

PROMOTION RECOMMENDATION
UNIVERSITY OF MICHIGAN MEDICAL SCHOOL
DEPARTMENT OF PATHOLOGY

Andrew P. Lieberman, M.D., Ph.D., Assistant Professor of Pathology, Department of Pathology, Medical School, is recommended for promotion to Associate Professor of Pathology, with tenure, Department of Pathology, Medical School.

Academic Degrees:

M.D./Ph.D.	1993	University of Maryland
B.S.	1985	Duke University

Professional Record:

2001-Present Assistant Professor of Pathology, University of Michigan

Summary of Evaluation:

Teaching: Dr. Lieberman has a strong commitment to the educational activities in the Department of Pathology. Every year he gives two lectures on neurodegenerative diseases to the second-year medical students and teaches the neuropathology laboratories. For fourth-year medical students rotating in the pathology/radiology elective, he lectures on the neuropathology/neuroradiology correlation for approximately six contact hours yearly. He also teaches graduate students for about ten hours every year in courses and lectures involving proteins in neurologic diseases and neuropathology aspects of the histopathologic basis of disease. In addition, he teaches a course on the introduction to diagnostic neuropathology to residents, which also includes residents in neurology, neurosurgery and neuroradiology and graduate students in pathology. He runs a biweekly brain cutting conference approximately twenty-five times a year and provides two diagnostic slide conferences to the residents on neuropathology. He also instructs pathology residents regularly in diagnostic surgical neuropathology. He has mentored several Ph.D. students in his laboratory and has mentored undergraduates, graduate students and postdoctoral students in his laboratory. In all of these endeavors, he is considered to be a superb, dedicated, insightful, and exciting teacher.

Research: Over the past several years, Dr. Lieberman has studied Kennedy disease, a degenerative disorder of lower motor neuron due to a glutamine tract expansion in the androgen receptor gene. This is one of the CAG/polyglutamine disorders which cause protein misfolding and aggregation, so it shares certain features with similar chemical abnormalities such as Alzheimer's and Parkinson's diseases. Dr. Lieberman's laboratory has developed a knock-in mouse model of Kennedy disease which has become a superb resource for studying pathogenesis and therapeutic strategies. This model has been shared with a number of other laboratories, and as a result of his efforts, he and his colleagues have formulated a model of Kennedy disease pathogenesis. His efforts have resulted in significant publications in high-quality peer-reviewed

journals, including *Journal of Biological Chemistry*, *American Journal of Pathology*, *Hum Mol Genet*, and the *Journal of Clinical Investigation*. His work has been regularly funded from external sources including an RO1 from the National Institutes of Health to study mechanisms of motor neuron toxicity in Kennedy disease. He also has a Career Development Award in Aging Research from the NIH. He has been invited to present his research at several Kennedy Disease Association conferences, at a Winter Conference on Brain Research, at the International Neuroophthalmology Society Congress and at the Annual Meeting of the Endocrine Society.

Recent and Significant Publications:

Yu Z, Dadgar N, Albertelli M, Scheller A, Albin RL, Robins DM, Lieberman AP: Abnormalities of germ cell maturation and Sertoli cell cytoskeleton in androgen receptor 113 CAG knock-in mice reveal toxic effects of the mutant protein. *Am J Pathol* 168:195-204, 2006.

Thomas M, Harrell JM, Morishima Y, Peng HM, Pratt WB, Lieberman AP: Pharmacologic and genetic inhibition of hsp90-dependent trafficking reduces aggregation and promotes degradation of the expanded glutamine androgen receptor without stress protein induction. *Hum Mol Genet* 15:1876-1883, 2006.

Yu Z, Dadgar N, Albertelli M, Gruis K, Jordan C, Robins DM, Lieberman AP: Androgen-dependent pathology demonstrates myopathic contribution to the Kennedy disease phenotype in a mouse knock-in model. *J Clin Invest* 116:2663-2673, 2006.

Thomas M, Yu Z, Dadgar N, Varambally S, Yu J, Chinnaiyan AM, Lieberman AP: The unfolded protein response modulates toxicity of the expanded glutamine androgen receptor. *J Biol Chem* 280:21264-21271, 2005.

