UC Davis
UC Davis Previously Published Works

Title
Photoreceptor degeneration in experimental transmissible mink encephalopathy of hamsters

Permalink
https://escholarship.org/uc/item/76p0312v

Journal
Experimental Neurology, 96(3)

ISSN
0014-4886

Authors
Buyukmihci, NC
Goehring-Harmon, F
Marsh, RF

Publication Date
1987

DOI
10.1016/0014-4886(87)90233-0

Peer reviewed
RESEARCH NOTE

Photoreceptor Degeneration in Experimental Transmissible Mink Encephalopathy of Hamsters

NEDIM C. BUYUKMIHCI, FAYE GOEHRING-HARMON, AND RICHARD F. MARSH

Department of Surgery, School of Veterinary Medicine, University of California, Davis, California 95616, and Department of Veterinary Science, University of Wisconsin, Madison, Wisconsin 53706

Received October 1, 1986; revision received January 5, 1987

Hamsters were inoculated intracerebrally with the agent of transmissible mink encephalopathy and developed clinical signs of encephalopathy. Photoreceptor degeneration occurred in all animals examined histologically. The changes were similar to those in scrapie, although less extensive. The findings suggest that either transmissible mink encephalopathy is a mink-adapted form of scrapie or, in rodents, photoreceptor degeneration is a characteristic of infection with agents of the spongiform encephalopathies. © 1987 Academic Press, Inc.

Experimental infection with the agents of scrapie or Creutzfeldt-Jakob disease results in retinal degeneration in hamsters (1, 2) and mice (6, 7). As part of our work describing the pathogenesis of scrapie retinopathy, we wanted to determine if photoreceptor degeneration also occurred in transmissible mink encephalopathy (TME), a disease of mink similar to scrapie.

Abbreviation: TME—transmissible mink encephalopathy.

1 We thank Cindy Southard for technical assistance. This study was supported by National Institutes of Health grants EY 03299 (Buyukmihci) and NS 14822 (Marsh), and by the College of Agricultural and Life Sciences, University of Wisconsin-Madison, where Dr. Marsh is located. Please address reprint requests to N. C. B., Department of Surgery, School of Veterinary Medicine, University of California, Davis, CA 95616. This work was done prior to 1985. The senior author no longer accepts this type of work as ethically defensible but feels the data should be reported to prevent unnecessary duplication of the research.