



**NIGERIAN SOCIETY OF BIOCHEMISTRY  
AND MOLECULAR BIOLOGY**

**BOOK OF ABSTRACTS**

**37<sup>th</sup> ANNUAL  
SCIENTIFIC CONFERENCE  
KATSINA 2019**

○ ————— **THEME:** ————— ○  
**BIOCHEMISTRY & MOLECULAR BIOLOGY:  
OPTIMISING THE VALUE OF LOCAL RESOURCES  
FOR DIRECT FOREIGN INVESTMENT AND YOUTH EMPOWERMENT**

**DATE:** 4th – 8th November, 2019

**TIME:** 10:00am Daily

**VENUE:** Umaru Musa Yaradua University, Katsina, Katsina State



## LIST OF NEC MEMBERS

### NAMES AND AFFILIATIONS

#### POST - NAME AND AFFILIATION

- President - Prof. (Mrs) Syilvia O. Malomo,**  
*Department of Biochemistry, University of Ilorin, Ilorin*
- Secretary General & - Prof. Osaretin Albert T. Ebuehi,**  
**Business/Production** *Department of Biochemistry, College of Medicine,*  
**Manager** *University of Legos, Lagos*
- Assistant Secretary - Prof. Musa T. Yakubu,**  
*General Department of Biochemistry, University of Ilorin, Ilorin*
- Treasurer - Dr. Evans C. Egwim,**  
*Department of Biochemistry, Federal University of Technology, Basso Campus, Minna, Niger State*
- Public Relations Officer - Prof. (Mrs) Ehimwenma S. Omoregie,**  
*Department of Biochemistry, University of Benin, Benin, Edo State*
- Financial Secretary - Dr. Musa Dickson,**  
*Department of Biochemistry, Ibrahim Badamosi Babangida University, Lapai, Niger State*
- Internal Auditor - Prof. Yusuf Saidu,**  
*Department of Biochemistry, Usmanu Dan Fodiyo University, Sokoto, Sokoto State*
- Editor-in-Chief - Prof. R.U Aliyu**  
*Biochemistry Department, Usmanu Danfodio University Sokoto, Sokoto State*
- Deputy Editor-in-Chief - Prof. Rabi'u A. Umar,**  
**South East Zonal** *Department of Biochemistry, Usman Dan Fodiyo*  
**Coordinator** *University, Sokoto, Sokoto State*
- South South Zonal - Prof. Irene I. Ijeh,**  
**Coordinator** *Department of Biochemistry, College of Natural and Applied Science, Michael Okpara University of Agriculture, Umudike, Umuahia*
- South West Zonal - Prof E. I. Akubugwo,**  
**Coordinator** *Department of Biochemistry, Abia State University, Uturu, Abia State*

ENP 234	CHEMICAL CONSTITUENTS AND ANTIOXIDANT POTENTIALS OF <i>BAUHINIA</i> GENUS	267
ENP 235	<i>IN-VIVO</i> ANTITYPHOID EVALUATION OF A NIGERIAN COMERCIAL POLY HERBAL PRODUCT ON <i>SALMONELLA TYPHI</i> INDUCED TYPHOID FEVER IN ALBINO RATS	267
ENP 236	BENEFICIAL EFFECT OF <i>CASSIA SIEBERIANA</i> LEAF EXTRACTS ON HAEMATOLOGICAL INDICES OF ALLOXAN INDUCED DIABETIC RATS	268
ENP 237	NEEM LEAVES ETHANOLIC EXTRACT REDUCES BREAST CANCER PROLIFERATION THROUGH INHIBITION OF NRF2 PATHWAY	269
ENP 238	ANTIMICROBIAL RESISTANCE PATTERNS OF <i>CAMPYLOBACTER JEJUNI</i> AND <i>SALMONELLA TYPHI</i> SOURCED FROM READY-TO-EAT VEGETABLE SALADS HAWKED IN KANO METROPOLIS	269
ENP 239	QUALITATIVE AND QUANTITATIVE PHYTOCHEMICAL ANALYSES OF CHLOROFORM LEAF EXTRACT OF <i>FICUS POLITA</i> .	270
ENP 240	NUTRITIONAL CHARACTERIZATION OF DUNG BEETLE LARVAE ( <i>APHODIUS RIFIPES</i> ).	270
ENP 241	NUTRITIONAL PROFILING AND FUNCTIONAL PROPERTIES OF HERBAL TEA INFUSIONS OF GUAVA LEAVES SUPPLEMENTED WITH MORINGA AND GINGER POWDER	271
ENP 242	ANTIOXIDANT ACTIVITY OF BIO-ENHANCED METHYL GALLATE AND PALMATINE COMBINATION AGAINST OXIDATIVE STRESS IN THE LIVER AND ERYTHROCYTE OF <i>PLASMODIUM BERGHEI</i> -INFECTED MICE	271
ENP 243	EFFECT OF DIFFERENT LIGHT COLOR ON THE GROWTH OF TOMATO ( <i>SOLANUM LYCOPERSICUM</i> ) AND COWPEA ( <i>VIGNA UNGUICULATA</i> ) USING ARTIFICIAL LIGHT SOURCES	272
ENP 244	ANTIOXIDANT ACTIVITY OF CRUDE AND FLAVONOID EXTRACTS OF <i>OCIMUM GRATISSIMUM</i> AND <i>HYPTIS SUAVEOLENS</i> LEAF	272
ENP 245	EFFECTS OF JUICE EXTRACTS OF LEMON, APPLE AND CARROT ON LIPID PROFILE AND WEIGHT OF MALE ALBINO WISTAR RATS	273
ENP 246	HEMATOLOGICAL AND BIOCHEMICAL PARAMETERS IN CYCLOPHOSPHAMIDE-INDUCED ALBINO RATS ADMINISTERED WITH <i>MOMORDICA CHARANTIA</i> METHANOL LEAF EXTRACT	273
ENP 247	PHYTOCHEMICAL SCREENING, THIN LAYER CHROMATOGRAPHY AND ELEMENTAL ANALYSIS OF <i>CUSSONIA BARTERI</i> SEEMAN (ARALIACEAE)	274
ENP 248	ANTI-ULCER ACTIVITY OF METHANOLIC LEAF EXTRACT OF <i>PENNISETUM PEDICULLATUM</i> IN ALBINO RATS	275
ENP 249	PHYTOCHEMICAL ANALYSIS, ANTIOXIDANT AND ANTI-DIABETIC POTENTIAL OF THE METHANOL EXTRACT AND FRACTIONS OF <i>ETHULIA CONYZOIDES</i> .	275
ENP 250	ISOLATION AND MORPHOLOGICAL CHARACTERIZATION OF <i>TRICHODERMA SPP.</i> AND BIOCOMPATIBILITY ASSESSMENT WITH <i>MYCORRIZA SPP.</i> FOR IMPROVE ORGANIC FARMING PRACTICE	276

