

ACKNOWLEDGEMENT

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RESEARCH POLICY AND INNOVATION PLANNING (RPIP) DEPARTMENT

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PREFACE

The Federal Government of Nigeria in a visionary initiative established the NNMDA through an Act of Nigerian Parliament in 1997, with the mandate to teach, research, develop, document, conserve, preserve and promote Nigeria's natural medicine (Indigenous/Traditional) healthcare systems, medication and non-medication healing arts, science, technologies, and bio resources; into an integral National Healthcare Delivery System of the Country.

Since her establishment, the Agency has had a number of Chief Executives who worked in actualizing the mandates of NNMDA. Nonetheless this book tries to X-ray the growth of NNMDA under the leadership with focus on the era of May, 2023–May 2025; where phenomenal successes were being achieved as Prof. Martins Emeje being the Director General/Chief Executive Officer.

It is hoped that this Book will also serve as a form of advocacy for the Public to look at possible areas of collaboration with the Agency, in harnessing the development and utilization of Nigeria's vast herbal medicinal plant and animal resources as ingredients to our National Healthcare Delivery System.

CHAPTER ONE

INTRODUCTION

1.0 BACKGROUND

The Nigeria Natural Medicine Development Agency (NNMDA) was established in 1997 via the recommendation of the Nigeria Academy of Science (NAS) and this was ratified under the 1980 Science and Technology Act by a Ministerial Order on 3rd May, 1999 (National Science and Technology, Nigeria Natural Medicine Development Agency Order 1997). The Order was predicated on the authorization of a National Science and Technology Act of 1980, by which provision in Section 1, the Honorable Minister is empowered to establish research institutes, where the indigenous raw materials and knowledge exist.

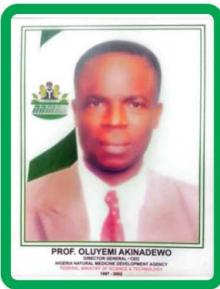
The Agency was established to enable Government through the Federal Ministry of Science and Technology pursue and actualize the critical and strategic mandate to research, develop, document, preserve and promote the nation's natural medicine – traditional healthcare systems, indigenous medication and non-medication healing arts, science and technologies and assist its integration into the national healthcare delivery system, as well as assist contribute to improved healthcare delivery, job and wealth creation and national socio-economic growth and development.

Two years after its establishment, the Federal Government set up a Presidential Advisory Committee to review the Agencies and Parastatals of government. This Committee noted and re-affirmed the importance of the Agency and it's 1999 Report of the Presidential Policy Advisory Committee (The Danjuma Report) of the Federal Government in its view and comments noted inter alia that "The Nigeria Natural Medicine Development Agency, a Parastatal under the Federal Ministry of Science and Technology which is responsible for the promotion and development of indigenous medicine would be adequately funded to enable it step up its research and development efforts".

In 2006, a draft Bill was developed and passed through series of reviews and processing by the Agency, and the Ministry. It was finally reviewed by the Federal Ministry of Justice, before the final copy was forwarded to the Ministry of Science and Technology vide a letter dated June 19, 2006, Ref. Bill 283/75. It was thirteen (13) years later, 2019, that the 9th Assembly formally passed the Agency's bill which was subsequently assented to by the President into Nigeria Natural Medicine Development Agency (Establishment Act), Act No 25 of 2019.

The Agency is now an internationally recognized centre for research, development and promotion of the Nigeria's indigenous Medicine. The Agency also has the mission to facilitate active national and international cooperative and collaborative research and development, documentation and promotion efforts for Nigeria's Natural Medicine endowments and also engender the utilization of science, technology and innovation for the development and production of safe, efficacious, standardized traditional therapies extracts and drugs

The First Director General/Chief Executive was the Late Prof. Oluyemi Akinadewo, 1997-2002. This was followed by Dr. Koripamo Agary, 2002 – 2006, Mr. Tamunoibuomi Franklin Okujagu, Director General/Chief Executive in acting position before being confirmed as the substantive Director General/Chief Executive in 2007, the position he occupied for another eight (8) years from 2007-2014. After Okujagu, Dr. Sam Oghene Etatuvie acted as Director General/Chief Executive from 2014-2015 and was confirmed in 2015 as full Director General/Chief Executive and he was in charge for Eight (8) years from 2015-2023. The current Director General/Chief Executive Officer is Prof. Martins Ochubiojo Emeje, he assumed duty on the 9th of May, 2023.









DIRECTOR GENERAL/CHIEF EXECUTIVE DAY 2015 - WAY 2023 NIGERIA NATURAL MEDICINE DEVELOPMENT AGENCY



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Pharmanewsonline

President Buhari Appoints Prof. Emeje as NNMDA DG By <u>Temitope Obayendo</u> 17/05/2023



Minister of State for Science, Technology and Innovation, Chief Henry Ikechukwu Ikoh, presenting the appointment letter to Prof. Martins Emeje.

President Muhammadu Buhari has appointed Prof. Martins Emeje, as the new Director General/ Chief Executive Officer (DG/CEO) of the Nigeria Natural Medicine Development Agency (NNMDA).

The appointment, which is for an initial period of 4 years, takes effect from 9 May, 2023.

In the appointment letter sent to *Pharmanewsonline*, it was stated that the office is backed up by the NNMDA ACT 2019.

It reads in part "I have the pleasure to convey the approval of Mr. President, Commander -in-Chief of the Armed Forces of Federal Republic of Nigeria of your appointment as Director

General/Chief Executive Officer (DG/CEO) of the Nigeria Natural Medicine Development Agency (NNMDA) for an initial period of 4 Years with effect from 9th May 2023".

"The appointment is governed by the NNMDA (Establishment) Act 2019 read together with the Conditions of Service for Federal Research and Development Agencies, Institutes and Colleges (2019) and other Terms and Conditions of Service obtainable in Parastatals/Agencies under the supervision of the Federal Ministry of Science, Technology and Innovation".

Prior to his appointment, Prof. Emeje, a seasoned teacher, scientist and pharmacist was the pioneer Vice-Chancellor of the European University of Nigeria, Abuja.

Emeje is a distinguished Professor of Drug Delivery and Nano medicine, at the National Institute for Pharmaceutical Research & Development (NIPRD). A holder of Bachelor of Pharmacy with distinction from ABU Zaria, Master of Pharmacy and PhD from the University of Nigeria, where he received the best PhD award, and was enlisted in UNN "Faces of Research Vi".

He began his career at the primary school level about 3 decades ago. He was hired as a Junior Research Fellow in the department of Pharmaceutical Technology and Raw Materials Development, National

Institute for Pharmaceutical Research & Development (NIPRD), where he rose to the rank of Research Professor within 10 years.

For over fifteen (15) years, Emeje focused on creating an understanding of the molecular behavior of polymeric materials and the compaction properties of pharmaceutical powders, excipients and active pharmaceutical ingredients including the physico-chemical properties of drug formulations using these substances.

Having conducted several research projects in herbal pharmacotherapy, herbal formulation, compaction characteristics of pharmaceutical powders, and excipient characterisation, his expertise are on the development of solid oral dose formulations for immediate- and sustained- release applications and the physical properties of polymer-polymer and polymer-drug interactions.

The outcome of his research made him discover wide array of naturally occurring raw materials that could be harnessed as excipients suitable as carriers in drug delivery and the outcome further generated his interest in pharmaceutical Nanotechnology and Nanomedicine. In this respect, he undertook an extensive molecular solid-state characterization and application of natural polymers in Nanomedicine for the targeted delivery of challenging conventional drugs and insoluble bioactive agents. He has the patent for the first Starchengineered Nanodrug Delivery System in Nigeria.

Prof. Emeje was the principal investigator of a foreign grant (\$11.6M) for the development of anti-malaria, diabetes and tuberculosis drugs from Nigerian medicinal plants and the establishment of the first Nano medicine centre in Nigeria. His work on phytomedicines has so far resulted in three major products listed by NAFDAC and available in the market. Also, his work in the application of nanotechnology in drug delivery won World Health Organization (WHO) innovation award in Addis Ababa.

He was one of the eight (8) finalists and the only Nigerian whose innovation for the advancement in health was selected by Emory University – facilitated consortium. He was part of an international team of scientists from 23 countries who won a European grant on developing natural products for use in combating antimicrobial resistance. His team also won a WHO grant for developing a novel product from Nigeria's natural resources for the management of sickle cell disease.

The erudite researcher also developed NiprimunePlusTM listed by NAFDAC for the management of COVID-19 symptoms just seven months following the outbreak. In April 2021, Martins was appointed by WHO as a member of the world health body's Expert Committee for development of Target Product Profiles (TPP). He won the highest M&B-sponsored professional award in Pharmacy in November 2021.

He is enlisted in the World Who is Who and the International Biographic Congress, London. He is listed among the 2000 outstanding scientists of the 21st century. Prof. Emeje is a Board member of the first private medical university; Institute of Medical Sciences Africa; a medical university devoted to the postgraduate training of medical and health professionals. He is a fellow of the Institute of Corporate Administration of Nigeria.

Prof. Emeje is a recipient of many fellowships, awards and grants all over the world including the prestigious Raman Fellowship; Research Scholar, Jawaharlal Nehru Centre for Advanced Scientific Research (JNCASR), Bangalore and the Centre for Co-operation in Science & Technology among Developing Societies (CCSTDS); International Scholar, Poona College of Pharmacy and other.

He is a member of many national/international organisations such as the British Society for Antimicrobial Chemotherapy (BSAC), American Chemical Society (ACS), American Society for Tropical Medicine and Hygiene (ASTMH), Society of Ethnobiology (SoE), West African Health Research Network (WANNPRESS) among others.



Medicine: Emeje Emerges NNMDA's DG

Written by Royal Ibeh

Professor Martins Emeje has emerged as the new Director General/Chief Executive Officer of the Nigeria Natural Medicine Development Agency (NNMDA).

Before Emeje joined NNMDA, he was the Head, Ultra-Modern Biology/Chemistry Laboratory in National Institute of Pharmaceutical Research and Development (NIPRD), Abuja.

Emeje is a distinguished Professor of Drug Delivery and Nanomedicine. He obtained his BPharm with distinction from Ahmadu Bello University, Nigeria, and an MPharm and Ph.D. from the University of Nigeria, Nsukka (UNN), where he received the best Ph.D. award and was enlisted as UNN's "Face of Research".

He established the first Nanomedicine Centre in Nigeria and was the pioneer head of the intellectual property and technology transfer as well as the WIPO's technology innovation and support center (TISC).

Prof. Emeje has several international fellowships including the prestigious Raman fellowship.

He has published more than one hundred and fifty (150) articles and patents. He is also the Head of R&D at NIPRD and holds a visiting professor position at Nnamdi Azikiwe University, Nigeria.

He has a postgraduate certificate in Project Management from Walden University, Minnesota, as well as a professional teaching certificate, and a World Bank Certification in Public Procurement.

Prof. Emeje was a national chairman of Academic Pharmacists in Nigeria and the 2021 winner of the May & Baker Nigeria Plc.—sponsored prize for professional service in research and innovation.

During his brief speech to ecstatic staff members of NNMDA, he emphasized how much he believes and will prioritize staff welfare and human capacity development.

"I prefer to have qualified, skilled, motivated staff and not have buildings and equipment, than to have buildings and equipment and have unskilled staff, "he reiterated.

His Word at the beginning;

"At NNMDA, we commit to using our knowledge and expertise to develop Nigeria's Indigenous Medicines for a more sustainable and security assured healthcare delivery system. We are open to collaboration and

partnerships with any and everyone who believes in our course and/or averse to modern slavery and colonialism through weaponization of geographical residences and/or economic imbalances fueled by ignorance. We do not have any iota of doubt in our ability to get the job done; NNMDA staff are Nigerians who believe in Nigeria, and are not apologetic about it. Join us now or watch us take our country to the level you never dreamed was possible. Now is the time!"

Source: Facebook@NNMDAFMST

Professor Martins Emeje resumed at NNMDA Headquarters Office, Abuja as the 5th Director General / Chief Executive Officer, Nigeria Natural Medicine Development Agency, after his Predecessor, Dr. Sam Oghene Etatuvie retired on the 8th of May, 2023. Exactly on the 17th of May 2023, Prof. Martins Emeje travelled down from Abuja to resumed duty at the NNMDA Laboratory Headquarters located at No 9, Kofo Abayomi Street, Victoria Island, Lagos. On his arrival, he was highly welcomed by the Management and Staff of NNMDA including the outgoing Director General / Chief Executive, Dr. Sam Etatuvie. He thereafter had a tour of the facilities and the NNMDA Infrastructures which include; Laboratory, Herbarium, PDU, Library, College and Non-Medication/Massage Centre, after which a Staff meeting was held in his honour.



Figure 1: From Left: Mr. Adedoyin, Dr. Etatuvie, Board Chairman, Hon. Victor Tera-Patrick and Prof. Martins Emeje on his first day of resumption in Abuja Office.



Figure 2: Facility Tour of the DG/CE, to the NNMDA Laboratory Complex, 9, Kofo Abayomi Street, Victoria, Lagos



Figure 3: Former DG/CE (Dr. Sam Etatuvie) introducing the Research Staff to Prof. Martins Emeje at the NNMDA Laboratory Complex Reception, Lagos.



Figure 4: Prof. Emeje inspecting one of the analytical equipments in the Laboratory Complex, Lagos.



Figure 5: Tour of the NNMDA Library by Prof. Martins Emeje as the Head of Library (Mrs. Janet Ukoha) explains certain issues about the Library.



Figure 6: Prof. Martins Emeje asking questions in the Library

1.1. Meeting with NNMDA Staff

Prof. Martins Emeje, after the tour of NNMDA Facilities at the NNMDA Laboratory Headquarters, Lagos, held a meeting with all the Staff of the Agency to know individuals; and few days later held meetings with the Unions Leaders (Academic Staff Union of Research Institutes, ASURI; Senior Staff Association of Universities, Teaching Hospitals, Research and Allied Institutions, SSAUTHRAI; and Non-Academic Staff Union, NASU); and the Laboratory Staff (Researchers and Technologist). He also appreciated the presence of the outsourced Staff (the Cleaners, Gardeners and Security Personnel) of the Agency as part of his familiarization with the Staff of the Agency. This was to establish amongst others their challenges and the way forward.



Figure 7: From left: Mr. Adedoyin (Head of Admin), Prof.
Martins Emeje and the immediate past Director General/
Chief Executive, Dr. Sam Oghene Etatuvie at the NNMDA
Staff general meeting.



Figure 8: Showing some of the NNMDA Staff at the First General Staff Meeting held by Prof. Martins Emeje





Figure 9: Meeting with the three Unions Leaders by the Director General / Chief Executive, Prof. Martins Emeje.



Figure 10: The Director General/Chief Executive, Prof. Martins Emeje, meeting with some NNMDA's Laboratory Staff.





Figure 11: The Director General/Chief Executive, Prof. Martins Emeje, meeting with all NNMDA Research Staff

1.2. Presentations by Heads of Departments and Units

Few days after his resumption at NNMDA Laboratory Headquarters, Lagos; between 22nd and 24th of May, 2023, the Director General / Chief Executive Officer, Prof. Martins Emeje, directed that all Heads of Departments and Units should make presentations on the Achievements, Challenges and Future Plans for their Departments and Units. This was carried out while the DG/CEO asked questions and made input.



Figure 12: Presentation by the Head, Administration Department (Now Human Resource Management), Nigeria Natural Medicine Development Agency (NNMDA) to the Director General /Chief Executive, Prof. Martins Emeje.



Figure 13: Presentation by the Head, the Department of Bio-Resources and Documentation, Nigeria Natural Medicine Development Agency (NNMDA) to the Director General/Chief Executive, Prof. Martins Emeje.



Figure 14: Presentation by the Head, the Department of Library/ICT, Nigeria Natural Medicine Development Agency (NNMDA) to the Director General/Chief Executive, Prof. Martins Emeje.



Figure 15: Presentation by the Rector, the Nigeria College of Natural Medicine Technology (NICONMTECH) to the Director General/Chief Executive, Prof. Martins Emeje



Figure 16: Presentation by the Head, the Department of Research Policy, Innovation and Planning (RPIP),
Nigeria Natural Medicine Development Agency (NNMDA) to the Director General/Chief Executive,
Prof. Martins Emeje.

1.3. Visit to Gberigbe Research Farm, Ikorodu, Lagos.

The Director General/Chief Executive Officer of NNMDA, Prof. Martins Emeje, after the facility tour at the NNMDA Laboratory Headquarters also visited the NNMDA Centre for Entomological and Toxicological Research located at Gberigbe, Ikorodu Lagos to inspect the equipment and other facilities present at the centre.



Figure 17: The Director General/Chief Executive Officer, Prof. Martins Emeje visit to NNMDA Centre for Entomological and Toxicological Research at Gberigbe, Ikorodu, Lagos.



Staff of the Director General/Chief Executive Officer, Abuja Office



Staff of the Director General/Chief Executive Officer, Lagos Office

CHAPTER TWO

NNMDA ADVOCACY AND PUBLICITY TOWARDS PROMOTION OF NIGERIA INDIGENOUS TRADITIONAL MEDICINE AND ITS PRACTICE FROM MAY 2023 TO MAY 2025

2.0 ADVOCACY AND PUBLICITY

In accordance with the NNMDA Establishment Act No 25 of 2019; section "6h"; which states that "NNMDA shall Research, Collate, Document and Disseminate all Published and Unpublished Research Works and Findings on all aspects of Traditional Medicines, Products and Practices including Medicinal, Aromatic and Pesticidal Plants, Indigenous Health and Technologies" as well as section "6m", of the Establishment Act No 25" of 2019; which states that "NNMDA shall demystify and increase Public Awareness and Interest in the Development, Promotion and Rotational Utilization of appropriate Natural Medicines, Products and Services", emphasizes that advocacy and publicity towards promotion of the Nigeria indigenous traditional medicines and its practices is one of the paramount functions of the Agency.

Before May, 2023, awareness of NNMDA activities, functions and mandates on indigenous knowledge of Traditional Medicine as well as its practices was on the very low side. Beyond participations in the annual Science & Technology (S&T) Expo, (Now Innovation, Science and Technology EXPO); World AIDS Day and African Traditional Medicine Day in 2001/2002; there were hardly any electronic or print media interviews by the erstwhile DG/CEs. All these issues changed during the tenure of Prof. Martins Emeje from May, 2023 to May, 2025

Between May 2023 and May 2025, NNMDA has witnessed massive advocacy, publicity and promotion of the Nigeria Indigenous / Traditional Medicine in term of interviews on both print and electronic media, community engagements with the stakeholders in Traditional Medicine Development and its Practices, launching of novel medicinal herbal drugs, highly publicized electronic (TV, etc.) and print (Newspapers, etc.) media celebration of African Traditional Medicine Day, Innovation, Science and Technology Expo (IS&T EXPO) and other International Days (Yoga, etc.). All these has actually brought the NNMDA into very great limelight and created more awareness on his Activities, Functions and Mandates

2.0.1 RADIO, TELEVISION AND PRINT MEDIA INTERVIEWS

So many interviews were granted by the Director General/Chief Executive Officer, Prof. Martins Emeje, to actually intensify efforts in the development of our Indigenous /Traditional Medicine and accept it as a solution to diseases affecting the people of the Nigeria Communities. The interviews were also granted to create public awareness on the Activities, Roles and Contributions of NNMDA towards the Development and Acceptance of the Nigeria Indigenous /Traditional Medicine and its Practices by the Nigerian Populace. These Interviews were published in Twenty three (23) Daily Newspapers (the Print Media), Ten (10) Television Station as well as Six (6) Radio Station; and has reduced the negative mindset of the people towards Traditional Medicine; moving them away from "colonial mentality" to "decolonization mentality". Between June 22nd, 2023 and 13dd May, 2025, the Director General / Chief Executive Officer, Prof. Martins Emeje; granted and attended Nine (9) Radio Interviews, Twenty Six (26) Television Interviews and Sixty Three (63) Print Media Interviews. Consequently, the interviews has brought about positive changes and great impact on NNMDA with the visiting of WHO IS WHO in Nigeria to the Agency to Partner and assist the Agency in its Research and Development Activities and efforts to develop Safe and Effective Herbal Medicinal Products against several ailments in Nigeria. Below are excerpts of the interviews granted and attended by the Director General/Chief Executive, Prof. Martins Emeje.



NTA 2, Abuja: (HEALTH OPTION)

Date:4/09/2023
Focus:MAXIMISING NIGERIA NATURAL MEDICINE POTENTIAL



ASO NEWS: TV/RADIO Date: 13/02/2024

Focus: NNMDA SEEKS HERBAL REMEDIES FOR NATIONAL HEALTH SECURITY THROUGH COMMUNITY ENGAGEMENT.



AIT, Lagos:

Date: 8/03/2024

Focus: DG & MINISTER INTERVIEWS DURING MINISTER'S VISIT TO THE AGENCY IN LAGOS: TINUBU TO LAUCH 11 PRODUCTS IN OCTOBER, 2024



NTA 2, Abuja: Date: 13/02/2024

Focus: NNMDA Advocates for Herbal Medicines
Development in Nigeria through Community
Engagement



SOUQ PULSE: Date: 20/03/2024
Focus: INDIGENOUS AFRICA MEDICINE: DEVELOPING
AND BUILDING TRUST: HOW FAR, HOW WELL?



NTA 2, Abuja: Date: 25/03/2024

Focus: THE PLACE OF INDIGENOUS MEDICINE IN HEALTHCARE DELIVERY SYSTEM



TV: SOUQ: DATE: 4/7/2024
FOCUS: PROF. MARTINS EMEJE, DG NNMDA,
DISCUSSED TRADITIONAL MEDICINE, HEALTHCARE
ACCESS IN RURAL AREAS.





NTA2 (ON THE SPOT) DATE: 03/08/2024
Focus: SPEAKING ON THE IMPACT OF HERBAL MEDICINE





AIT: DATE: 16/08/2024

Focus: INNOVATIONS IN NATURAL MEDICINE AND MARKET POTENTIALS

ASO News: DATE: 22/08/2024

Focus: SPEAKING ON THE IMPACT OF HERBAL

MEDICINE



NTA (HEALTH OPTION)

DATE:02/09/2024

FOCUS: POTENTIAL OF NATURAL MEDICINE FOR SOCIO-ECONOMIC DEVELOPMENT



Prof. Martins Emeje Advocates for Traditional Medicine at ATM Day 2...

RADIO NIGERIA

Date: 04/09/2024

FOCUS: PROF. MARTINS EMEJE ADVOCATES FOR TRADITIONAL MEDICINE AT ATM DAY NATIONAL DIALOGUE.



ARISE: DATE: 28/09/2024

Focus: THE NARRATIVE THAT NATURAL MEDICINE
IS ALTERNATIVE TO WESTERN MEDICINE
IS COLONIALISM



NTA: DATE: 01/10/2024 Focus: RESHAPING DEMOCRACY





Ln247: DATE: 24/10/2024
FOCUS: ORTHODOXY VS TRADITIONAL MEDICINE: EXAMINING: EFFICACY AND EFFICIENCY



IDEA TV: DATE: 2/12/2024 FOCUS: DOCUMENTARY ON NNMDA'S RESEARCH ACTIVITIES.





NTA: DATE: 13/12/2024

FOCUS: ACCESS TO QUALITY HEALTHCARE IN NIGERIA ON THE OCCASION OF UNIVERSAL HEALTH COVERAGE DAY.



Interview with DG, NNMDA

Premius Times (Youtube) Date: March, 2025.

Focus: WHY NIGERIA TRADITIONAL MEDICINE IS NOT ADVANCING



Ln247: Date: 16th April, 2025.

Focus: HOUSE OF REPRESENTATIVE COMMITTEE ON LEGISLATIVE COMPLIANCE VISIT TO NNMDA



AIT Lagos: DATE: 19[™] APRIL, 2025 FOCUS: NIGERIA CAN BECOME NET EXPORTER OF NATURAL MEDICINE



ARISE TV: DATE: 5/5/2025

FOCUS: MALARIA: NIGERIA TO PRIORITISE LOCAL INITIATIVE IN PREVENTION AND TREATMENT.



KAFTAN TV: DATE: 9/05/20225 FOCUS:



Health

Global herbal medicine to worth \$356bn by 2030



By Chukwuma Muanya

22 June 2023 | 3:09 am

Prof. Martins Emeje

Nigeria has 10,000 plant species but less than 20% have been utilised

Herbal medicines effective as metformin for blood sugar control in type 2 diabetes

Tinubu to launch NNMDA's malaria, diabetes, BP, ED, arthritis drugs before July 2024

Agency gets approval to run College of Natural Medicine, assembled world-class teachers

NIPRD transferred market authorisation, technology of worldwide-accepted

herbal sickle cell drug, NIPRISAN/NICOSAN to May & Baker as NICLOVIX

Nigeria will have comprehensive electronic database of TMPs with their services/products in four years Prof. Martins Emeje, is a pharmacist and Director General, Nigerian Natural Medicine Development Agency (NNMDA). Until his appointment as DG of NNMDA, Emeje was the pioneer Vice-Chancellor of the European University of Nigeria, Abuja. Emeje is also a distinguished professor of Drug Delivery and Nanomedicine at the National Institute for Pharmaceutical Research and Development (NIPRD) Abuja. Emeje in this interview with The Guardian talks about plans to commercialise herbal 'cures' for chronic diseases and boost foreign exchange earnings of the country through exports, among other things. CHUKWUMA MUANYA writes.

As one of the developers of Niprisan/Nicosan, how far with first the world-accepted herbal drug for sickle cell? NIPRISAN is the flagship product of NIPRD, and I'm glad to be associated with it. In fact, I signed as the witness to the DG NIPRD during the license to May & Baker, and I was responsible for transferring the technology to the company. The product is now in the market as NICLOVIX; May & Baker has the market authorisation.

While one is proud of that drug, Nigeria has about 10,000 plant species and arable land of over two million hectares, yet less than 20 per cent of the plants have been utilised. Imagine how many indigenous medicines we can develop from this untapped plant biodiversity. In the next 12 months, we will be inviting the president to NNMDA to launch our malaria, diabetes, hypertension, erectile dysfunction, arthritis drugs. The time to end this inferiority complex has come.

Does NNMDA have any herbal drug for sickle cell? Yes! We have five different products for the management of sickle cell. In fact within five weeks of assuming work here, I and my team engaged a couple of pharmaceutical companies on how best to commercialise our products. In fact, the Chief Executive Officer (CEO) of Evans Baroque visited us and was so impressed with the way my colleagues were working and he immediately donated a state-of-the-art sporting facility to encourage relaxation of my staff after the day's work.

