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Off Imgbi Road, Amarata  
Yenagoa, Bayelsa State  
Nigeria.



**Published by:**  
FAHP, Ngeke-plaza, Clerk's Quarters,  
Opposite White House, Buea, Cameroon.



**“REBUILDING THE DEVASTATING ECONOMY THROUGH  
AGRICULTURE, EDUCATION, MANAGEMENT, SCIENCE &  
TECHNOLOGY: THE POST COVID-19 EXPERIENCE  
IN AFRICA”**

Abstracts of AFRIBVAM-African Scholars Conference Journal

**Volume2, Number 1**

**Editors:**

Steve Azaiki  
David Turner  
Fidelis Okpata  
Austin Uwakwe  
Kurian Kachapilly  
James Ogunleye  
Iwueke Obinna  
George-Best Azuoko



## **WATER QUALITY ASSESSMENT OF RIVER OJI IN OJI RIVER LOCAL GOVERNMENT AREA OF ENUGU STATE, NIGERIA.**

Agu Valentine .O.

Enugu State Polytechnic, Iwollo, Nigeria

Onwu Edward .O.

Federal College of Education, Eha Amufu Enugu Nigeria.

The importance of water resources in meeting the water needs of humans, animals and industries indicate the essential need to protect them against contamination. Heavy metals concentration in water and sediments of upstream and downstream of river oji has been investigated. Samples were collected from the upstream and downstream and were analysed for Cd, Cr, Cu, Fe, Pb, Ni and Zn using Atomic Absorption Spectrophotometer. The result indicated that the average concentration of the metals in water and sediments on downstream was higher than that of upstream. The comparison of the mean concentrations of heavy metals in the water of river-oji with drinking water standards and that used for agriculture suggests that the mean concentration of Mn . Zn and Pb lies within the standard range for agricultural water. The highest average concentration on downstream for Pb in water and for Mn in sediment was 1.95 and 820.5ppm respectively. Also the lowest average concentration on upstream was identified for Cd in water and sediment 0.07 and 10.0ppm respectively. With regard to the results, it is obvious that using the water for recreational purposes, washing and fishing is detrimental to human health and the environment. The probable sources of pollutants could be rural/urban runoffs and industrial effluents. There could be also contributions from natural resources.

**Keywords:** upstream, downstream, mean concentration, heavy metals.

**“Rebuilding The Devastating Economy  
Through Agriculture, Education,  
Management, Science & Technology:  
The Post Covid-19 Experience In Africa”**

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### **Abstracts of AFRIBVAM Conference Journal**

Volume 2, Number 1, October 2021

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Produced and published by AFRIBVAM-African Scholars

## **THE ROLE OF WOMEN IN THE ECONOMIC DEVELOPMENT OF AFIKPO.**

Agha Romanus Urom & Okpani-Eziuloh Samuel Ogbonnia

Akani Ibiam Federal Polytechnic, Unwana, Ebonyi State.

In retrospect, the women of Afikpo had been very industrious and efficient in their quest to see that the economy of Afikpo does not have a retarded growth; their zeal and effort towards sustaining the economy have been explicitly remarkable. Be that as it may, women in Afikpo right from the ancient period till date have engaged in different kinds of productive and developmental activities irrespective of cultural, traditional, social and educational constraints that tend to militate against their endeavours. Although, they were considered as one of the main pillars of economic development, they have suffered from an unjust social heritage in addition to discriminatory practices both in terms of gender equality and in the market. This reflected on their social, educational and cultural situation. Amidst all these constraints, women have undoubtedly contributed to about 75% of the economic growth and development in Igboland at large and Afikpo in particular amidst through their various engagements in different kinds of production and profit oriented businesses. Secondly, in the aspect of agriculture, women are said to have been extremely industrious; In fact they are responsible for about 80% of agricultural activities. The purpose of this study however, is to investigate the roles of women in the economic growth of Afikpo since independence. The paper further examines the enormous contributions of women in economic growth and development of Afikpo. The study adopts descriptive and analytic approach of historical writing; the paper equally utilizes both primary and secondary sources.

**Keywords:** women, economic activities, development, economic achievement and challenges.

## THE KNOWLEDGE MANAGEMENT APPROACH: THE THEORETICAL- ISSUES.

Aginah

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Obeten, Okoi Okoi

Cross River Institute of Management and Technology, Ugep, Cross River State.

Knowledge Management (KM) is a subject that has aroused the interest of many researchers in the last decade, being great part of contributions driven by steps, named KM process. Because it is an embracing theme, publications about KM process have multidisciplinary contributions and, thus, this research aims to conceptualize this process, analyzing the main approach that guides the study of each stage, and also, to raise the main publications on the subject, classifying them as to their contribution area. To reach these goals, this article is oriented by a theoretical-conceptual research, in which 71 articles were studied. The results indicate that the KM process consists of four stages: acquisition, storage, distribution, and use of knowledge. In the acquisition phase, the studied themes are organizational learning, knowledge inception, creative process and knowledge transformation. In the storage phase, the contributions deal with a person, an organization and information technology, while in the distribution phase the studies concentrate in social contact themes, practice community and sharing via information technology. And, finally, in the use phase, we address the form of use, dynamic capacity and retrieval and knowledge transformation.

**Keywords:** Knowledge management process; Knowledge acquisition; Knowledge storage; Knowledge distribution and Uses of knowledge.

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Abstracts of **AFRIBVAM** Africa Conference Journal (October, 2021)

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Iwueke, Obinna C., Njemanze, Amanze Bob, & Nnochiri, Chukwum  
Federal Polytechnic, Nekede, Owerri, Imo State.

The study investigated the effect of logistics management on organizational performance. The situation is in poor transport and inventory management which is being aggravated by poor communication structure. The specific objectives are to identify effects of transport management inventory management and communication structure on organization performance in the South East. The research question focused on how logistic management affects organization performance variables while the hypotheses were hinged on there is no significant relationship between logistics management and organization performance variables. Review of related literature discussed logistic management and related variables. The Theories of constraints (TOC) and Game theory were used for the study and some empirical reviews. The population of the study was hundred members of staff of ABC transport Owerri, Nigerian breweries Enugu and Unilever Plc Aba. The sample size was 80; questionnaire was the main instrument for data collection. The study revealed that logistic management is very critical to successful operation of business in every sector. The study concluded that logistics management if properly done create competitive advantage. The study recommends among others the urgent need for the government to improve the transportation and communication infrastructure which are very critical to efficient inventory management and value creation for firms and customer satisfaction.

