NEUROLOGY

Brian C. Callaghan, M.D., M.S., associate professor of neurology, with tenure, Department of Neurology, Medical School, is recommended for promotion as professor of neurology, with tenure, Department of Neurology, Medical School.

Academic Degrees:

M.S.	2011	University of Michigan
M.D.	2004	University of Pennsylvania
B.S.	1999	University of Michigan

Professional Record:

2018-present	Associate Professor, with tenure, Department of Neurology, University of Michigan
2011-2018	Assistant Professor, Department of Neurology, University of Michigan
2009-2011	Clinical Lecturer, Department of Neurology, University of Michigan

Summary of Evaluation:

Teaching: Dr. Callaghan is an active and enthusiastic educator, having given numerous international, national, and institutional lectures. He considers his clinical teaching his most valuable contribution to ensuring the successful training of the department's residents. He teaches in the clinical setting every week, staffing medical students and residents during inpatient service at the Ann Arbor Veteran's Affairs Health System and the University of Michigan Health System. He skillfully guides medical students in taking patient histories, performing detailed neurologic examinations, and presenting patients. He also provides clinical teaching to residents and fellows every month in his neuromuscular outpatient clinic, where they are provided constructive and timely feedback on their performance and instruction in performing EMG studies. Dr. Callaghan also mentors learners in his research work and recently mentored a neurology faculty member on an R25 award. He is currently overseeing the research projects of four neurology residents. He was recently selected as the associate program director for research for the neurology residency program and is responsible for recruiting neurology residents, thereby ensuring the success of the next generation of neurologic researchers. As the associate program director for research, he also assists residents in research project planning, mentor selection, and study design.

Research: Dr. Callaghan's current research focuses on understanding the underlying causes of diabetic neuropathy, with the long-term goal of improving therapeutic options for this condition. His National Institutes of Health K23 project and two other large epidemiologic studies were the first to report that, while diabetes is the largest metabolic driver for neuropathy, obesity alone is also a cause of neuropathy. These groundbreaking studies acted as a springboard for multiple grants, including an ongoing NIDDK R-01 clinical trial comparing the effects of high-intensity interval training with and without bariatric surgery on neuropathy outcomes. This phase 2 study

will lead directly to a phase 3 study that will further explore the effect of exercise and/or weight loss interventions on neuropathy.

Since transitioning to junior faculty, he has become the national expert in the evaluation and management of patients with neuropathy. He published game-changing reviews and papers in *JAMA*, *JAMA Neurology*, and *Neurology* detailing diagnostic evaluations and treatment guidelines for neuropathy. This work improved diagnostic testing for patients with neuropathy and updated nationwide Choosing Wisely and American Diabetes Association guidelines for the diagnosis and treatment of neuropathy. Dr. Callaghan's work as a lead facilitator on the American Academy of Neurology treatment of painful diabetic neuropathy guideline led him to recently submit a grant application to the Patient-Centered Outcomes Research Institute to address gaps in the current knowledge regarding the treatment of neuropathy, such as how to identify the best initial treatment modality, how to address non-responders and the impact of quality of life on outcomes.

Dr. Callaghan also holds an appointment at the Veteran's Administration Ann Arbor Health System hospital, where he initiated a Veterans Administration Clinical Science Research and Development Merit-funded project to optimize the approach to headache neuroimaging. He has been involved in nine collaborations with the American Academy of Neurology that has included projects such as identifying the effect of neurologists on the care of patients with headache and epilepsy. In addition, he recently submitted a grant proposal to the National Institutes of Health - National Institute of Diabetes and Digestive Health and Kidney to determine whether opioid use in veterans with neuropathy is safe and provide guidelines to reduce high-risk opioid prescribing in the veteran population.

Even at this early stage of his career, Dr. Callaghan's work has already led to 133 peer-reviewed publications, four book chapters, and numerous abstracts. He has an h-index of 34 (Scopus) and 41 (Google Scholar) with over 7k citations. He currently serves as a co-section editor for *Innovations in Care Delivery* and as a reviewer for multiple publications including *JAMA Neurology* and *Neurology*.

Recent and Significant Publications:

- Callaghan BC, Armon C, Bril V, Colbert L, David WS, Del Toro DR, Fink K, Jones LK Jr, Kleemeier R, MacGregor LC, Bennett A, Shenow A, "Polyneuropathy Quality Measurement Set: Quality Improvement in Neurology," *Neurology* 98(1): 22-30, 2022. PMID: 34965986
- Price R, Smith D, Franklin G, Gronseth G, Pigone M, David WS, Armon C, Perkins BA, Bril V, Rai-Grant A, Halperin J, Licking N, O'Brien MD, Wessels SR, MacGregor LC, Fink K, Harkless LB, Colbert L, Callaghan BC, "Oral and Topical Treatment of Painful Diabetic Polyneuropathy: Practice Guideline Update Summary: Report of the AAN Guideline Subcommittee." *Neurology* 98(1): 31-43, 2022. PMID:34965987
- Callaghan BC, Price RS, Feldman EL, "Distal Symmetric Polyneuropathy in 2020," *JAMA* 324(1): 90-91, 2020. PMID: 32633792
- Callaghan BC, Reynolds EL, Banerjee M, Chant E, Villegas-Umana E, Gardner TW, Votruba K, Giordani B, Pop-Busui R, Pennathur S, Feldman EL, "The Prevalence and Determinants of Cognitive Deficits and Traditional Diabetic Complications in the Severely Obese," *Diabetes Care* 43(3): 683-690, 2020. PMID31932459/PMC7035591