Natural medicine has been described as the future of medicine. As a pharmacist, what is your take on this? I totally agree; first, medicine started with nature, it was man's unwholesome attitude to nature that destroyed nature, and we went to chemical drugs. Be that as it may, over 20 per cent of



June 22, 2023 by Adekunle Yusuf

NNMDA boss promises to revamp herbal medicine development, patronage



The newly-appointed Director-General and Chief Executive Officer of the Nigeria Natural Medicine Development Agency (NNMDA), Prof Martins Emeje, has vowed to use his accumulated wealth of experience and several years of acquired expertise in drug research and manufacturing to reposition herbal medicine research, development and patronage with a view to integrating traditional medicines into overall healthcare delivery system in the country.

Emeje, who was the head of Ultra-Modern Biology/Chemistry Laboratory in the National Institute of Pharmaceutical Research and Development (NIPRD) before joining NNMDA as D-G in May, made the promise when Pharm Onyeka Onyeibor, Managing Director of Evans Baroque Limited, a leading pharmaceutical healthcare company with global partnerships and a vast presence in West Africa, paid a courtesy visit to the agency's head office last Friday in Lagos.

A distinguished professor of Drug Delivery and Nanomedicine, Emeje said he came into office fully prepared with a ready roadmap and action plan to help Nigeria reposition the traditional medicine subsector. After itemising achievements and breakthroughs NNMDA has recorded so far in herbal medicine research and development, Emeje said research findings recognised by the World Health Organisation have showed that nothing less than 70 per cent of people in the developing world rely on herbal medicines for their overall wellness. He added that, since millions of Nigerians depend on natural medicines because of affordability, availability, insufficiency of orthodox medicine, and religious/cultural beliefs, it means that herbal medicine market is a goldmine waiting to be tapped in order to improve people's quality of life and boost the nation's economy to the boot. The NNMDA boss listed products such as Amarus Herbal Tea for prevention and management of malaria, herbal

formulated as an insecticide and air freshener, as well as Ocimum Herbal Tea for management of diabetes, among others, produced by the agency for public consumption.

In his slide presentation witnessed by Evans Baroque Limited team as well as the agency staff and management, the NNMDA boss said he applied for the job because he passionately believes that the traditional medicine subsector holds the master key to the much-desired future of Nigeria's healthcare delivery and economic greatness. While analysing the opportunities inherent in the sector, Prof Emeje noted that natural medicine, with its associated bio-resources, is a strategic sector that can be used as a tool for the overall development of the country, starting from the natural improvement of health, simulation of small and medium scale agro-business, small scale product industries in health, raw materials and a feedstock to the global knowledge economy in research and product development.

In his response, Onyeibor tasked the agency to work on some of the challenges impeding the development of the sector so that resources such as traditional medicine knowledge products and technology can be transformed into innovative and commercialisable products for the prevention of diseases and benefit of Nigerians. He also promised to collaborate with the agency in the area of product research funding and training, among other possible partnerships.

Also, NNMDA, in another meeting with the United States Pharmacopoeia (USP), the agency scored the bull's eye. The meeting ended with the USP agreeing to partner the agency in the development of dietary supplements using indigenous medicinal plants resources like Moringa and others; while NNMDA is to coordinate the development of phyto-pharmacopoeia in Africa as the agency plans to expand its ISO 17025 accreditation to cover more scope – all aided by the USP team, which vows to support the aforementioned plans and give all necessary guidance in achieving success. In another strategic engagement meeting with Aberdeen Commercial, the agency has secured a promise, which involves Aberdeen to develop standard operational roadmaps covering short, medium and long term goals, and also carry out intensive in-house training for all NNMDA staff on standard operation.

The new NNMDA boss obtained his BPharm (with distinction) from Ahmadu Bello University, and MPharm and Ph.D. from the University of Nigeria (UNN), where he received the best Ph.D. award and was enlisted as UNN's "Face of Research." He established the first Nanomedicine centre in Nigeria and was the pioneer head of the intellectual property and technology transfer as well as the WIPO's technology innovation and support centre (TISC). The D-G, who has published more than 150 articles and patents, is also the Head of R&D at NIPRD; he holds a visiting professor position at Nnamdi Azikiwe University.

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TM Day: Nigeria's Challenge not Integration, but Funds' Misappropriation- Emeje By Temitope Obayendo

31/08/2023



-Says N350M can Transform Herbal Plant into Phytomedicine

The Director General, Nigerian Natural Medicine Development Agency (NNMDA) Prof. Martins Emeje has identified financial misappropriation as the major challenge hindering the development of most medicinal plants into finished herbal medicines in the country.

The NNMDA DG, who acknowledged the issue was not lack of funding but financial misappropriation, decried the huge portion of the allocated funds to the agency that was expected to be given out to contractors, with an erroneous belief that research is a contract project.

Prof. Emeje, spoke with *Pharmanewsonline* in an exclusive interview on the occasion of the African Traditional Medicines (ATM) Day. The erudite researcher wonders how the development of natural medicines can thrive in the country, when his agency is expected to dispense 50 per cent of the paltry allocation of N300M in 2023 to contractors.

He disclosed further that the funding appropriation process is fraught with dubious attitudes and until practitioners free themselves from such notoriously freaky method of allocating resources, there will continuous agencies' underperformance.

The NNMDA boss said "My agency is the only research institution with the national mandate of conducting research and developing indigenous medicines. We were allocated a paltry N300M, but my problem is not even the N300M, but the fact that, almost N150M of this money will not be used for research at the agency, rather, contractors get the money, because, the law says that, research is a capital project, it goes to people as contract; who does that? How can we grow like that?

"I believe you are expecting me to say funding right? Unfortunately, I do not belong to that group of scientists that see funding as the challenge; yes, the allocated funds are never enough, but that's not peculiar to Nigeria.

"Our own problem is the application of the little funds available. It is fraught with dubious attitudes, and until we free ourselves from such notoriously freaky method of allocating resources, we will continue to have agencies underperforming. My agency is the only research institution with the national mandate of conducting research and developing on indigenous medicines, we are expected to go round the entire 774 LGAs to cultivate, preserve, conserve, research, develop, document, collate, produce and promote everything indigenous, whether plants, animals, or minerals, anything and everything natural.

"Yet, in 2023, we were allocated a paltry N300M, but my problem is not even the 300M, but the fact that, almost N150M of this money will not be used for research at the agency, rather, contractors get

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"I don't even understand why half of my allocation for research should go to any other thing aside research; unnecessary deductions, contract mark-ups etc; it hurts, demoralizes, frustrates and incapacitates patriotic researchers like me" he decried.

VANGUARD NEWS

September 20, 2023

Declare State of Emergency on indigenous medicine, pharmacists tell Tinubu



By Dickson Omobola

President Bola Tinubu has been urged by stakeholders in the pharmaceutical sector to extend the State of Emergency declared on food security to indigenous medicine.

The stakeholders spoke on Tuesday at a three-day pharmaceutical training themed: "Nigerian Pharmaceutical Manufacturers'

Quality Improvement and Capacity Building (part 2)," which held in Lagos.00 / 0:00

They said indigenous medicine and agriculture cannot be separated, adding that such proclamation would be beneficial to the development of the nation's pharmaceutical industry.

The guest speaker, Professor Martins Emeje, who urged pharmacists to domesticate the training that they acquire in other countries, explained that pre-qualification training and indigenous drug development are vital to the growth of the sector.

He said: "160 million people in Nigeria don't have access to foreign drugs. According to World Health Organisation, WHO, about 80 per cent of people in developing countries use traditional and herbal medicine. In our country, we cannot develop traditional medicine without support from government and the private sector.

"If we want to develop as a country, we cannot continue to be the market for others. We must create so that others can be a market for us. When you hear about about medicine security, it means making one's medicine. If you don't, you are not secured as a country but vulnerable."

On the need for the President to extend the State of Emergency declared on food security to indigenous medicine, he said: "Our indigenous medicine and agriculture cannot be separated. Our indigenous medicine is about our plants, animals and soil, which is agriculture."

On his part, Executive Officer of Bloom Public Health, Professor Chimezie, who lauded the government for supporting the training, said manufactures should also do the same.

He said: "The reason for this training is to make sure that people are supported so that they will be able to produce quality medicines. That way, Nigeria will stand strong. We cannot continue to have Nigeria as a dumping ground. This is a massive effort and I am happy that the Nigerian government is supporting it.

"The vision is to be the India of Africa. There are over 140 people here to be trained, which shows the hunger. People want to be trained and want to get to the level of quality manufacturing. We have to learn what we are doing to be technically strong and confident.

"When we get to that level, we can seek means to expand our medicine by looking at local leads and move them to the next. We have to get to a level where we have quality manufacturing. While government is supporting this project, we hope that it continues and we hope that the manufacturers get into the picture."



Health



Experts brainstorm indigenous medicines' role in sustainable health care delivery
By Chukwuma Muanya 06 October 2023 | 3:25 am

Prof. Martins Emeje

The Nigeria Natural Medicine Development Agency (NNMDA) is organising a one-day virtual colloquium meant to deal with the age-long cold debate on the role of traditional, complementary and integrative medicine in Nigeria's healthcare delivery system.2

The meeting, scheduled for noon (WAT) November 2, 2023, will feature three international experts in three major areas of natural medicine: Prof. Atmaram Pawar, a pharmacist and vice chancellor, will x-ray the role of traditional medicine in one of the world's most advanced countries in traditional medicine practice; Dr. Willcox, a physician, clinical researcher and lecturer at Oxford University before moving to Southampton University, who has conducted several clinical trial of herbal medicines in Europe and Africa, will share his experience, while Jude Nwokike, a Nigerian and quality of medicines expert, who is deploying his expertise in quality of allopathic medicines around the globe to promoting quality herbal medicines because of its affordability and accessibility, will provide practical strategies to doing this in Nigeria.

Director General, NNMDA, Prof. Martins Emeje, said this colloquium therefore, provides opportunity for genuine lovers of our dear country and its people to engage in dispassionate, and realistic conversation towards developing sustainable strategies to attaining universal health coverage in Nigeria. "To continue to depend on imported health products for our health care delivery is to be brain lazy," he said.

Emeje, who is also a pharmacist, said the objective of this colloquium therefore, is to have a dispassionate and realistic debate on the role of herbs, medicinal products, skills, practices, beliefs, and experiences indigenous to Nigeria, whether explicable or not, but currently being used in the maintenance of health as well as in the prevention, diagnosis, improvement or treatment of physical and mental illness.

"While we 'mouth' that traditional medicine in Nigeria is not 'international', the reality is that, majority of our people depend on this means of healing," Emeje said.



Science

Make Nigeria hub for local drug product devt, FG urges practitioners By Chukwuma Muanya



09 November 2023 | 4:04 am Uchenna Nnaji

The Minister of Innovation, Science and Technology, Mr. Uche Nnaji, has directed the Nigeria Natural Medicine Development Agency (NNMDA) to make Nigeria a hub for local drug product development through the actualisation of capacity building for traditional medicine practitioners (TMPs), and researchers in the area of patenting, refocusing research and development (R&D) projects.

Others include linking R&D to industry needs, coordinating research, marketing R&D results, creating technology-based Small and Medium Enterprises (SMEs) from high-tech start-ups, and spin-offs or spin-outs, generating entrepreneurialism among researchers in order to diversify the economy.

Nnaji, who was a special guest at the virtual workshop/one-day virtual colloquium on Traditional Complementary and Integrative Medicine, hosted by NNMDA, a foremost research institute mandated to promote and integrate Nigeria's natural medicine into healthcare, echoed the valuable insights into traditional medicine Nigeria's rich heritage offers. "Integrating it into our modern healthcare system requires careful consideration, collaboration, and innovation while respecting cultural significance. Indigenous medicine aligns with our goal of providing holistic healthcare," he said.

Nnaji, who was represented by the Technical Adviser on Programmes, Prof. Nnanyelugo Ike-Muonso, said to tap into the potential of indigenous medicines, "we need collaboration, training, and regulation of traditional healers. I'm committed to fostering innovation that bridges traditional wisdom and modern medicine through research for development."

He said indigenous medicines have been recognised by the World Health Assembly and World Health Organisation (WHO), and it is time for Nigeria to prioritise their development.

Nnaji said the potential for indigenous medicines in Nigeria is vast, considering the country's large population and growing economy. He, however, said challenges like lack of government patronage, infrastructure, and research coordination must be addressed.

The Minister said partnerships between research institutions and industry are critical for harnessing the full potential of scientific discoveries. "We need to improve productivity and commercialize research results. "Indigenous medicines complement modern medicine, and together, we can build a sustainable healthcare system deeply rooted in our culture. Let's work collaboratively to advance our healthcare system and bridge the gap between discovery and commercialization," he said.

Director-General/ Chief Executive Officer, NNMDA, Prof. Martins Emeje, who spoke on 'The Role of Indigenous Medicines in Sustainable Healthcare Delivery System in Nigeria', said NNMDA has the mandate to research, develop, collate, document, preserve, conserve and promote the nation's indigenous (traditional) healthcare systems, medication and non-medication healing arts, sciences and technologies

and assist facilitate its integration into the national healthcare delivery system, as well as contribute to the nation's wealth and job creation, socio-economic growth and development efforts.

Emeje said NNMDA also has a College of Natural Medicine, accredited by the National Board for Technical Education for the award of Diploma certificates in Natural Medicine.

The pharmacist said indigenous medicines, which here refers to traditional, herbal, nutraceutical, functional foods, phytomedicine, or traditional complementary and alternative medicines, have played a significant role in healthcare systems worldwide for centuries. He said, in the context of Nigeria, these ancient therapeutic practices hold a wealth of knowledge and potential to contribute to a sustainable healthcare delivery system.

Emeje said the objective of this colloquium, is to have a dispassionate and realistic debate on the role of herbs, medicinal products, skills, practices, beliefs, and experiences indigenous to Nigeria, whether explicable or not, but currently being used in the maintenance of health as well as in the prevention, diagnosis, improvement or treatment of physical and mental illness. "This event is open to scientists, students, educators, government functionaries, policy makers, industry stakeholders, health workers, traditional medical practitioners, intellectual property and technology transfer scholars and players, law officers, law enforcement agencies, the judiciary, lawyers, legislators, politicians, and the public," he said

Emeje said the knowledge gained and decisions reached at this meeting will form the basis for policy framework and project implementation by the responsible public and private organisations towards facilitating universal health coverage in Nigeria. "While we 'mouth' that traditional medicine in Nigeria is not 'international', the reality is that, majority of our people depend on this means of healing," he said.

Emeje drew attention of participants to key areas indigenous medicines stand out and will contribute to the Nigerian healthcare system, socio-economic development and medicine security.

These, he said, include: preservation of cultural heritage; access to affordable healthcare; holistic healthcare approach; biodiversity conservation; scientific validation; regulation and standardisation; and education and awareness.

The pharmacist said indigenous medicines have a pivotal role in achieving a sustainable healthcare delivery system in Nigeria and their preservation, accessibility, holistic approach, contribution to biodiversity conservation, adaptive scientific validation and regulation, and public education are essential elements for their integration into the healthcare system.

"As we move forward, it is imperative that we recognise and harness the potential of indigenous medicines, working in tandem with imported medicine to provide comprehensive and sustainable healthcare solutions for all Nigerians. Let us embrace our heritage and utilise our indigenous knowledge to build a stronger, more inclusive healthcare system that benefits our nation," Emeje said.

THE MOST READ NEWSPAPER AMONG THE POLITICAL AND BUSINESS ELITE

INDEPENDENT.

Report: High Cost of Drugs, Medicals Increasing Mortality Rate By Chioma Umeha on Jan 20, 2024



The cost of drugs and healthcare is skyrocketing, and experts are asking for a national state of emergency over the availability of crucial medicines. If action is not taken quickly, many Nigerian hospitals may become mortuaries. CHIOMA UMEHA discusses how to make things better.

The spiraling cost of medicines, according to experts worsened with the exit of big drug makers in the

country, including the impact of high forex and raw materials. For instance, Sanofi-Aventis Nigeria Ltd left in November 2023. The Nigerian arm of the multinational pharmaceutical company Sanofi Aventis in a similar fashion to GSK and P&G announced they are ceasing operations in Nigeria and pivoting into a third-party distribution business model in a letter sent to its partner earlier the same year.

Not even President Bola Tinubu's prompt action on Universal Healthcare Coverage (UHC) Day of last year, when he unveiled a blueprint for providing all Nigerians with inexpensive and accessible healthcare, has helped to improve the situation.

Mrs. Abigail Useni bemoaned, saying, "The average Nigerian cannot afford the cost of drugs, especially anti-malarial and antibiotic drugs. I asked my son to buy the anti-malaria medication Lonart (DS) recently. I was shocked to learn that I had to pay about N5, 000 for a sachet of Lonart (DS) and Amoxil by Beecham at the pharmacy. Until I went to the pharmacy to authenticate the price, I did not believe it. Until today, you could easily purchase the two medications for N2, 000. It's a sad scenario. How much money will I have left over after paying a total of N5, 000 for antibiotics and anti-malarial medications?"

The Nigeria Natural Medicine Development Agency's (NNMDA) Director General and Chief Executive, Professor Martins Emeje, blames the nation's reliance on imports for its increasing drug prices. He contends that Nigeria's reliance on foreign pharmaceuticals is an indication of carelessness. Prof. Emeje expressed dismay at the situation, claiming it is reckless not to apply the lessons the nation gained from COVID-19.

"The prices of anything you don't produce cannot be under your control, we don't produce the drugs you are

talking about, so, why won't the prices increase? Are the drugs you are talking about not imported? Is importation done with Nigerian Naira? As long as we continue with this colonial mentality of importation of foreign medicines, the prices have not even started increasing yet," the pioneering founder of Nigeria's first Nano-medicine centre stressed.

Speaking on the implications of rising drug costs on healthcare for Nigerians and in Nigeria, Prof Emeje, said, "The implication is that we will never achieve universal health coverage." Why? He asked rhetorically. "This is because, even before the current problem, most Nigerians, especially those in rural areas, did not have access to imported or foreign medicines due to economic constraints, so is it now you expect a positive change?"

The pioneer head of the intellectual property and technology transfer of Nano-medicine centre as well as the WIPO's technology innovation and support center (TISC) said that "one of the most significant advantages of indigenous medicines (herbal and traditional medicines) is their accessibility, affordability, and acceptability, but, as a nation, we have neglected the development of our natural heritage, so, the implication for Nigerians and Nigeria, is twofold," he added.

Commenting on how poor healthcare is reducing life expectancy, the distinguished professor of Drug Delivery and Nano-medicine believes that people live longer even without advancement in unorthodox medicines compared with today. He said, "Please look back into the history of our people, between your ancestors and our generation, who lived longer? But because we didn't keep records, everybody is talking about life."

Speaking on the exit of big drug makers in the country amid the high cost of forex and raw materials, he said, "The implication for me is that we will be good for it; it will force us to look inward and develop our natural resources, make our medicines, establish our responsible pharmaceutical industries and stop behaving like spoilt children."

He scowled at people who criticise increasing reliance on prescription medications. Respectfully, he said, "Many of us, even those who aspired to be highly educated, are living in slavery, albeit unknowingly. As a result, no matter what you tell them, they will never be able to believe in themselves, much less in another African or Nigerian. I refer to this as voluntary slavery and 21st-century colonialism. So I can't produce yam because someone claimed he wouldn't sell it to me again and left my community with my land still in it? Should I now rely on him to get yam from his homeland? It's unfortunate."

He said that the best approach to deal with the rising cost of medications and medical treatment is to "Make indigenous health research and development a priority, simple. Put an end to the entry of any drugs into this nation. The advancement of traditional medicine is essential to achieving UHC," he emphasised.

by the current high drug costs," the consultant clinical pharmacist continued, "and they include the unemployed and low-income earners, including those on minimum wage. Occasionally, a packet of medication that costs N2, 000 at first can now cost up to N40, 000. This is significantly more than what most folks make each month."

Madu added, "Some patients are using certain coping mechanisms, such as going to quacks for medical attention and abusing medications that aren't prescribed or administered by qualified medical personnel. Another harmful coping method used by patients is skipping dosages to complete the recommended time. There are also allegations that certain patients shorten the recommended course of treatment or dosage. Some move to less expensive options even when they are unsure of their effectiveness," he continued.

The CPAN boss said, "The potential consequences of skipping doses or switching to lower or cheaper nonguaranteed brands include treatment failure, poor adherence, antimicrobial resistance, organ damage, and even death."

But he said, "I dread the execution of the universal health coverage road map that the Federal Government published, even though it will undoubtedly be useful if done right. Better healthcare may result from the implementation of various healthcare modalities, particularly pharmaceutical care, if everything is carried out as directed by universal health coverage. Given that pharmaceuticals are the topic of discussion and that pharmaceutical care is the accountable administration of medication therapy, it is encouraging that all facets of universal health coverage are being addressed.

He said," My recommendations and potential solutions to addressing this challenge of the high cost of medicines include; Immediate Consultation and collaboration with the Nigerian pharmacy professionals who are the peak experts in this field. Apart from providing expert advice on solutions to the technical and financial challenges that continue to cause an increase in the prices of drugs, pharmacists, especially clinical pharmacists can help suggest or choose cheaper but effective alternatives to both patients/ clients and prescribers. This will in the immediate term help to cushion the effects of the rising costs of medications in particular and healthcare in general, as effective alternatives can be substituted for costly or unavailable brands."

The CPAN National Chairman demanded a "Declaration of a nationwide state of emergency on the availability of essential medicines, temporary suspension of all municipal, state, and federal taxes, fees, and levies about medications. The entire pharmaceutical distribution chain can benefit from a low-interest Central Bank of Nigeria (CBN) intervention fund. Deliberate importation of reasonably priced, dependable, and effective generics after consulting our bodies and professional groups for pharmacy. Collaborating with pharmacy experts to pilot a programme for end-user medication access is very vital."

The coordinator of the Infectious Diseases Pharmacists of Nigeria, Dr. AbdulMuminu Isah, stated, "I do not see a downward trend soon. Drug prices have been rising recently."

Isah contended that "the idea of drug prices is a subset of the country's economy about which analysts, including the President in his New Year speech said it will take some time before a full recovery." Isah is also the National Editor-in-Chief of the Clinical Pharmacists Association of Nigeria (CPAN). In addition to inflation and economic instability, supply chain difficulties, exchange rate swings, and intellectual property rights are some of the other elements that contribute to the current situation.

Additionally, he thinks that the departure of major pharmaceutical companies from Nigeria and the growth in medicine prices are strongly related, with serious consequences for the nation's health. He declared, "Weak local drug production capacity in Nigeria cannot meet our drug needs. As a result, we rely largely on drug imports." Recall that the importation of drugs is still subject to fees for shipping, customs clearance, and depreciating Naira.

"The biggest impact on the nation's healthcare system is the restricted availability of necessary medications. Healthcare professionals now have few alternatives when it comes to prescribing medications for their patients as they attempt to strike a balance between cost and established efficacy.

"Another consequence of underdevelopment in the local medication manufacturing sector is a greater reliance on imports to meet our drug demands. Under the current conditions, there will also be a significant impact on the overall quality of healthcare delivery. Medicines are the lifeblood of any healthcare system, and their scarcity or unavailability could result in worse-than-ideal treatment outcomes, raising morbidity and placing further burden on the nation's already overburdened healthcare facilities.

"All of these will ultimately result in a public health catastrophe because illnesses (particularly chronic diseases) that often necessitate long-term pharmaceutical regimens will become more challenging to treat, raising rates of morbidity and mortality," warned Isah. He said with this rate of morbidity, no wonder burials have become the major ceremony in the country, especially in rural areas where people attend more than two burials in a day.

"Since then, the World Health Organisation has promoted the use of traditional medicine in public health care. There is no damage in utilising those medications when they are used following the proper regulations and with valid and trustworthy methods of selection, use, and monitoring. As usual, we advise using any medication—orthodox or unconventional—under the advice and understanding of a qualified healthcare provider. Unorthodox drugs have adverse effects, just like other prescriptions, which should be considered before taking them. Therefore, in my opinion, both are complementary and ought to be used sparingly when necessary," Isah further explained.

On the government's recent roadmap for improved healthcare, the Senior Lecturer, Department of Clinical Pharmacy and Pharmacy Management, University of Nigeria, said, "Our problem whenever we have laudable proposals is the implementation. With the right leadership, I believe that the programme will be able to address some of the identified challenges."

According to the academic, "There is no single solution that will miraculously solve all the problems at once. However, with the right attitude and dedicated implementation of expert opinions, we could surmount the challenges as soon as possible.

"I recommend well-targeted and tangible investments in the drug manufacturing sector. This should go along with the holistic improvement in the health sector of the country. We must also strengthen our regulatory frameworks to ensure that the available medicines contain the right active ingredients in the right quantity as claimed by manufacturers. It would be unfortunate to use costly yet fake medications. It is also recommended that policies that would support and encourage local drug production should be put in place. Apart from policies, financial support including interest-free loans or tax waivers will help to support local drug manufacturing.

"This should be done with a purposive diversification of our drug sources. With a diverse range of options for our drug needs, there would be a stable supply chain for a nationwide equitable distribution of drugs in Nigeria. Finally, the government should intensify efforts toward stabilising the Naira. Transactions on commodities like drugs are conducted using foreign currencies and a weak Naira will always keep us at a disadvantage," he stressed.



Vanguard Newspape.

160m Nigerians can't afford imported drugs, says NNMDA
Editor February 24, 2024



By Funso Alarape Saturday February 24, 2024

Nigeria Natural Medicine Development Agency (NNMDA) has lamented Nigeria's over-dependence on the importation of drugs and other healthcare products.

The Director General of the agency, Prof. Martins Emeje stated this at Nnamdi Azikiwe University, Awka during a community engagement meeting on the importance of Integrating Indigenous Medicine with Orthodox Health Practices for Community Health

and Economic Development in collaboration with the Federal Ministry of Science, Technology and Innovation.

Emeje regretted that while over 160 million Nigerians could not afford imported drugs, over 40 percent of drugs in the pharmaceutical space globally originated from plants.

He said: "Nigeria and Africa have been over-dependent on the importation of healthcare products, including drugs. As of today, Nigeria doesn't manufacture a single drug. This is quite painful and shameful.

"This simply means we're insecure in terms of medicine, not just the insecurity we all know. That is why we decided to see how we can develop our own indigenous and natural medicine so we can produce our drugs locally.

"Over 40% of current drugs in the pharmaceutical space globally are from the plant origin, not to talk of animals, minerals and soil. For every disease, the solution is within the environment. There's no disease in Nigeria that the panacea is not here.