**Keywords:** logistics management, organizational performance, transportation, inventory management and communication.

## THE EFFECT OF STRESS ON LEADERSHIP

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The study sought to determine the effect of stress on Leadership arising from increasing insecurity and other problems in South East Nigeria. Survey design was adopted and questionnaire was administered in the five States; (Imo, Abia, Anambra, Enugu and Ebonyi). Frequency simple percentage and tables were used to explain the responses from samples selected from the population. Chi-square statistical tool was used to find the relationship between and among the variables of the hypotheses. Analysis of the study revealed that stress has affected Leadership adversely which has led to irrational and low quality decisions, inability to achieve desirable goals and poor performance of followers. The study concludes that stress effect on leadership is dependent on style of Leadership practiced which must take cognizance of situation. It was recommended among others that Leaders must know the necessary structure that curb crisis that often arise from panics and disasters in the organization.

**Keywords:** Stress, Leadership, Transformational Leadership, and Decision making.

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## **SUSTAINABLE BIONERGY TECHNOLOGY DEVELOPMENT IN NIGERIA: PROSPECTS AND CHALLENGES.**

Muhsinat. B.S. Yusuf, Steadfast & O. Joshua  
Energy Commission of Nigeria, Abuja.

Nigeria is blessed with potential resources of energy both conventional and renewable that empower the country with a large capacity to develop an effective and sustainable energy development that can boost the national economy if properly harnessed. The available conventional energy has not been able to meet the demand of over 200 million populace of the country of which about 60% are rural dwellers who engage in agriculture but lack access to energy. Hence there is need to look inward and convert some of the agricultural wastes into useful energy and thereby increase the agricultural production which translates to higher national GDP.

This paper explores the nexus between agriculture, energy and sustainability showcasing the complimentary relationship that can be fostered between them. It then proposes policy and economic incentives that would promote rural energy access , increased productivity while expanding their economic growth options in environmentally sustainable manner.

## RESPONSIBLE LEADERSHIP: A TOOL FOR ACHIEVING SUSTAINABLE DEVELOPMENT IN AFRICA.

Ijomanta Umunnabuike Eze, Eze Desy Chinyere, Oko Juliet Ekenma  
Akanu Ibiam Federal Polytechnic, Unwana, Ebonyi State, Nigeria.

The topic of the study is Responsible Leadership: A Tool for achieving sustainable development in Africa. The study design is qualitative with secondary sources of data and documentary approach of data analysis. In the course of the study, it was discovered that African leaders care much about their personal goal, neglecting the national goals; that African leaders are corrupt and would want to remain in office for a longer period of time. All of these characteristics of African leaders have led to a high rate of poverty, unemployment and low standard of education in the continent. Owing to this, the paper is of the opinion that the solution to African problems is responsible leadership. This kind of leader does not see the followers as slaves rather as part owners and partakers of governance as well as the dividend of governance. Its attention is focused on matters of responsibility including accountability, legitimacy and trustworthiness. He serves the legitimate interest of others and does not see the nation's resources as his personal resources. In fact, all over the world, leaders make things happen, they are wave makers and society without talented, committed, and responsible leaders will retrogress or at best remain stagnant. Based on this, the paper concluded that responsible leadership that is associated with accountability, transparency, trust and legitimacy must be enthroned in African leadership if sustainable development goal must be achieved by the year 2030. Owing to this, the paper recommended that those aspiring to occupy leadership positions should be checked to find out how accountable, transparent, and reliable they have been in their previous leadership positions.

**Key words:** Responsible, Leadership, Sustainable, Development, Africa

## BETWEEN HEALTH AND FUNDAMENTAL RIGHTS: THE POST COVID-19 EXPERIENCE, NIGERIA.

Friday Okechukwu Iloh  
Gregory University, Uturu, Abia State Nigeria

Kenneth Uzor Eze  
Nigerian Police Academy, Kano, Nigeria

By the end of March 2020, almost all countries of the world had shutdown their borders-something awful had hit the earth-the thing so great and fearful that the earth shook. An epidemic had arrived-the coronavirus-covid-19. This pandemic was first spotted in China. On 31<sup>st</sup> December, 2019, World Health Organization (WHO) was informed of cases of pneumonia of unknown cause in Wuhan city, China. A novel coronavirus was identified as the cause by Chinese authorities on 7<sup>th</sup> January, 2020 and was temporarily named "2019-nCov". On the 30<sup>th</sup> January, 2020, the Pandemic has, and is still affecting every facet of individuals' and nations' life. Life may not remain the same again. Thus, this paper has as its aim the striking of a balance between the effect of the pandemic on the legal regime of fundamental rights and how the law should react, and this is imperative. The research methodology here is basically doctrinal, and that is, the research involves analysis, ordering and systematizing legal propositions through legal reasoning or rational deductions. In this wise, analysis of legal concept and principles through the reading of primary sources, such as statutes, case law; and secondary sources, such as textbooks, journal articles and interest materials. Finding reveals that measures that are imperatively necessary to combat the scourge of the pandemic may sometimes get into the scope of the people's fundamental rights. The researchers recommend that the laws in Nigeria, as they relate to covid-19 protective measures, should be made to so reflect. It is concluded that if this is done, there will be a better health regime in place to combat the pandemic and litigation will be reduced.

**Keywords:** Health, Fundamental Rights, Pandemic, Government Policy and Corona Virus.



## WASTEWATER FOR BIOGAS PRODUCTION; THE BEDROCK OF ENVIRONMENTAL SANITATION AND SOIL FERTILITY.

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Wastewater contains dissolved and suspended particles as well as pathogenic microorganism that finds its way to the water body and underground water thus polluting it and constituting a serious environmental and health hazard to humanity. Wastewater, when harnessed and treated has 1% as sludge that can serve as raw material for biogas production if subjected to anaerobic digestion. The treatment of wastewater and hence biogas production from the sludge will offer answers to the problems of disease outbreaks, since the anaerobic process helps to eliminate pathogenic germs such as; Paratyphoid bacillus which is known to be eliminated in the biodigester within 44 days, Hookworm eggs in 14 days while Flatworm eggs in 70 days retention time. Odor or smell is also known to be eliminated through the stabilization of organic matter during the digestion. Apart from biogas, an increasingly desirable product of anaerobic digestion (AD) is biogas digestate or effluent which can be used directly on the soil as fertilizer or after its being mixed with water in the ratio of (1:1) or (1:3) effluent and water and apply directly to plants, effluent and water (1:10) for young crops or directly with soil before cultivation. This means that the water we consider as waste is actually useful with high potential of biogas such that rather than the problem it poses to the environment, it can help to provide a clean energy source which is not only renewable but provides a substitute to the use of fossil fuel that has been a major cause of environmental pollution which the whole world is facing today.

