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Role of Glucocorticoid receptors in Mood Disorders

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This tall will review the work conducted within Moodinflame around the role of the glucocorticoid receptor in both cellular models of neurogenesis and in clinical samples of depressed patients. In our established model of 'depression in a dish', using human neuronal stem cells, we have found that the glucocorticoid receptor is the target of both glucocorticoid (stress) hormones and of antidepressants, with the ability of both inhibit and stimulate neurogenesis in the hippocampus. In addition, reduced glucocorticoid receptor function and expression in the peripheral blood depressed patients is a consistent finding across clinical samples as diverse as young adults, older depressed patients with coronary heart diseases, and patients with cytokine-induced depression. This body of research confirms the pivotal role of the glucocorticoid receptor, and the potential clinical relevance of targeting it for therapeutic antidepressant purposes.

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