"We can boast of men and women in our cultural heritage of herbal and traditional medical practitioners with a wealth of knowledge and experience of how to tackle all manner of diseases in our society. That's why our ancestors lived for over 100 years.

"But today, life expectancy is less than 60 years. That's because we've thrown away our culture and heritage and are busy exporting and exploiting our cultural bio-diversity and depending on imported pharmaceuticals.

"This engagement is part of a research project involving five countries China, India, the United Kingdom, Uganda, and Nigeria who are collaborating to find solutions to the problem of anti-microbial using herbal medicine of Nigeria origin.

"My agency is leading Nnamdi Azikiwe University and Obafemi Awolowo University with Prof. Charles Esimone and Prof Ibrahim Bellow as part of Nigeria's team to develop this medicine.

Emeje further announced that plans had been concluded by the agency to establish research farms in all 774 local governments in Nigeria as well as herbal clinics in all states.

"The research farms are for integrated cultivation, medical production, and functional foods, among others."

Currently, that of Kano State is 90% completed, while that of Plateau and Cross River States just commenced."

Identifying one of the Agency's visions as citizens' decolonization through proper education on placing a premium on indigenous medicine, the DG said NNMDA had been organizing training through its College of Natural Medicine where students receive lectures in different languages.

"We've been embarking on massive public enlightenment and training to tackle the issue of inferiority complex. We must believe in ourselves and what we can offer so others will take us seriously and buy into our products," he added.

The DG further allayed fears of intellectual property, saying, "The act establishing our agency clearly stated that intellectual property of all inventors and innovators is properly protected. The era of doubting trust on the part of government is gone.

Host Vice Chancellor, Prof Charles Esimone said the engagement was targeted at harvesting indigenous knowledge of medical plants for affordable, sustainable, and acceptable healthcare.

He said: "We're trying to harvest indigenous knowledge in terms of medicinal plants, document and explore them further for affordable, sustainable, and acceptable healthcare within and outside our environment.

"Nigeria is a big country to overlook or underrate, especially in the area of healthcare provision and we have a comparative advantage in terms of natural medicine.

"We also have very rich, but untapped bio-diversity. Regrettably, our traditional healers with enormous endowments are going to their graves with those endowments.

"Universities are supposed to provide policy direction based on empirical research they've done. UNIZIK has a track record in terms of research in pharmaceuticals with corresponding strong pharmaceutical faculty and extensive collaboration nationally and internationally.

Deputy Director/State Coordinator, Anambra State Office, National Agency for Food and Drug Administration and Control (NAFDAC), Pharm Louis Madubuattah assured the agency's support to the project, including addressing the challenge of clinical trials and product certification for marketing.

He called for visibility and collaboration on the part of herbal medicine practitioners, as well as seeking grants and investors towards battling the challenge of antimicrobial resistance.

On his part, the chairman of the Anambra State Traditional Medicine Practitioners Association, Chief Hyacinth Eze Ugo canvassed for traditional medicine hospitals in each state of the federation.

FG to establish research farms in 774 LGs

By Editor February 24, 2024



FG to establish research farms in 774 LGs

Lawrence Nwimo, Awka

Nigeria Natural Medicine Development Agency (NNMDA), has announced its plans to establish research farms in all 774 Local Government Areas in Nigeria as well as herbal clinics in all states.

Director General of the Agency, Prof. Martins Emeje, disclosed this at a Community engagement meeting for health and economic growth of Nigeria at the Nnamdi Azikiwe University, Awka, Anambra State.

The engagement organised in collaboration with Federal Ministry of Science, Technology and Innovation was on importance of Integrating Indigenous Medicine with Orthodox Health Practices for Community Health and Economic Development.

Emeje explained that the research farms would be meant for integrated cultivation, medical production, functional foods among others.

"Currently, that of Kano State is 90% completed, while that of Plateau and Cross River States just commenced.

The DG, however, decried Nigeria's over-dependence on importation of drugs and other healthcare products, regretting that over 160million Nigerians could not afford imported drugs a situation he described as painful and shameful.

He said, "Nigeria and Africa have been over-dependent on importation of healthcare products, including drugs. As at today, Nigeria doesn't manufacture a single drug. This is quite painful and shameful.

"This simply means we're insecure in terms of medicine, not just the insecurity we all know. That is why we decided to see how we can develop our own indigenous and natural medicine so can produce our drugs locally.

"We're naturally endowed with diverse plants, animal and other untapped bioresources we can convert to our own medicine.

"Over 40% of current drugs in the pharmaceutical space globally are from the plant origin, not to talk of animals, minerals and soil. For every disease, the solution is within the environment. There's no disease in Nigeria that the panacea is not here.

"We can boast of men and women in our cultural heritage of herbal and traditional medical practitioners with wealth of knowledge and experience of how to tackle all manner of diseases in our society. That's why our ancestors lived over 100 years.

"But today, life expectancy is less than 60years. That's because we've thrown away our culture and heritage and are busy exporting and exploiting our own cultural biodiversity and depending on imported pharmaceuticals.

"The predictions of increase in mortality rate in Nigeria and Africa during COVID-19 didn't come true because of our abundant bio-diversity especially of plant origin. Nature has endowed us with combination therapy which we must harness.

"This engagement is part of a research project involving five countries of China, India, United Kingdom, Uganda and Nigeria who are collaborating to find solutions to the problem of anti-microbial using herbal medicine of Nigeria origin."

Meanwhile, Vice Chancellor, Prof Charles Esimone said the engagement was targeted at harvesting indigenous knowledge of medical plants for affordable, sustainable and acceptable healthcare.

He said, "We're trying to harvest indigenous knowledge in terms of medicinal plants, document and explore them further for affordable, sustainable and acceptable healthcare within and outside our environment.

"Nigeria is a big country to overlook or underrate, especially in the area of healthcare provision and we have comparative advantage in terms of natural medicine.

"We also have very rich, but untapped bio-diversity. Regrettably, our traditional healers with enormous endowment are going to their graves with those endowment.

"Universities are supposed to provide policy direction based on imperical researches they've done. UNIZIK has track record in terms of research in pharmaceuticals with corresponding strong pharmaceutical faculty and extensive collaboration nationally and internationally.

Deputy Director/State Coordinator, Anambra State Office, National Agency for Food and Drug Administration and Control (NAFDAC), Pharm Louis Madubuattah assured the agency's support to the project, including addressing challenge of clinical trials and products certification for marketing.



Over 160m Nigerians can't afford imported drugs says NNMDA February 26, 2024

By Uzo Ugwunze

Nigeria Natural Medicine Development Agency (NNMDA) has lamented Nigeria's over-dependence on importation of drugs and other healthcare products.

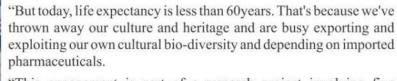
Director General of the Agency, Prof. Martins Emeje stated this at Nnamdi Azikiwe University, Awka during a Community engagement meeting on importance of Integrating Indigenous Medicine with Orthodox Health Practices for Community Health and Economic Development in collaboration with Federal Ministry of Science, Technology and Innovation was Emeje regretted that while over 160million Nigerians could not afford imported

drugs, over 40 percent of drugs in the pharmaceutical space globally originated from plants. He said, "Nigeria and Africa have been over-dependent on importation of healthcare products, including drugs. As at today, Nigeria doesn't manufacture a single drug. This is quite painful and shameful. "This simply means we're insecure in terms of medicine, not just the insecurity we all know. That is why we decided to see how we can develop our own indigenous and natural medicine so can produce our drugs locally.

"Over 40% of current drugs in the pharmaceutical space globally are from the plant origin, not to talk of animals, minerals and soil. For every disease, the solution is within the environment. There's no disease in Nigeria that the panacea is not here.

"We can boast of men and women in our cultural heritage of herbal and traditional medical practitioners with

wealth of knowledge and experience of how to tackle all manner of diseases in our society. That's why our ancestors lived over 100 years.



"This engagement is part of a research project involving five countries of China, India, United Kingdom, Uganda and Nigeria who are collaborating to find solutions to the problem of antimicrobial using herbal medicine of Nigeria origin.

"My Agency is leading Nnamdi Azikiwe University and Obafemi Awolowo University with Prof. Charles Esimone and Prof Ibrahim Bellow as part of Nigeria's team to develop this medicine.

Emeje further announced that plans have been concluded by the Agency to establish research farms in all 774 local governments in



"The research farms is for integrated cultivation, medical production, functional foods, among others. Currently, that of Kano State is 90% completed, while that of Plateau and Cross River States just commenced.

Identifying one of the Agency's vision as citizens' decolonization through proper education on placing premium on indigenous medicine, the DG said NNMDA had been organizing training through its College of Natural Medicine where students receive lectures in different languages.

"We've been embarking on massive public enlightenment and training to tackle the issue of inferiority complex. We must believe in ourselves and what we can offer so others will take us serious and buy into our products," he added.

The DG further allayed fears of intellectual property, saying, "the act establishing our agency clearly stated that intellectual property of all inventors and innovators is properly protected. The era of doubting trust on the part of government is gone.

Host Vice Chancellor, Prof Charles Esimone said the engagement was targeted at harvesting indigenous knowledge of medical plants for affordable, sustainable and acceptable healthcare.

He said, "We're trying to harvest indigenous knowledge in terms of medicinal plants, document and explore them further for affordable, sustainable and acceptable healthcare within and outside our environment.

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Make Local Drug Production A Priority; Experts tell Federal Govt

NNMDA to launch N500b herbal medicine project

Written by Patience Ivie Ihejirika and Royal Ibeh

As Nigeria joins the rest of the world to mark the World Health Day, pharmacists in the country have urged the federal government to make local drug production a priority.

The Director-General, Nigeria Natural Medicine Development Agency (NNMDA) Prof. Martins Emeje, said President Bola Tinubu should be talking about cutting down the importation of foreign drugs, adding that the country has the infrastructure and human capital to produce drugs locally.

He called for change of strategy, saying that the strategy that the country has been using since the colonial time is what it is still using.

The DG told LEADERSHIP Sunday that the country cannot achieve a change in outcome if it continues with the same strategy, which he described as dependence on importation of pharmaceuticals.

"That is what we have been doing over the years. We depend on support from other countries. It is either our pharmaceutical sector is importing finished products or we import raw materials and just package the dosage form here without necessarily doing any basic research and development or even local drug manufacturing.

"The problem is lack of investment in our own local development, local drug manufacturing, local research and development and manufacturing, and that is because we are not looking inward. We must support local drug research and development and local drug manufacturing.

"We don't have a problem of human capital. We have over 300 research institutes in this country and I can tell you that they are headed by competent researchers. But at home here, we are not, making headway because of the support that is needed from government and the private sector," he explained.

Prof. Emeje stressed the need to rethink indigenous medicines, saying that the country must begin to make it a priority.

However, he said that the Nigeria Natural Medicine Development Agency is working towards establishing herbal medicine centres in all the 774 local governments in the country, adding that the agency was already

developing a database of all traditional medicine practitioners in the country and the type of products and services they render, for comprehensive documentation.

"We are starting it already with Alimosho local government. It's a N500billion project that we are starting with Alimosho local government and we are going to use that as a pilot and escalate it to the rest of the country."

Also, the manufacturing pharmaceutical companies have called on the government to provide 'patient capital' to boost local production of drugs.

Pharmacists who spoke with LEADERSHIP Sunday averred that Nigeria is currently producing about 20 per cent of the nation's drug requirement, with about 70 per cent imported, adding that most of the drugs produced locally are the basic drugs, not the high tech products.

While the Tinubu-led administration has stated that they want to flip the ratio of drug importation around, to enable the country to produce more locally than import, the CEO of Neimeth, Valentine Okelu, said this can only be possible if the challenges in the pharmaceutical industry are tackled.

According to Okelu, the first challenge has to do with infrastructure which include power.

"Pharmaceutical production is energy intensive. People don't understand the amount of resources required to power a pharmaceutical plant. For instance, it requires about 1000KVA generator to power some pharmaceutical factories.

"To cut cost, we make use of public energy supply and generator. We try to produce like 50 per cent of drugs, using electricity and the other 50 per cent of drug production, using generator," he explained.

On the increase of electricity tariff, Neimeth's CEO averred that it will even make local manufacturing more difficult, in that, the cost of producing drugs may double. He however affirmed that the increase in electricity tariff, will only affect drugs that are produced locally, adding that drugs imported will not be affected.

"What this means is that the federal government's plan of boosting local production of drugs may be affected, considering the fact that the price of locally produced drugs may be almost the same with those imported," he posited, while calling on government to halt its plans to increase electricity tariff.

He also appealed to the federal government to provide what he called 'patient capital' for the pharmaceutical industry.

"Patient capital is capital that can wait for a long time, with little or no interest. This is needed because the

pharmaceutical industry is not like any other industries where one can get return on investment in a year.

"We need approval at every point in time, from setting up the factory, production, to start producing for the masses and then also get approval to export. The approval for each stage takes time."

He said, "I will also appeal to the government to ensure that locally produced drugs are the ones procured in all state and tertiary hospitals. Government has put in place the Drug Revolving Scheme for the procurement of drugs at public hospitals. But it is sad to note that most of the drugs are procured from India and China. This has to stop, if we must boost local production of drugs.

"I will appeal to the federal government to start procuring locally made drugs to boost the industry and also remit the fund on time, so that the pharmaceutical manufacturing companies can have enough money to use for production," he recommended.

The president, Association of Medical Laboratory Scientists of Nigeria (AMLSN), Dr. Casmir Ifeanyi, faulted the four point agenda of the coordinating minister of Health and Social Welfare, Prof. Mohammed Ali Pate, citing neglect of medical laboratory scientists.

Dr. Ifeanyi said that the minister has not been able to coordinate laboratory services in the four point agenda, you cannot find a place of medical laboratory services.

He told LEADERSHIP Sunday that what determines the state of a country's health system is the state of its medical laboratory science services, adding that the reason Nigeria has not been able to get it right is due to lack of medical laboratory science services.

He said, "We had what was known as Federal Laboratory Services. It provided structure from medical laboratory services delivery in Nigeria. Unfortunately, and due to misplaced priority and politics, we scuttled the Medical Laboratory Science Services in Nigeria.

"Ever since we scuttled it, our health system has continued to nosedive and we have continued to occupy the lowest part of health indices in global health ranking."

He commended President Bola Tinubu for coming forth and showing that he is committed to improving the health system of Nigeria.

"On Behalf of all medical laboratory scientists in Nigeria, I commend president Bola Tinubu for the giant step he has taken in the heath sector," he added.

On his part, the chairman, Public Health Sustainable Advocacy Initiative (PHSAI), Barrister Ayo Adebusoye tasked the government on Universal Health Coverage (UHC) for all Nigerians, irrespective of their location.

To achieve this, Adebusoye said government has to begin to put its money where its mouth is, adding that, "We need to go back to the Abuja declaration of 15 per cent health budget, if we must achieve good health for all Nigerians.

"Also, we need the health system to be driven, not at the federal level, but at the state and local government area levels. Federal government should focus on formulating policies, but the implementation of those policies should be at the state and local government levels."

On health insurance, Adebusoye said health insurance is also another gateway to achieve UHC, while urging the government to set up a council that will manage the Vulnerable Group Fund (VGF) as stipulated it the National Health Authority Act 2022.

"There is supposed to be a governing council that should be instituted to manage the vulnerable fund. The council will manage the modalities on how and where the fund should go. If that council is not instituted, then we won't be able to achieve UHC for all Nigerians," he stated.

On brain drain, he tasked the government to improve the remuneration of healthcare workers to stem brain drain in the country, as they cannot operate like other civil servants.

"I know government can revamp the health sector, but it takes political will. I appeal to the government to put all the recommendations as highlighted above, to achieve UHC for all," he stated.

In the same vein, the lead director, Center for Social Justice (CSJ), Onyekepere Eze, said the full implementation of the basic health care provision fund and the complete resuscitation of primary health care centers throughout the Federation should be prioritized by the government.

Eze repeatedly emphasized the need for accountability while pleading with the federal government to give PHC, a high priority, which is a step toward UHC



Federal Government Unveils Herbal Medicines For Diabetes, Sickle cell, And Others 2024/03/11



The Federal Government has unveiled four herbal products developed by the Nigeria Natural Medicine Development Agency for the management of diabetes and sickle cell disease.

Others are for the treatment of upper respiratory tract infections and reducing fast aging.

The Minister of Science and Technology, Uche Nnaji, unveiled the products during an official visit to NNMDA in Lagos, recently.

Nnaji, who affirmed FG's readiness to invest in natural medicine, said the herbal products would serve as substitutes for foreign drugs amid the rising cost of drugs in the country.

The minister said, "I am happy to have verified so many products they have developed. They have those that treat arthritis, diabetes, and hypertension, including the four products that I launched this afternoon.

"This is part of the reason why I am here to launch the four products."

"The drugs are foreign substitutes. You have one for diabetes, you have the one for aging, you have the one for sickle cell, and then the one for upper respiratory tract infection that will replace Augmentin. We should be celebrating."

Nnaji disclosed that the Federal Government planned to create an innovation fund for research and development to support research institutions, stressing that research remained crucial for development.

In his remarks, the Director-General of NNMDA, Prof. Martins Emeje, said Nigerians should stop depending wholly on imported drugs for their healthcare needs.

Emeje, a professor of Pharmacy, said Nigeria could develop herbal medicines to cure many diseases that appear incurable through orthodox medicines.

The NNMDA DG said, "We can do it. Nobody should make it look like it's a big deal to do these things. The minister unveiled four products that we started looking at four months ago.

"The products are for upper respiratory tract infection, diabetes, aging, and sickle cell."

"We should value local drug manufacturing and stop being dependent on foreign drugs. We should value research.

"By October 2024, the agency will have 11 products that will be unveiled by the President which will create over two million jobs.

"The private sector should provide resources for research and development.

"Studies have shown that the herbal industry alone will be worth \$5tn by 2050."

He noted that Nigeria had the highest biodiversity in Africa and therefore had a lot to contribute to the herbal medicine industry.



March 11, 2024 by Chinyere Okoroafor

Tinubu's plan for research, funding of natural medicine, by minister



<u>'President Bola Tinubus</u> administration is planning to establish funds for the research and development of natural medicine, <u>Minister of Innovation</u>, <u>Science and Technology</u>, <u>Uche Nnaji</u>, has said.

He made this known in Lagos at the weekend.

It was during the unveiling of four drugs produced by the Nigerian National Natural Medicine Development Agency (NNNMDA).

It was also the minister's first visit to the agency.

The new drugs are Namdamune (200mg) meant for Anti-ageing, Namdasan (200mg) for anti-sickling, Aberesine (200mg) for anti-diabetes and NanoBere (50kg).

The minister, who lauded the efforts of the agency for carrying out research to produce the drugs, emphasized the importance of research and development in the natural medicine sector for the growth, well-being and progress of the nation.

He said: "This is the kind of innovation, the kind of science we are talking about in science and tech and this is why our President, Bola Ahmed Tinubu said that science remains the key to nation building.

"Part of what we keep saying is that there must be research and development funds. So, the President and the government, are looking at it very seriously. If we have research and development funds, the issue of drug hike will be addressed that is on one hand. When I came in as a minister, I insisted that my key area is to commercialise what we have on the shelves, the development, the research we have on the shelf, and this is part of the store, he said.

On how the medicines unveiled can get to the general public, the minister said it is through government funding and private partnership.

"Once we have research and development funding and private partners, which we are searching for, we've gotten a couple of them. But it depends on what they are going to choose. Remember, this is not the only four products that we have. There are over 15 to 20 of them on the shelf. That was why I had to come for an inspection because I have to take note of them."

The agency's Director General/Chief Executive Officer (DG/CEO), Prof Martins Emeje, appreciated the federal government's plans to establish a research and development fund, urging the federal government to ensure the application of proposals before researchers can access the fund.



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FG Pledges more Funds for Natural Medicines Research

By Admin 11/03/2024

As part of its response to reduce the high cost of orthodox medications in the country, the Federal Government says it will invest more funds into research of natural medicines.



The Minister of Innovation, Science and Technology, Chief Uche Geoffrey Nnaji, made this remark at the unveiling of four natural medicines produced by the Nigeria Natural Medicine Development Agency, NNMDA, in Lagos.

The Minister who was on a working visit to the agency expressed delight at the level of professionalism in the production of the medications.

Chief Nnaji said plans are underway to make available, research

development fund, which will foster scientific innovations.

He said, "When the research development funds is available, most of the current issues facing science and innovation will be addressed. When I became Minister, I said my key area is to commercialize what we have on the shelves".

Chief Nnaji who stated that the President Tinubu administration is committed to supporting sciences called for more patronage for traditional medicines.

"You see this products here for infections can replace Augmentin and it is less than one thousand naira, these are the kind of innovations we want in science and technology and that's why President Tinubu said science remains key to national development "he added.

Director General and Chief Executive of Nigeria Natural Medicine Development Agency, NNMDA, Professor Martins Emeje said the Agency's research farms across the country are generating positive results, pointing out that the products are medically proven.

He stated that, "Nature is the best laboratory in the world, but pride has not made many in the field study it".

Professor Emeje pointed out that natural medicine had the potential of creating at least two million jobs.

"It is about both the private and the public sector, because in other countries of the world where we are bringing these medicines into the country, if you notice, the private sector is responsible for funding to a large extent research and development, so after the outcome, they have right to the products, same way the COVID-19 vaccine we took in Nigeria was produced by Oxford University, which is a public institution but was funded by AstraZeneca which is a private company", he noted.

Highlight of the event was the presentation of the new natural medicine produced by the agency to the minister.



FG set to restore glory of natural medicine — Martins Emeje

By Online Editor March 14, 2024



The Nigeria Natural Medicine Development Agency (NNMDA), on Thursday, said the Federal Government is on the path of restoring the glory of natural medicine.

The Director-General of NNMDA, Prof. Martins Emeje, made this known in an interview with the News Agency of Nigeria (NAN) at the ongoing Science, Technology and Innovation (STI) Expo taking place in Abuja.

He said that "before colonialism, Nigerians used natural medicines to cure all manner of illnesses and diseases." He added that with the coming of foreign products, including medicines, Nigerians developed taste and patronized such goods over locally made ones.

He, however, disregarded the belief that natural medicines are old and overtaken by advancements in technology.

According to him, technology is an aid that is helping to modify the study, processing and packaging of natural medicines.

He also said that the Renewed Hope Agenda of the Federal Government is focused on building a better Nigeria where the common man will benefit from the nation's socio-economic development.

He said "our vision is to see how Nigerians can begin to believe in themselves first, because convincing people that foreign drugs are also from plants is not the issue.

"We need to tell people that what we have thrown away, this government is bringing it back.

"In the next two to three years, what the agency is doing as part of its contribution to the Renewed Hope Agenda, is to ensure that the hope of our people is renewed.

"We are renewing the hope of Nigerians who do not have access to imported drugs and depend on herbs."

Emeje added that people who lack access to orthodox and imported drugs shouldn't feel less about natural medicines.

He explained that "years before colonial masters, our people were taking care of their health, and many never had access to orthodox medicines but they survived with herbs in their surroundings and lived longer." NAN reports that the Science, Technology and Innovation (STI) Expo is being organised by the STI Ministry, and has innovators, inventors, exhibitors of technological wares, research institutes, universities, institutions of government, participating.

The STI expo, holding from March 11 to March 15 has "STI: Solutions to National Economic Challenges" as its theme.



NNMDA deploys nanotechnology, AI in natural medicines' production

March 14, 2024



Prof. Martins Emeje, the Director-General, Nigeria Natural Medicine Development Agency (NNMDA), says the agency has started deploying Nanotechnology and Artificial Intelligence (AI) into its natural medicines' production. He made this known at the ongoing 8th edition of the Science, Technology and Innovation Expo (STI Expo) in Abuja on Thursday.

Emeje, however, said that in spite of advancements in technology, natural medicine is always effective and has its pride of place.

According to him, technology, being an enabler, means it can be leveraged on to enhance natural medicines' production.

He added that "today, we make medicines from herbs, and in this expo and the first time in Nigeria, a government agency has an herbal product that Nanotechnology was used to make.

"We have a Nano product here called NanoBere 50mg, which is a herbal product, made with the application of nanotechnology.

"We developed NanoBere, meaning Nanotechnology, while Bere is Abere, a plant used in South Western Nigeria to cure different diseases.

"We were able to carry out laboratory investigations and develop the drug in a Nano particle form, useful for the treatment of upper respiratory tract infections."

The Director-General explained that the use of AI in herbal medicine production is to reduce waste, time spent in the laboratory, reduce resources deployed into the laboratory.

He said the agency was also exploring Phytopharmaceuticals, the production of herbal medicines that rely on one or more plant components or active elements for effectiveness.

Another aspect of nanotechnology which the agency is also exploring is Pico Technology, a term used to refer to the fabrication of structures where atoms, devices are positioned with sub-nanometer accuracy.

He added that "we do a lot of work on computers before going to the lab and that is AI.

"We develop apps used in creating the information, the models, and simulations for the delivery of herbal medicines to where we want it to function in the human system or in animal system.

"Technology can help us in delivering herbal services in better ways and today, we have Phytopharmaceuticals that are of Nanotechnology origin.

"We are moving into the Pico technology era now because in our agency, we already have a group that is working toward the application of nanotechnology and Pico technology to develop herbal medicines."

He said that the government's belief in natural medicines saw the approval of some funds in the 2024 budget to deploy nanotechnology in the production of herbal products.

He recalled that the Minister of STI, Chief Uche Nnaji, launched NanoBere on March 8, which was already in the market.

He added that President Bola Tinubu is expected to launch 11 innovative products by NNMDA in October.

He stressed the need for government and other stakeholders to prioritise science and technology for national development.

Meanwhile, the STI Expo holding from March 11 to March 15 has "STI: Solutions to National Economic Challenges" as its theme.

It has innovators, inventors, research institutes, universities, industry players, agencies of government, among others, participating. (NAN)



Health

How to improve healthcare system, by experts By Ijeoma Nwanosike 12 April 2024 | 3:16 am



While the right to health of many continues to dwindle, most people around the world, especially in low-income countries have little to no access to basic health care and as such, are denied their right to basic health benefits.

According to the World Health Organisation (WHO), at least 4.5 billion people, which is more than half of the world's population, were not fully covered by essential health services in 2021 and therefore, the right to health of millions is increasingly coming under threat.

Prof Martins Emeje In commemoration of this year's World Health Day 2024 themed; 'My Health, My Right', experts recommended a change in the strategy of operations of some of the key areas of the health sector. They also suggested ways to help improve the health care system and outcomes for Nigerians.

