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Summer 12-30-2021

**PROTECTIVE ROLE OF COD LIVER OIL ON METABOLIC AND  
NEUROLOGICAL PARAMETERS IN RAT MODEL OF DIABETIC  
DEPRESSION**

Roweena Sheryl

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**Miss – Miss. Roweena Sheryl**  
**Project guide : Dr. Nayanatara Arun Kumar**

**To study the antidepressant and anxiolytic effect of cod liver oil on distinct brain tissues in wistar rat model of comorbid depression**

**Abstract thesis**

Diabetes mellitus is a chronic metabolic disorder . Depression is also one of the most neglected symptoms in patients with diabetes. Oxidative stress plays an very important role in pathogenesis of this diabetes. The evidences from the animal studies might help in interpreting the various mechanisms responsible for depression in humans with diabetes leading to identifying biomarkers and new therapeutic targets . Dyslipidemia has been well associated with the micro and macrovascular complications of diabetes leading to morbidity and death. Cod liver oil (CLO) is a dietary supplement that consists of polyunsaturated fatty acids vitamin A and vitamin . Beneficial role of cod liver supplement in various diseased conditions stimulated us to obtain insight into the hypolipidemic and antidepressant role in diabetic model of depression .The present study is first of its kind, which was conducted to investigate individual role of cod liver oil as an antidepressant agent in wistar rat model of comorbid depression by taking into consideration the metabolic and various neurological

**Key words:** Cod liver oil, Brain , diabetes , depression, chronic unpredictable stress