**keywords:** Waste Water, Soil Degradation, Environmental Sanitation and Health Hazard.

## PROFESSIONALIZATION OF ANIMAL SCIENCE AND STRICT REGULATION AGAINST VENDORS IN THE NIGERIAN LIVESTOCK INDUSTRY

Nkwocha, G.A.

Alex Ekwueme Federal University Ndufu–Alike Ikwo

Agriculture as the world's oldest and largest primary industry plays vital role in the economic life of virtually all nations regardless of their state of development. As the nation grapples with the realities of the global economic recession occasioned by dwindling fortunes from oil and Post Covid-19 experience, a drastic shift to agriculture especially animal science option would apart from helping to diversify the Nigerian economy and create self-employment at the same time move the country forward to the next level. Animal scientists must have formal training and appropriate experience to learn and apply the complex principles involved in animal production, care, and use. Today the Nigerian livestock industry is bastardized by vendors who neither passed through any professional training nor received any formal education, a bad signal for the collapse of the industry. Nigerian Institute of Animal Science (NIAS) has specified the operational ethics of animal scientists but stringent measures for its implementation is yet to be addressed head on. This is negatively affecting the Nigerian livestock industry and the agricultural horns of plenty. NIAS as a matter of fact, should develop a professional network with the inductees and ensure that they are proactive in their areas of operations. The body should also guide against the inept, unethical and backyard activities of vendors in the Animal Science profession. Moreover, for optimum productivity and better living standards of Nigerians, animal production, processing and marketing must be regulated by NIAS through her registered members for quality control assurance and health safety of consumers.

**Key words:** Professionalization, Animal science, Nigerian livestock industry

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**Keywords:** Health, Fundamental Rights, Pandemic, Government Policy and Corona Virus.

## INNOVATIONS IN THE TEACHING AND LEARNING OF OFFICE TECHNOLOGY AND MANAGEMENT COURSES IN THE POLYTECHNIC SECTORS

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The paper focused on the innovations in the teaching and learning of Office Technology and Management courses in the polytechnic sectors. The advancement of Information Communication Technology (ICT) has transformed content delivery of Office Technology and Management curriculum in tertiary institutions. The innovation has made the curriculum implementation more appealing and enhancing. The revolution of ICT has rendered the “chalk and talk” method obsolete and outdated. The concern of this paper is to assess some ICT facilities used for effective teaching and learning as well as office environment. Machines and equipment used for teaching and learning in the classroom should be replicated in the office environment for practical demonstration and job performance. The paper critically unveils the concept of teaching and learning, the use of ICT facilities such as computer system, power point, internet for content delivery of Office Technology and Management courses. The paper recommends among others that management of the polytechnics should encourage lecturers by organizing programmes from time to time to train lecturers with the state of the art technology. Moreover, OTM lecturers as a matter of urgency, should continually update their knowledge so that they will be skillful enough to use technology in the teaching and learning process.

**Keywords:** Innovation, Teaching and Learning, Office Technology and ICT.

## **THE ROLE OF INTELLECTUAL PROPERTY LAWS IN THE GROWTH OF SMALL AND MEDIUM ENTERPRISES (SMES) IN NIGERIA.**

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Kenneth Uzor Eze  
Nigeria Police Academy, Wudil-Kano, Nigeria

Intellectual Property laws can help Small and Medium Enterprises as well as entrepreneurs thrive in the market place in the growth and development of Nigerian, as it has done in other developed and developing countries. In pursuit of the above objective, the research examined the role of Intellectual Property Law plays in the growth of Small and Medium Enterprises as well as development of entrepreneurial skills, careful examination of Nigerian economy, the characteristics of a typical Nigerian Small and Medium Enterprises, investigated the performance of Small and Medium Enterprises in the Nigeria economy, problems and prospects. It also recommended remedial measures to be taken to ensure a vibrant Small and Medium Enterprise in Nigeria. In the case of Nigeria, Small and Medium Enterprises have performed below expectation due to certain constraints ranging from our environment to our attitude and instability of government and change in government policies. Small and Medium Enterprises, armed with Intellectual Property rights such as trademark, patent, industrial design protection would play the vital role of growth, development and industrialization, wealth creation, poverty eradication, and employment creation should appropriate attention be given to it.

**Keywords;** Intellectual Property, Law, Small and Medium Enterprise(SME)

## **CONSUMER ATTITUDE TOWARDS SOCIAL MEDIA INTERACTION.**

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This study focused on Consumer attitude towards Social media interaction. Social media interaction are becoming increasingly important in the society and change the way people communicate, how they acquire information, feel, form beliefs and behave. Objectives of the study include among others to: find out the direction of belief towards social media interactions, find out if consumer knowledge about Social media changes consumer feeling towards social media interacting to each other, and find out the direction of behavioural intention towards social media interaction. Attitude can either be positive or negative depending on how consumers perceive and interpret the image of the social media interaction. The paper devised a content analysis based on the existing literatures on the subject matter to discover any gap inherent in the existing literature. Theoretical implications of this study will definitely add value to the literature on this subject matter. It will serve as a guide to those who will like to write on similar topics in future. The study concluded that consumer knowledge about Social media changes consumer feeling towards social media interacting to each other. For the fact that marketers use social media to reach wider customer worldwide, the belief towards social media interactions have increased worldwide. Social media provides a quick and easy way to spread news and information online.

## INNOVATIVE MARKETING IN THE POST COVID-19

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Global epidemic crises of (COVID-19) expose marketing activities and others to various kinds of challenges and may put lives at risk. Covid-19 has created a leadership culture of immediate collaboration focused on the urgent need for resilience. Marketing now has the opportunity to driving the organization's broader growth and innovation agenda. After globalization and the changes created in competition, innovation has become one of the most important tools providing competitive advantage. Most important criterion that makes this tool successful is that consumers adopt these innovations. Businesses need to know the process of adopting innovations by their target audiences and the factors affecting this process. One of these factors is undoubtedly the innovativeness level of the consumers. For this reason "Customer innovativeness" has been the subject of many studies, especially because of its important role in the adoption, diffusion of innovations and consumer behavior.