The Director General, Nigerian Natural Medicine Development Agency (NNMDA), Prof Martins Emeje told The Guardian that the healthcare system in the country is poor and would continue to have the same

outcome unless health is domesticated.

He argued that the health system is not making any significant headway because it is still a testing market. He said, "The reason why we are not doing well is that we are repeating what we have been doing for the past 100 years and expecting a different outcome, which will not yield any useful outcome.

"We need to change strategy by domesticating health. We are practicing imported health and that is the reason we are not making any significant headway; we are still largely a market for testing the health apparatus of other countries."

Emeje emphasized the need to prioritize research and development of natural medicine. "Research and development in health should be a top priority and does not necessarily have to be government-driven.

"The private sector should have a role to develop and refine these products that are available to our people in communities so that it can be accessible to them. Everything should not be left in the hands of government as financial resources are scarce."

"Explaining how traditional medicine would help fill the gap created by modern medicine regarding the current economic situation and the challenge of counterfeit drugs in the country, Emeje said, "They are already filling the gap, especially in most of our rural areas where modern medicines are not readily accessible and even when they are available, they're not affordable.

"Most of our people in such areas go to traditional medical practitioners in their villages when they are sick. Every village that you go to in this country, knows families that can cure malaria, typhoid, mental sickness, or whatever. They know families that can do bone-setting, traditional delivery for pregnant women. It's our cultural heritage."

He said the agency is embarking on training traditional medical practitioners in quality assurance, standardization, and ensuring documentation. We plan to escalate it in all the 774 local governments. The most important material that traditional medical practitioners use is herbs, and herbal medicine is a huge market, and the global herbal market will be \$5 trillion by 2050.

"We have also decided to establish research farms in the 774 local councils so that we can cultivate medicinal plants for particular and specific diseases in those local governments, and this is how we can change the narrative," he said.

The Director General, Nigerian Institute for Medical Research (NIMR), Prof Babatunde Salako, explained that the new leadership at the Ministry of Health is making attempts at improving and adopting strategies that are bound to have a positive impact on the health system.

"Currently, we are losing a lot of care workers to greener pastures abroad and the ministry has rightly directed colleges of medicine, faculties of medicine and the medical and dental association of Nigeria to see how we can increase the number of intakes for the production of doctors."

"The same directive has been given to other agencies that are regulating the production of other healthcare systems. These are attempts by the ministry to ensure that we can produce more healthcare workforce so that Nigerians will continue to have access to health.

"We are in a stage where a weaker system is gradually becoming stronger, and we will be able to provide access to health; we may not be meeting the basic rights now, but we seem to have future opportunities to do that with the current approaches the ministry of health is taken now," he said.

Salako highlighted awareness, collaboration, and partnership as some of the measures needed to address the rising non-communicable diseases (NCDs) like diabetes, hypertension, and cardiovascular-related conditions in Nigeria.

"The number one thing is to ensure people are aware of these diseases and what to do if they suspect they have it and where to go for screening for the presence or absence of diseases. We also need to work in partnership with others; collaborate to investigate the newer agents for treating hypertension, diabetes and others," he said.

The professor insisted that the healthcare infrastructure can respond to public health emergencies like pandemics and outbreaks, adding that what is needed is a strong partnership with development partners and international organizations.

"I believe that once government supports NCDC, with the right structures and ensuring they're in a good state to carry out continuous surveillance, training of health care workers in epidemic response, we should be able to work with other regional bodies to share data and ideas, as well as ensure disease outbreaks are monitored," Salako added.



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Nigeria Risks Epidemics Resurgence Except Govt Prioritises R&D, Local N250 Drug Production — Prof. Emeje, Others

ByChioma Umeha On Apr 20, 2024

...Strengthen Disease Surveillance System From Grassroots To Curb Disaster, Dr. Isah Cautions

...Donor Support Critical For Filling Gaps In Resources, Expertise, Technology — Report

In the global landscape of public health, the critical nexus between research and development, local drug production, and epidemic prevention is pivotal in safeguarding populations against the looming threats of contagious diseases. The strategic foresight and proactive investment in these domains act as formidable bulwarks in the defense against potential health crises. Yet, nations risk exposing themselves to the perilous specter of epidemic resurgence without a concerted focus on such foundational pillars. Nigeria, a prominent regional power in Africa, stands at a crossroad where the imperative to prioritise research and development, coupled with the bolstering of local drug production capabilities, emerges as a pressing mandate for sustainable public health resilience. CHIOMA UMEHA writes

Nigeria, a nation of immense diversity and complexity, has long grappled with the challenges of disease control. Despite strides made in healthcare infrastructure and public health initiatives, the country continues to face the resurgence of infectious diseases and epidemics, raising questions about the root causes of this persistent issue.

Experts are quick to say that Nigeria's healthcare system grapples with fragmentation, inefficiencies, and

resource constraints, as disparities in healthcare access between urban and rural areas exacerbate the challenges of disease surveillance, prevention, and treatment, hindering the country's ability to respond swiftly to outbreaks.

They also added that challenges in disease surveillance, early detection, and rapid response capabilities impede Nigeria's ability to contain outbreaks effectively. Limited laboratory capacity, inadequate data collection systems, and delays in reporting and communication exacerbate the spread of infectious diseases before containment measures can be implemented. There is also what they describe as vaccine hesitancy and healthcare misinformation, which they say pose significant challenges to disease control efforts in Nigeria as myths, misconceptions, and distrust in healthcare systems undermine vaccination campaigns, leaving populations vulnerable to vaccine-preventable diseases and hindering herd immunity.

However, despite these formidable obstacles, Nigeria has demonstrated resilience and a commitment to addressing the root causes of its disease control challenges. This is by prioritising investments in healthcare infrastructure, strengthening disease surveillance and response capacities amongst others.

Despite the lessons learned from COVID-19 about the importance of emergency preparedness and response to epidemic diseases, Nigeria has been constantly fighting infections and diseases such as Lassa fever, Cholera, Meningitis, and monkey pox.

Some experts during the week spoke to Saturday INDEPENDENT about the challenges of disease control in Nigeria and why the country is still dealing with the resurgence of infectious diseases and epidemics.

Professor Martins Emeje, Director General and Chief Executive of the Nigeria Natural Medicine Development Agency (NNMDA), responded to the trend by asking rhetorical questions: "Who are the people who die from the diseases you mention? Is it not the poor people living in the countryside? What drugs are we using to treat these infectious diseases? Are they not imported? Are vaccines not imported? I will continue to say that as long as we do not prioritize research and development, which leads to local drug production in our country, we will be joking about expecting positive change.

He disclosed that Lassa fever is indigenous to Nigeria, "the treatment is available in Nigeria; however, we must be deliberate in disseminating the treatment through research and development. All of the drugs and vaccines we import are the result of research and development in other countries. We must do ours, and for me, that is how I interpret Mr. President's renewed hope message; you can only renew what has previously existed, but probably not well, and now is the time."

Prof. Emeje further commented on the Nigeria Centre for Disease Control (NCDC's) efforts to put an end to the resurgence of Lassa fever, Cholera, Meningitis, and monkey pox epidemics. "Well, to the extent that these diseases have been contained over time, and to the extent that the agency has received support in its plan to solve

this problem, I believe they are weathering the storm."

He said it would be unfair for him to assess a federal agency, or any agency for that matter, "from the outside when I do not know exactly what they are dealing with. If you ask me if the human capital at that agency is adequate to carry out the mandate, I will not hesitate to say yes, because, like most of our agencies, particularly at the federal level, we have very competent staff, and the world knows that we can compete with our counterparts all over the world, which is why they come here to poach our intellectuals."

A distinguished professor of Drug Delivery and Nanomedicine emphasized the importance of preventive medicine in addressing the challenges of emergency preparedness and response to epidemic diseases in Nigeria, stating that there no disease that cannot be prevented.

"This is the foundation of our work at the Nigeria Natural Medicine Development Agency. While we may be quick to list the numerous challenges we face, the truth is that our country is endowed with enormous natural resources that, if properly harnessed through R&D, these diseases will no longer embarrass us in the way they do today."

On whether Nigeria has enough funding for infectious diseases an epidemic control, Prof. Emeje's response was spontaneous. "While I may not be in the best position to answer this question, I can confidently state that funding for health R&D or intervention of any kind anywhere in the world will never be sufficient."

Concerning how the government and partners can help the NCDC achieve effective and seamless disease control in the country, he stated, "My proposal is twofold: Indigenous private sector must become active players in our health sector, and we must be deliberate about this. Second, there is research and development."

According to him, the solution to the resurgence of infectious diseases and epidemics is to "prioritize research and development (R&D), local drug production, and end the age-long dependence on importation of foreign synthetic products."

Dr. Abdul Muminu Isah, Coordinator, Infectious Diseases Pharmacists of Nigeria, during the week, told Saturday INDEPENDENT that Nigeria faces challenges in disease control, including limited access to healthcare services in rural areas, inadequate infrastructure for disease surveillance and monitoring, insufficient funding for public health initiatives, and gaps in healthcare workforce capacity.

Additionally, he added that population density, socio-economic disparities, and cultural beliefs can all have an impact on disease control efforts. Addressing these challenges necessitates a multifaceted approach that includes strengthening healthcare systems, improving surveillance capabilities, expanding public health education, and encouraging collaboration among healthcare professionals and organisations.

Isah, the National Editor-in-Chief of the Clinical Pharmacists Association of Nigeria (CPAN), praised NCDC's

performance. He said, "The Nigeria Centre for Disease Control (NCDC) has made commendable and methodological efforts to combat the resurgence of epidemics such as Lassa fever, Cholera, Meningitis, and Monkey pox. Their brave response, which included rapid outbreak detection, coordination of emergency responses, and the dissemination of timely information, was critical in mitigating the impact of these infectious diseases.

"The NCDC's collaborative approach with healthcare professionals, government agencies, and international partners has enabled a more coordinated and efficient response to public health emergencies. However, there are areas in which the NCDC could improve its efforts. One suggestion is to improve disease surveillance systems at the community level to ensure early detection and response to outbreaks. Investing in capacity building for healthcare workers, particularly in rural areas, would also improve disease control efforts.

"Furthermore, increasing public awareness and community engagement initiatives can enable people to take proactive steps to prevent the spread of infectious diseases. Overall, while recognising the NCDC's accomplishments, continuous improvement and innovation are critical to effectively combating epidemics and protecting public health in Nigeria," he emphasised.

Concerning the challenges of emergency preparedness and response, Isah explained that, "emergency preparedness and response to epidemic diseases in Nigeria face multi-faceted challenges that require comprehensive strategies and collaborative efforts to overcome.

One of such primary challenges is a lack of healthcare infrastructure, particularly in rural areas, which impedes effective healthcare delivery and emergency response. Inadequate funding for public health emergency preparedness is also a significant barrier, affecting the procurement of necessary equipment, healthcare professional training programmes, and the implementation of effective response strategies.

"Another significant challenge is a lack of trained healthcare professionals, such as infectious disease specialists, epidemiologists, and public health workers. This shortage has an impact on the ability to respond quickly and effectively to outbreaks, as well as conduct surveillance, monitoring, and data analysis, all of which are necessary for disease control."

Weak disease surveillance systems and insufficient data collection mechanisms exacerbate the issues, making it difficult to detect outbreaks early, accurately track disease trends, and implement targeted interventions. During emergencies, logistical challenges such as transportation, storage, and distribution of medical supplies and vaccines impede response efforts.

"Additionally, limited public health education and awareness about infectious diseases, preventive measures, and the importance of early reporting all contribute to delayed response and increased transmission rates. Social and cultural factors, such as cultural beliefs, social norms, and misinformation, can also influence community

behaviour, reducing compliance with public health interventions and impeding outbreak control efforts."

When asked if Nigeria has enough funding for infectious diseases and epidemic control, he said "Nigeria has allocated a reasonable amount of funding for infectious diseases and epidemic control; however, there are ongoing challenges and gaps that necessitate continued support and collaboration, including from donors.

"While the government has made efforts to allocate funds to public health initiatives, such as infectious disease control, healthcare budget constraints limit the scope and effectiveness of response efforts. These constraints include competing priorities in the healthcare sector, infrastructure requirements, workforce capacity, and the complexities of addressing multiple public health challenges at once.

"Donor support is critical for supplementing government funding and filling gaps in resources, expertise, and technology. Donor support allows for the implementation of innovative programmes, capacity-building initiatives, the procurement of critical medical supplies, and the deployment of trained personnel during emergencies.

As a result, while Nigeria has made progress in funding infectious disease control, ongoing support and collaboration with donors are critical to strengthening epidemic preparedness, improving response capabilities, and ultimately protecting public health."

Isah said "In charting the course for effective disease control and public health initiatives in Nigeria, a collaborative effort involving all stakeholders is critical. Government agencies, healthcare providers, academia, NGOs, international organisations, and the private sector must work together to strengthen disease control measures and improve healthcare outcomes across the country.

"Clinical Pharmacists' active participation is an important component of this collaborative approach. These healthcare professionals play critical roles in patient care, medication management, and public health education. Clinical Pharmacists, with their expertise in pharmacotherapy, infectious disease management, and antimicrobial stewardship, can make a significant contribution to disease control efforts.

"Research and development initiatives are also critical for advancing disease control efforts. Clinical Phar macists help to drive evidence-based disease control strategies by creating new knowledge. Policy advocacy is another way that clinicians can make a difference."

He disclosed that Clinical Pharmacists can advocate for policies and regulations that promote effective disease control strategies, strengthen healthcare systems, and prioritise public health investments by actively participating in their development and implementation. This advocacy, he stated, ensures that patient-centred and evidence-based care is prioritised in healthcare policies and initiatives.

"To summarise, a collaborative approach involving all stakeholders, with a special emphasis on the invaluable

contributions of clinical chemists, is critical for advancing disease control efforts and improving public health outcomes in Nigeria. Clinical Pharmacists play an important role in shaping the nation's healthier future by leveraging their expertise, embracing innovation, investing in capacity building, conducting research, and advocating for supportive policies," he emphasised.

For every disease in Africa, its cure is within the continent - Medical experts

APR 30, 2024 ADRAP, ADReF, Africa, Africa Disease Reporting Fellowship, diseases, medical experts, traditional medicine



Pharmaceutical experts in Nigeria are advocating for a transformative shift in Africa's healthcare paradigm, asserting that the continent holds the key to addressing its health challenges. Professor Martins Emeje, Director General and CEO of the Nigeria Natural Medicine Development Agency (NNMDA), and Dr Zainab Ujudud Shariff, the CEO of Zee's Herbal Pharmacy, emphasised the need for alternative medicine and abundant resources available within Africa, urging Africans to embrace indigenous solutions to healthcare issues. Nnenna Ibeh in this article writes that the call to action comes amid the inaugural fellows' visit of the Africa Disease Reporting Fellowship (ADReF), a platform aimed at equipping African journalists with essential tools to tackle existing and emerging health crises on the continent.

Harnessing Africa's healing potential in traditional medicine

Pharmaceutical experts in Nigeria have said that it is time for Africa to start looking inward for solutions to challenges in its health systems and healing exploits.

Professor Martins Emeje, the director general and chief executive officer of the Nigeria Natural Medicine Development Agency (NNMDA) said nature has already provided everything that is needed by humans in every environment they find themselves.

Speaking during a visit by the inaugural fellows of the Africa Disease Reporting Fellowship (ADReF), Emeje held that raw materials, herbs and processes needed for healing and curing diseases plaguing the continent are not far-fetched.

ADReF is organised by the Africa Disease Prevention and Research Development (ADRAP) Initiative in partnership with AkweyaTV, IsuMedia, Africa Science Technology and Innovation and Premium Times.

The fellowship aims to equip African journalists with tools and key information on existing and emerging diseases in the continent and possible ways to tackle them.

For Emeje, a Pharmacist and a Professor of Drug Delivery and Nano medicine, Africans must begin to go the extra mile to make use of gifts available across the continent.

He said, "For every disease, for every ailment, the solution to that disease or ailment is within that environment where it exists. So, if there is a disease in Rwanda and you are going to America to go and look for treatment for that disease, it is because in Rwanda, you are deficient. The deficiency is in looking for the solution because it is there.

"You can't get it unless you deliberately go out to look for it. That is why I told you earlier that there is nothing that has not been done; there is no disease that is not in existence and there is no solution that is not available. If the disease was not there you can't discover it, at the time we did not discover it, we were limited by knowledge and that is our problem not nature's."

Quit the blame game

Speaking further, Emeje tasked journalists and scientists to remain resolute in their effort to seek ways to solve African problems using home-based solutions and in turn champion better narratives about the continent.

He noted that there is a need for Africans to quit the blame game and resolve to better develop the continent in areas of health, and education among others.

"For us in the health sector, for every disease, every drug we manufacture, there is only one question to be asked—the benefit and the risk, which one is bigger? And that is what is expected of you too as journalists.

"In Africa, we all for us to harmonise, we still blame the is brain laziness.

"We were not alone in the same fate have of the world today. is our problem and masters," Emeje said.

He also reminded the colonial masters, there was no disease the African continent.



have similar problems and the problem is yes, we were colonized but up until today, colonialists for colonizing us. For me, that

colonisation; many countries who suffered gone far and have become nuclear powers So, our inability to develop and get out of it has nothing to do with the colonial

people that even before the influx of the Africans were healing themselves and that its treatment was sought after outside

Conclusion

The exploitation of Africa's natural resources by foreign entities underscores the urgency for Africans to reclaim ownership of their traditional healing practices. While acknowledging the contributions of complementary medicine, experts emphasize the need for Africans to take pride in their heritage and leverage their indigenous knowledge for the continent's benefit. By fostering collaboration and promoting local solutions, Africa can unlock its vast healing potential and chart a path towards improved healthcare outcomes for its people.

Vanguard News

May 3, 2024

ADReF: Journalists key to decolonising African mind — Prof Emeje



ADRAP

Dr. Joseph Enegela (3rd left), some faculty, and resource persons; from left: Onche Odeh, Lanre Olaiya, Mojeed Alabi, Steve Abbah, and Okenyodo Odoh.

Professor Martins Emeje, the Director-General and CEO of Nigeria Natural Medicine Development Agency, NNMDA, has stressed the need for Africans' mindset to be decolonized, noting that journalists were key to making it possible.

Professor Emeje said nature provided everything needed by humans in any environment they find themselves, and that Africa was no exception.

However, he noted, "Our (Africa's) inability to get out of the woods is our problem and has nothing to do with the colonial masters."

The professor made these points when he played host to Fellows of the Africa Disease Reporting Fellowship, ADReF, organised by the Africa Disease Prevention and Research Development (ADRAP) Initiative, in Abuja.

Health

Emeje said: "Let me zero down on health. Thousands of years before the colonialists came to Africa, Africans were healing themselves.

"No disease treatment was sought for outside Africa. And let me tell you that there is no new disease in the world. I am a professor of pharmacy. What we studied, and are teaching others, are Western. The curriculum is not for Africans but for colonial folks.

"You were not trained to develop yourselves. You were trained to become tools to be used. That is why in the 21st Century our graduates are hot in demand outside the shores of Africa.

"Take the covid-19 experience. Some developed country deliberately opened their borders and requested healthcare professionals from Africa. So they wanted half-baked graduates? They wanted graduates from a continent where the educational standards are very low? Does it make sense? Why do you think we shine when we step out of our continent we shine?

"Colonial and slave mentality are the two major issues that we have in the development of our health resources in Africa.

"Everything we do in Africa we want Western validation. Whereas others learn in their language, Africans chose to learn in English, a foreign language.

"So there is a need for the decolonisation of the African brain. And let me tell you the people that are key to getting this done — the journalists."



The Fellowship

The Fellowship brought together 13 journalists from six African countries — Nigeria, Liberia, Ghana, Burundi, Kenya and Rwanda. The six-week programme ran from March and April 2024.

The focus was tackling biases often associated with disease reportage in Africa, telling the stories from the continent's point of view, and removing the stigma associated with traditional health practises.

The Fellows are Abdulbasid Yusuf Dantsoho (Nigeria), Jean De Dieu Ndikumasabo (Burundi), Agbonkhese K. Oboh (Nigeria), Folashade Akpan (Nigeria), Milliam Njeri Murigi (Kenya), Ridwan Karim Dini-Osman (Ghana), Justina Asishana (Nigeria), Nnenna Jane Ibeh (Nigeria), Francine Andrew Saro (Rwanda).

Others are Ojoma Akor (Nigeria), Moses Kollie Garzeawu (Liberia), Zainab Adewale (Nigeria), and Mariam Ileyemi (Nigeria).

On his part, Dr. Joseph Enegela, Founder and CEO of ADRAP, while charging the ADReF Fellows to be good ambassadors, urged them to always reflect the true situation on the continent.

Enegela said: "You need to collaborate and tell the true African stories, especially where health is concerned.

"This Fellowship is for you to understand the social aspects of diseases, scientific developments, management strategies, policies, and research focus, all from an African perspective."

Enegela added that the Fellows should promote education, and support of traditional medicine; drive cross-cultural exchange and partnerships, empowerment of local communities, and advocate policy support.

ADRAP had Isumedia, AkweyaTv, Centre for Journalism Innovation and Development, CJID, and Africa Science, Technology, Innovation as partners.

The Fellowship had very dedicated and capable Faculty. They include □Okenyodo Odoh, Onche Odeh, Steve Abbah and □Esther Nakazzi.

Resource persons, who handled sessions throughout the six-week programme, were professionals and academics of repute.

So do not say traditional medicine is not good because it means your culture is not good.

"The healing systems established by your grandparents or your forefathers are gifts given to them by God to heal individuals. So that is why traditional medicine, whether white people like it or not, is part of our culture.

"My traditional medicine in Ghana becomes alternative because Ghana has its own medicine. Traditional medicine is practiced by 80 percent of people, especially those in rural areas. And we are the ones to promote our traditional medicine."

DAILY POST

DAILYPOST

World Health Day: Make local drug production priority – DG NNMDA to govt

NEWS

World Health Day: Make local drug production priority - DG

NNMDA to govt

Published on May 5, 2024 By Amos Tauna



Prof. Martins Emeje

The Director-General, Nigeria Natural Medicine Development Agency, NNMDA, Prof. Martins Emeje, has urged the federal government to make local drug production a priority.

In his call to mark World Health Day, Emeje said President Bola Tinubu should be talking about cutting down the importation of foreign drugs, as the country has the infrastructure and human capital to produce drugs locally.

He noted that the strategy that the country has been using since colonial times has kept it where it is, suggesting that Nigeria needs a change of strategy.

He said Nigeria cannot achieve a change in outcome if it continues with the same strategy, describing it as dependence on importation of pharmaceuticals.

"The problem is lack of investment in our own local development, local drug manufacturing, local research and development and manufacturing, and that

is because we are not looking inward. We must support local drug research and development and local drug manufacturing."

Prof. Emeje advocated the improvement of indigenous medicines, saying the country must begin to make it a priority.

He said the Nigeria Natural Medicine Development Agency is working towards establishing herbal medicine centres in all the 774 local governments in the country and that the agency was already developing

a database of all traditional medicine practitioners in the country and the type of products and services they render, for comprehensive documentation.

"We are starting it already with Alimosho local government. It's a N500 billion project that we are starting with Alimosho local government and we are going to use that as a pilot and escalate it to the rest of the country," he explained.

Forget colonial mentality, traditional medicine safe, effective -

Pharmacy professor



12th May 2024 By Yusuff Moshood

Director-General of the Nigeria Natural Medicine Development Agency and a professor of Drug Delivery and Nanomedicine, Martins Emeje, speaks with YUSUFF MOSHOOD about how to address pressing issues within Nigeria's traditional medicine sector

As you approach the completion of your first year as the director-general and chief executive of the Nigeria Natural Medicine Development Agency, could you provide insights into the transformative measures undertaken by NNMDA during your tenure so far to advance traditional medicine practices in Nigeria?

To answer this question properly, let me first restate the blueprint I submitted, which was part of the reason I was given this job. The blueprint includes a commitment to forge strong collaboration between academia and industry; develop a robust intellectual property regime for natural medicine; pilot the agency's training institution away from paper to practical qualifications; institutionalize grantsmanship to reduce or totally remove the burden of funding from the government and establish a drug manufacturing company registrable with the CAC.

Other components of the blueprint include undertaking clinical trials of indigenous medicines; establishing the first public herbal pharmacy in Nigeria; connecting with the chemical, food, and pharmaceutical industries; organizing business summits with the industries, entrepreneurs, TMPs, universities, colleges of education, polytechnics, hospitals, NGOs, as well as creating NNMDA fellows.

You can call it a 10-point agenda, and based on this marking scheme or target which we set for ourselves, and which many saw as being too ambitious, we have scored 200 per cent because numbers one to five of the agenda have been completed, and done very well to the admiration of even our detractors. Many will

attest to the fact that the era of bad-mouthing traditional medicine is gone and gone for good, largely because of the strong advocacy of the last 10 months of our administration.

And I must use this opportunity to thank Nigerian journalists for partnering with us in this respect. Another major transformational activity we embarked on in traditional medicine in Nigeria was kick-starting our training institute. I feel highly fulfilled that today, Nigeria belongs to the comity of nations that operate a functional institution for training people interested in traditional medicine. I must express gratitude to our partners in this respect, notably Alimosho Local Government Area. Towards the transformation of traditional medicine in Nigeria, we have begun a total census and digitalization of traditional medical practitioners, practices, and services in the country, beginning with Alimosho LGA.

You have for years been an advocate for the prioritization of local research and development as well as local drug production. How crucial are these two components to healthcare delivery in Nigeria?

I also have journalists like you to thank for publishing my patriotic opinion in this regard. This is why I cannot fail in this national assignment; otherwise, my journalist friends alone as the watchdogs of society will be on my neck. The truth is, I maintain my position that without prioritizing local research and development as well as local drug production, the health sector will never develop. You can see the way we are complaining because some pharmaceutical companies exited the country. If we were serious about local Research & Development (R&D) and drug production, would we complain? In any case, NNMDA is up to the task because, whether those who see drugs as a business rather than the health rights of our people like it or not, we will work assiduously to salvage our country. The people in countries we run to for medical treatment are human beings like us. The difference is that they took their R&D seriously. Let me quickly add here that the private sector, especially philanthropists, has a big role to play in this respect.

A major issue confronting Nigerians right now is the spiralling high cost of drugs. Why is the Nigerian nation in this situation, and what can be done in the short and long term to address this problem?

