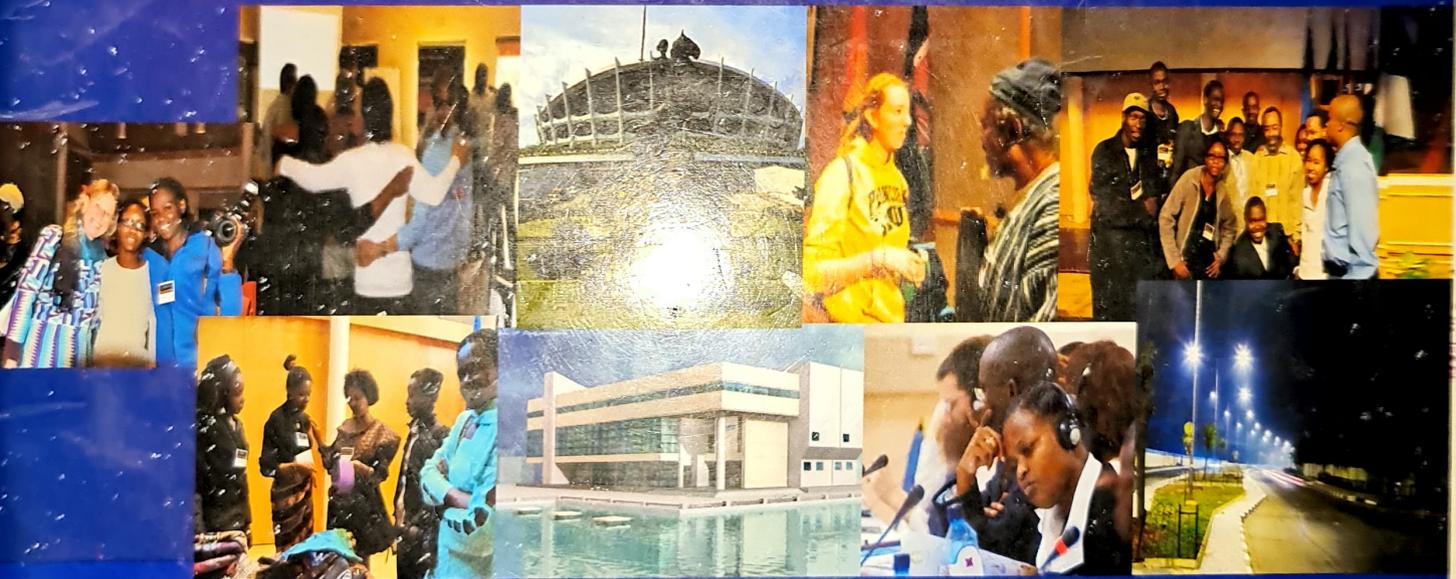




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A033 MEDICINAL PLANTS P074

THE ANTIMICROBIAL EFFECTS OF *MEZONEURON BENTHAMIANUM*, *HELIOTROPIUM INDICUM* AND *FLABELLARIA PANICULATA* ON *CANDIDA* SPECIES.Scott O. Fayemi,¹ and A. Osho,¹¹Redeemer's University, College of Natural Sciences, Biological Sciences Department, Km 46, Lagos/Ibadan Expressway, PMB 2011, Sagamu, Ogun State, Nigeria.Corresponding author e-mail address: fayscot@yahoo.co.uk**Abstract**