**Keywords:** Innovative, Marketing, COVID-19, Leadership and Culture.

## IMPACT OF TAXATION IN THE DEVELOPMENT OF NIGERIAN ECONOMY FOR ENHANCING BUSINESS OPPORTUNITIES.

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This paper examined the impact of taxation in the development of Nigerian economy for enhancing business opportunities. Tax is a compulsory payment by individuals or corporate bodies to the governments. The study found out that taxation is a form of withdrawal by government for some economic purposes. It constituted the bulk of government revenue and not an exploitation by government for selfish interest. Various areas of taxation; the political importance of taxation, merits and demerits of taxation as well as other aspects of the topic were clearly discussed. The researchers concluded that capital flight and tax havens contributed to undermining the tax base of Nigeria and recommended that tax proceeds should be properly channeled to enhance business opportunities in the country. Government must devise some means of blocking revenue leakages in the country in order to ensure better business opportunities for the citizenry.

**Keywords:** Taxation, Business, Government, Opportunities, Base.

## STATE INSTITUTIONS AND THE MANAGEMENT OF COMMUNAL CONFLICT IN EBONYI STATE.

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Since 2006, there has been an increasing spate of re-occurring communal conflicts in the Ebonyi state. The conflicts have defied several efforts aimed at resolving them and now require urgent attention from all stakeholders to find a lasting solution. Several strategies have been employed in resolving the crises, such as mediation, the use of the military, legal adjudication, setting up of dialogue committee, legislative approach to mention a few. However, all these measures have not been able to resolve the crises nor bring a lasting peace to these warring communities. The social structure and deep-seated grievances that generate communal conflicts have not been addressed and the crowding out of traditional methods of social control from official policies has left room for escalation of violent communal conflicts. This study assessed the effectiveness of different strategies that they have been employed to stem the conflicts in Ebonyi state with a view to identifying the loop-holes and bottlenecks that have deterred or hindered the lasting resolution of the re-occurring conflicts. Survey method was employed in the collection of data through the instrumentality of questionnaire. Findings revealed the urgent need to reappraise the current strategies employed in handling these re-occurring conflicts which seem as though they are suppress and later re-emerges with greater intensity and furiosity “Whilst employing alternative strategies with more focus on people-oriented approach which centres on addressing the root cause of re-occurring conflicts such as bargaining process, non-implementation of peace agreement, corruption, Building reliable democratic process to accommodate all parties, and with emphases on preventive methods to conflict resolution and peace building.

**Keywords:** State, Institution, Management and Communal Conflicts.

## DISABILITY LEGISLATION AND POLICY IN NIGERIA: MYTHS & REALITIES ON TECHNICAL AND VOCATIONAL EDUCATION AND TRAINING.

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The study examined the prevailing difficulties experienced by persons with disabilities in Tertiary Education in Nigeria, as being aggravated by lack of appropriate laws and lack of political commitment. The lack of political will to provide a legal framework for the disability act has given rise to multiplicity of factors militating against the realization of the objectives of TVET in Nigeria, even though the Nigerian government as far back as 2010 enacted a legislation to implement the United Nation convention document, it has remained at a theoretical level. In view of the foregoing, the researcher adopted a historical method of study using secondary data to analyse the plight of the disabled in the Nigerian Tertiary Education and its implications in achieving the TVET objectives. The study anchored on Social model of Disability. The study reveals that the Nigerian government has continuously neglected signing into law, policies that will ensure access to healthcare, education and employment opportunities for the disabled, thus impeding their participation and inclusion in all aspect of life. The study concluded that the non legislation of disability act in Nigeria is an enemy to the realization of TVET objectives therefore recommended; that the disability act be signed into law which will support the United Nations standard rules as well as, spell out policies essential for accessibility, put in place, optimal plans to provide a legal framework, to fairly allocate funds to meet special needs of persons with disabilities in the Nigerian Tertiary Education thereby promoting their living standard.

**Key words:** disabled persons, legislation, accessibility.

**REBUILDING THE DEVASTATING ECONOMY THROUGH  
ANIMAL AGRICULTURE – A PARADIGM FOR SUSTAINABLE  
AND INTENSIFIED LIVESTOCK PRODUCTIVITY IN  
DEVELOPING COUNTRIES.**

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Post Covid-19 global pandemic and the socioeconomic implications on sub Saharan African (SSA) countries depicts gloomy future snowballing in poor living standards, hunger, poverty, animal protein supply and demand deficit and economic dislocations on African countries. The interest of youths in developing countries in embracing agriculture is very discouraging. Ground breaking measures such as review of national educational policies on agricultural education, making farming more attractive by the use of modern techniques, review and implementation of agricultural policies, collaboration with advanced countries in Agricultural Research and Biotechnology aimed at using highly sophisticated breeding techniques and tools, availability of loan facilities to non-political farmers to boost productivity, establishment of Agricultural libraries, regulation of government agricultural appointments strictly on efficiency and professionalization of animal science practice in developing countries is the road to achieving optimum productivity and better living standard in African countries.

**Keywords:** devastating economy, animal agriculture, sustainable, intensified animal production, developing countries.

**THE DISTRIBUTION OF SPINAL NERVES AND  
LUMBOSACRAL PLEXUS IN AFRICAN GIANT RAT  
(CRICETOMYS GAMBIANUS-WATERHOUSE, 1840).**

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The African giant rat (AGR) (*Cricetomys gambianus*) is a large rodent and arguably becoming Africa's most intriguing rodent. There is paucity of information on peripheral Nervous System of AGR in available literature. This study was aimed to identify origins of spinal nerves as well as tracing the distribution of the peripheral nerves that constituted the Lumbosacral Plexus (LSP). Four (2 males, 2 females) AGR were sedated by placing them in a covered white transparent bucket containing cotton wool mildly soaked with chloroform. They were intracardially perfused with 4% paraformaldehyde. The abdominal cavity was opened through linea alba and all abdominal and thoracic organs removed before embedding them in 10% formalin for 48 hours. They were dissected, with Iliohypogastric nerve from ventral ramus of L<sub>1</sub> communicating to dorsal ramus of L<sub>2</sub>. Ilioinguinal nerve from ventral ramus of L<sub>2</sub> joined dorsal ramus of L<sub>3</sub>. Lateral cutaneous femoral and genitofemoral nerves originated commonly from ventral ramus of L<sub>3</sub> on the right but, individually on left antimer. The LSP in AGR was formed by ventral rami of last four lumbar (L<sub>3</sub>-L<sub>6</sub>) and first three sacral (S<sub>1</sub>-S<sub>3</sub>) nerves. The Ischiadic plexus distributed cranial and caudal gluteal, caudal cutaneous femoral and ischiadic nerves. Rectal caudal nerve from S<sub>2</sub> and S<sub>3</sub> innervated rectum, anal sphincter muscles and communicated pudendal nerves. This study will serve as guide for regional anaesthetic nerve blocks, increase available information on gross anatomy of AGRs' peripheral and spinal nerves; provide a baseline for further neuroanatomical studies of rodents.