As I have said several times before, the prices of anything you don't produce cannot be under your control. We don't produce the drugs you are talking about, so why won't the prices increase? So when you ask why Nigeria is in this situation of spiralling high cost of drugs, the answer is simple: as long as the drugs you are talking about are imported, we will be at the mercy of international market forces.

As long as we continue with this colonial mentality of importation of foreign medicines or begging to be validated at every step we take after suffering to go to all the schools we have gone to, the prices have not even started increasing yet. The short-term solution is for my president to immediately extend the state of emergency in Agriculture to Indigenous medicine. I bet you, it will work.

Let us try new things, especially indigenous ideas. Can you remember the urgency with which the CBN set aside funds for local R&D when COVID-19 was ravaging the world? See how the same CBN under the same governor then immediately abandoned the project as soon as they discovered that people are not dying

as predicted. The only sustainable long-term solution is to invest in health R&D. There should be a deliberate and massive deployment of resources towards the development of our most affordable, accessible, culturally relevant means of healthcare delivery which is traditional medicine. See, we can speak grammar till tomorrow, if we all don't join hands to support the development of our traditional medicine, we will not get out of this problem. Fortunately, the country has a few research institutions, including universities, that can solve this problem if given the necessary support. My agency has taken this as a priority and we are not looking back.

What are the advantages of natural medicines especially when compared to synthetic drugs?

Let me start by saying that Nigeria is a nation with a diverse and rich cultural heritage with a treasure trove of traditional medicinal practices that have been nurtured over centuries; before colonialism ever surfaced, our people took care of themselves in peculiar, special, culturally acceptable, and affordable ways. These practices are not merely historical relics but living repositories of wisdom, offering us unique and valuable insights into healthcare; by the way, every modern technology you see today took its foundation from history.

Natural medicines are a testament to the resourcefulness and resilience of our people, who have turned to nature and tradition for remedies, even in the face of adversity. Natural medicine means any or all of the following: traditional, herbal, nutraceutical, dietary, functional foods, phytomedicine, or traditional complementary and alternative medicines. While synthetic drugs simply put are chemical agents. From my explanation, you can deduce what the advantages of natural over synthetic drugs are. It is akin to saying what the advantages of organic foods over synthetic foods are. As a pharmacist, I can tell you that many of the complications or even deaths we are seeing are due to these synthetic products. I end by repeating this: One of the most significant advantages of indigenous medicines (herbal and traditional medicines) is their accessibility, affordability, and acceptability.

How safe are traditional medicines being produced, sold, and used in Nigeria?

To the extent that the only medicine that over 160 million Nigerians have access to is their traditional medicines, they are safe and effective. Forget this colonial mentality with the elites. Let them be sitting inside AC rooms in the Abuja and Lagos duplexes and telling people that traditional medicines are not safe. Poor people using traditional medicines daily are living longer than the elites. What we owe this country is using our knowledge and skills to develop our traditional medicines.

A major criticism of traditional medicine over the years is the seeming lack of standards as it relates to dosage. This is often blamed for traditional medicine's misuse and abuse. Why is this challenge still with us in this clime and how can it be addressed?

I laugh at people's ignorance when they say these things. I am a pharmacist and I know enough about drug dosage. So, are they saying until our traditional medical practitioners start producing their medicines to

look like the foreign dosage forms, they are not dosed right? That is why I talk about colonial mentality. Traditional medicines have doses; people should not say what they don't know. We know the challenges of traditional medicine, and I am particularly glad and grateful to Mr. President for giving me the NNMDA platform to solve it; watch us do it. Let me, however, say this: to ensure the safe and effective use of indigenous medicines, there is a need for regulation and standardization. Establishing guidelines for the collection, preparation, and administration of these remedies can help maintain quality control and safety. But, I reject the attitude of using the protocols designed for synthetic foreign products to validate our traditional knowledge and products. Nigerian scientists and regulators must decolonize their brains and rise to the challenge of deriving protocols that are peculiar to us but robust and able to withstand any stress test anywhere in the world.

Proper health financing is no doubt fundamental to a functioning health system, how can this be achieved in Nigeria, especially at the three tiers of government? (Federal, state, and local government)

Let me answer this imagine. Health problem at all. Please are financing their financing the health of people? See, if we and national resources industry, you will be become as a nation.

eko

question in a way you didn't financing in Nigeria is not a can you tell me exactly those we health? The elites? Who is the over 60 per cent of our invest a little of our local, state in the development of the herbal surprised how wealthy we will

The herbal industry

alone can lift millions of people

out of poverty. The global herbal medicine market size is estimated to be worth USD 356 Billion by 2030. Nigeria has about 10,000 plant species and arable land of over two million hectares, yet less than 20 per cent of the plants have been utilized. Let's get it clearer; this is just herbal medicine. My agency is not an herbal medicine agency. We are responsible for everything that is not artificial or chemically synthesized in Nigeria. Let me give you an idea of what I'm talking about so that you can imagine what it can contribute to our GDP and why I always say that it will replace oil if we get serious with research in this area.

According to WHO, about 80-85 per cent of people in developing countries depend on traditional medicine. In other words, about 170 million Nigerians use traditional medicines. Is that not more than the number of people using GSM? Take your mind back to the profit declared by the GSM providers last year and tell yourself what we are missing from developing or investing in our traditional medicine.

It's a shame! Right now, we do not have the data on how much herbal medicine can add to the GDP in precision terms; in fact, until we deliberately prioritize R&D in herbal/traditional medicine, we will continue to beg for drug aides, and we will continue to expose ourselves to the danger of consuming drugs

produced by people we don't know. We will remain vulnerable because the day any country decides that they don't want these Nigerians on the surface of the earth again, sorry for us. The good thing though is that NNMDA under my leadership is in the driver's seat of renewing the hope of our people in traditional medicines.

Expectations were high when the Federal Government took a definite step to establish the National Health Insurance Scheme in 1999. Yet, 23 years after the scheme was launched with so much fanfare, the majority of Nigerians are still paying out of pocket for health services. Where did we get it wrong with health insurance?

With due respect, many of us, including the supposedly highly educated, are living in slavery, albeit unknowingly. So, no matter what you tell them, they will never believe in themselves, talk more of believing in another African/Nigerian; I call it 21st-century colonialism and voluntary slavery. You see, many of us are quick to quote the saying that "it is only a mad person that will continue to do the same thing while expecting a different outcome" but that is what many of us do when we are given positions of responsibility.

We lack innovative ideas. We just like repeating what people have been doing since time immemorial. How can we develop like that? Go to our villages and see poor people doing cooperative clubs/groups; they take turns to get their monies and pay for what they want, including buying lands, houses, cars, marriages, or health care. We can do our own indigenous health insurance by fashioning this along this culturally acceptable model, but we are busy copying people's models and expecting such models to succeed.

We are not Americans, Europeans, Asians, etc.; we are Nigerians, and we have people in this country who can develop responsive models. So, where we got it wrong was where like many of our policies, we just copied without adaptation.

Are you in favour of advocating for the inclusion of herbal and traditional medicine within health insurance coverage?

My answer is yes. However, I'm aware that those who don't want to hear anything about herbal and traditional medicine will come for my jugular. The privilege I have today is that I have the opportunity to prove that the herbal and traditional medicine industry holds the ace, and I will do it.

In recent years, there seems to have been an increase in the number of Nigerians coming down with kidney failure. Some experts have blamed the increase on the abuse of traditional medicines, synthetic drugs, and other substances by Nigerians. How correct is this claim, and what can be done to curb this abuse if indeed it is contributing to the increase of kidney failure cases?

When people blame herbal and/or traditional medicines for kidney failures, I just regret the colonial education we all went through for which many have refused to get themselves liberated. You have been consuming bitter leaf, eforiro, ugwu, moringa soups, etc., for years without having kidney failure, but

because you took a bitter leaf capsule, it is now responsible for your kidney failure. See these statistics; according to published data, Saudi Arabia and Belgium have the highest estimated prevalence of kidney failure at 24 per cent.

This is followed by Poland with 18 per cent, Germany, with 17 per cent, and the UK and Singapore with 16 per cent. The United States' estimated prevalence is 14per cent, while Canada and Australia are 13 per cent. In fact, Norway and the Netherlands have the lowest estimates at 5 per cent. India and China, which consume herbs more than everybody, have a prevalence between 2.9 to 10.8 per cent. May God forgive those who don't know but won't keep quiet just because they have gone to school. The truth is that there are many factors responsible for kidney diseases, and drug use is among them. As a pharmacist, I can tell you that more than herbs, more synthetic drugs cause kidney failures. To curb the increase in kidney failures, I advise everyone to go organic in both food and medicines.

A good policy framework is invaluable for any sector to thrive, will you say the traditional medicine subsector of the health sector has the required national policy to make it impactful?

The problem of Nigeria is not policy again; our forebears have done exceedingly well in developing policies in most of these areas for us; our problem is good or sincere implementation. How many people, including academics and researchers, know that the country even had an expired traditional medicine policy? Some of us knew because, in writing competitive grant proposals, some of these funders will not accept your proposal without reference to your national policies. That policy was never implemented.

Nations like China have integrated the traditional healthcare system and conventional medicine; should Nigeria consider embracing this idea?

I am not a proponent of integration at this time. Integration will occur naturally in the future. For now, my proposal is for parallel existence. Let people have a choice of what they want. Nobody should be forced to see a Western-trained healthcare provider, and nobody should be threatened with death because he or she opted for any particular form of treatment. After all, is there any form of treatment that will make you stay on earth forever? NNMDA under my leadership is embarking on massive national herbal clinic development to provide people with options.

What is the potential of the traditional medicine industry in Nigeria if properly harnessed?

The potential is huge. A system of healthcare that is currently being patronized by more than 160 million people in Nigeria alone, and billions of people across the globe is obviously not an industry to joke with, except we don't know what we want. I hope you know that herbal medicine is just a small component of traditional medicine, and this sector alone is estimated to be worth USD 5 trillion by 2050.

How can traditional medicine be properly regulated in Nigeria?

Traditional medicine, like any other healthcare delivery system, can only be properly regulated by having a regulatory body for that purpose. This is because you cannot give what you don't have. A teacher cannot

regulate a lawyer.

Traditional medicine knowledge, especially among local practitioners, is often unwritten and is usually transmitted orally from one generation to another. How can this knowledge be preserved in Nigeria and is NNMDA doing something about that?

Documentation, Documentation, Documentation, that is all that we need. NNMDA is the only government institution with parliamentary backing to ensure that we reverse this unfortunate part of our traditional medicine. We are very clear about where we are going. NNMDA will become Nigeria's "new oil" making a positive impact on the nation's economy. In the last 10 months, we commenced a comprehensive electronic database of TMPs with their services/products, beginning with Alimosho LGA.

We are going to get this done in all the nearly 9000 wards in Nigeria; the shame of lack of documentation of traditional medical knowledge, leading to the dearth of information will vanish. Every part of this country, i.e. all the 774 local governments in Nigeria, will experience our activities in the next three years because the solution to our health problems lies within the local communities where those ailments also exist. We will establish functional research centers using the local people with knowledge of the plants, animals, and minerals within their communities to make our medicines. Any primary health that is not built around our traditional medicines is simply a continuation of colonialism and meant to continually make us beggars.



Declare state of emergency on natural medicine in Nigeria, NNMDA boss tells Tinubu

by Segun Kasali May 16, 2024



The Director-General of the Nigerian Natural Medicine Development Agency (NNMDA), Professor Martins Emeje, has called on President Bola Tinubu to declare a state of emergency on natural medicine in the country.

The DG, who spoke exclusively with *Tribune Online* on Thursday, noted that this will address challenges facing the country in all areas, especially that of precarious insecurity situation.

Emeje proposed the adoption of what he described as the Model of Needs Deployment, where requests will be made for items needed only and not

funds.

He said this is necessary because of the perception people have towards money handling and the fact that

they see people in government as untoward which is highly demoralizing.

The Pharmacist, therefore, solicited more government support to perform optimally and effectively in their responsibility.

"The only thing I want the President to do is to declare a state of emergency on natural medicine development in Nigeria.

"It is our own raw materials we use in making natural medicine. You know declaring that emergency means the president will focus his attention more on that place.

"If he can do that, it will be the greatest thing he has done. I am not asking for money.

"In fact, the model that I would like to implement if they will allow me and see how the country will turn around is called Model of Needs Deployment, where I will tell you all the things that we need but don't give me money.

"This is because a lot of things go wrong when it comes to money handling. There is mistrust. Once you are in government, people see you as a thief and such is highly demoralizing.

"The challenge is that of making us a top priority and giving us the support to do what we want to do," Emeje said.

Meanwhile, the DG revealed that plans are underway by the Agency to establish research farms in all the 774 Local Government Areas in the country.

According to him, peculiar medicinal plants to those states for specific diseases peculiar to those states will be cultivated.

Professor Emeje said through those farms medicinal products-making factories will be created and made available for the people of that place through herbal clinics.

He said such will give pride to the nation, increase foreign exchange, reduce or eliminate medical tourism and entrench national security.

"Right now, we are constructing the Establishment of Research Farms in several states, where peculiar medicinal plants to those states for specific diseases peculiar to those states are being cultivated.

"For now, Ondo, Plateau, Kano, Cross River, Nasarawa, Ebonyi, and Enuguare ongoing.

"And we will make sure we get to all the 774 local governments in Nigeria.

"So, we are going to establish those research farms, cultivate the medicinal plants in those states, create medicinal products making factory in that farm and make the products for the people of that place.

"Through those farms, we will establish herbal clinics in that local government so that people can go there

for whatever ailment.

"As such, Nigeria will get its pride. It will bring us foreign exchange. It will reduce or eliminate medical tourism and it will give us national security," he said.



Rising cost of drugs worsens steep rise in hypertension cases By Nkechi Onyedika-Ugoeze (Abuja) and Ijeoma Nwanosike (Lagos)

17 May 2024 | 4:15 am



Hardship, unhealthy lifestyles plunge more youths into hypertension Experts advocate regular BP checks, increased physical activity, lifestyle modifications

Minister of Health raises concern as one in every three adults is hypertensive

As Nigeria joins the rest of the world to commemorate World Hypertension Day

today, stakeholders in the country's health sector have identified the rising cost of drugs for the treatment of hypertension as a major concern and potential threat to the gains that may be derived from hypertension control initiatives.

This is as the Minister of Health and Social Welfare, Prof Ali Pate, decried the increasing number of people with the condition and attributed it to sedentary and unhealthy lifestyles. He, therefore called for the creation of awareness about hypertension to reduce its prevalence in the society.

According to the World Health Organisation (WHO), more than one billion people globally are living with hypertension, which is one of the leading causes of stroke, heart failure, chronic kidney disease and heart attack resulting in death or disability. Hypertension affects approximately 1.28 billion people worldwide, with two-thirds of them living in low- and middle-income countries.

Nigeria contributes significantly to the global burden of the disease. According to the Cardiac Society of Nigeria, about 38 per cent of adult Nigerians, representing four out of every 10 adult Nigerians or one of every three adults are hypertensive.

The Nigerian Hypertension Society (NHS) has, therefore, urged healthcare providers to cautiously use the most affordable and available effective and safe medicines for the treatment of hypertension.

President of the society, Prof. Simeon Isezuo, who stated this on Thursday in Abuja,

called on the government to take necessary measures to bring down the prices of medicines while advocating local production of drugs.

Isezuo urged the private sector, philanthropists and religious organisations to support the less-privileged by funding their treatment and enrolling them in healthcare insurance schemes.

He observed that hypertension is an inheritable disease that may affect multiple members of the same family and advocated that Nigerians strengthen their traditional African family system in the control of hypertension.

"These include sharing of information about hypertension, promotion of native African diet, and involvement in physical domestic activities instead of living them exclusively for house-helps. Families should support and encourage their members with hypertension to take their medicines regularly. Regular blood pressure checks should be encouraged in the family. Ultimately, every family or household or home in Nigeria should have a blood pressure apparatus for regular blood pressure checks."

May 17 every year is observed as World Hypertension Day since 2005. The aim is to create awareness and promote the prevention, detection and treatment of hypertension. The theme for this year is 'Measure Your Blood Pressure Accurately, Control It, Live Longer.'

Hypertension, also known as high blood pressure, occurs when the pressure in blood vessels is too high (140/90 mmHg or higher), it is common but can be serious or deadly if not treated.

Modifiable risk factors, according to WHO, include unhealthy diets, physical inactivity, consumption of tobacco and alcohol, and being overweight or obese while the non-modifiable risk factors include a family history of hypertension, age over 65 years and co-existing diseases such as diabetes or kidney disease.

To commemorate this year's World Hypertension Day, experts have advised that regular blood pressure checks, regular physical activity and lifestyle modifications can help maintain a hypertensive-free life.

In an interview with The Guardian, the National President of the Nigerian Cardiac Society, Prof. Augustine Odili, said cases of hypertension are increasing in the country not just among youths but the whole population, adding that the increasing risk factors include obesity and physical inactivity.

He lamented that the cost of hypertension drugs is rising because most of these drugs are imported, adding that the fluctuation of the foreign exchange rate is significantly affecting anti-hypertensive drugs, leaving a very terrible impact on hypertension control in the country.

He pointed out that the greatest risk factor for hypertension is age stressing that as people age, they become more hypertensive. He said: "Nigerians are getting bigger, the size you see people when you get into any social gathering was not the size people were 50 years ago, also physical inactivity is increasing, we are no longer as active the way we used to be many years back. Ours used to be an agrarian population, people

went to the farm and trekked for kilometers and trekked back when they finished their farm work, you no longer see those things again, people are no longer so physically active. The public transport system is so poor; people don't ride bicycles; even when you want to ride bicycles, the roads are so bad that you can't even try it. You can't take a walk around and all these are things that increase physical inactivity."

He explained that weight reduction and physical exercise can reduce blood pressure marginally, but warned that somebody whose blood pressure is 200/140 wouldn't say that he is going to treat the hypertension with exercise, but those lifestyle modifications are important even when taking drugs.

"The best way to manage hypertension is to use the drugs but lifestyle modifications help the drugs to be more effective in terms of reducing the quantity of the drugs you have to take."

Speaking on the theme for this year, a former president of the Nigerian Hypertension Society, Prof. Basden Onwubere, said hypertension is the commonest non-communicable disease in Nigeria, which is on the increase adding that a lot of people are still not aware that they have the disease and stressed the need for people to get checked regularly.

Onwubere noted that the economic situation of the country is presently hindering necessary treatments for a lot of hypertensive patients and this he said has alarming consequences, including sudden death.

According to the professor, the most recent research conducted showed that only 10 per cent of Nigerians who had hypertension knew while the remaining 90 per cent were unaware that they were hypertensive and a good number of them died suddenly from stroke or experienced heart failure without knowing that their blood pressure was the initial cause.

Speaking on the current cost of drugs and how it will affect those with chronic disease, the Director-General/Chief Executive Officer of Nigeria Natural Medicine Development Agency (NNMDA), Prof Martins Emeje, recommended the use of indigenous herbal medicine to treat hypertension.

According to him, natural medicines and their phyto-constituents can pass through millions of pathways to treat a particular disease unlike synthetic drugs, built to pass through a particular pathway, limiting the chances of effective treatment, especially when the individual develops resistance to the drugs.

"We have about five natural anti-hypertensive products currently and some of them are already approved by NAFDAC and all of them are natural, and development of resistance against it is impossible," he said.

Emeje also noted that these natural medicines are less expensive and therefore more affordable for hypertensive patients to purchase.

To curb mortality from the condition, the Minister of Health, Pate said the Federal Government in 2020 launched the National Hypertension Control Initiative, which provided screening services and treatment for persons with the condition. He,

therefore, stressed the need for more awareness to promote early detection and diagnosis. He added that the government is working with WHO, the Nigerian Heart Foundation (NHF) and other partners to reduce the burden of hypertension and other Non-communicable Diseases (NCDs) in the country.

Also, Dr. Abiola Awe of the Nigerian Heart Foundation advised Nigerians to avoid tobacco, alcohol, trans-fat and oil, as well as reducing salt intake, manage stress and exercise regularly to prevent hypertension.

The NHF stated that unhealthy foods should be taxed to discourage their consumption while legislation should be enacted to enforce appropriate labels of salt, fat and sugar contents on food packages. It further recommended the consumption of traditional African food derived from roots, stems and leaves, regular exercise and optimum weight for the prevention of hypertension.

Health

Vanguard News

May 17, 2024

Our four locally-formulated drugs can generate 3.8m jobs — NNMDA DG

By Chioma Obinna

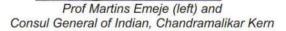
The Director General of the Natural Medicine Development Agency, NNMDA, prof Martins Emeje has said that the Agency's recently unveiled, locally formulated medications into tablets can

create at least 3.8 million jobs in Nigeria.

Emeje also said the solution to the cost of essential medicine remains the prioritization of local research and development to fast-track local drug production.

Making this claim during a celebration of his first year in office, he highlighted the NNMDA's achievement in developing the four oral medications using only materials sourced within Nigeria.

Emeje, said the achievement was historic for the West African region. The NNMDA recently unveiled four, locally-formulated oral medications made entirely with Nigerian raw materials.



Emeje believes these drugs have the potential to generate a staggering 3.8 million jobs once fully developed. He points to countries like India and China, where prioritizing local research and development has led to job creation and economic growth alongside improved healthcare.

"By harnessing our own resources," Emeje said, "we can not only make essential medicines more affordable but also create significant job opportunities within Nigeria and potentially across West Africa.

"The beauty of this area of research is that there's a solid bond, the connection between

agriculture and medicine."

He explained the exciting connection between locally produced medicine and agriculture. He emphasized that the raw materials for these medications are essentially agricultural products.

"By developing these medicinal products," Emeje said, "we're not just creating medicine. We're also creating functional foods, nutraceuticals, and dietary supplements – all derived from Nigerian agriculture."

This approach, Emeje argued, fosters a powerful economic ripple effect. It empowers farmers, creates jobs for transporters and skilled workers, and ultimately contributes to lifting Nigerians out of poverty.

Addressing the high cost of essential medicines in Nigeria, he emphasized that the NNMDA represents a beacon of hope for the country.

"The answer to expensive imported drugs lies in prioritizing local research and development for domestic drug production," Emeje declared. This approach, he believes, will not only make medicines more affordable but also contribute to Nigeria's self-sufficiency in healthcare.

"All we need is little support and we get there because the essential medicines are costly. They are all imported. When we begin to make our own, when you go to eat food in a restaurant, are you not able to eat food? When you plant your bitter leaf, your ugu, eforero, and all those things, you plant in your backyard and you harvest them. Are you paying anybody? You are not paying anybody.

"But those are the things we say we can make into appropriate dosage forms. We evaluate them scientifically and put them in the proper form that you can use. That's what countries are doing and we are competent, if not more competent than many of the people who are doing it across the globe. That's what we are saying. So that's the solution. The solution is the prioritization of local R&D for local drug production."

Emeje added that the healthcare delivery system as regards traditional medicine is a neglected area, and that is why the healthcare system is suffering the way it is suffering until the model is changed.

He criticized Nigeria's current healthcare model, stressing that relying solely on imported drugs and interventions is unsustainable and fails to address the needs of the vast majority of Nigerians.

"For ten years, I've advocated for a different approach. We need to prioritize local research and development, utilizing our own resources. This, as demonstrated by Asian countries, is the key to achieving universal health coverage."

Emeje emphasized the significant number of Nigerians who cannot afford imported medications. He stressed the urgency of finding a domestic solution.

The NNMDA proposes a "bio-farming model" as a key strategy. This initiative aims to cultivate medicinal plants throughout Nigeria, starting at the local government level with plans to expand further.

Corroborating his views, the head of medicine at Bayero University Kano and Aminu Kano Teaching Hospital, Professor Uloko Andrew, highlighted the compatibility of orthodox and natural medicine, stating that many Nigerian doctors already integrate both approaches.

Uloko further emphasized this point by explaining that most conventional medicines have origins in plants. These natural ingredients are refined and standardized for safety and efficacy in the form of tablets, syrups, etc.

"Natural medicine doesn't have to be harmful," Emeje reassured. "We advocate for well-researched and refined natural medicines to minimize potential side effects. Just like

complementary medicines and supplements used by doctors, these can be valuable additions to healthcare.

Speaking, Chandramalikar Kern, Consul General of India, commended Professor Emeje's background in Indian studies. He emphasized the importance of traditional medicine, calling Ayurveda and Yoga "two beautiful gifts to civilization." Kern expressed his support for the NNMDA's efforts to develop indigenous medicines.

He envisioned that it would not only benefit Nigerians but also potentially generate foreign exchange for the country in the future. This, he argued, is a critical step towards not only reducing healthcare costs but also creating significant job opportunities.



21/05/2024

Admin

NNMDA Celebrates DG's Full Year in Office.



Professor Martins Emeje, the Director-General of the Nigerian Natural Medicine Development Agency (NNMDA), has been honoured for his 365 days of service.

In appreciation of his commitment to the institute for the past one year, friends and associates from many backgrounds, including staff members, convened at the institution to discuss his sportsmanship.

The DG, taken aback, thanked everyone for thinking it appropriate to honour him in **Prof. Martins Emeje** his reply.

Nonetheless, he praised President Bola Tinubu's administration for its insistence on performance-based compensation, stating that this is the agency's hallmark.

The agency, according to Emeje, is about to start using airplanes for its operations, he therefore instructed the employees to fasten their seat belts.

He said: "I want to sincerely appreciate you all for deeming it fit to celebrate the office as it clocks a year today.

"I am using this opportunity to tell you all to tighten your seat belt as the agency is about to transition to flying in its activities.

"It is important to note that the agency will begin to do more field activities as the next 365 days commence. "It is also imperative to laud the administration of President Bola Tinubu for insisting on performance-based salary, which is what we have been doing"

FG agency launches e-documentation for traditional medicine practitioners

By Sodiq Ojuroungbe May 24, 2024

The Nigeria Natural Medicine Development Agency has initiated an e-documentation programme tailored specifically for Traditional Medicine Practitioners to promote traditional medicine and facilitate quick access to vital information.

The agency's Director General, Prof. Martins Emeje, said the initiative is expected to improve traditional medicine's integration into the larger healthcare system as well as maintain Nigeria's rich legacy of traditional medicine.

Speaking at an event in Lagos, Emeje said there is a need to have proper documentation of traditional medicine to help Nigerians make necessary choices and inquiries.

He said, "Traditional medicine is peculiar to each environment and this means that our job and responsibility is to work together with the traditional medical practitioners to render services to communities through standardization.

"We have a programme starting in Lagos State where we are going to document every traditional medical practitioner, the services they render, and products they provide, as well as digitalized such so that from anywhere in the world when you want to have information or access to any traditional medical practitioner, you can do it on the touch of a button."

