



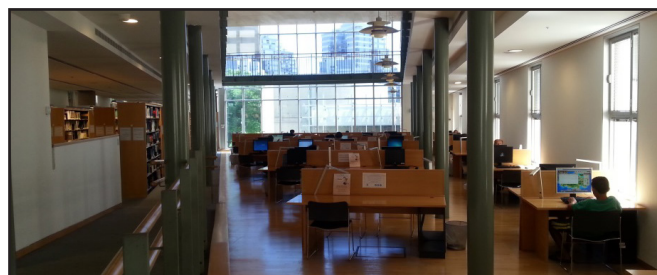
New Herbal Treatment for depression and Anxiety Disorders with minimal side-effects increase BDNF level in the hippocampus

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Abstract:

Anxiety and Depression disorders are prevalent and severe diseases with deleterious impact on both patients and society. Selective serotonin reuptake inhibitors (SSRIs) were shown to be effective in treating a wide spectrum of anxiety and depression disorders. Despite their therapeutic actions, SSRIs are associated with a wide variety of side effects such as weight changes, insomnia, gastrointestinal disturbances and sexual dysfunction. Furthermore, recent studies show that their success rates are not high, reaching 50% at most. Therefore, there is a clear need to explore alternative treatments for anxiety and depression disorders. We have recently produced a novel herbal mixture for the treatment of anxiety disorder. The novel treatment displayed anxiolytic and antidepressant-like effects in treated mice previously exposed to stress. The aim of the present study was to examine whether the novel treatment induce two common side effects normally induced by the conventional treatment with the SSRI escitalopram, namely, sexual dysfunction and weight gain. Mice were treated with either: (a) herbal treatment; (b) one of the four herbal components; (c) escitalopram; or (d) control group. Following treatment, sexual behavior and weight gain were evaluated in the different groups, as well as changes in prefrontal cortex serotonin transporter levels. We have found that the novel treatment has not altered sexual behavior and did not cause a weight gain, while escitalopram did lead to these two side effects. Interestingly, serotonin transporter levels in the prefrontal cortex of the escitalopram treated group were significantly lower compared to the other treatment groups. The BDNF level in the hippocampus increase after escitalopram and herbal treatment. These results suggest that the novel treatment may have the same behavioral anxiolytic and antidepressant efficacy as SSRIs, while causing fewer side effects, possibly due to different biological mechanisms. Further studies are now conducted



in order to explore the underlying biological mechanisms through which the novel treatment lead to the behavioral anxiolytic and antidepressant effects.

Biography:

Dr. Ravid Doron is a Senior lecturer at the Education and psychology department in The Open University of Israel. He joined the faculty in October 2019. Prior to this appointment, He was a Senior lecturer in the Academic college of Tel Aviv Jaffa in Israel in addition to the position of Courses Coordinator of Honor student in Psychobiology and psychology and behaviour that held since 2001 in the Open University. His current laboratory focuses on develop novel herbal treatments for depression and anxiety disorders based on herbal medicines. We use animal models, and investigate the behavioural, peripheral and brain biological mechanism underlying depression and anxiety. My overall goal is to pursue research that aims to deepen our understanding on the development of psychiatric diseases, in order to generate a significant impact through translating ideas into clinical reality.

Publication of speakers:

1. Murray C.J., Lopez A.D. Alternative projections of mortality and disability by cause 1990-2020: Global Burden of Disease Study. *Lancet*. 1997;349(9064):1498-1504. doi: 10.1016/S0140-6736(96)07492-2.

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