**Keywords:** Lumber, Plexus, Rat, Sacral, Spinal, Trunk.

## **WISDOM: AN EFFECTIVE INSTRUMENT FOR LEADERSHIP HANDLING THE POST COVID- 19 EXPERIENCES IN NIGERIA.**

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The paper focuses on the instrumentality of wisdom in handling the post covid-19 experiences by the leaders in Nigeria. The study design used was qualitative with secondary sources of data and documentary approach of data analysis. By implication, we made use of expert publications, journal articles and other relevant materials in addressing the issue at hand. In the course of the study, it was discovered that the effects of covid-19 on Nigerians was made manifest in different ways such as hunger, disease, loss of jobs and unemployment, school closures which affected the academic calendar of several schools in the nations. At present, people have not fully recovered from the effects and scars left by covid-19 era. Therefore, Nigeria needs leadership that must operate in wisdom. It is believed that leadership has a role of adding value to other people and the true measure of leadership is influence, thus a great leader must have the ability to change the attitude or behavior of others. If this kind of leadership persists, the post covid-19 experience in Nigeria will not Sbe different from the covid-19 experience. Owing to this, the paper is of the view that the kind of leadership that can bring succor to Nigerians is leadership that operates in wisdom. This leadership is the type that has the ability to distinguish between the right and the wrong actions at any giving period of time or event. It is the leadership that has the ability to know what to do at a challenging period with the outcome meeting the desired end that is acceptable by the majority of the persons concerned. Consequently, the paper asserts that those aspiring to be in leadership must not be selfish otherwise; the followers will also be looking for their own selfish interest which can lead to inefficient and ineffective organization.

**Keywords:** wisdom, Leadership, Post COVID-19, Experience, Nigeria.

## **INFORMATION SECURITY AND FRAUDULENT PRACTICES IN ELECTRONIC COMMERCE, PROSPECTS AND CONSTRAINTS.**

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This paper explored information security and fraudulent practices in E-commerce, prospect and constraint. Today, business organization has been transform in its ways of reaching the final consumers, both profit and non-profit business (NGO's) has embrace the utilization of digital technologies to reach its target market access the globe. The internet has simplified business processes such as sorting, summarizing, coding, editing, customized and generic report generation in a real time processing mode. However, it has brought unintended consequences such as criminal activities, spanning, credit card transactions, and other successful means for cybercriminal miscreants to perpetrate their insidious act. The paper equally examine some fraudulent practices affecting e-commerce prospects such as miscellaneous fraud, advance free fraud, online auction fraud, phishing etc. It is imperative that information security can be of great benefits in enhancing customers trust and confidence in electronic commerce transactions, assist business organisations faster detection of online threats, revealing the identity of database users, verification of users information etc. Constraints of information security affecting the prospects of e-commerce such as staff infidelity, unpreparedness of the business organization, unfavourable regulations, lack of ICT skilled manpower, poor network, cost implication etc. It was recommended among others that e-commerce organizations should engaged the services of human resources that competent and skillful in use of ICT and equally organize continue training to update its personnel on the emerging technologies in the e-commerce world.

**Keywords:** Information, Security, Fraudulent Practice and Electronic Trade.

## **IMPACT OF VIGILANTE GROUPS ON ARMED ROBBERY IN IHIALA LOCAL GOVERNMENT AREA OF ANAMBRA STATE.**

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This study examined the impact of vigilante groups on armed robbery in Ihiala local Government Area of Anambra state. The population of the study was made up of residents of Ihiala local government area of Anambra State which is 129,025. Taro Yamane formula was use to get the sample size of 370. Copies of questionnaires were duly completed and returned showing 90% response rate. Research hypothesis were tested using ANOVA method. Findings from the study show that the presence of the vigilante group in Ihiala community has reduced arm robbery. The emergence of the vigilante group in Ihiala community is to control armed robbery and not for political purposes. The vigilante group is more useful in controlling crimes such as armed robbery in Ihiala community than the police. The challenges being faced by the vigilante groups in tackling armed robbery in Ihiala local government area include inadequate funding, poorly trained personnel, the interface between law and community and poor enabling registration.

**Keywords:** Vigilante groups, Armed robbery, Ihiala, ANOVA, Ihiala community

## **APPROACHES TO DETERMINING COST AND BENEFITS OF FURTHER PROFESSIONAL EDUCATION.**

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This article provides new approach to evaluation of employer and employee costs and benefits of further professional education. Based on the results of the survey of MBA graduates of the Faculty of Management Sciences University of Calabar and HND graduates of Akanu Ibiam Federal Polytechnic, Unwana, Ebonyi State, it argues the definitions of costs and benefits of further professional education becoming wider. While making a decision about participation in further education programs workers now consider not just the earnings gain, but also the utility of education that consists, for instance, career progress or job satisfaction increase. For employers several approaches are suggested including cost related to workers' resignation because of the career progress absence after education and benefits in the form of additional professional duties. These mean that the real value of further professional education is now higher for both employers and employees than it was considered earlier.

**Keywords:** Employer, Costs, Benefits, Career paths.



## PRODUCTION AND APPLICATION OF HIGH STRENGTH CONCRETE WITH SELECTED BIOMASS ASHES (BA) IN POST PANDEMIC SITUATIONS

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The aim of this study was to produce and appraise the applications of high strength concrete with selected biomass ashes (BA) in post pandemic situations. The objectives were to determine the mix proportions, density, compressive strength, flexural strength, water absorption and oxygen permeability of the concrete samples. biomass ashes (BA) were produced from rice husk (RH), palm kernel shell (PKS) and cow dung (CD). The ashes from these biomass wastes were used as partial cement replacements (0, 10, 20 and 30 percent) in concrete. The ashes were blended in equal proportions in accordance with Barbosa et al. [2010]. The effect of Biomass ash (BA) on the density, compressive strength, flexural strength, water absorption and oxygen permeability was investigated. The overall conclusions were that within this investigation, both biomass ash concrete formulations had almost similar mechanical properties with normal concrete in respect to density, compressive strength and flexural strength, except for water absorption and oxygen permeability. Generally, the biomass ash concrete formulations are better alternatives in post pandemic situations, resulting in the reduction of CO<sub>2</sub> emissions and costs of construction.

