

PROMOTION RECOMMENDATION
THE UNIVERSITY OF MICHIGAN
MEDICAL SCHOOL
DEPARTMENT OF NEUROLOGY

Peter Todd, M.D., Ph.D., associate professor of neurology, with tenure, Department of Neurology, Medical School, is recommended for promotion to professor of neurology, with tenure, Department of Neurology, Medical School.

Academic Degrees:

M.D.	2004	University of Wisconsin, Madison
Ph.D.	2004	University of Wisconsin, Madison
B.S.	1994	University of California, San Diego

Professional Record:

2016- Present	Associate Professor of Neurology, with tenure, University of Michigan
2010- 2016	Assistant Professor of Neurology, University of Michigan
2008-2009	Clinical Lecturer of Neurology, University of Michigan

Summary of Evaluation:

Teaching: Dr. Todd lectures to neurology residents annually on neurogenetics and neurodegenerative disorders and organized their basic science curriculum. He lectures in the genetic counselors training program, on the genetics of neurodegenerative disease, in the Medial Science Training Program (MSTP) biochemistry course program to first year MSTP students, and on the genetics of Parkinson Disease to upper level undergraduate students. Dr. Todd led the neurobiology of disease section of the Neuroscience Graduate Program course from 2014-2017, and now guest lectures in this course. The majority of Dr. Todd's teaching occurs in the laboratory and the clinic. He serves as a direct mentor to undergraduate and graduate students, and post-doctoral fellows. Four students have completed their Ph.D. degrees in Dr. Todd's laboratory, with all four going on to either academic post-doctoral fellowships or completion of medical school training. Five of his students have received National Research Service Awards from the National Institutes of Health. He has served on six Ph.D. thesis committees. Three post-doctoral fellows have completed training in his lab, with two obtaining tenure track faculty positions, and a third becoming a permanent lecturer in Molecular, Cellular, and Developmental Biology at the University of Michigan. Approximately 25 undergraduates have worked in his lab, with five having completed an honors thesis and more than 80% moving onwards to Ph.D., M.D., or MSTP programs. He also teaches medical students one on one about clinical care in neurology as part of his weekly Veteran's Affairs clinic.

Research: Dr. Todd spends the majority of his time leading a translational neuroscience laboratory whose core mission is to define the pathogenic mechanisms underlying inherited neurological disorders and develop novel and effective therapeutics for these conditions. His work focuses primarily on nucleotide repeat expansion disorders, including Fragile X associated disorders and C9orf72 associated ALS and Frontotemporal Dementia. His lab is best known for defining a novel mechanism by which repeats can be translated in the absence of an AUG codon through a process

known as Repeat-associated Non-AUG initiated (RAN) translation. More recently, he has begun exploring the native roles of repeats in the genome and their potential to serve as risk alleles across a wide set of human disorders. Dr. Todd has published 51 peer-reviewed articles. His work has had a significant impact on the field, changing some conceptions of the diseases we study and laying the groundwork for thinking differently about our genomes.

Dr. Todd has given invited lectureships at scientific meetings on five continents, and has served as the keynote speaker at multiple international meetings. In 2018, he completed a sabbatical with John Mattick at the Garvan Institute in Sydney, Australia that expanded his skill-sets in whole-genome biology and diagnostics- tools which served as key elements underlying his appointment as a Precision Health Initiative fellow in 2019. He has received numerous awards for his research, including the Medical School Dean's Award for Excellence in Research in 2017, and the American Neurological Association's Derek Denny-Brown Prize for the leading early to middle career academic neurologist in the association in 2018. His research has been continuously funded through the NIH, Veteran's Affairs, and foundation grants.

Recent and Significant Publications:

Rodriguez CM, Wright SE, Kearse MG, Haenfler JM, Flores BN, Liu Y, Ifrim MF, Glineburg MR, Krans K, Jafar-Nejad P, Sutton MA, Bassell GJ, Parent JM, Rigo F, Barmada SJ, Todd PK: A native function for RAN translation and CGG repeats in regulating Fragile X protein synthesis. *Nature Neuroscience*. 23: 386-397, March 2020.

Linsalata AE, He F, Malik AM, Glineburg MR, Green KM, Natla S, Flores BN, Krans A, Archbold HC, Fedak SJ, Barmada SJ, Todd PK: DDX3X and specific initiation factors modulate FMR1 repeat associated non-AUG-initiated translation. *EMBO Reports*, 20(9): e47498, 2019.

