EFFECTS OF EARLY LIFE STRESS ARE ATTENUATED BY EXPOSURE TO *L. RHAMNOSUS*

**INDIKA SOMIR** & **PAUL FORSYTHE**

1The Brain Body Institute, St. Joseph’s Healthcare, Charlton Campus
2Firestone Institute for Respiratory Health, McMaster University
3Department of Medicine, McMaster University

Alterations in gut microbiota can affect the development of the immune and nervous systems. In particular, microbe-based interventions may attenuate the detrimental effects of early life stress (ELS), such as immune and neurodevelopmental disorders. This study assessed the impact of ELS on anxiety-like behaviour and immune function, and determined the potential therapeutic effects of *Lactobacillus rhamnosus* (JB-1). BALB/c mice were exposed to a limited nesting paradigm. Stressed mice were either given JB-1 dissolved in their drinking water or water alone. Behavioural tests were conducted to measure anxiety-like behaviour and splenocytes were isolated to assess alterations in immune responses. ELS was observed to be associated with behavioural changes, decreased stress-induced corticosterone release, and increased inflammation. The results demonstrate that the ELS-associated symptoms of anxiety-like behaviour and stress-induced corticosterone release were diminished in the JB-1 treatment group.

EXAMINING THE EFFICACY OF GOAL MANAGEMENT TRAINING AS A COGNITIVE REMEDIATION APPROACH IN A SAMPLE OF INDIVIDUALS WITH MAJOR DEPRESSIVE DISORDER

**MARIA NICULA**
**JENNA BOYD**
**MARGARET MCKINNON**

1Department of Psychology, Neuroscience & Behaviour, McMaster University
2Mood Disorders Research Unit, St. Joseph’s Healthcare Hamilton
3Department of Psychiatry and Behavioural Neurosciences, McMaster University

Cognitive impairment is a central component of major depressive disorder (MDD). These deficits are shown to persist after euthymia and are associated with poor functional outcomes and diminished treatment effectiveness. Cognitive remediation therapies (CRTs) have the potential to re-establish cognitive functioning in the MDD population because these approaches have been effective in populations that suffer similar deficits. In the present study, we tested the efficacy of a successful CRT program called Goal Management Training (GMT), which employs take-home strategies targeted at improving executive functioning skills. We investigated the differences between a sample that received this intervention and a waitlist control (WLC) sample on their self-reported measures of cognitive difficulty, functional outcomes, and clinical symptoms of depression and anxiety. We hypothesized that, in comparison to the WLC group, the GMT group would subjectively report improvements on these domains after treatment. Our results indicate that the GMT group reported a significant decline in their cognitive difficulties, with improved social functioning and fewer symptoms of depression and anxiety. These findings suggest that GMT is a useful tool for rehabilitating cognitive function in the MDD population.

Acknowledgments: Research supported by the J.P. Bickell Foundation, as well as the Mood Disorders Research Unit and Mood Disorders Program at St. Joseph’s Healthcare Hamilton.