ENP 243

**EFFECT OF DIFFERENT LIGHT COLOR ON THE GROWTH OF TOMATO (*Solanum lycopersicum*) AND COWPEA (*Vigna unguiculata*) USING ARTIFICIAL LIGHT SOURCES**

USMAN AFFAN

<sup>1</sup>Department of Human Anatomy, College of Health Science, Umaru Musa Yar'adua University, Katsina,

Corresponding author: [usman.affan@umyu.edu.ng](mailto:usman.affan@umyu.edu.ng); +2348034409926

**Abstract**

Solar radiation is radiant (electromagnetic) energy from the sun it provides light and heat for the Earth and energy for photosynthesis. This radiant energy is necessary for metabolism of the environment and its inhabitants. The aim of the study is to assess the vegetative growth of Tomato (*Solanum lycopersicum*) and Cowpea (*Vigna unguiculata*) plants specie using artificial light sources of Compact Fluorescent Light (CFL) and Light Emitting Diodes (LED) under indoor experiment in Katsina State. Tomato and Cowpea plant were placed in a growth Chamber of 40 watts Compact Fluorescent Light (CFL) and 12 watts ToteK Light Emitting Diodes (LEDs) for 9WAS and 8WAS respectively. Lamps emitted light colors: White, Green, Blue and Red. It was found that the growth of Tomato and Cowpea Plant was dependent upon the lamp type and light color. The highest tomato plant height, number of leaves, was obtained under the Blue LED and the least in red and green LED, while highest chlorophyll content under White LED and least under blue CFL. The highest cowpea plant in height and number of leaves was obtained in Red CFL and the least in Red and Green LEDs while the highest chlorophyll content, under the sunlight (Control) and least under Red and Green LEDs. Precise use of grow light may hold a promise in maximizing plant production, quality of vegetables grown in controlled environment.

**Key words:** Compact Fluorescent Light, Light Emitting Diodes, Katsina, Chlorophyll.

ENP 244

**ANTIOXIDANT ACTIVITY OF CRUDE AND FLAVONOID EXTRACTS OF *Ocimum gratissimum* AND *Hyptis suaveolens* LEAF**

E.A. Ayanda<sup>1</sup>, F.S. Adefolalu<sup>1</sup> and T.Y. Gara<sup>1</sup>

<sup>1</sup>Department of Biochemistry, Federal University of Technology, Minna, Niger State, Nigeria

\*Corresponding author: [t.gara@futminna.edu.ng](mailto:t.gara@futminna.edu.ng)

**Abstract**

Antioxidants are natural substances that can inhibit oxidation or delay cell damage. In this study the antioxidant activity of crude and flavonoid extracts of *Ocimum gratissimum* and *Hyptis suaveolens* leaves were evaluated. The crude leaf extract of *ocimum gratissimum* and *Hyptis suaveolens* leaf were obtained by cold maceration and the flavonoid content extracted from the crude extracts. The antioxidant activity for the crude and flavonoid extracts were investigated using 1, 1-Diphenyl-2-picrylhydrazyl (DPPH) radical scavenging activity. The result obtained in the study indicated higher flavonoid content in *Ocimum gratissimum* 568.92 mg/100 g than *Hyptis suaveolens* leaf extract 454.86 mg/100 g. The crude extract of *Hyptis suaveolens* leaves exhibited a stronger radical scavenging activity with IC<sub>50</sub> value of 109.12 µg/mL than the flavonoid extract of *Hyptis suaveolens* leaf, the crude extract of *Ocimum gratissimum* leaf and flavonoid extract of *Ocimum gratissimum* leaf with IC<sub>50</sub> values of 189.24, 138.72 and 182.84 µg/mL respectively. The result suggest that the flavonoid from the two plants used in this study can scavenge for free radicals and may aid in enhancement of health against reactive oxygen species.

**Key words:** *Ocimum gratissimum*, *Hyptis suaveolens*, Flavonoid, Antioxidant, DPPH.