**Keywords:** Pandemic, high strength, biomass, concrete, compressive, flexural, oxygen permeability

## BACTERIOLOGY ASSESSMENT OF SOME SELECTED BOTTLE WATER SOLD IN ABIA METROPOLIS, ABIA STATE NIGERIA.

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This study was carried out to determine the microbial quality of 10 randomly selected brands of bottle water sold at Aba-owerri road in Aba town, south cast of Nigeria. Twenty water samples collected and analysed using standard microbiological tests. Heterotrophic bacterial count had a range of (1.8-8.0cfu/ml), the total coliform count had range of (1.0-7.0 clu/ml) and the total Escherichia coli count had a range of (1.2-7.4cfu/ml). The water samples collected were all odourless, colourless and had a pH range of (6.31-7.45), The bacteria isolate were Escherichia coli (64%), Enterobacter species (55%), Staphylococcus aureus (46%), Bacillus subtilis (27.3%), Bacillus species (18.2%), Klebsiella species (55%), Proteus species (46%) Chramobacter violcium (18.2%) Water samples F, G, J and I had more contaminants than water samples A, B, C, D, E, and H. These findings have shown that though these water samples had NAFDAC numbers, they were contaminated. Therefore regular bacteriological assessment should be carried out on these bottle water sold along Aba-owerri road in Aba Abia State Nigeria.

**Keywords:** Water , Microbial Quality, Randomly, Assessment, Contaminated.

## THE ATTRIBUTE OF NORTH EAST WOMEN ENTREPRENEURS IN NIGERIA

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The aim of this study is to describe the attribute of the north east female Entrepreneurs who have been successful in their business ventures. This paper attempts to understand who these successful women are and what their trademarks for success are. A questionnaire survey was employed for this study. Result are drawn from 200 respondents who identified themselves as female Entrepreneurs, and who have attained recognizable achievement in their venture. Provides an insight into the personal and venture experiences of these women to give a broad picture of prosperous female entrepreneurs. The study addresses issues such as personal profile, business profile, motivations, problems encountered on their way to venture performance.

## NUTRIENT AND ANTINUTRIENT COMPOSITION OF SELECTED WILD AND DOMESTICATED GREEN LEAFY VEGETABLES CONSUMED IN SOUTH EAST, NIGERIA.

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The proximate composition, calorific value, mineral concentrations and anti-nutrient levels of leaves of *Lasianthore Africana* (LA), *Heinsia crinata* (HC), *Vernonia amygdalina* (VA) and *Telfairia occidentalis* (TO) were investigated. Moisture content was highest ( $80.1 \pm 0.16$ ) in *Telfairia occidentalis* and lowest ( $69.3 \pm 0.03\%$ ) in *Heinsia crinata* while ash ranged from  $1.42 \pm 0.01\%$  in *Heinsia crinata* to  $2.66 \pm 0.02\%$  in *Lasianthore africana*. Protein was highest ( $4.39 \pm 0.01\%$ ) in *Telfairia occidentalis* (TS) followed by *Vernonia amygdalina* ( $3.80 \pm 0.55\%$ ) and lowest ( $3.02 \pm 0.02\%$ ) in *Lasianthore africana* (Ls). *Lasianthore africana* (LA) had the highest crude fat of  $1.44 \pm 0.01\%$  while *Vernonia amygdalina* (VA) had the lowest value of  $0.20 \pm 0.01$ . Fibre content was highest ( $17.3 \pm 0.02\%$ ) in *Heinsia crinata* (HC) and lowest ( $7.99 \pm 0.07\%$ ) in *Telfairia occidentalis* (TO). Total carbohydrate was lowest in *Lasianthore africana* (LA) followed by ( $5.37 \pm 0.02$ ) in *Telfairia occidentalis* (TO) and the highest value of  $7.58 \pm 0.01\%$  in *Vernonia amygdalina* (VA). The energy content was highest ( $46.5 \pm 0.37\%$ ) in *Vernonia amygdalina* (VA) and lowest value of  $43.1 \pm 1.99\%$  in *Telfairia occidentalis* (TO). Boiling increased the moisture contents but reduced the concentrations of the other constituents of the samples. These findings may offer scientific basis for the utilization of wild and domesticated vegetables in meeting human nutritional requirements in developing nations.

**Keywords:** Nutrient and antinutrient composition, green leafy vegetables, (wild and domesticated).

## EVALUATION OF THE NUTRIENT POTENTIAL OF HENSIA CRINATA AND TELFERIA OCCIDENTALIS FROM SOUTH EAST, NIGERIA.

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The nutrient potential of *Telferia Occidentalis* (T.O) were investigated using standard methods, proximate nutrient potential revealed that crude fiber potential of *Hensia crinata* was higher ( $61.80 \pm 0.19$ ) than that of *Telferia Occidentalis* ( $28.50 \pm 0.21$ ). Both leaves revealed appreciable crude protein potential as follows: *Hensia Crinata* ( $7.52 \pm 0.11$ ) and *Telferia Occidentalis* ( $9.78 \pm 0.13$ ) respectively. The crude lipid potential, total carbohydrate potential and calorific potential were low in both leaves. Processing by boiling lowered the proximate nutrient potentials of both *H. crinata* and *T. Occidentalis* respectively. The potassium and magnesium potentials of *Telferia Occidentalis* ( $23.60 \pm$  and  $14.20 \pm 0.01$ ) were higher than the values of *Hensia crinata* ( $3.20 \pm$  and  $3.30 \pm$  respectively). Iron presented an appreciable potential in *Hensia Occidentalis* ( $2.80 \pm 0.10$ ) and *Telferia Occidentalis* ( $2.40 \pm 0.02$ ), the values of the zinc potential and sodium potential in both leaves were low. The results highlighted in this study revealed that both vegetables are good sources of fiber, protein, potassium, magnesium and iron and suggest their use in diet formulating for the people who largely depend on high density calorie foods.

**Keyword:** Proximate Nutrient Potential, *Hensia Crinata*, *Telferia Occidentalis*, South East, diet formulation.

## EVALUATION OF THE USE OF DIFFERENT SOLVENTS FOR EXTRACTION, THIN LAYER CHROMATOGRAPHY AND PHYTOCHEMICAL CONSTITUENTS, OF MORINDA LUCIDA.