Haenfler JM, Skariah G, Rodriguez CM, Monteiro da Rocha A, Parent JM, Smith GD, Todd PK: Targeted Reactivation of FMR1 Transcription in Fragile X Syndrome Embryonic Stem Cells. *Front Mol Neurosci*, 11:282, 2018.

Sellier C, Buijsen RAM, He F, Natla S, Jung L, Tropel P, Gaucherot A, Jacobs H, Meziane H, Vincent A, Champy MF, Sorg T, Pavlovic G, Wattenhofer-Donze M, Birling MC, Oulad-Abdelghani M, Eberling P, Ruffenach F, Joint M, Anheim M, Martinez-Cerdeno V, Tassone F, Willemsen R, Hukema RK, Viville S, Martinat C, Todd PK, Charlet-Berguerand N: Translation of Expanded CGG Repeats into FMRpolyG Is Pathogenic and May Contribute to Fragile X Tremor Ataxia Syndrome. *Neuron*, 93(2): 331-347 2017.

Kearse MG, Green KM, Krans A, Rodriguez CM, Linsalata AE, Goldstrohm AC, Todd PK. CGG Repeat-Associated Non-AUG Translation Utilizes a Cap-Dependent Scanning Mechanism of Initiation to Produce Toxic Proteins. *Molecular Cell*, 62(2): 314-322, 2016.

Service: Dr. Todd serves on numerous departmental committees. Since 2013, he has been the director of the Clinical Neurogenetics Research Program, which in turn manages IRBs for iPSC and biobank programs throughout the department, including the establishment of MIND-PRO, which is a neurology extension of the Precision Health Initiative biobank program. He serves on the Board of Scientific Councilors, and the Executive Committee of the Center for RNA

biomedicine. He plays active roles in the neuroscience graduate training program, and the admissions committee and preliminary committee chair in the Cellular and Molecular Biology program. Nationally, Dr. Todd is a standing member of the Cellular and Molecular Neurodegeneration Study section at the NIH and is an ad-hoc member on numerous NIH, DOD, VA, and European and Australian grant committees, as well as foundation boards. Dr. Todd is a member of the American Academy of Neurology Research committee and previously served on their Translational Neuroscience Committee. He previously served as a mentor and then director of the AAN/AUPN annual symposium on launching a career in academic neurology as a clinician scientist from 2010-2017. He now serves on the professional development committee at the American Neurological Association.

External Reviewers:

Reviewer A: “Dr. Todd has an [sic] addition been an active clinician and teacher and a faculty member who has been generous with his service to at the institutional and national level. He is the co-director of the fragile X clinic at University of Michigan the Director of the Clinical Neurogenetics program and has served a [sic] numerous PhD committees. He has been generous with his citizenship as a grant reviewer including for many foundations and as ad hoc reviewer in many NIH study sections is currently a standing member of the prestigious CMND NIH study section.”

Reviewer B: “Overall, Dr. Todd is one of the leading international scientists studying neurodegenerative disorders due to repeat expansions...Peter Todd is an international leader in his field of study who has made seminal original research contributions.”

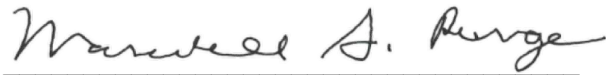
Reviewer C: “One of Peter’s great strengths is to bring clarity to complicated problems...He is a skilled communicator who has been gifted with a linear vision and unique ability to explain how he arrived at a conclusion and where he is going next...My overall estimation is that Peter Todd’s talents and productivity are right on par with or exceed that of full professors at comparable institutions.”

Reviewer D: “Dr. Todd’s career has been marked not just by the standard metrics of grants and publications by which physician-scientists are typically measured. He has been an exceptional mentor at Michigan training undergraduate students graduate students and fellows...Dr. Peter Todd is an exceptional clinician, educator and scientist.”

Reviewer E: “Dr. Todd has attracted substantial funding from the NIH and various foundations for his research...Given Dr. Todd’s research productivity and current and prior funding success, this level of funding is likely to be maintained or to increase in coming years.”

Summary of Recommendation:

Dr. Todd is an outstanding clinician-scientist who demonstrates excellence in all metrics, including teaching, research and service. He is a thought leader in the field of neurodegenerative disorders due to repeat expansions. I am pleased to recommend Peter Todd, M.D., Ph.D. for promotion to professor of neurology, with tenure, Department of Neurology, Medical School.

A handwritten signature in cursive script that reads "Marschall S. Runge". The signature is written in black ink and is positioned above a horizontal line.

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

May 2021