Emeje highlighted the importance of TMP and how their knowledge of ingenious medicine is vital to the growth of natural medicine in the country.

"We depend on the knowledge of these traditional medical practitioners, the folkloric knowledge they provide and their traditional medicine is peculiar to the culture. We have decided that the era of people trying to belittle or disrespect traditional medical practitioners is gone," he added.

The Consul General of India, Shri Chandramaouli Kumar Kern, said the agency is improving every day under the leadership of the DG, adding that India thrives on the use of its indigenous medicine.

He announced plans to support, partner with the agency and introduce Nigeria to Indian natural medicine.

"The DG has some Indian connection because he studied in India. India is a land with gifts given by nature from the indigenous things and the knowledge we got from our forefathers. NNMDA is required to calibrate, standardize, and develop drugs from indigenous sources to help Nigerians and over time add to foreign exchange. We will support this initiative," he assured



Nigeria can halt expensive drug imports with local research, says NNMDA boss



By Angela Onwuzoo

The Director-General of the Nigeria Natural Medicine Development Agency, Prof. Martins Emeje, has said the solution to the country's dependency on drug importation lies in prioritizing local research and development to boost local production.

Emeje, a professor of Pharmacy, said Nigeria could develop herbal medicines to cure many diseases that appear incurable through orthodox medicines if it invests in local production of medicines.

The don, who spoke at a recent event in Lagos to mark his one year in office, said the prioritization of research and development for local drug production will not only make drugs more affordable to Nigerians but also contribute to the country's self-sufficiency in healthcare.

The NNMDA boss maintained that local drug production remains key to affordable medicines in Nigeria.

In 2019, the National Agency for Food and Drug Administration and Control said Nigeria imports 70 per cent of the medicine being consumed in the country.

The Director-General of NAFDAC, Prof. Mojisola Adeyeye, who disclosed the figure, said the remaining 30 per cent were being produced by local manufacturers.

Emeje emphasized that Nigeria needed to harness its abundant bio-resources to improve healthcare delivery.

He said, "The answer to expensive imported drugs lies in prioritizing local research and development for domestic drug production.

"This approach will not only make medicines more affordable but also contribute to Nigeria's selfsufficiency in healthcare.

"All we need is a little support and we get there because the essential medicines are costly. They are all imported."

Highlighting the NNMDA's achievement, the pharmacist said the agency had developed four herbal products for the management of diabetes sickle cell disease, upper respiratory tract infections, and fast

aging.

He said the four oral medications that were unveiled in March by the Minister of Innovation Science, and

Technology, Uche Nnaji, were developed using only materials sourced within the country.

The professor said the oral medications when locally formulated into tablets could create over three million jobs, adding that NNMDA represents a beacon of hope for the country.

He stated that countries like India and China were prioritizing local research and development which he noted had led to job creation and economic growth alongside improved healthcare delivery.

"By harnessing our resources, we will not only make essential medicines more affordable but also create significant job opportunities within Nigeria and potentially across West Africa.

"The beauty of this area of research is that there's a solid bond- the connection between agriculture and medicine," he said.

He pointed out that the raw materials for these medications were essentially agricultural products.

He reiterated, "We need to prioritize local research and development, utilizing our resources. This, as demonstrated by Asian countries, is key to achieving universal health coverage."

"By developing these medicinal products, we're not just creating medicine. We're also creating functional foods, nutraceuticals, and dietary supplements—all derived from Nigerian agriculture."

Head of Medicine at the Bayero University, Kano and Aminu Kano Teaching Hospital, Prof. Uloko Andrew whose speech centred on the compatibility of orthodox and natural medicines, stated that many Nigerian doctors had already integrated both approaches.

According to him, most conventional medicines have their origins in plants.

"These natural ingredients are refined and standardized for safety and efficacy in the form of tablets, syrups, etc. Natural medicine doesn't have to be harmful.

"We advocate for well-researched and refined natural medicines to minimize potential side effects. Just like complementary medicines and supplements used by doctors, these can be valuable additions to healthcare," Uloko said.

Also speaking, Consul General of India, Chandramalikar Kern commended Emeje's background in Indian studies while highlighting the importance of natural medicine.

Kern pledged his support for the NNMDA in its efforts to develop indigenous medicines, adding that it would not only benefit Nigerians but also potentially generate foreign exchange for the country in the future.



My father and I were roommates in university —NNMDA DG

By Segun Kasali May 26, 2024



Martins Emeje is a Professor of Pharmacy and the current Director-General, Nigerian Natural Medicine Development Agency (NNMDA). In this interview with SEGUN KASALI, he shares his life story, among other issues.

As a teacher's son, what was your ambition?

Most of us who were children of primary school teachers never thought of becoming something because someone is something. You just go to school with your parents even when you are not mature enough to start school. My father was a primary school headmaster at Local Education Authority Primary School, Enjema in then Benue State (present Kogi State). Then, it was a big issue to be a primary school teacher not to even

talk of the headmaster. We have always stayed in quarters even though it was in the village. I followed my dad everywhere because he was always being transferred from one place to another. But, as we matured, you now started saying I wanted to become an engineer like I wanted to be a pilot when I was in primary school.

How did a village boy see being a pilot as a career?

This is a very good question. There were two things we did in the village as primary school children. There was this white bird, cow egret, locally called 'lekeleke' and you know there is a particular time of the season that you see them around. Now, while they are flying in the sky, we come out and shake our hands in the air like birds, chanting 'Lekeleke, give me your finger,' and you will thereafter see some white marks on your fingers. Now when I look back, I always wonder what happened. Two, whenever we see an aircraft in the sky with a white trail, they tell us that the said aircraft were carrying human beings. So, my ambition at that time was to pilot an aeroplane so that I could take people up.

But you ended up being a pharmacist?

At home then, there was no hospital. I was not born in the hospital; I was born at home. My father was one of the most educated people, but traditional medicine was what was affordable and accessible to our people at that time. As it was then, so it is up till today. What the people in the village can afford and access is traditional medicine. So, growing up, there was no sickness I had that my dad or my mum did not fetch herbs for in the backyard. They cut different types of herbs, clean them, put them in clay pots and cook. By the time brown liquid is popping out of the pot, you will given to drink and such sickness is gone. Without those things, I wouldn't be alive today. And as I am talking to you today, many children in the villages are surviving because of traditional medicine. And from that time, I wanted to be a doctor because anyone we

see giving out medicine then was a doctor. So, it was while in secondary school that we began to hear that people who make the medicine are different from the people who administer injections. While those administering injections are called doctors, those who make those medicines are called pharmacists. So, I then changed my ambition to become a pharmacist because I wanted to make medicines.

You must be brilliant then?

Right from my primary school education level to the PhD level, I was never number three in academic ranking. And you know, it was a privilege being a child of a headmaster. If you were, you would be respected and looked up to by the children of others. When I was in primary school, one of my father's contemporaries was even the speaker of the Benue State House of Assembly, Mr. Reuben of blessed memory. The children of the teachers were seen as privileged children because the respect the country had for teachers then was enormous. They treated teachers specially. So, if you are now a child of a headmaster, you would be rated differently.

Differently?

Yes. Let me give you an instance. There is something called handcraft, which is what you use your hand to make. They usually use agricultural produce to make those things, and it is graded as part of your continuous assessment. But children of the headmaster will not do such. I think the children of teachers were also exempted. Your other classmates knew that you were lucky not to have been a participant. I think that was the major privilege that one got. Other things were not privileges but for me, demerits.

How?

If you come late to school and other kids are getting two strokes of cane, you will get four, because you are the child of a teacher. In our time, your punishment is double as the child of a teacher if you commit any offence. Number two is you cannot fight in a duel or brawl if you are the child of a teacher. If you fight, you will be fished out on the assembly ground in the morning and two students will be mandated to hold you; one will hold your two hands while the other will hold your two legs and they will use a cane made from a stick to flog you seriously.

Did you have this experience?

No. I never fought. There was no time for that.

What is your unforgettable experience?

The only thing I can never forget because it has moulded my life is the family. What I cannot forget is my father cooking for me. This is because I grew up in a society where I know that men don't cook but command their wives to cook. Yet, I saw my father cooking for me whenever my mum travelled. And I am saying this because my wife knows even though she sees it as a disadvantage. She knows that I have never told her to go and cook. Once I am hungry and even though she mistakenly hesitates, I have already gone to the kitchen to cook for everybody including her. All my children grew up with that. Nobody waits for anybody.

So, your dad infused that value in you?

Let me also tell you this; my father was my roommate in the university. And for the years he stayed in the university while I studied Pharmacy; he cooked food for me throughout.

You mean your dad was also in school while you were?

Yes, he was also a student studying Education. It was a wonderful experience being in the same school and hostel with my dad.

Yes. That is why I am unable to forget that he just departed. I don't think there is any trait I have that is not from my dad because he was my closest friend. And he had an NCE. He started teaching as a Grade 2 teacher. While I got admission to study Pharmacy, he got admission to study Social Studies Education in Zaria.

How did you handle social life in the university?

No, I did not have a social life and this does not have anything to do with my dad. It was not even because of Christianity but my course of study. Most people who study pharmacy do not have a social life.

Does it suffice to say your dad's presence in the university shaped your performance?

Yes, it did. This is because I was not among the students who go back home to look for food. I was not among those who cooked food at home. This was because my dad did those things for me except when he went on holiday. So, his presence had a positive impact on my studies in school, but it was not the reason I was a top graduate from the school because I did not become intelligent in the university. In primary and secondary school and the university, I was never number two.

So, you had no relationship in the university?

No. And it was not because of my dad. At one point, I wanted to be a priest. And as a reverend father, you will not have a girlfriend. I was the president of Catholic Pharmacy Students. So, I was the one in charge of the fellowship. I was the one telling students they should not have girlfriends. I was the one who told students it was a sin and one would go to hell if one did that. I was a virgin throughout my university.

Weren't you seen as a daddy's boy in the university?

Oh no! They did not even know my dad was around. It was only my roommate that knew my dad was. As I am talking to you now, many of my classmates would be surprised when they hear this because they never knew. And only my roommate knew because he was my best friend and also became my best man during my wedding ceremony.

How did you meet your wife then?

It was in the church. I saw her and I knew that was my wife. Whenever I was on break in the university, I used to teach in a secondary school free of charge. The best student in Chemistry and Biology was Michael Egwu and he became my friend. His father was the most senior pastor in charge of all the pastors in the United Evangelical Church. The day I went to his house for the first time was when I saw her at the entrance of the church. I got to know later that it was choir practice that was going on. When I saw this girl, I asked Michael who the girl was. I did not know she was Michael's immediate elder sister. So, I told the brother she looked like my wife and that was all. I did not even ask her to be my girlfriend honestly because I did not know how to tell anybody to be my girlfriend. Up till today, I have never told any girl to be my girlfriend. This was because I didn't even know how to do it. I don't know how to look at a girl and say come and be my girlfriend. But my wife and I became friends, just like I did with everyone in the family. And it wasn't because of her that made me visit the house often. But one day while they were seeing me off, I told her Michael, her brother, had been coming to our house and asked when she would come to visit me at home. She said she would come. So, she came with her brother once and we became friends.

You never told her to be your girlfriend?

Yes, I never did. It just happened naturally. One afternoon, I told her 'won't you get married?' She queried why I asked that kind of question. I said it was because I was thinking of marriage and whenever it is time to marry, I would like to marry my friend. I then told her she was the only friend I had.

Which of your children is taking after you?

I have four children. When I see my children refuse to be cowed from saying what is on their mind, I used to tell myself to calm down because 'that is what you used to do o'. And I see it in everybody, including the girl among them.

How would you describe your personality?

I am a proud village man who is 100 per cent indigenous and trained. I am in love with this country and I have been given the opportunity to serve.

Looking back, is there anything that still breaks you down?

The only thing that is my pain and that I am unable to remove is that my father died. And it may sound stupid to anybody who hears this from me. It is not that I don't know that man will die or that I will die. I think it is more acceptable to me that I died than to see my father die.

As DG of NNMDA, you mentioned having indigenous hospitals. What is the plan?

Yes. I plan to have indigenous hospitals in the 774 local governments in the country. If I do not create a hospital to harness and utilize the things that made me survive, I will be a failure. And it will be the greatest achievement of this government. Importation can never change our healthcare delivery system.



HEALTH Anniversary: Agency Produces Herbal Medicines For Treatment Of Diabetes

June 3, 2024 By Folasade Akpan

Prof. Martins Emeje, the Director-General, Nigeria Natural Medicine Development Agency (NNMDA), says the agency has produced four medicines in appropriate dosage forms, in its drive to promote the use of herbal medicines.

He told our correspondent in Abuja on Monday that the four medications were part of activities carried out by the agency in the last one year.

According to Emeje, a professor of Drug Delivery and Nanomedicine, the agency converted natural foods and herbs indigenous to Nigeria to drugs to treat sickle cell, diabetes and slow aging process.

He added that the products, which are organic in nature, were launched on March 8.

He explained that "the medicines are Aberesine, used in the management of Diabetes Mellitus and Namdasan for the management of sickle cell disorder, which is a huge issue in the black population of the world and Nigeria is home to more than four million sufferers.

"We have that product containing at least eight different plants indigenous to Nigeria", he added.

The Director General also said that the first herbal Nano-product in Africa called NanoBere was also developed by the agency, and used in the treatment of Upper Respiratory Tract Infections.

He added that an anti-aging agent called Namdamune was developed by harnessing natural plants and herbs that do revitalization, build the immune system and is responsible for slowing aging process.

He said "we got all these done in one year and it is not just about health, the significance of this is that Nigeria can develop its own products locally and manufacture locally, and that is medicine security.

"It means that the life of your people is in the hands of your people because the greatest disservice you can do to yourself is to have your own life in the hands of another person."

He also said that the production of the herbal medicines resulted to job and wealth creation.

"This is because unlike the synthetic products that are imported, the basic materials used in making these medicines are from farms, local plants, animals, insects and sea animals all in Nigeria.

"The ingredients are abundant in the nation and farmers are needed to cultivate the herbs.

"So, you can imagine the millions of people that we need to cultivate one of the plants so by our calculation in producing one of our products, the process from the farm to the final production, we would have employed 3.8 million Nigerians.

"You can then imagine for four products, how many would have been employed?.

"So, if by two years of this administration, we are able to produce 10 medicines, multiply 3.8 million by 10 that's the number we would have employed", he said.

Emeje said that the aim of the agency is to use science and technology to innovatively address and put the herbs and plants in a form that they would not just be useful to Nigerians, but to also export them and get foreign exchange for the country.

This, he explained, is because the herbal medicine market alone is predicted to be about five trillion dollars in the next 13 years.

He, however, said that the plan of the agency is to have good agricultural and cultivation research farm in each political ward in the country.

According to him, the agency will establish a herbal manufacturing factory, using the prototype approved by the National Agency for Food and Drug Administration and Control (NAFDAC).

He also said that the agency subjects itself to the evidence-based regulatory approach that NAFDAC is using for products regulation.

Additionally, the agency would establish a garlic research farm in Benue because studies have shown that there is high prevalence of asthma in Benue, he said.

"We will produce medicines for asthma in Benue because we do not want the people in Vandekiya to travel to Makurdi before they can get the products.



NNMDA DG Vows To Stop Importation Of Foreign Medicine

Segun Kasali June 5, 2024



The Director-General of Nigeria Natural Medicine Development Agency (NNMDA), Professor Martins Emeje, has expressed the Agency's determination to stop importing foreign medicines.

According to him, this will be done through indigenous Research and Development for local drug production, harnessing the land to determine the future.

He stated this at the World Environmental Day titled Land Restoration

Prof. Martins Emeje

Desertification and Drought Resilience, with the slogan, "Our Land,

Our Future, organized by the Indian Consulate on Wednesday in Lagos.

This was just as he noted that Nigeria is ready to lead the development of its Natural resources to create jobs, wealth, and the well-being of its people.

The DG explained that NNMDA is passionately leading the renewed hope of Mr. President in this respect.

Emeje described Nigeria as full of untapped natural resources, such as green gold, expressing determination to stop importing foreign medicines through indigenous R&D for local drug production, harnessing the land to determine the future.

"We are determined to stop the importation of foreign medicines through Indigenous R&D for local drug production, harnessing our land to determine our future.

"Nigeria, through NNMDA, is fully charged to lead the development of our natural resources to create jobs, wealth, and well-being for our people.

"NNMDA is passionately leading the renewed hope of Mr. President in this respect.

"Our land in Nigeria is full of untapped natural resources, which are green gold," he said.

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Local Drug Production, A Must For Affordable Medicines, Healthcare In Nigeria — Prof. Emeje

By Chioma Umeha On Jun 12, 2024

... Says Traditional Medicine Development Crucial To Achieving UHC



Prof. Martins Emeje, Director-General/Chief Executive, Nigeria Natural Medicine Development Agency (NNMDA) and a distinguished Professor of Drug Delivery and Nanomedicine, in this interview with CHIOMA UMEHA speaks on why Nigeria must embrace traditional medicine development, local research, and development (R&D) as well as indigenous drug production as the only sustainable way forward to affordable medicines and Universal Healthcare Coverage, among other

issues. Excerpts:

There are claims that the devaluation of the foreign exchange contributed to the rising cost of drugs in Nigeria. The devaluation is affecting manufacturers' ability to buy raw materials and equipment to produce. How do you see this development?

Like I have been saying for the past ten years, the prices of anything you don't produce cannot be under your control, so, whether there is devaluation or not, as long as local R&D is not a priority thereby making local drug manufacturing a dream and essentially making us a market for those who make local R&D as well as local drug manufacturing a priority in their countries, international commerce will continue to decide our local prices. We are importing everything, even from countries where we teach their scientists how to do research, and you don't want prices to increase. Let us stop blaming devaluation and do the needful. The Nigeria Natural Medicine Development Agency (NNMDA) is already implementing its roadmap towards solving this problem, and you will see the results soon.

Some analysts have blamed the exit of big drug makers in the country on the impact of high forex. How do you react to this?

There were no big drug makers in Nigeria, I am a pharmacist, and I can tell you that, there were and still no big drug makers in Nigeria. We only have manufacturers who have been taking advantage of our total dependence on drug importation to bleed us die. Go to Asia and see how big pharma operates. Mention one API or excipient-making facility set up by the so-called big drug makers. My reaction to this is that it will force us to look inward and develop our own natural resources, make our medicines, establish our own responsible pharma industries, and stop behaving like slaves who prefer to continue to eat from porcelain plates rather than seek freedom.

What is the way forward for drug importers and manufacturers who depend on imported active pharmaceutical ingredients (API) given forex allocation?

I'm sorry, but the only sustainable way forward is local research and development (R&D) for local drug production. Which one is forex allocation? Nobody should be allocated anything. Is it not business they are doing? How are the millions of people in our villages where there are no health facilities benefitting from the forex allocation?

Would you recommend import rebates and special Forex allocation for drug importers and manufacturers? Should they be offered import rebates?

I am the wrong person to be asked this question. I have been consistent in my struggle for homegrown R&D for local drug manufacturing. I recommend an increase in import duties on all finished drug products and total removal of any form of rebates on drug importation if we must import. By so doing, manufacturers who currently prefer trading will begin to think; that innovation can never come out of buying and selling.

Some have urged Nigeria to build an industrial base to manufacture active pharmaceutical ingredients (APIs) and pharmaceuticals.

That is what I have been calling for, but we must also do it properly, that is as a product of research, development, and innovation; again, check countries that established functional pharma parks, it is the hub for science, technology, and innovation. We can make our own Excipients, Active Crude Extracts (ACE), and Active Pharmaceutical Ingredients (API) here in Nigeria. The most important infrastructure needed to get this done is human capital, and we have them. We even have Nigerian professionals at home and in the diaspora who are ready to offer their skills for free. Since I became DG about a year ago, about six Nigerian professors and professionals have been working with us free of charge, and three of them are in the diaspora.

What are your recommendations on the issue of power supply, technology, drug supply chain, and regulatory landscape?

Power is not my area of expertise, I don't dabble into what I don't know. But, I have lived in many countries before to know that, most countries that have overcome power challenges did by using more than one source of power generation. See the enormous sunlight we are blessed with here, or is it wind, water, or coal in my village at Agaliga? We have abundant sources. I thought by now all the states would have started developing their own power infrastructure. I thought everybody was blaming the federal government when power was exclusive. What is stopping states now? On the drug supply chain and regulatory landscape, I can tell you as a pharmacist who has been in this space for over two decades that, the current leadership of the Pharmacy Council of Nigeria (PCN) and the National Agency for Drug Administration and Control (NAFDAC) are about the best we have had in recent history. Do you know that NAFDAC has put the country on the map of serious countries when it comes to regulation? While I am not their spokesperson, I speak because I know. So, as it stands today, the supply chain and regulatory landscape is under unprecedented transformation.

Others have called for a strengthened health insurance scheme attributing the high cost of medicines and healthcare to out-of-pocket expenses.

Please which of the health insurance schemes do we want to strengthen? Anybody talking about health insurance in Africa without making traditional medicine the core of the strategy is either not being sincere, deliberately mischievous, or out of touch with the realities in Africa. Imported models for health insurance are a joke. I was president of the FMST Cooperative Thrift and Credit Society for four years, asking SMEDAN and over 2000 civil servants what we did with that cooperative. See, there is no rocket science in insurance; our poor rural dwellers are already doing local insurance, instead of developing our own models, we want to use copied models.

There have been calls for industrialization and increased funding of the health sector. What are your perspectives on this?

Funding can never be enough, so I agree. But more importantly, there is the need to change strategy; let us look inward. The most potent strategy to renew the hope of our people is to go back to our abandoned cultural heritage. On the call for industrialization, it is not by calling, industrialization is not called into existence, it is achieved through science, technology, and innovation QED.

With the increased shift of patients to alternative medicine practitioners, some people have canvassed for the Federal Government to invest in alternative medicines to fill the gap. What are your recommendations?

I don't know what you mean by alternative medicine practitioners, but if you mean our indigenous medicine, it is not alternative, rather, it is the imported medicine that is alternative. I believe as the DG of the only indigenous medicine development agency and a western-trained pharmacist who went back to school to study traditional medicine who has done research in this area for over 20 years, and who has been consistent on the call for both government and private sector to invest in indigenous R&D, you already know my recommendation; Make indigenous health research and development a priority, simple. Stop the importation of all drugs into this country. Traditional medicine development is a must if we want to achieve Universal Health Coverage (UHC).



igeria Must Embrace its Roots to Flourish in Pharmaceuticals – NNMDA DG

By Temitope Obayendo 02/09/2024

Director General of the Nigeria Natural Medicine Development Agency (NNMDA), Prof. Martins Emeje



To reposition the Nigerian pharmaceutical industry in the global market and enhance economic empowerment, the nation must return to its roots and leverage its rich ecological base as a cornerstone of primary healthcare, says Professor Martins Emeje, Director General/CEO of the Nigeria Natural Medicine Development Agency (NNMDA).

In an exclusive interview with Pharmanews, Emeje emphasized the need for Nigerian scientists to develop robust, home-grown protocols to validate the country's rich traditional knowledge. He argued that relying on orthodox approaches alone is

insufficient to achieve universal healthcare in Africa.

Emeje called for the involvement of all stakeholders—agriculturists, environmentalists, medical researchers, practitioners, regulators, policymakers, religious, and traditional leaders—in research and development efforts to standardize and globalize Nigeria's herbal medicines.

The NNMDA chief also stressed the importance of documenting ancestral knowledge and combining it with modern evidence on safety and effectiveness. He proposed integrating this knowledge into school

curricula as the most sustainable way to advance Nigeria's natural medicine sector, aligning with the third vision of the Declaration of Astana.

Below is the full interview:

Congratulations on your first year in office as the director general/chief executive officer of the Nigeria Natural Medicine Development Agency (NNMDA). Based on your research so far, which natural resources in Nigeria would you identify as the most promising for drug development, and how can these resources be harnessed effectively?

It is difficult to say which natural resources are the most promising for drug development because, within one year in office, my team and I have identified 115 very potent plant and plant-based resources, from which we have developed four oral solid dosage forms for the treatment and/or management of various diseases. These were launched by the Minister of Innovation, Science, and Technology, Chief Uche Nnaji, on 8 March 2024.

I should note here that it was the first time a solid dosage formulation had ever been developed at NNMDA and the first time any government agency in Nigeria had launched four phytomedicines. The products are now ready for clinical trials. They are designed for the management and/or treatment of upper respiratory infections, anti-ageing, sickle cell disorder, and diabetes mellitus.

Additionally, we have received the NAFDAC assessment report on 18 of our products, with listing approval granted for five. You can see, therefore, that we are unmatched in this space when it comes to performance. Our herbal medicines for treating sickle cell disorder, ageing, immune enhancement, upper respiratory tract infections, hepatitis B, prostate, colon and breast cancers, malaria, erectile dysfunction, vaginal infections, diabetes, and skin infections are ready for uptake by serious pharmaceutical companies. This makes it difficult for me to simply name the most promising natural resource. However, our top three products in terms of demand are those for ageing, erectile dysfunction, and arthritis.

Researchers often mention several setbacks that prevent the integration of natural medicines into conventional medicine in Nigeria. What do you see as some of these bottlenecks, and how can they be addressed?

In my view, the problem lies with us as a people; our appetite for foreign products is unbelievable, and I can trace this to our colonial background, which we have unfortunately refused to shake off. It is not only Nigeria that was colonized, but Nigeria is among the few countries that buried its culture with colonialism.

You see, those countries whose natural medicines we now admire were developed by their scientists and professionals working together. In our case, it is even our own scientists and professionals who view our indigenous medicines as unscientific, dirty, and fetish. The irony is that many of those who condemn natural medicines have never seen any serious equipment outside of textbooks.

Thousands of years before the advent of colonialism, our people healed themselves using natural medicines, but today, we have completely surrendered everything about us to foreign medicines. Imagine if the bone-setting technology, which is peculiar to us, existed in the 'oyibo' (foreign) lands—we would be trooping there, not only to repair fractures but to even do PhDs in bone-setting because they would have developed curricula for it. But here we are, even ashamed to talk about it.

The best way to address this is through education, and my agency recently received accreditation from the National Board for Technical Education (NBTE) in that respect. We have also inaugurated a national committee to look into this.

I'm sorry, but I do not support integration; let every sector develop on its own. Those who don't understand what we are talking about should concentrate on what they know, leaving us to do what we know. So, instead of integration, I propose "co-occurrence". Our colonial mentality and inferiority complex, seeking foreign validation, is currently our greatest bottleneck.

