



**FACULTY OF CLINICAL SCIENCES**  
**COLLEGE OF MEDICINE, UNIVERSITY OF LAGOS**



# **13<sup>th</sup> Annual Scientific Conference & Gathering**

**THEME**

**Environmental Virology,  
Exposomics and Epigenetics**

**VENUE**

Old Great Hall, College of Medicine,  
University of Lagos, Idi Araba,  
Lagos State

**DATE**

WEDNESDAY 8<sup>TH</sup> JUNE 2016

**TIME**

8.00 am - 5.00pm

• **PROGRAMME & BOOK OF ABSTRACTS** •

**EFFECT OF VILDAGLIPTIN ON WEIGHT AND BLOOD GLUCOSE LEVELS IN OLANZEPINE TREATED NORMOGLYCAEMIC ALBINO RATS.**

**NWAIWU O, CHIJOKE CM**

*Department of Pharmacology, Therapeutics and Toxicology, Faculty of Basic Medical Sciences, College of Medicine, University of Lagos.*

Correspondence: Nwaiwu O; Email:obiyo\_nwaiwu@yahoo.com

**Background and Objective:** Evidence suggests that there is an association between antipsychotic drugs and new-onset diabetes. Olanzapine is an atypical antipsychotic whose clinical efficacy is limited by side effects including weight gain and diabetes. Evidence on the metabolic dysregulation of atypical antipsychotics shows that olanzapine

alters insulin sensitivity. The present study addresses whether co-administration of olanzapine with vildagliptin will prevent olanzapine-induced weight and blood glucose changes in normoglycaemic rats .

**Methods:** Twenty normoglycaemic adult female albino rats were divided into four groups of five rats each with each group receiving saline (0.9%), olanzapine, vildagliptin and olanzapine co-administered with vildagliptin respectively. The rats were treated orally with vildagliptin (60 mg/kg/day) once daily for 12 weeks and olanzapine 6mg/kg/day once daily for 12 weeks). Weight and blood glucose concentrations were documented.

**Results:** In the control and olanzapine groups respectively the weight at 12 weeks was not significantly higher than weight at baseline. There was a significant increase in weight at 12 weeks compared to baseline in the olanzapine + vildagliptin group and the vildagliptin group. In all the treatment groups the blood glucose levels at 12 weeks were not significantly different from baseline levels. In between group differences were not significant. Hypoglycaemia was not documented in the vildagliptin groups..

**Conclusions:** Co-administration of vildagliptin may be protective against olanzapine-induced hyperglycaemia without increasing the risk of hypoglycaemia. Further studies are needed to determine potential use of vildagliptin in assisting olanzapine-treated schizophrenic patients.

**Keywords:** vildagliptin, olanzepine, weight, blood glucose, normoglycaemic rats