PSYCH> Vol.1 No.5, December 2010

OPEN ACCESS

Acquisition of Avoidance Responding in the Fmr1 Knockout Mouse

PDF (Size:186KB) PP. 367-369 DOI: 10.4236/psych.2010.15045

Author(s)

Maria G. Valdovinos, Kelly Ippolito, Lauren Nawrocki, Greg Woods

ABSTRACT

Fragile X Syndrome (FXS) is the most common inherited cause of mental retardation. Much work has been done characterizing the behavioral phenotype of the animal model of FXS, the Fmr1 knockout mouse. However, very little literature exists on knockout performance in the active avoidance task. This study evaluated if Fmr1 knockouts differed from wild type littermates in avoidance acquisition. Data revealed no difference in acquisition between knockouts and wild types.

KEYWORDS

Fragile X Syndrome, Fmr1 Knockout, Active Avoidance

Cite this paper

Valdovinos, M. , Ippolito, K. , Nawrocki, L. & Woods, G. (2010). Acquisition of Avoidance Responding in the Fmr1 Knockout Mouse. *Psychology, 1,* 367-369. doi: 10.4236/psych.2010.15045.

References

[1] Bear, M. F., Huber, K. M., & Warren, S. T. (2004). The mGluR theory of Fragile X mental retardation. Trends in Neuroscience, 27, 370- 377.

[2] Beckel-Mitchener, A., & Greenough, W. T. (2004). Correlates across the structural, functional, and molecular phenotypes of Fragile X syndrome. Mental Retardation and Developmental Disabilities Research Reviews, 10, 53-59.

[3] Brennan, F. X., Albeck, D. S., & Paylor, R. (2006). Fmr1 knockout mice are impaired in a leverpress escape/avoidance task. Genes, Brain and Behavior, 5, 467-471.

[4] Brown, W. T. (2002). The molecular biology of the fragile X mutation. In R. J. Hagerman, & P. J. Hagerman (Eds.), Fragile X syndrome: Diagnosis, treatment, and research (3rd ed., pp. 110-135). Baltimore, MD: The Johns Hopkins University Press.

[5] D?len, G., & Bear, M. F. (2009). Fragile x syndrome and autism: From disease model to therapeutic targets. Journal of Neurodevelopmental Disorders, 1, 133-140.

[6] Dutch-Belgian Fragile X Consortium. (1994). Fmr1 knockout mice: A model to study fragile X mental retardation. Cell, 78, 23-33.

[7] Hagerman, R. J. (2002). The physical and behavioral phenotype. In R. J.

[8] Hagerman, & P. J. Hagerman (Eds.), Fragile X syndrome: Diagnosis, treatment, and research (3rd ed., pp. 3-109). Baltimore, MD: The Johns Hopkins University Press.

[9] Hessl, D., Glaser, B., Dyer-Friedman, J., & Reiss, A. L. (2006). Social behavior and cortisol reactivity in children with fragile X syndrome. Journal of Child Psychology and Psychiatry, 47, 602-610.

[10] Irwin, S. A., Galvez, R., & Greenough, W. T. (2000). Dendritic spine abnormalities in fragile-X mental retardation syndrome. Cerebral Cortex, 10, 1038-1044.

[11] Iwata, B. A., Pace, G. M., Dorsey, M. F., Zarcone, J. R., Vollmer, T. R., Smith, R. G., et al. (1994). The

- Open Special Issues
- Published Special Issues
- Special Issues Guideline

PSYCH Subscription

Most popular papers in PSYCH

About PSYCH News

Frequently Asked Questions

Recommend to Peers

Recommend to Library

Contact Us

functions of self-injurious behavior: An experimental-epidemiological analysis. Journal of Applied Behavior Analysis, 27, 215-240.

[12] Kau, A. S., Reider, E. E., Payne, L., Meyer, W. A., & Freund, L. (2000). Early behavior signs of psychiatric phenotypes in fragile X syndrome. American Journal on Mental Retardation, 105, 266-299.

[13] McKinney, B. C., Grossman, A. W., Elisseou, N. M., & Greenough, W. T. (2005). Dendritic spine abnormalities in the occipital cortex of C57BL/6 fmr1 knockout mice. American Journal of Medical Genetics, Part B, 136, 98-102.

[14] Miller, L. J., McIntosh, D. N., McGarth J., Shyu, V., Lampe, M., Taylor, A. K., et al. (1999). Electrodermal responses to sensory stimuli in individuals with fragile X syndrome: A preliminary report. American Journal of Medical Genetics, 183, 268-279.

[15] Qin, M., Kang, J., & Smith, C. B. (2005). A null mutation for Fmr1 in female mice: Effects on regional cerebral metabolic rate for glucose and relationship to behavior. Neuroscience, 135, 999-1009.