Much has been said about partnerships to drive the development of medicinal plants, but little is seen on the national scene. How can partnerships between academic institutions, research centres, and

the pharmaceutical industry be strengthened to accelerate natural drug development in Nigeria?

As you probably know, I am the first scientist in Nigeria to have practically bridged the gap between academia and industry. My friend, Pharm. Ignatius Anukwu, and I, as national chairmen of industrial and academic pharmacists respectively, brought academia and industry together through a deliberate and well-designed process that eventually led to the launch of the first herbal medicine jointly owned by industry and academia in Nigeria. So, there is no better model for driving medicinal plant development—or any drug development effort, for that matter—than a partnership between academic institutions and the pharmaceutical industry.

The problem is that most of our pharmaceutical industries don't seem interested in R&D for medicinal plants. The reason is not far-fetched; it is easier and more lucrative to import. Unfortunately, this can never lead to national development, and it exposes everyone to the dangers of medicine insecurity.

You have been in the research and development industry for years. What strategies can Nigeria adopt to position its natural drugs in the global market, and how can this enhance the country's economic empowerment?

To position Nigeria's natural drugs in the global market and enhance the country's economic empowerment, we must return to our roots, which undoubtedly have a strong ecological base, so that we can make them the core of our primary healthcare delivery system. Secondly, we must design home-grown yet robust protocols to validate our traditional knowledge, rather than using orthodox approaches that may not be sufficient to support the attainment of universal healthcare in Africa.

Furthermore, we must involve all stakeholders—agriculturists, environmental activists, medical and health researchers, practitioners, regulators, policymakers, and religious and traditional leaders—in R&D. Another strategy is the documentation of ancestral knowledge of traditions, combined with modern evidence on safety and effectiveness. The best way to achieve this sustainably is to introduce it into school curricula, enabling the country to achieve the third vision of the Declaration of Astana.

In addition to existing policies, what other plans should the Nigerian government implement to support natural drug development?

It is very simple: make indigenous health research and development a priority, stop the importation of drugs into this country, and make natural medicine the core of Universal Health Coverage (UHC). One of the most significant advantages of indigenous medicines (herbal and traditional medicines) is their accessibility, affordability, and acceptability. However, as a nation, we have neglected the development of this natural heritage. We must agree to liberate ourselves, decolonize our minds, develop our own medicines, design our own "emergency authorization" models, and reject our thirst for foreign products and our inferiority complex. Anyone talking about UHC in Africa without making traditional medicine the core of the strategy is either not being sincere, deliberately mischievous, or out of touch with the realities in Africa. The Nigeria Natural Medicine Development Agency (NNMDA) is already implementing its roadmap towards solving this problem, and you will see the results soon.

How can the development of medicinal plants contribute to the economic empowerment of Nigeria, particularly in terms of job creation, revenue generation, and export potential?

Our modest in-house estimate shows that with the cultivation and full exploitation of just one medicinal plant for product development, 3.4 million jobs could be created, generating over 100 billion naira in foreign exchange. A brief description of the global herbal trade should help clarify this point, although Nigeria will not benefit from this significant revenue unless we deliberately invest in the development of our medicinal plants.

As I mentioned earlier, today's commercial medications and pharmaceuticals contain active components derived from plants in about 40–60 per cent of cases. People across the globe are becoming more health-conscious, increasingly avoiding synthetic chemical products in favour of natural, organic items in their daily lives.

The acceptance of medicinal plants extends beyond Nigeria. For instance, the Food and Agriculture Organisation estimates that 77 million acres of land are used to produce 330 million tonnes of medicinal plants worldwide. Even developed countries like Japan, the USA, and Europe are major consumers of medicinal plants, while India and China are the most important global suppliers. Over 70 per cent of the global demand for herbal medicines is met by China and India, with India alone exporting raw herbs valued at USD 330.18 million.

The global trade in value-added extracts of medicinal plants and herbal products reached USD 456.12 million in 2017–2018. The most significant suppliers of medicinal plants in Africa are Egypt and Morocco. This market is anticipated to grow at a compound annual growth rate of 6.6 per cent from 2015 to 2025, reaching USD 35.4 billion. According to a World Health Organisation (WHO) forecast, the global herbal market is expected to rise from its current level of USD 62 billion to USD 5 trillion by 2050.



September 5, 2024 by Our Reporter

NNMDA lists economic, health gains from commercialising local medicinal plants

By Adekunle Yusuf, Emmanuel Chidi-Maha and Princess Iduh



The Director General of the Nigerian Nigeria Medicine Development Agency (NNMDA), Prof. Martins Emeje, has emphasized the significant economic and health advantages of commercialising local medicinal plants. In an exclusive interview, Prof. Emeje, a distinguished pharmacist and expert in pharmaco-economics and traditional medicine, provided an insightful analysis of how the strategic use of indigenous herbs could revolutionized both Nigeria's economy and healthcare sector.

His discussion highlighted the considerable economic benefits that could result from the systematic cultivation of medicinal plants. Using a recent example of a medicinal plant approved by the National Agency for Food and Drug Administration and Control (NAFDAC)

for malaria treatment, he illustrated a compelling scenario. Allocating 10 hectares of land for cultivating this plant could trigger a cascade of economic advantages. If Nigeria expanded this cultivation to 30 hectares, the impact would be even more pronounced. In this model, managing each 10-hectare plot would require approximately 20 workers, amounting to 60 jobs for just the farming phase. This figure represents the initial employment boost. Following harvest, the need to transport the plants to processing facilities would create additional jobs in the transportation sector. Prof. Emeje likened the logistics of this process to the transport network employed by the Independent National Electoral Commission (INEC) during elections, suggesting that similar coordination could significantly impact employment in transportation.

Beyond transportation, once the raw materials arrive at processing facilities, further job opportunities would arise. Skilled workers in fields such as chemistry, biology, botany, and pharmacy would be required

for sorting, cleaning, drying, and manufacturing processes, thus stimulating broader economic activity. Prof. Emeje stressed that the creation of processing facilities would spur growth in related industries, including quality assurance laboratories and manufacturing units, addressing local unemployment and economic hardship.

The NNMDA DG's vision extends to a transformative shift in healthcare delivery through the integration of traditional medicine with modern pharmaceutical practices. He proposed the establishment of herbal clinics or wellness centres based on medicinal plant farms. These centres would offer patients a unique therapeutic environment, utilizing fresh, locally sourced herbs for treatment. Such wellness centres could serve as an alternative to conventional healthcare facilities, potentially reducing the need for medical tourism. By providing a holistic approach to health, Nigeria could retain capital that would otherwise be spent abroad and enhance its reputation as a destination for traditional medicine. This shift could also foster a more inclusive healthcare system, integrating indigenous knowledge with modern medical practices.

On the international stage, Prof. Emeje highlighted Nigeria's potential to become a major player in the global medicinal plant market. By adhering to global quality standards, such as ISO 22000 for food safety management, Nigeria could position itself as a key exporter of medicinal herbs. Current market leaders like China and India dominate this sector, with the U.S. being a major consumer. If Nigeria develops a robust system for cultivating and processing medicinal plants, it could tap into this lucrative market, generating significant export revenue. A notable challenge identified by Prof. Emeje is the public perception of traditional medicine. Despite its historical and cultural significance, scepticism remains, particularly among the educated elite. This scepticism often stems from colonial-era biases that favoured Western medicine over indigenous practices.

Prof. Emeje expressed optimism about changing attitudes, driven by increasing scientific validation and expert support for traditional medicine. He pointed to successful examples of integrating traditional and modern practices as models for future development, suggesting that shifting public perception could enhance the acceptance and utilization of traditional medicine.

Looking to the future, the don is hopeful about the role of natural medicine in Nigeria's healthcare system. With continued expert support and growing recognition of indigenous knowledge, traditional medicine could become a cornerstone of national healthcare strategies. Developing local production facilities, wellness homes, and rigorous quality assurance processes could revolutionized healthcare delivery, making it more accessible and affordable while boosting local economic activity. Prof. Emeje also emphasized the need for public awareness campaigns to build trust in traditional medicine. Investment in research and development is crucial to validate herbal treatments and ensure they meet international standards. Strengthening collaborations between traditional practitioners and modern scientists will be essential for advancing the field and ensuring the effective integration of traditional medicine into Nigeria's healthcare delivery system.

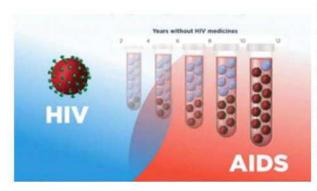
To fully realise the benefits of commercialising medicinal plants, several challenges must be addressed. Prof. Emeje stressed the importance of overcoming public scepticism through education and awareness campaigns. Additionally, substantial investment in research and development is needed to validate and standardize herbal treatments. Strengthening collaborations between traditional and modern medical practitioners will be essential for advancing the field and ensuring the effective integration of traditional medicine into Nigeria's healthcare delivery system.



Nigeria

Traditional Medicine At The Core Of Universal Health Coverage – NNMDA Reveals

By Sodiq Omolaoye, Abuja 10 September 2024 | 12:24 pm



HIV/AIDS

The Federal Government has expressed doubts over claims by some Nigerian researchers that they have discovered a cure for HIV/AIDS.

The government urged researchers, especially those claiming to have a traditional cure for the ailment, to provide more information and evidence to support their claims.

The Director-General of the Nigeria Natural Medicine Development Agency (NNMDA), Prof.

Martins Emeje, made the observation on Tuesday in Abuja during a national dialogue on rethinking natural medicine with the theme "Support the Provision of Quality and Safe Traditional Medicine Through Appropriate Regulatory Mechanisms."

Some Nigerian researchers have, in the last two decades, claimed to have discovered a cure for the life-threatening disease. First, it was popular surgeon Dr. Jeremiah Abalaka who, for the last 20 years, has consistently claimed to have found a cure for HIV, but that the Western world was undermining his efforts because developed countries were making a lot of money off the sale of antiretroviral drugs.

In 2017, the National Agency for the Control of AIDS (NACA) dismissed the claim of Professor Maduike Ezeibe, a Professor of Veterinary Medicine and Clinical Virology at the Michael Okpara University of Agriculture, Abia State.

The Guardian in April reported that a Nigerian researcher in phyto-medicine and Director of the Institute of Natural Medicine, University of Abuja, Dr. Ben Amodu, claimed he invented a cure for HIV/AIDS.

Amodu, who is also the Managing Director of the African Alternative Medicines Hospital, argued that diseases termed incurable can now be cured, insisting that this is based on results from various patients within and outside the country who were treated with herbs.

The DG of NNMDA, however, said many people claimed to have cures without providing evidence or collaborating with the scientific community, saying that anyone "who has a cure for HIV, come forward and present your research to peers and experts."

Describing the claim that the government has refused to support local researchers who have made such a discovery as malicious, Emeje, who acknowledged the potential of traditional medicines in fighting the disease, stressed that any claims must be proven through rigorous scientific investigation, not just wishful thinking.

He said: "You see, the problem is when we begin to claim that we can cure things we don't even understand, because there are many people who claim to cure things they don't know.

"How did you know that it is HIV? Can you just come and present to people and your peers? Research is not a cult. Science is a systematic body of knowledge. So if you come out and you say, this is what you have done, people will ask simple questions, and you will be able to do what you are supposed to do. But if you stay away, or you hide, and you are just there, talking to the media, writing articles, doing interviews with the electronic media that you have discovered something and they don't want to support you, nobody is going to support what they cannot understand.

"And for goodness sake, this country has more than 1,000 research institutions, colleges of education, polytechnics, and universities. So how did you discover something that there is no one research institution in this country that you are even working with? These are questions that need to be answered. I believe that if you have done anything that is useful, there are ways that we can go about it.

"The truth is that it is possible that we have a cure for HIV from our traditional medicines, but it's not by wish. We have to do it properly. That is why an agency like this exists because we have the capacity and capability to do investigation, and to verify and say whether it is true or not."

Emeje, while reaffirming the agency's commitment to promoting indigenous medicine and healthcare systems, called for a comprehensive integration of natural remedies into the national healthcare delivery framework.

According to him, by leveraging indigenous knowledge and expertise, Nigeria can develop and manufacture natural medicines and healthcare solutions that are uniquely Nigerian.

He argued that for centuries, Nigerians have relied on nature for healing, using remedies passed down through generations.

Noting that these traditional practices are deeply ingrained in the nation's identity, Emeje said that the future of Nigeria's healthcare lies in a re-evaluation of natural medicine, integrating modern science and technology to ensure safety and efficacy.

Speaking, Minister of Innovation, Science and Technology, Uche Nnaji, said the government is making efforts to boost the nation's employment generation through the commercialization of Nigerian research results in natural medicines.

According to him, President Bola Tinubu has given the marching order for initiating the commercialization of the research results, while the commercialization of these products is expected to generate 3.8 million jobs.

"Mr. President has challenged me to commercialize our research results, and I am reviewing an NNMDA application to engage the private sector. Approval will soon be granted for the commercialization of 15 products.

"I am proud that NNMDA has the highest number of NAFDAC-listed herbal medicines in Nigeria, reflecting our commitment to evidence-based standards. Under my leadership, I will ensure that regulatory authorities have the data they need to make informed decisions.

"We will also create national medicinal farms to provide quality materials for clinical trials. Additionally, the College of Natural Medicine, now in its second year, offers training to enhance the documentation and regulation of traditional medicine practices," he said.

Nnaji, while spotlighting the importance of natural medicine, said, "No nation can advance without investing in science and technology."

He said this recognition has strengthened the government's commitment to developing natural

medicine in the country through various innovative steps and support for relevant institutions.

"Nigerian scientists have demonstrated remarkable resilience and a strong commitment to finding local solutions.

"In my 12 months as Minister, the NNMDA has shown that even with minimal support, research can drive transformative changes.

"Recently, I launched four new oral solid dosage phytomedicines, the first of their kind in the country. The commercialization of these products is expected to generate 3.8 million jobs, impacting multiple sectors from agriculture to education."

On his part, the Indian High Commissioner to Nigeria, Balassubramanian, said Nigeria is on the right path with the development of natural development.

He, however, stressed the importance of Nigerians' acceptance of the importance of their natural medicine



September 12, 2024 by Adekunle Yusuf

'Integrating tradition with science will transform Nigeria's health, economy'



In this interview, Prof. Martins Emeje, DG of NNMDA, discusses the agency's recent achievements and priorities for the future. He highlights the launch of innovative herbal treatments, the economic and employment benefits of medicinal plant cultivation, and the integration of traditional medicine with modern science. Prof. Emeje spoke with Associate Editor ADEKUNLE YUSUF and EMMANUEL CHIDI-MAHA. Excerpts:-

Challenges and recent feats recorded by the agency

Reflecting on the past year, March 8, 2024, stands out as a particularly proud moment for me. On that day, the Minister of Innovation, Science, and Technology, Chief Uchenna, travelled from Abuja to our

headquarters in Kofo Abayomi, Lagos, to launch four groundbreaking herbal oral solid dosage formulations. This event marked a significant milestone: for nearly 30 years, our agency had never developed a solid oral dosage form. Our scientific process was meticulous, covering everything from cultivation and harvesting to extraction, laboratory practices, and manufacturing. We produced capsules and nanoparticle granules, setting a new standard for our agency and health research institutions in Nigeria.

The four products launched on March 8, 2024, were developed to address significant health issues prevalent in Nigeria. First, we focused on sickle cell disease, for which Nigeria has one of the highest global rates. Our herbal formulation leverages traditional knowledge and modern science to offer a novel treatment option. Diabetes mellitus, once rare in Nigeria, has become a major health concern due to changing lifestyles. We selected a plant known for its efficacy in managing diabetes, as identified through research and traditional knowledge. The formulation uses this plant to create a therapeutic solution. Given the physical strain many

Nigerians face due to peasant farming, which accelerates aging, we developed an anti-aging product to help mitigate the effects of rapid aging and boost immunity.

The COVID-19 pandemic highlighted the effectiveness of traditional remedies. In response, four professors and I sought funding from _TETFUNDto develop COVID-19 treatments using indigenous medicinal plants. We successfully registered these products with NAFDAC. Observing the global trend of traditional remedies gaining recognition during the pandemic, we also developed treatments for upper respiratory tract infections, reflecting our commitment to integrating traditional wisdom with scientific advancements. My background as a traditional healer and scientist underscores my belief in the synergy between indigenous knowledge and modern research. For example, after consulting with the Oba of Lagos, who identified the plant 'Abere' as a remedy for diabetes, we developed a capsule form of this plant, now officially registered as Aberesine. Similarly, our sickle cell product combines multiple plants for a comprehensive approach, offering anti-malarial, anti-sickling, and blood-building properties in one formulation. These advancements not only address pressing health concerns but also reinforce the value of traditional medicine in modern healthcare.

Despite these achievements, we faced several challenges. The greatest challenge, which I hesitate to articulate fully, is the misconception that financial constraints are the primary obstacle to progress in research. Since becoming the Director-General (DG), I have frequently been asked why I am not seeking additional government funding. Some have even suggested that my reluctance to focus on money might be misguided. My response is firm: I don't believe that money is the core issue. In my two decades as a researcher, I have learned that the real challenge lies not in the lack of funds but in the prevailing attitude towards resource utilization. I have seen that available resources, when managed effectively, can yield remarkable results.

Upon assuming the role of DG, I chose not to confine myself to the office. Instead, I immersed myself in the lab. I discovered that many researchers were unable to conduct their work because all research was outsourced to contractors. These contractors provided processed results, which were often inadequate for genuine innovation or patenting. The agency had accumulated various equipment and chemicals over time, but these resources were underutilized because the researchers lacked the necessary training and initiative. One significant step I took was to address the underutilization of equipment. For instance, a freeze dryer, which had never been used because no one knew how to operate it, was put to work under my guidance. Similarly, I activated and utilized a six-station UV machine, which was far superior to the single-beam UV machines I had used previously. By leading by example and actively engaging in lab work, I instilled a new culture among my team, who now embrace working long hours in the lab with enthusiasm. A crucial part of this transformation involved halting the practice of outsourcing research. Instead of relying on external contractors, I utilized the chemicals and resources already available in the lab. This shift not only increased efficiency but also allowed us to focus on practical, hands-on research. We also ceased the practice of training herbalists and other non-relevant activities, focusing instead on research that directly aligned with our agency's goals and the political priorities set by the government.

Another major challenge was the lack of human capacity. Many of my researchers were passionate and motivated but lacked the requisite skills and knowledge. To address this, I established partnerships with universities for capacity building. This initiative enabled many researchers to pursue advanced degrees in relevant fields. These partnerships also ensured that research projects were aligned with the agency's objectives and national priorities, bridging the gap between academic research and practical application. The true challenge lies not in the absence of funds but in the effective application of resources and the cultivation of a productive attitude towards research. I advocate for a model where, instead of providing money directly, the government supplies the necessary resources for research. This approach would eliminate bureaucratic hurdles and allow researchers to focus on their work without the constant scrutiny of how funds are spent. Additionally, by aligning research efforts with national priorities and enhancing human capacity through targeted partnerships, we can drive meaningful progress and innovation.

Urgent priorities of the agency

Our agency's priorities are threefold. First, we are dedicated to revolutionizing the training of traditional medical practitioners. As the only health agency accredited by the National Board for Technical Education to offer a diploma in natural medicine, we prioritize "decolonization"—ensuring that indigenous healing practices are respected and leveraged, regardless of literacy levels. Our goal is to include practitioners from all cultural backgrounds, including Yoruba, Hausa, and Igbo, who might be custodians of ancestral healing knowledge but lack formal education. We are seeking support from the Federal Ministry of Education to facilitate this. To support this, we are creating an electronic database of traditional medical practitioners, their practices, and their products across Nigeria. We've signed an MOU with Alimosho Local Government and have received interest from other states like Cross River. We aim to document the best practitioners in Nigeria—bone setters, traditional birth attendants, and others—to ensure proper regulation, quality assurance, and effective utilization of their knowledge.

Our second priority is the establishment of medicinal gardens in all 774 local governments across Nigeria. We believe that the solutions for local health issues, such as malaria, lie within the same environment. By planting medicinal gardens in each local government area, we will not only ensure the availability of relevant herbal remedies but also create local markets for these products. We have already initiated this in several states and plan to expand. This approach will support local health and create job opportunities while setting up a one-stop product development outlet for processing these herbal medicines. Lastly, we are committed to offering a holistic approach that respects cultural heritage while embracing scientific progress. Shifting our perspective to recognize the value of both approaches will help build a more inclusive and effective healthcare delivery system.



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Why Nigeria should rethink natural medicine —Prof. Emeje

By Ojoma Akor

Tue, 17 Sep 2024 2:17:01 WAT

The Director General of the Nigeria Natural Medicine Development Agency (NNMDA), Prof. Martins Emeje says rethinking natural medicine holds a lot of promise for healthcare delivery system in Nigeria.



He stated this Monday in Abuja during a one day national dialogue on natural medicine in Nigeria organised by the agency and other partners to mark this year's African Traditional Medicine Day.

He said, "We must rethink our approach to natural medicine in Nigeria. We must ask ourselves: How can we preserve and protect this invaluable heritage while ensuring that it evolved rn society? How can we leverage the advances in science and technology to elevate our traditional medicine to new heights making it a cornerstone of our national health care system." Power is not my area of expertise, I don't dabble into what I don't know. But, I have lived in many countries before to know that, most countries that have overcome power challenges did by using more than one source of power generation. See the

enormous sunlight we are blessed with here, or is it wind, water, or coal in my village at Agaliga? We have abundant sources. I thought by now all the states would have started developing their own power infrastructure. I thought everybody was blaming the federal government when power was exclusive. What is stopping states now? On the drug supply chain and regulatory landscape, I can tell you as a pharmacist who has been in this space for over two decades that, the current leadership of the Pharmacy Council of Nigeria (PCN) and the National Agency for Drug Administration and Control (NAFDAC) are about the best we have had in recent history. Do you know that NAFDAC has put the country on the map of serious countries when it comes to regulation? While I am not their spokesperson, I speak because I know. So, as it stands today, the supply chain and regulatory landscape is under unprecedented transformation.

Others have called for a strengthened health insurance scheme attributing the high cost of medicines and healthcare to out-of-pocket expenses.

Please which of the health insurance schemes do we want to strengthen? Anybody talking about health insurance in Africa without making traditional medicine the core of the strategy is either not being sincere, deliberately mischievous, or out of touch with the realities in Africa. Imported models for health insurance are a joke. I was president of the FMST Cooperative Thrift and Credit Society for four years, asking SMEDAN and over 2000 civil servants what we did with that cooperative. See, there is no rocket science in insurance; our poor rural dwellers are already doing local insurance, instead of developing our own models, we want to use copied models.

There have been calls for industrialization and increased funding of the health sector. What are your perspectives on this?

Funding can never be enough, so I agree. But more importantly, there is the need to change strategy; let us look inward. The most potent strategy to renew the hope of our people is to go back to our abandoned cultural heritage. On the call for industrialization, it is not by calling, industrialization is not called into existence, it is achieved through science, technology, and innovation QED.

With the increased shift of patients to alternative medicine practitioners, some people have canvassed for the Federal Government to invest in alternative medicines to fill the gap. What are your recommendations?

I don't know what you mean by alternative medicine practitioners, but if you mean our indigenous medicine, it is not alternative, rather, it is the imported medicine that is alternative. I believe as the DG of the only indigenous medicine development agency and a western-trained pharmacist who went back to school to He added that the agency has made significant strides, "For the first time in this country and based on folkloric knowledge, four oral solid dosage phytomedicines were developed and launched earlier this year by the minister. In addition, the agency is partnering with the best university in West Africa to train our researchers and only yesterday, five of my researchers were enlisted by the Covenant University. We are embarking on the first comprehensive and modular documentation of traditional medicine practitioners, services and

products in Nigeria. In this respect, we are already in partnership with some states and LGAS. We are ready to partner with any private or public institutions."

The Minister of Innovation, Science and Technology, Uche Nnaji said President Bola Ahmed Tinubu has challenged him to commercialize research results, and that he is reviewing an NNMIDA application to engage the private sector.

He said approval will soon be granted for the commercialization of 15 products.

He said with about 80% of Africa's population relying on traditional medicine, its role in healthcare is crucial. He urged the private sector to support NNMDA sustainable production through its medicinal farms.

The minister said the theme of this year's African Traditional Medicine Day "Supporting Quality and Safe Traditional Medicine Through Appropriate Regulatory Mechanisms," highlights the importance of regulation, adding that he was proud that NNMIDA has the highest number of NAFDAC-listed herbal medicines in Nigeria, thus reflecting the commitment to evidence-based standards.

He said, "To support regulatory efforts, I have directed the NNMDA to establish a National Clinical Committee with multi- Sectorial representation, focusing on funding and government support. We will also create national medicinal farms to provide quality materials for clinical trials. Additionally, the College of Natural Medicine, now in its second year, offers training to enhance the documentation and regulation of traditional medicine practices."

He added that in his 12 months as minister, the NNMDA has shown that even with minimal support, research can have transformative changes.

He added that he recently launched four new oral solid dosage phytomedicines, the first of their kind in the country, noting that the commercialization of these products is expected to generate 3 8 million jobs, and impact multiple sectors.



Health

September 19, 2024 by Adekunle Yusuf and Dele Anofi

Why Fed Govt plans to commercialise herbal medicinal products



In recent years, the conversation surrounding healthcare in Nigeria has undergone a transformative shift. Increasingly, there is a recognition of the vast potential that herbal medicinal products hold not only for enhancing healthcare delivery but also for stimulating economic growth and leveraging Nigeria's rich biodiversity. The Federal Government's initiative to commercialise these natural remedies is a strategic response to both domestic healthcare challenges and global trends towards natural medicine.

Nigeria is endowed with an extraordinary wealth of flora, featuring thousands of plants that have been traditionally used for medicinal purposes. For centuries, local communities have turned to these natural remedies to treat ailments, promote

wellness, and enhance their quality of life. Traditional healing practices are deeply embedded in the cultural

fabric of many Nigerian societies, with generations passing down knowledge about the healing properties of various plants. However, despite this rich heritage, many of these traditional practices have remained largely unregulated and underutilized within the formal healthcare system. The government's decision to commercialise herbal products acknowledges the importance of these practices while also integrating them into modern medicine. By formalizing the use of herbal remedies, the government aims to create a bridge between traditional knowledge and contemporary healthcare practices.