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*Morinda lucida* benth is a promising source of bioactive compounds since it has been traditionally used for the treatment of various diseases and illnesses especially in Africa. Extraction is the main process by which bioactive compounds may be obtained from biomass materials. The extraction yield and biological activity by the resulting extract is not only affected by the extraction technique but also by the extraction solvent, due to their different solubility properties in different solvents. The present study aimed at evaluating the impact of different solvents on extraction yields, phytochemical constituents and the number of spots from Thin Layer Chromatography (TLC) analysis of *M. Lucida*. Four different solvents (ethanol, methanol, n-hexane, ethyl acetate) were used. Simple soxhlet extraction method was used in the extraction process. The results showed that the used solvents took an important role in the yield of extraction, the content of the chemical components from the phytochemical constituents screening and the number of spots from the TLC analysis. n-Hexane was identified as the most effective solvent for the extraction, resulting in the highest extraction yield (48.4%) using 10:1 solvent - to-solid ratio, as well as the highest content of phytochemical constituents. The TLC result of the n-hexane extract exhibited highest number of spots compared to other solvents under the same condition of use. With n-hexane as solvent for extraction, a larger variety of compounds will be extracted which in turn provides a better chance or probability that biologically active compounds/substances will be present from the leaves and root extracts of *M. Lucida* for utilization in pharmacognosy and traditional medicine.

**Keywords:** Phytochemical constituents, Thin Layer Chromatography, Extraction Yield, *Morinda Lucida*.

## EVALUATION OF SOLID WASTE STORAGE AND COLLECTION PRACTICES IN UMUAHIA SOUTH ABIA STATE.

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The purpose of this study was to assess solid waste storage and collection practices in Umuahia south, Abia State, Nigeria. This is done in order to provide policymakers with information about the nature of waste storage and collection activities in the study area. The study area is divided into ten wards, which are further subdivided into three residential zones: sub-urban, core and transition. Each zone is made up of district with a variety of residential buildings. There are 600 houses in each of the three zones. Using a systematic sampling technique, One of every seven building was surveyed. The information gathered was analyzed using statistics analysis. The study found a significant difference in income, occupation, and tenancy status, but not in residents' education, family size, or type of house occupied (p 0.05). According to the study, storage receptacles used in the three residential zones were similar, and the majority (75%) is not environmentally friendly. A substantial proportion of residents do not have access to a waste collection truck. The computed ANOVA results (F = 5.64 and p 0.05) established that there is a significant difference in the frequency of waste collection. Hence it is recommended that there is an immediate need for the promoting awareness about environmentally friendly waste storage receptacles, as well as the provision of quality equipment and personnel for the delivery of sustainable collection and disposal of waste in the area.

**Keywords:** waste collection, residents, solid waste, storage receptacles, residential area,

## PHYTOCHEMICAL AND ANTIMALARIAL PROPERTIES OF AQUEOUS-METHANOL EXTRACT OF MANGIFERA INDICA.

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Malaria is a life threatening disease caused by the parasite, plasmodium It is prevalent in West Africa especially Nigeria. Malaria in recent times has become resistant to the orthodox antimalarial drugs. Phytochemical profiling and in vivo antimalarial properties of aqueous methanol extract of Magnifera indica in albino mice was conducted using standard methods. Twenty five (25) male albino mice within the weight range of 24 – 46g were used for the scientific study, the mice was randomly divided into five (5) groups of 5 mice per group. After 2 weeks of acclimatization, induction of malaria was done using plasmodium beghei via i.p. injection. Administration of extract was done orally following confirmation of malaria induction in mice and lasted for 7 days. Parasitaemia, weight, temperature were recorded for each mouse. Parasitamia level was checked at 2 days after induction, 4 days after treatment and 7 days after treatment respectively. Results from this study revealed the presence of phytochemicals such as alkaloids, saponins, tannins, phenol, sterol, flavvonoids and glycosides There was significant difference (p0.05) between the treated groups and the untreated group only at the dose of 400mg/kg b.w. while there was no significant difference (p 0.05) between the treated groups and the standard control group. These results indicated that aqueous methanol extract of the leaves of Magifera indica is a good source phytochemicals and possess plasmodium parasite inhibitory properties in mice, hence, suggests its use in the treatment of malaria.

**Keywords:** Malaria, Plasmodium, antimalarial properties, aqueous-methanol extract, magnifera indica

**EFFECT OF ETHANOL EXTRACT OF THE FRUITING BODIES OF ORGANICALLY CULTIVATED PLEUROTUS OSTREATUS ON THE SERUM RENAL FUNCTION PROFILES AND KIDNEY HISTOLOGY OF HS-HFD-STREPTOZOTOCIN INDUCED DIABETIC RATS.**

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The effect of ethanol extract of the fruiting bodies of organically cultivated *Pleurotus ostreatus* on the serum renal function profiles and kidney histology of HS-HFD-Streptozotocin induced diabetic rats was determined using standard methods. The pharmacological model was 20% High Sucrose (HS) + 20% High Fat Diet (HFD) + 35mg/kg body weight (via intraperitoneal) Streptozotocin (STZ) induced diabetic rat model, with the fruiting body ethanol extracts administered orally at 50, 150 and 300mg/kg. The results in this study indicated that serum urea, BUN and creatinine concentrations after 9 weeks of administration of the POE extract at 300mg/kg were time- and dose- dependently, significantly (p lowered compared to the test control. Histopathological examination conducted on the kidney of the HS-HFD-streptozotocin induced diabetic rats revealed dose dependent nephro protective features of the extract against nephro toxicity. The reduction in the levels of these renal function biomarkers by the extracts in the serum shows that they may be used to reverse the incidence of kidney function test irregularities common in diabetic patients. This implies that ethanol extract of organically cultivated *Pleurotus ostreatus* may be employed in the management of kidney diseases associated with diabetes mellitus.

**Keywords:** Renal function profiles, kidney histology, serum urea, BUN, creatinine, HS-HFD-Streptozotocin induce diabetic rats

**EMPLOYEE DIVERSITY AND ORGANISATIONAL PERFORMANCE IN SELECTED BANKS IN THE SOUTH EAST**

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Employee diversity is critical to organizations that must continue to be competitive in a globalised economy that is fraught with constant changes. Nigeria which is with diversity problem need to rise up to the challenges by embracing the employee diversity management techniques that harness skills and talents. The study examined the effect of employee diversity on organization performance of some selected banks in South East. The specific objectives were to find how education age and ethnicity affect productivity. The study adopted information processing and decision-making theories in addition to empirical frameworks. The study used descriptive research design, the population of the study consist of 376 staff of first, fidelity and guaranty trust banks while the sample size was 194. The data was analyzed using chi-square statistical tool. The study revealed that employee skills diversity which is an outcome of education and training affects performance. The study recommended among others that sustainability of diversity policies and practices (especially skills, education, age and ethnicity) give organizations competitive advantage.

