NIGERIAN SOCIETY OF BIOCHEMISTRY AND MOLECULAR BIOLOGY

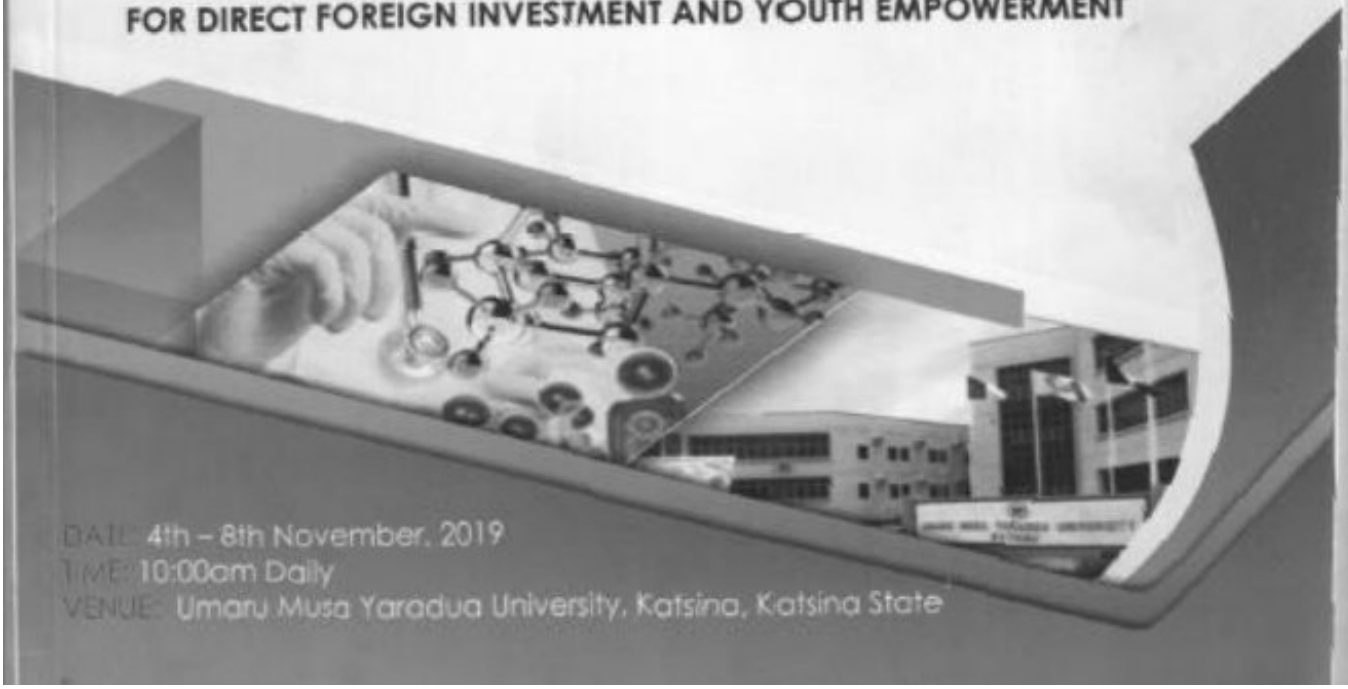
BOOK OF ABSTRACTS

37th 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 & - Business/Production Manager	**Prof. Osaretin Albert T. Ebuehi,** *Department of Biochemistry, College of Medicine, 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 – South East Zonal Coordinator	**Prof. Rabi'u A. Umar,** *Department of Biochemistry, Usman Dan Fodiyo University, Sokoto, Sokoto State*
South South Zonal – Coordinator	**Prof. Irene I. Ijeh,** *Department of Biochemistry, College of Natural and Applied Science, Michael Okpara University of Agriculture, Umudike, Umuahia*
South West Zonal – Coordinator	**Prof E. I. Akubugwo,** *Department of Biochemistry, Abia State University, Uturu, Abia State*

ENP 255
IN VITRO ANTIOXIDANT STATUS AND POLYPHENOL ANALYSIS OF *Vitex doniana* LEAVES EXTRACT

[*1]Memi Gabriel Galadima, [2]Onubiyi Joy Ada, [1] Ndukwe Nelson Nwachukwu, [1]Tyohemba Samuel Terhide and [3]Zaharadeen Abdullahi.

[1] Department of Biological Sciences, Federal University of Kashere, Gombe State
[2]Department of Biochemistry, Modibbo Adama University of Technology Yola, Adamawa State
[3]Department of Chemical Sciences, Federal University of Kashere, Gombe State
Corresponding email: gmemimemorial@gmail.com, +2348142923372

Abstract

Free radicals are generated in all living cells as part of normal cellular function, also generation of excess free radical either from exogenous or endogenous sources are responsible for many diseases. Antioxidants are machines that scavenge or neutralised free radical directly or indirectly. This study was designed to evaluate the antioxidant and phytochemical activities of *Vitex doniana leaves*. Hexane, ethyl acetate, acetone and methanol were used as extractive solvents. Total flavonoids, phenolic and extracts scavenging actitiviy on DPPH were determined spectrophotometrically at different wave lengths. Solvents yielded (5.24), (6.85), (7.48) and (7.99) % w/w respectively. Preliminary phytochemical screening revealed the presence of alkaloids, flavonoids, steroids, tannins, saponins, anthraquinones and phenols. Flavonoids highest value (59.99±2.23) was seen in methanol while least value (29.88±2.15) in hexane. Also phenolic value in methanol (12.22±0.20) and least value (5.19±0.61) was recorded in hexane. Methanol scavenging activity on DPPH was (83.8±0.85%) and least value (43.51±3.42%) was observed in hexane. This study revealed that *Vitex doniana* possessed antioxidant status, quantitatively, flavonoids demonstrated higher solubility than phenols also, phytoconstituents present could be responsible for the observed effects.

Keywords: *Vitex doniana,* scavenging, Antioxidant and Polyphenolics

ENP 256
ANTIOXIDANT ACTIVITY, TOTAL FLAVONOID AND TOTAL PHENOLIC CONTENT OF ETHYL-ACETATE AND N-BUTANOL FRACTIONS OF *Detarium microcarpum* STEM BARK

Gara T.Y[a], Ameh D.A[b], Anigo K.M[b] and Innalegwu D.A[a]

[a]Department of Biochemistry, Federal University of Technology Minna, Nigeria.
[b]Department of Biochemistry, Ahmadu Bello University Zaria, Nigeria.
*Email: yebogana@yahoo.com

Abstract

Flavonoids and phenolic are natural antioxidants found in plants that can scavenge free radicals. The present study was aimed to investigate the antioxidant activity, total flavonoid and total phenolic content of ethyl-acetate and n-butanol fractions of *Detarium microcarpum* stem bark. Aqueous extraction was carried out on *Detarium microcarpum* stem bark and the crude extract was further fractionated sequentially using ethyl-acetate and n-butanol solvents. For ethyl-acetate and n-butanol fractions, the total flavonoid content were 45.76±2.59 and 234.42±0.71 mg/g quercetin equivalents while total phenol content were 11.54±0.20 and 2.97±0.31 mg/g Gallic acid equivalents respectively. Ethyl acetate fraction showed the highest DPPH free radical scavenging activity with 65.31% inhibition while n-butanol showed the highest reducing power and H_2O_2 free radical scavenging activities with 65.31% and 52.55% inhibition at a higher concentration. This result suggests that an extract from this plant could be used as a natural antioxidant supplement.

Keywords: Antioxidant activity, *Detarium microcarpum* stem bark, total flavonoid, total phenol, reducing power