Reynolds EL, Burke JF, Banerjee M, Kerber KA, Skolarus LE, Magliocco B, Esper GJ, Callaghan BC, “Association of out-of-pocket costs on adherence to common neurologic medications,” *Neurology* 10.1212: 9039, 2020. PM32075894

Service: Through his professional work and service, Dr. Callaghan has made an impact at institutional, national, and international levels. Dr. Callaghan is a dedicated physician and leads the Department of Neurology’s Neuromuscular Division as a co-director. The group is currently comprised of nine physicians. He spends his clinical time on the Neurology consultation service and the Ann Arbor Veteran’s Affairs inpatient service. He is a founding member of the University of Michigan’s Neurology Health Services Research Program which began in 2010 with eight faculty members and is now the largest health services research group in the country. Institutionally, he leads the Amyotrophic Lateral Sclerosis (ALS) clinic monthly and currently serves on the Neurology Executive Advisory Committee, the MDiabetes Enrichment Committee, the Underserved Medical Care Committee, and the Neuromuscular Fellowship Clinical Competency Committee. Nationally and internationally, he serves as the vice chair for the American Academy of Neurology Health Services Research subcommittee, the vice chair of the Peripheral Nerve Society’s Education Committee, and as a board member for the International Diabetes Neuropathy Consortium. In these roles, he continues to grow and strengthen his reputation in the field and solidify his standing as a thought leader in neuropathy clinical research.

External Reviewers:

Reviewer A: “He is recognized nationally and internationally, and his publications represent the seriousness of his work. His successful major publications looking at modifiers of diabetic neuropathy including metabolic syndrome are sentinel in the understanding of that disorder. He has not only provided focus to this diagnostic aspect but also is doing important research for treatment interventions in the field as illustrated by his current grant funding...Independent of his original research contributions he has been a major administrator and leader fostering the careers of others and overseeing academic pursuits in the space of his research focus... I strongly support his academic promotion as a tenured professor at the University of Michigan.”

Reviewer B: “I would like to strongly endorse his promotion to Professor with tenure. Brian Callaghan has taken an area of Neurology, that is diabetic neuropathies, metabolic neuropathies and idiopathic neuropathies and focused [sic] his research on difficult areas including epidemiology, service provision, developing quality measures and equity of care and researching the suitability of medication including opioids in this group of patients. This type of research, which is very clinically based is very difficult to publish and it is important to note that he has published in all of the best clinical neurology journals. I particularly commend him for making this relatively difficult topic his research interest.”

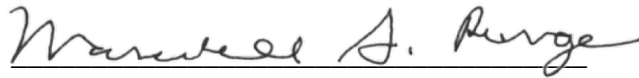
Reviewer C: “...I have long regarded Dr. Callaghan as a first-rate academic neurologist. The portfolio of his work, which I have reviewed above, is outstanding. He is an excellent investigator who is highly respected in our field. As someone who has served for 20 years on my department’s committee for appointments and promotions, I can assure you that he would be put up for promotion to Professor at this time.”

Reviewer D: “I would summarize my letter by stating that I am certain that Dr. Callaghan would be promoted to Professor of Neurology, with tenure [my institution] or in fact with any other institution in the United States. He is an outstanding clinician and clinical investigator. Dr. Callaghan is certain to continue to make important contributions to the field of Neurology and Peripheral Neuropathy in the coming years.”

Reviewer E: “...Dr. Callaghan is one of the leading clinician scientists in the world focused on diabetic neuropathy; his academic work in this area alone would be worthy of promotion. That he is also a nationally recognized health services researcher is particularly impressive. He is an outstanding leader, both within his institution and in numerous professional organizations. I believe he has also made significant contributions to medical education at Michigan Medicine and the University of Michigan Medical School. I strongly support his promotion to Professor with Tenure.”

Summary of Recommendations:

Dr. Callaghan is an outstanding educator, clinician, and scholar who has made significant contributions to the department and the university. We look forward to his continued contributions. I am pleased to recommend Brian C. Callaghan, M.D., M.S. for promotion to professor of neurology, with tenure, Department of Neurology, Medical School.



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

May 2023