**Keywords:** Employee Diversity, Performance, Training, Education and Competitiveness.

## IS THE BRAIN REALLY INVOLVED IN THE METABOLIC DISORDER CALLED OBESITY ? –A REVIEW.

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Obesity is a disorder involving excessive body lipid that increases the risk of health problems. The word is fast becoming an obesogenic community because people now engage in binging (getting addicted to fast-food containing high density calorie with low density nutrient). The body cannot metabolize excess calorie. Biochemically, the brain governs health and emotional state because the brain biochemical activity determines the food we are compelled to eat, metabolic speed, ability to stop eating and recognize when we are full. The way the brain processes the energy which the body and the brain need to keep functioning efficiently at the correct power, speed, rhythm and synchrony is governed by four brain biochemical: Dopamine, Acetyl Choline, Gamma Amino Butyric Acid (GABA) and Serotonin. A balanced brain biochemistry frees one from food addiction, provides stronger metabolism and ultimately leads to a healthy brain-body connection. Abnormal brain biochemistry due to incorrect electricity transmission in the brain will always create specific food cravings leading to binging and obesity. Although obesity shot the gun that caused the death of the binger, yet it was the brain that pulled the trigger.

**Key words:** Obesity, brain, dopamine, GABA , acetyl choline , serotonin food addiction

## EFFECT OF ETHANOL EXTRACT OF THE FRUITING BODIES OF ORGANICALLY CULTIVATED PLEUROTUS OSTREATUS ON THE HEMATOLOGICAL INDICES AND HEART HISTOLOGY OF HS-HFD-STREPTOZOTOCIN INDUCED DIABETIC RATS.

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The effect of ethanol extract of the fruiting bodies of organically cultivated *Pleurotus ostreatus* on the hematological indices and heart histology of HS-HFD-Streptozotocin induced diabetic rats was determined using standard methods. The pharmacological model was 20% High Sucrose (HS) + 20% High Fat Diet (HFD) + 35mg/kg body weight (via intraperitoneal) Streptozotocin (STZ) induced diabetic rat model, with the fruiting body ethanol extracts administered orally at 50, 150 and 300mg/kg. The results revealed that the RBC<sub>s</sub>, hemoglobin, MCH and MCHC, RDW-CV and RDW-SD levels were significantly (p to normal ranges by the extract in a time and dose dependent manner in the treated diabetic rats. The WBCs levels of the treated rats were significantly (p lowered to normal by the extract, time and dose dependently in the diabetic rats. The extract showed positive effect on PLT, MPV and PCT levels by significantly (p time and dose dependently lowering them to the normal range and also revealed cardio-protective characteristics against heart toxicity. The results from this study therefore suggest that ethanol extract of the fruiting bodies of organically cultivated *Pleurotus ostreatus* may be employed in the management of anemia, prevent bleeding or disorder of platelet function and improve immune function in diabetics.

**Key words:** Hematological indices, heart histology, hemoglobin, red blood cell, platelet , HS-HFD-Streptozotocin induce diabetic rats

## CELL COMMUNICATION NETWORK VANDALISM BY A CHOLERA TOXIN-(CTxA<sub>1</sub>A<sub>2</sub>B<sub>5</sub>): A REVIEW.

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Toxin transport mechanism and molecular information maps are vital biochemical tools for investigation this 21<sup>st</sup> century. Cells use biochemical engine communication to detect and accurately respond to molecular signals in their biologic environment. GTP-binding protein, GM<sub>1</sub>g-receptor, CRSP and PK are components of cell signaling network. Biochemical activities are only possible when there is perfect cell communication in a perfect molecular machinery. Perturbation in the bionetwork may cause functional error in bio-information processing, disorganize homeostasis, alter metabolism, resulting to diseased state. As a catalytic domain, the toxic messenger recognizes HPP, mediates in ADP-ribosyl cleavage from NAD<sup>+</sup>, plays payload role to transfer ADP-ribosyl group onto activated G-protein to inhibit GTPase reversal inactivation activity, cause uncontrollable adenylate cyclase activation, cAMP elevation, PKA trigger, abnormal CFTCR function leading to uncontrollable efflux of Cl<sup>-</sup>, Na<sup>+</sup>, and H<sub>2</sub>O into the lumen to alter ionic/osmotic gradients with the consequence of loss of electrolytes, dehydration, malnutrition, stooling, vomiting, muscle cramp, energy loss, tiredness and consequently, death. Biochemical mapping of cell communication network, toxin transport mechanism and their mechanism of action may provide core scaffold for future drug discovery.

**Key words:** Cell communication network, cholera protein toxin, GTP-protein, endocytosis, adenylate cyclase, drug discovery

## BIOCHEMICAL IMPLICATION OF LIPOPROTEIN INTERGRITY ALTRATION ON GPCR/G-PROTEIN ACTIVATION :A REVIEW.

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The lipoprotein envelope is an oily, flexible membrane that cover the cell and its internal structures. It consists of a phosphor-lipid bilayer structure which is rich in carrier proteins, glycol-lipids, and cholesterol. The envelope is selectively permeable, hence, restricts the entry and exit of polar molecules and ions, carrier proteins help in membrane transport, glycol-lipids act as receptor sites for biochemical signaling and glycoproteins play the role of cell identity markers. GPCR is G-protein Coupled Receptor (a communication device between cells) located in the bio membrane. It helps bio-systems to process any information encoded in the ligand (chemical messengers such as drugs, hormones, enzymes or neurotransmitters). Ligand binds to GPCR to form ligand-GPCR complex there by inducing signal transduction to G-protein (a membrane protein bound to GTP). G-protein has  $\alpha$ ,  $\beta$ , and  $\gamma$  – sub-units with G-regulatory and G-inhibitory components. G-protein operates by an on/off switch mechanism. Compromising the lipoprotein integrity by substances such as detergents affects GPCR/G-protein activation and biochemical reactions in the cell will be perturbed making the bio engine to be in a diseased state.

**Key words:** Lipoprotein envelope, G-protein coupled receptor, ligand, detergents, diseased state