**TITLE PAGE**

**ANTIHYPERLIPIDEMIC EFFECT OF *Momordica Charantia* LEAF FRACTIONS ON ALLOXAN INDUCED DIABETIC RATS**

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**JULY, 2018.**

**ANTIHYPERLIPIDEMIC EFFECT OF *Momordica Charantia* LEAF FRACTIONS ON ALLOXAN INDUCED DIABETIC RATS**

**A PROJECT SUBMITTED IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE AWARD OF BARCHELOR OF SCIENCE DEGREE (B.Sc.).**

**IN**

**BIOCHEMISTRY**

**BY**

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**JULY 2018.**

**DEDICATION**

I dedicate this work to God almighty

**CERTIFICATION**

I certify that this project was carried out by Eze,Maureen chika (U14/NAS/BCH/081) in the Department of Chemical, Faculty of Natural and Applied Sciences, Godfrey Okoye University Thinkers Corner Enugu. The Department recognized that Eze, Chika Maureen bear full responsibility for this work.

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**AKNOWLEDGEMENT**

I give thanks to Almighty God for his abundant grace and blessings upon my life.

I sincerely acknowledge my supervisor Mr. Ikechukwu Obiudu, my H.O.D Chemical Science Department Mr. Ayuk E.L, and Mr. Ugwu Francis C. for their full support, keen interest and listening ears to me during this research work.

To all my lecturers I will ever remain grateful. I say a big thank you for having tutored me thus far in my academic pursuits. To all the Staff of the Department of Chemical Sciences, may God reward you.

I greatly appreciate my parents for their unending support, morally, financially, and spiritually. My siblings, I love you all and pray for God’s blessings upon you.

I cannot end this without mentioning a set of people who played significant roles during my project.

Also, I say a big thank you to my mates who supported me during my project.

**ABSTRACT**

Diabetes mellitus is a metabolic disorder resulting from the presence of excess sugar in the blood as a result of defect insulin secretion, insulin action or both. *Mormodica charantia* commonly known as bitter gourd is an economically important plant belonging to the family of *cucurbitaceae*. In Nigeria and many parts of the world, fruits, leave, and seeds of bitter gourd have been used by traditional healer to treat ulcer, inflammation, diabetes and cancer. This study was aimed at determining the anti-lipidemic effect of *Momordica charantia* fractions on alloxan induced diabetic albino wistar rats. A total of 40 female albino wistar rats were used for this study, which was divided into eight groups and each comprised five rats. The animals were induced diabetic with alloxan and treated with fractionated extracts of *Momordica charantia* and a standard anti-diabetic drug was administered orally with syringes into six groups such that group one received a standard anti-diabetic drug (glibenclamide), group two received hexane fraction, groups four, five and six received aqueous, methanol, ethylacetate and chloroform fractions respectively at a dose of 200mg/kg body weights per day, group seven served as the negative untreated control while the last group served as the positive control were fed with normal feed and water only. After four weeks of administration, blood samples were collected directly from the heart and assayed for total cholesterol, triglyceride, high-density lipoprotein and low-density lipoprotein levels. Results indicated that *Momordica charantia* plant extract fractions showed a significant increase (P <0.05) in high density lipoprotein (HDL) level between the group treated with extracts and the control group. It showed a significant decrease in the level of cholesterol in rats fed with the extracts of *Momordica charantia* as compared to the control. The difference in total cholesterol value of treated and untreated rats were significant (P <0.05) compared with the control. It showed that the difference in triglyceride value of treated and untreated rats were significant (P<0.05) compared with the control group. Finally, it showed a significant decreases (P <0.05) in the level of serum low density lipoprotein (LDL) in all the groups treated with the fractionated extract compared to the control. In all, the results obtained show that the plant extract especially chloroform and N-hexane fraction appears to be more active in reducing the level of cholesterol in the body.

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