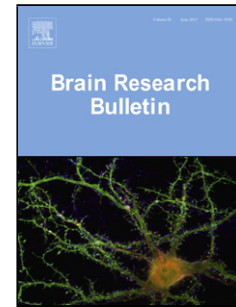


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Title: Lipopolysaccharide (LPS) induced sickness in adolescent female rats alters the acute-phase response and lithium chloride (LiCl)- induced impairment of conditioned place avoidance/aversion learning, following a homotypic LPS challenge in adulthood



Authors: Caylen J. Cloutier, Martin Kavaliers, Klaus-Peter Ossenkopp

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Lipopolysaccharide (LPS) induced sickness in adolescent female rats alters the acute-phase response and lithium chloride (LiCl)- induced impairment of conditioned place avoidance/aversion learning, following a homotypic LPS challenge in adulthood.

Caylen J. Cloutier¹, Martin Kavaliers^{1,2}, Klaus-Peter Ossenkopp^{1,2}

¹Department of Psychology, University of Western Ontario, London, Ontario, Canada

²Graduate Program in Neuroscience, University of Western Ontario, London, Ontario, Canada

Corresponding Author: Klaus-Peter Ossenkopp Email: ossenkop@uwo.ca

Department of Psychology, Faculty of Social Science, The University of Western Ontario, 1151 Richmond St., London, ON, Canada N6A 5C2

Abstract

The multi-variable locomotor activity effects of LiCl treatment in female rats were examined in a conditioned place avoidance/aversion (CPA) paradigm. In addition, the sickness effects of an LPS injection (200 µg/kg), given during adolescents, on CPA learning in adulthood were examined, as were the effects of a homotypic LPS injection (200 µg/kg) just prior to CPA acquisition trials. Female rats were injected with LPS or saline during adolescents (6 weeks of age) and later pretreated with LPS again or saline in an automated two-chamber CPA paradigm with LiCl (95 mg/kg) treatments as the aversive toxin. Results showed that, while adolescent LPS treatment had no long-term effect on the establishment of CPA, it did interfere with the ability of a second LPS challenge in adulthood to impair CPA learning, an effect obtained in subjects pretreated with LPS in the CPA procedure in adulthood only. The results of this study demonstrate the importance of considering the adolescent stage of development when evaluating the effects of environmental challenges on adult behavior.

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