Thomas M, Dadgar N, Aphale A, Harrell J M, Kunkel R, Pratt WB, Lieberman AP: Androgen receptor acetylation site mutations cause trafficking defects, misfolding and aggregation similar to expanded glutamine tracts. *J Biol Chem* 279:8389-8395, 2004.

Service: Dr. Lieberman has been a reviewer of manuscripts for a number of high-quality journals, including the *American Journal of Pathology*, *Experimental Neurology*, *FEBS Letters*, *Gene*, *Human Molecular Genetics*, *Journal of Biological Chemistry*, *Journal of Neuropathology and Experimental Neurology*, and the *Lancet* to name a few. He has also been a reviewer of grants for several national and international groups including the German Israeli Foundation for Scientific Research and Development, British Wellcome Trust, The Alzheimer's Association, the Telethon Foundation of Italy, and the Advocacy for Neuroacanthocytosis. He is currently a member of The Kennedy Disease Association Scientific Review Board and a task member of the American Association of Neuropathology Awards Committee. At the University of Michigan, he is currently the Chair of the Department of Pathology Graduate Program Admissions Committee, a member of the Anatomic Pathology Project Review and Funding Committee, a member of the Executive Committee of the Michigan Alzheimer's Disease Research Center and a member of the Executive Committee of the Neuroscience Graduate Program. As a result, it is clear that Dr. Lieberman has made an active commitment to work for his profession.

Professional Work: Dr. Lieberman is a staff general neuropathologist at the University of Michigan. This means that he covers a number of months during the year on the diagnostic services, including frozen sections from the neurosurgery service, and analysis of brains and spinal cords at autopsies. He is regarded as an excellent diagnostician with a great fund of diagnostic knowledge and great communication skills when dealing with the neurologists and neurosurgeons.

External Review:

Reviewer A: “Dr. Lieberman is an up-and-coming neuropathologist with specific expertise in neurodegenerative diseases, both human and animal models...He is fully conversant on the neuropathology of degenerative disorders and has made a number of important written contributions to the field as a whole...He is also known for his contribution to the Alzheimer Disease Research Center at the University of Michigan, where his diagnostic expertise and interest in neurodegenerative disorders merge.”

Reviewer B: “Overall, Dr. Lieberman’s work is creative, rigorous and of very high quality. His publication record has been excellent since starting his laboratory at University of Michigan in 2001, with several publications in top journals in the past two years...I predict he will continue and in fact accelerate in his productivity and contribution to the scientific literature on polyglutamine diseases.”

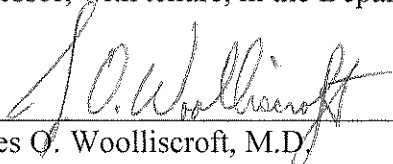
Reviewer C: “My view is that Dr. Lieberman is the leading neuropathologist working in polyglutamine diseases in the United States...he has carved out a nearly unique niche as a neuropathologist in the currently topical area. He also seems to have excelled at making connections with other scientists and clinicians at the University of Michigan, providing important neuropathological expertise for other laboratories and investigators.”

Reviewer D: “Dr. Andrew P. Lieberman is now a well known independent scientist as demonstrated by the number and quality of the publications, in which he appears either as first or senior author...most of these publications appeared on widely distributed refereed journals with a high impact in the field of neurosciences. His work has been presented at several important international neuroscience meetings.”

Reviewer E: “He is a creative and productive researcher who has had an excellent public action record since arriving at the University of Michigan. He is involved in service activities, especially teaching and committee service, and he is nationally recognized as an innovative researcher in the Kennedy disease arena.”

Summary of Recommendation:

Andrew P. Lieberman, M.D., Ph.D. has made a number of important experimental and clinical contributions in the field of neurodegenerative diseases, including Alzheimer's disease, and the whole field of polyglutamine diseases. His publication record in high-quality peer-reviewed journals is excellent, and his work has been continually well-funded from external sources. He is also a committed educator who has made numerous service commitments to the profession. For these reasons, I strongly support Dr. Lieberman's promotion to Associate Professor, with tenure, in the Department of Pathology.



James O. Woolliscroft, M.D.
Dean
Lyle C. Roll Professor of Medicine

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