The widespread acceptance of alternative medicine, even in the Western world where it has been proved to improve the quality of life, prevent diseases, and address conditions such as chronic back ache and certain cancers that conventional medicine has limited success in curing is undisputable. Therefore, this research was based on testing of antimicrobial effects of *Mezoneuron benthamianum* Baill (Leguminosae), *Heliotropium indicum* L. (Boraginaceae) and *Flabellaria paniculata* Cav. (Malpighiaceae) on *Candida* species. The specificity of the objectives are hinged on the isolation and characterization of *Candida* species from the human buccal cavity, phytochemical and antibiotic sensitivity tests and minimum inhibitory concentration methods for determining the bio-active ingredients of candidate medicinal plants on selected *Candida* species of pathogenic importance. Antimicrobial activities and minimum inhibition concentrations (MIC) of *M. benthamianum*, *H. indicum* and *F. paniculata* ethanolic plant extracts were investigated against characterized *Candida albicans*, *Candida torulopsis*, *Candida krusei*, *Candida glabrata* and *Candida stellatoidea* isolated from human buccal cavity. Phytochemical tests were also investigated on these plants. The zones of inhibition for the whole plant extract of *F. paniculata* range from 12.8 ± 0.33 mm against *C. krusei* to 14.5 ± 0.50 mm observed against *C. albicans* while that of *H. indicum* range between 8.6 ± 0.50 mm against *C. torulopsis* to 13.4 ± 0.50 mm observed against *C. glabrata*, and *M. benthamianum* was from 7.8 ± 0.60 mm against *C. glabrata* to 12.8 ± 0.20 mm against *C. krusei*. Phytochemical tests revealed saponins, alkaloids, anthraquinones, flavonoids and tannins in *Flabellaria paniculata* extracts, and *Mezoneuron benthamianum* extracts is positive for saponins, anthraquinones, flavonoids and tannins. But, *H. indicum* contained saponins and tannins only. Between 5mg/ml and 8mg/ml was recorded as MIC for *Candida* species against *F. paniculata*. *M. benthamianum* recorded 6-15mg/ml while, *H. indicum* indicated 6-8mg/ml. The highest zone of inhibition in this study was obtained in *F. paniculata* followed by *M. benthamianum* and *H. indicum* consecutively. This may be due to the consecutive reduced number of phytochemical constituents obtained from the plants. Hence, need to further investigate and characterize individual phytochemical compound and their anticandidal role is inevitable. In conclusion these plants may be a source of antibiotic against *Candida* species, a group of organisms known for their recalcitrance against many antimicrobial drugs. Also if these plants activity is further quantify pharmaceutically, it may be a source of income to the country.

Key words: *Heliotropium indicum*, *Mezoneuron benthamianum*, *Flabellaria paniculata*, *Candida* species.

A034 MEDICINAL PLANTS P075

FRACTIONATION AND PARTIAL CHARACTERIZATION OF CONSTITUENTS OF GARLIC BULBS EXTRACT

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ABSTRACT

The fight against sleeping sickness has relied heavily on vector control strategies and old chemotherapy. The effectiveness remains unsatisfactory because of toxicity and resistance developed by trypanosomes. Therefore, there is urgent need to find new drug leads. Garlic has been reported to have analgesic, antimicrobial, anti-inflammatory and immunological properties. It has been reported that the administration of methanolic extract of garlic bulbs at 300mg/kg body weight to *Trypanosoma brucei*-infected rats was able to reduce parasitaemia and extended the life span of infected treated rats when compared with infected untreated rats. In this study, the constituents of the extracts were characterized. Garlic bulbs (*Allium sativum*) were extracted with methanol and partially purified by column chromatography to give fractions A, B and C. These fractions were further characterized by proton nuclear magnetic resonance (¹H-NMR) and the major components identified are octadecanoic acid 9-Octadecen-18-olide and alkenes (unsaturated hydrocarbon). Their systematic name are monoenoic fatty acid (Palmitoleic, oleic and linoleic acid) belonging to omega 6 and omega 7 which are necessary for forming of prostaglandins. These balances and strengthens the immune system giving it's the power to prevent infections. Therefore, it may be concluded that the essential oils composition of methanolic extract of garlic bulbs are responsible for its activities.

Keywords: Garlic bulbs, ¹H-NMR, Palmitoleic, oleic acid

A036 MEDICINAL PLANTS P076**A COMPARATIVE STUDY OF THE SERUM LEVELS OF SOME CATIONS IN RABBIT FED WITH *Cocos nucifera* WATER AND AQUEOUS *Vernonia amygdalina* EXTRACT**

Sub theme: Medicinal Plants

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1. A comparative study of the serum levels of calcium, zinc, potassium, inorganic phosphorus and magnesium in rabbits fed with *Cocos Nucifera* (coconut) water and aqueous extract of *Vernonia amygdalina* (bitter leaf) was carried out. The rabbits were grouped into three (3) with 2 in each. The rabbits were then fed with extracts for two (2) weeks were *ad libitum*. Thereafter one from each group was sacrificed weekly and blood samples were collected and the serum concentration levels of trace elements were determined using Atomic Absorption Spectrophotometer. The result showed that there were increases in the serum concentrations of minerals investigated compared with the control. A look at the result obtained at the end of the Weeks 1 and 2 shows that there is an increase in the serum concentration of the trace elements, though this varies with respect to days. The medical properties of these plants (bitterleaf and coconut) have been attributed to the biochemical resident in the plant materials such as the mineral content. Coconut water which is sterile until opened contains sugar fibre, proteins, antioxidants, vitamins and provides isotonic electrolyte balance making it a highly nutritious drink. The active ingredients in these plants can influence the body's ionic composition.

Key Words: Serum, Trace elements, coconut, bitter-leaf.