The commercialization of herbal medicinal products is not merely about capitalizing on traditional knowledge; it is also about marrying this wisdom with scientific rigour. Recent advancements have led to the approval of five herbal products by the National Agency for Food and Drug Administration and Control (NAFDAC). The five products were developed by researchers at the Nigeria Natural Medicine Development Agency (NNMDA) under the Ministry of Innovation, Science and Technology. This represents a significant step toward recognizing and legitimizing herbal medicine in Nigeria. These approved products have been said to meet rigorous safety and efficacy standards, thereby fostering public confidence in herbal remedies. The launch of the first oral solid dosage phytomedicines earlier this year serves as a testament to the potential for innovation within the realm of herbal medicine. By investing in research and development, Nigeria can create high-quality, effective products that resonate with both local and international markets.

Moreover, the establishment of the National Clinical Trial Committee, as directed by the Minister of Innovation, Science and Technology, Uche Nnaji, emphasizes the government's commitment to scientific validation. This committee will focus on funding and supporting research initiatives that validate the efficacy of herbal medicines and ensure that they meet international standards. Encouraging local researchers and entrepreneurs to explore Nigeria's rich biodiversity will lead to the discovery of new treatments while fostering a culture of innovation.

One of the most compelling reasons for the commercialization of herbal medicinal products is the potential for economic empowerment. The Federal Government estimates that this initiative could generate approximately 3.8 million jobs across various sectors, including agriculture, manufacturing, and healthcare. This job creation represents real opportunities for individuals and communities to thrive. Farmers will gain access to new markets for medicinal plants, leading to increased agricultural productivity and income. Local artisans can engage in the production of herbal remedies and related products, thereby contributing to the growth of small and medium-sized enterprises. Additionally, as the demand for herbal medicines rises, there will be a corresponding need for healthcare professionals to engage in research, clinical trials, and education, further diversifying job opportunities.

Nnaji made these disclosures recently in Abuja during the National Dialogue on Re-Thinking Natural Medicine in Nigeria organised by the NNMDA to close the 2024 African Traditional Medicine Day celebration. "Mr. President has challenged me to commercialise our research results, and I am reviewing an NNMDA application to engage the private sector. Approval will soon be granted for the commercialization of 15 products.

"I am proud that NNMDA has the highest number of NAFDAC-listed herbal medicines in Nigeria, reflecting our commitment to evidence-based standards. Under my leadership, I will ensure that regulatory authorities have the data they need to make informed decisions. We will also create national medicinal farms to provide quality materials for clinical trials. Additionally, the College of Natural Medicine, now in its second year, offers training to enhance the documentation and regulation of traditional medicine practices," he said.

The Indian High Commissioner to Nigeria, Mr. Shri G. Balassubramanian, expressed his support for Nigeria's advancements in natural medicine, stating that the country is making significant strides in this area. He emphasized, however, the crucial need for Nigerians to fully embrace the value of their traditional medicinal practices. He said: "Traditional medicine is a knowledge that has been passed on through generations to all of us. Nigerian and Indian traditional medicines, these are invaluable tools in our hands.

We need to re-verify and re-validate it in the normative way, according to the modern medical structure. Because recognition has to be there, people will have to accept. People in Nigeria would certainly rely on the Nigerian traditional medicine, because it has been handed over through generations, but people outside the country might not know about it.

"So for others also to identify and recognize and use the medicines, there has to be a normative manner in which the same medicine can be prepared with the same conditions, by others also with the same efficacy. That is the kind of clinical trials that is the kind of medical validation that will have to be done, which will certainly help all of us, Indian traditional medicine, Nigerian traditional medicine, to achieve its glory."

Nigeria's healthcare delivery system faces numerous challenges, including limited access to quality healthcare, high treatment costs, and a growing burden of non-communicable diseases. By integrating herbal medicinal products into the healthcare system, the government is taking a proactive approach to address these gaps. Herbal remedies often provide more affordable alternatives for patients, particularly in rural areas where access to conventional medicine may be limited. The focus on regulated herbal products ensures that even the most vulnerable populations have access to effective treatments that resonate with their cultural practices. This initiative aligns with a growing global trend towards preventive healthcare, as many individuals increasingly seek natural alternatives to conventional treatments, driven by a desire for holistic health solutions.

The commercialization of herbal medicinal products presents a unique opportunity to enhance community health resilience. By integrating herbal medicine into the formal healthcare system, individuals can access treatments that reflect their cultural beliefs and practices. This not only empowers patients but also fosters a sense of ownership over their health. Communities will benefit from increased awareness of herbal remedies and their potential uses. Educational programmes can disseminate information about the safe and effective use of these products, promoting informed decision-making among patients. Furthermore, as local economies thrive through the commercialization of herbal products, the overall well-being of communities will improve, leading to healthier, more vibrant populations.

The global herbal medicine market is experiencing significant growth, driven by increasing consumer interest in natural and organic products. By commercialising herbal medicinal products, Nigeria has the opportunity to enter this lucrative market and establish itself as a leader in the field of natural medicine. As international consumers seek high-quality herbal remedies, Nigerian products can capitalize on the country's rich biodiversity and traditional knowledge. By adhering to international quality standards and investing in branding and marketing, Nigeria can position itself as a trusted source of herbal medicines, attracting both domestic and foreign investments.

The Federal Government has demonstrated its commitment to developing the herbal medicine sector through various innovative steps and support for relevant institutions. According to Minister Uche Nnaji, President Bola Tinubu has given a clear mandate for the commercialization of research results in natural medicines. This support includes the establishment of national medicinal farms to provide quality materials for clinical trials and the development of training programmes for researchers and practitioners.

The Nigeria Natural Medicine Development Agency (NNMDA) plays a crucial role in this initiative, with a mandate to research, document, and promote indigenous medical practices. By leveraging indigenous knowledge and expertise, Nigeria can develop and manufacture natural medicines that are uniquely Nigerian. This approach not only enhances the nation's healthcare system but also promotes cultural pride and sustainability.

As Nigeria embarks on this journey, collaboration with international partners will be essential. The Indian High Commissioner to Nigeria has emphasized the importance of validating traditional medicine in a way that aligns with modern medical structures. Collaborative efforts, such as the memorandum of understanding between Nigeria and India on traditional medicine, can facilitate joint research, clinical trials, and production. Such partnerships will help both countries push the boundaries of traditional medicine beyond their localities, ensuring that these valuable practices gain recognition and acceptance on a global scale. Establishing a normative manner of preparing and validating herbal medicines will enhance Nigeria's

reputation as a leader in natural health solutions.

To ensure the success of the commercialization of herbal medicinal products, it is crucial to establish a robust regulatory framework that maintains the safety and efficacy of herbal products. The NNMDA's commitment to instilling public confidence in traditional medicines aligns with the growing demand for quality and safe healthcare solutions. Furthermore, the integration of educational programmes focused on the safe use of herbal products can empower communities, leading to informed decision-making regarding health choices. Promoting collaboration between modern scientists and traditional healers can create a more comprehensive healthcare approach, blending the best of both worlds.

Natural medicine agency seeks increased investment to boost herbal medication

Prof. Emeje said that natural medicine also could create jobs for the youths.

NEWS AGENCY OF NIGERIA OCTOBER 24, 2024



Natural Medicine Development Agency has called for deliberate investment in the research and development of natural medicines. The Director General, NNMDA, Martins Emeje, made the call in an interview with journalists on Thursday in Lagos.

Prof. Martin Emeje Prof. Emeje said that the estimated revenue that the world expects from herbal medicine alone, which is just one component of traditional medicine or natural medicine, is about \$5 trillion.

He said that the country was not prepared for it because the private sector and government were not investing sufficiently in this area.

According to him, the country must invest in research and development, especially in natural medicine, to generate revenue and forex for the country.

He said, "The beauty of investing in the development of services and products in natural medicine is that you do not need more than 24 months to begin to reap what you invested. Natural medicine is not like the classical pharmaceutical drug development chemicals that take about eight to 12 years to reap returns on investment. Within six months to 12 months, one could begin to reap investment made in this area."

He said the job and responsibility of NNMDA was to be on the field for research purposes on natural medicine to reap the benefit of investment.

According to him, after the research, the agency develops the products from medicinal plants and has the proof of concept at the level it can no longer fail before commercialising it.

Prof. Emeje said that natural medicine also could create jobs for the teeming youths if taken seriously by the government and investors.

The director-general said that with a country blessed with not less than 300 medicinal plants, youths and entrepreneurs could be involved in the farming of the plants for export.

He said such is the practice in developed countries and could be achieved in Nigeria with proper awareness, sensitization, and mentorship, which NNMDA would willingly undertake.

According to him, currently, India and China export 80 per cent of their medicinal plants to Europe and America.

Prof. Emeje said there was a need to create awareness on the benefits of natural plants to the economic growth of the nation.

He said that such awareness and education could encourage investment, grants, and the creation of foundations for the development of natural medicines.





THERE IS HOPE FOR A BRIGHTER FUTURE IF ONLY YOU SAY 'NO' TO DRUG ABUSE TODAY

11

By Healthnika Nov 18, 2024



The Nigeria Natural Medicine Development Agency (NNMDA) says traditional medicine is at the core of Universal Health Coverage (UHC), not just in Nigeria but Africa.

The Director-General (DG) of NNMDA, Prof. Martin Emeje, said in an interview with the Newsmen in Lagos, that no fewer than 140 million Nigerians depended on traditional medicine to access health coverage in Nigeria.

According to Emeje, traditional medicine is not universal or allopathic, but culture-based, with 140 million Nigerians having access to it for cure and healing.

"It is culture-based because different soil components of an environment and attitude of a community could be used as a healing process.

"Traditional medicine has been the core of health care delivery across Nigeria and most African countries, helping to achieve universal health care

"Traditional medicine also has different medicinal properties.

"It is not universal medicine but must be zeroed down to things that make them different in each environment".

According to him, when it is studied, there is need to apply science and technology to harness or exploit it to the nation's advantage.

The Director-General said that it would be to the nation's advantage if traditional medicine was harnessed optimally, because science and technology could be applied therein, to develop those

things in a form that it would be more beneficial to our people.

"The benefit that our people have is that in our local communities, people are cured, people are healed, people are tended to by the traditional medical practitioners and they do not have any economic benefit, which is not good enough.

"It is our responsibility to educate the traditional medicine practitioners, but before we do that, we must also make it clear that there is need to apply science and technology to develop all of that to reap the benefit.

"If the nation should focus on it to develop traditional medicine in different local governments, there would be at least 100 different traditional recipes, processes and services in each local government".

According to him, by so doing, health will be taken to the communities and people will have access to durable, functional, affordable and accessible health.

Emeje said that Nigeria would set the example in Africa because NNMDA by law, should also have all trainings done in local languages.

"It is the only government institution that has that kind of law backing it, to ensure that all education is also done in local languages.

"This is because NNMDA's job also is to ensure that we educate people properly in traditional medicine, using our local languages".

Emeje said NNMDA sought accreditation from a college, a tertiary institution and had a college accredited by the Federal Ministry of Education through its regulatory agency- the National Board for Technical Education.

According to him, NNMDA offers National Diploma in natural medicine.

He said it also goes into local villages trying to establish centres in willing institutions.

"This is so that in the next three to four years, the nation will begin to have critical mass of people who are highly educated in traditional medicine but using local languages".

According to him, agency has a Memorandum of Understanding with Covenant University and the Niger Delta University has given NNMDA a huge building to operate in.

Emeje said that the Senate and Council of the Niger Delta University has just approved and NNMDA is starting the natural medicine Institute in that university.

He said that most of the lecturers and students would be from Bayelsa to learn traditional medicine in local languages.

According to him, Bayelsa is top in the world for bone-setting technology and NNMDA is taking this education back to them in the state, so that the nation can also begin to get revenue in forex from these resources.

The DG said that if it is developed properly, then people would start coming from different parts of the world for medical tourism to this country on the grounds of the efficacy of our traditional medicine.

NNMDA, under the Federal Ministry of Science and Technology, has the mandate to research, collate, document, develop, preserve and promote Nigeria Natural Medicine.

Source: NAN/Wumi



Agriculture

NNMDA set to train five million Nigerian youths on cassava plantation

Segun Kasali December 1, 2024



The Nigeria Natural Medicine Development Agency (NNMDA) has unveiled plans to train five million Nigerian youths in cassava cultivation through its Cassava Value Chain Initiative.

Announcing the initiative, the Director-General of the NNMDA, Prof. Martins Emeje, highlighted the agency's goal of harnessing Nigeria's vast cassava production potential to spur economic growth and development.

"Nigeria accounts for over 20% of global cassava production, making it the world's largest producer," Emeje noted.

He emphasized that the initiative aims to create jobs, generate wealth, and support the pharmaceutical and natural medicine industries by leveraging cassava's value chain.

The program will involve collaboration with stakeholders to establish largescale cassava farms and modern processing facilities.

Emeje, a nanotechnology expert, explained that the project would focus on producing pharmaceutical-grade starch and developing innovative natural medicine products.

"Our strategic approach includes advancing research to produce high-quality starch for



December 4, 2024 by Dele Anofi

FG Tackles Unemployment With Cassava-Grade Starch Production Initiative



Nigeria, the world's largest producer of cassava, is taking bold steps to add value to its vast cassava output by producing pharmaceutical-grade starch, it emerged on Wednesday.

The Director General/Chief Executive Officer (DG/CEO) of the Nigeria Natural Medicine Development Agency, Prof. Martins Emeje, announced the initiative in Abuja during the

Cassava Value Chain Initiative (CVCI): Community Engagement Meeting with Nigerian Youths, where he described it as a revolutionary step toward economic empowerment and national development.

The attendees, most of whom participated online, included youth farmer organization leaders, civil society representatives, and the agency's management team, among others.

The DG stressed that the meeting was primarily aimed at sensitizing the youths about the project and encouraging their active participation.

According to him, the project, which was initiated by the 10th National Assembly, aims to address unemployment and poverty while contributing to the nation's pharmaceutical sector which aligns with the mandates of the agency.

Emeje emphasized that the project is not only about cassava cultivation but also about creating wealth and building a sustainable value chain.

In addition to cultivating cassava for pharmaceutical-grade starch, he revealed plans to establish product development factories across the six geopolitical zones.

These factories, the DG noted, will ensure a secure market for both raw materials and finished products, addressing unemployment and boosting the nation's GDP.

He said: "This is governance brought to the rural province, it's a genuine, deliberate effort to address unemployment and ensure rural development.

"We cannot be the largest producer of cassava globally and fail to leverage its full potential. Every part of the cassava plant, roots, leaves, stems, and even seeds, has value, whether as food, medicine, or feed for livestock and marine life.

"It's time to harness these resources for the benefit of our people.

"This project is a decision by the National Assembly, not part of our agency's regular budget. We commend their foresight and commitment to national development.

"The initiative involves a grassroots approach, beginning with community engagement meetings to ensure local buy-in and input.

"We don't believe in elitist projects. We go to the communities to understand their needs and incorporate their suggestions into our plans.

"This is about lifting people out of poverty by creating jobs and opportunities where they are most needed."

According to him, the project that has already commenced with preliminary laboratory investigations, will roll out across Nigeria's six geopolitical zones, with training sessions for youth farmers and women starting in December.

"Special cassava farms will be established in each zone, where participants will cultivate cassava for pharmaceutical-grade starch production.

"The agency will provide support and guarantee a market for the harvested cassava. We have a Biobank technology to ensure sustainability. Farmers only need to cultivate; the market is already secured," he assured.

To further enhance the initiative's impact, he said with the active support of the National Assembly, since it is their creation, product development factories will be set up in the six geo-political zones.

These factories will process cassava directly from the farms into pharmaceutical-grade starch and other products.

"This is governance brought to the rural province, it's a genuine, deliberate effort to address unemployment.



December 9, 2024 by Dele Anofi

NNMDA DG Advocates Overhaul Of Educational Curriculum

The Director General of the Nigeria Natural Medicines Development Agency (NNMDA), Prof. Martins Emeje, has called for an urgent overhaul of Nigeria's educational curriculum to align with global technological and economic realities.

Speaking in Abuja on Monday during his conferment with the 'National Outstanding Award as Vanguard of Good Leadership and Epitome of Hope' by the National Association of Nigerian Students (NANS), Emeje described the current curriculum as outdated and ill-suited for the 21st century.

He emphasized that in a rapidly globalizing world driven by advanced technologies across all

sectors, the state of Nigeria's educational system should be a matter of grave concern for stakeholders.

Emeje, who pledged to contribute to the development of education in the country, stressed his commitment to improving the educational sector and promoting youth development for a better society.

Drawing from his own humble educational background, he highlighted the importance of making the system more accessible and less burdensome for students.

Being in this position can only accord me the opportunity to make my contributions toward finding ways to better the educational system. "NANS has the population and you are the end user of the curriculum, meaning that what you don't want should not be there.

"You need to utilize that number to engage stakeholders meaningfully," Emeje said.

Regarding the award, he noted that he accepted it out of numerous offers because of his commitment to youth development, a passion he has consistently demonstrated in his engagements.

"When the youths pick you up for anything, if it is bad, they are right and if it is bad, they are right, they are the most vulnerable people and the vulnerable people see better.

"Consider me as one of you and I will be committed to the development of the country through NANS," he said.

In his remarks, Abdullahi Bilal, Vice President of NANS, highlighted the urgent need for increased investment in education.

"The government must prioritize education by increasing its budgetary allocation and addressing the issue of out-of-school children," Bilal said.

He also called for the proper implementation of the student loan initiative introduced by President Bola Tinubu to ensure it benefits Nigerian students without commercializing public education.

Bilal also expressed concerns over outdated curricula, saying, "Our curricula should be designed to solve the problems of the Nigerian nation. NANS has always been at the forefront of advocating for educational advancement and will continue to champion this cause beyond tenures."

He explained that Emeje was selected for the award due to his contributions to youth development and his impactful work in the pharmaceutical field.

"Prof. Emeje has shown a consistent trajectory of promoting youth empowerment and making meaningful contributions to society," Bilal said.



Natural Medicine Agency to Regulate Activities of Religious Healers

By Temitope Obayendo 23/12/2024



The Nigeria Natural Medicine Development Agency (NNMDA) is poised to oversee the practice of spiritual healing within religious organisations. The agency has stated that any practitioner found operating outside its established guidelines will face appropriate sanctions.

Prof. Martins Emeje, the Director General and CEO of NNMDA, emphasized that spiritual healing, classified as a form of natural medicine, falls under the agency's jurisdiction, necessitating this regulatory enforcement.

Prof. Emeje's comments made in a media briefing on Monday were directed at religious leaders across the country who engage in spiritual healing, urging them to comply with the new regulations implemented by the NNMDA. He highlighted the importance of establishing individualized agreements with each spiritual leader to

ensure compliance.

"The NNMDA is the sole government agency responsible for the research and development of natural medicines in Nigeria, which includes practices in both churches and mosques. Many individuals choose not to rely on conventional medications when ill, instead seeking healing through their faith," he stated.

"This is a call for all pastors, imams, and religious practitioners—regardless of faith—to understand that if you are claiming to improve people's health through your practices, we are watching you."

The Nigeria Natural Medicine Development Agency (Establishment) Act of 2019 outlines the agency's mandate to establish, research, develop, promote, document, and preserve Nigeria's indigenous healthcare delivery systems and healing practices, and to facilitate their integration into the national healthcare system.

Prof. Emeje further stressed the importance of standardizing indigenous natural medicine practices in the country, asserting that these standards should be free from Western influences and tailored for the Nigerian populace. "We must establish our own methods and execute them effectively. Individuals are free to heal themselves as they choose; however, if you intend to use your faith to heal others, we need to collaborate to ensure adherence to established standards," he stated.

He elaborated, "We will develop mutual standards—not legalistic ones—but agreements between us. When we come to an understanding and someone deviates from that agreement, it will be clear that they have strayed from the established norms. Our standards will not mimic those from other countries; we are Nigerians, and our practices should reflect our unique culture and needs." Prof. Emeje also noted the necessity for standardization in healing practices across different religious contexts, including churches, mosques, and traditional healing practices, all of which fall under the umbrella of natural medicine.

In a related anecdote, he mentioned that a Reverend Father from the United States, who holds a PhD, has expressed a desire to learn about African natural medicine. Plans are underway for this individual to visit Nigeria to gain knowledge from the NNMDA.

With a background in Islamic culture, Prof. Emeje described Islamic spiritual healing practices, which involve writing on specific substances before washing and consuming them for healing effects. He affirmed his commitment to this significant undertaking, stating, "This is a monumental task, and we are approaching it gradually."

THE NATION

By Dele Anofi, December 25, 2024

Nnmda On The Brink Of Combating Cholera

...begins work on AMR

The Nigeria Natural Medicine Development Agency (NNMDA) is making significant progress towards developing solutions to combat cholera outbreaks in Nigeria with natural medicine, it emerged on Tuesday.

The agency also highlighted its ongoing focus on addressing antimicrobial resistance caused by the misuse and overuse of antibiotics, a growing public health concern, even as it unveiled, earlier this year, four Indigenous oral medicines as part of its commitment to promoting local solutions to healthcare challenges.

The agency's Director General (DG), Prof. Martins Emeje, emphasized the urgent need to reduce Nigeria's dependence on imported medicines, calling for deliberate, sustained efforts to harness the country's comparative advantage in the mass production of natural remedies.

Speaking during a hybrid end-of-the-year media engagement in Lagos, the DG disclosed that the agency had secured accreditation from the National Board for Technical Education (NBTE) to award diplomas in Natural Medicine, a milestone he noted underscores the agency's commitment to repositioning Nigeria as a global hub for natural medicine.

The DG further stated that the agency is actively engaging stakeholders and regulators to facilitate the mass production of promising indigenous medicines, particularly for diseases such as cholera and sickle cell anaemia.

According to him, the process has reached an advanced stage, with the agency awaiting approval from the National Agency for Food and Drug Administration and Control (NAFDAC) that will enable the transition to the next phases of clinical studies and trials, paving the way for the mass production of the medicine.

Emphasizing the importance of adhering to rigorous regulatory processes to guarantee the safety and efficacy of natural medicines, he added that, while awaiting approvals, the agency remains committed to ongoing research and is preparing for the unveiling of future products.

"While we are waiting for approvals, we have also moved on. We shall be unveiling new products in 2025," the DG assured.

Highlighting the challenges posed by antimicrobial resistance, Emeje emphasized the agency's strong commitment to addressing this critical issue, given its far-reaching impact on the nation's health security.

He noted that Nigeria has no reason to remain dependent on external solutions, citing environmental contamination, such as the presence of tetracycline in water systems, as a factor that diminishes the effectiveness of conventional treatments.

Emeje contrasted this with the holistic potential of natural medicine, where plants naturally contain thousands of bioactive compounds synergistically combined to combat diseases effectively.

Expressing confidence in the agency's ability to integrate natural medicine into Nigeria's mainstream health system, Emeje highlighted the growing global recognition of the agency's achievements on international platforms.

He revealed that, in addition to a four-year grant from the Canadian Institute for Health Research to advance natural medicine development, 16 Professors of Medicine from the nation's tertiary institutions are already collaborating with the agency on natural medicine initiatives.

He emphasized the agency's prioritization of capacity building to address the reliance on outsourcing research to contractors, a situation he encountered upon assuming office.

This strategic shift has enabled the agency to actively participate in global scientific conferences for the first time in nearly three decades.



NNMDA To Position Nigeria As Global Hub For Natural Medicine – Prof. Emeje



By Chioma Umeha On Dec 26, 2024

Teams Up With 16 Professors For Healthcare Integration

Prof. Martins Emeje, Director General, Nigerian Natural Medicine Development Agency (NNMDA), has disclosed the agency's strides in integrating natural medicine into Nigeria's healthcare system and repositioning the country as a global hub for natural medicine.

Emeje also revealed that the NNMDA agency has secured the accreditation of the National Board for Technical Education (NBTE) to award diplomas in Natural Medicine.

He specifically stated that, in addition to a four-year grant from the Canadian Institute for Health Research to boost natural medicine development, 16 Professors of Medicine from Nigeria's tertiary institutions are already working with the agency on natural medicine efforts.

The strategic partnership is aimed to standardize traditional medicines and facilitate their integration into the country's healthcare system.

Expressing optimism in the agency's ability to integrate natural medicine into Nigeria's mainstream health system, Emeje highlighted the growing global recognition of the agency's achievements on international platforms.

The DG who spoke during a hybrid end-of-the-year media engagement in Lagos also announced that the agency is making significant progress towards developing solutions to address cholera outbreaks in Nigeria with natural medicine.

The agency stressed its commitment to tackling the growing issue of antimicrobial resistance, which has been exacerbated by the misuse and overuse of antibiotics. This initiative reflects NNMDA's ongoing dedication to improving public health through innovative and sustainable approaches, even as it unveiled, earlier this year, four Indigenous oral medicines as part of its commitment to promoting local solutions to healthcare challenges.

Emeje stressed the urgent need to reduce Nigeria's dependence on imported medicines, calling for deliberate, sustained efforts to harness the country's comparative advantage in the mass production of natural remedies.

The NNMDA boss also stated that the agency is actively engaging stakeholders and regulators to facilitate the mass production of promising Indigenous medicines, particularly for diseases such as cholera and sickle cell anaemia.

He said that the process has reached an advanced stage, with the agency awaiting approval from the National Agency for Food and Drug Administration and Control (NAFDAC).

According to him, obtaining NAFDAC's approval will enable the transition to the next phases of clinical studies and trials, paving the way for the mass production of the medicine.

Underscoring the importance of adhering to rigorous regulatory processes to guarantee the safety

and efficacy of natural medicines, Emeje added that, while awaiting approvals, the agency is committed to ongoing research and is preparing for the unveiling of future products.

"While we are waiting for approvals, we have also moved on. We shall be unveiling new products in 2025," Emeje assured.

Expressing concerns over the challenges posed by antimicrobial resistance, Emeje emphasized the agency's strong commitment to addressing this critical issue, given its far-reaching impact on the nation's health security.

NNMDA boss noted that Nigeria has no reason to remain dependent on external solutions, citing environmental contamination, such as the presence of tetracycline in water systems, as a factor that diminishes the effectiveness of orthodox treatments.

Emeje contrasted this with the holistic potential of natural medicine, where plants naturally contain thousands of bioactive compounds synergistically combined to combat diseases effectively.

Emeje stressed the agency's prioritization of capacity building to address the reliance on outsourcing research to contractors, a situation he encountered upon assuming office.

This strategic shift has enabled the agency to actively participate in global scientific conferences for the first time in nearly three decades. Notably, the agency achieved first and third positions in international research competitions in August and November this year, marking a significant milestone just one year into his leadership.

According to him, NNMDA's achievements in 2024 included developing and unveiling four herbal products targeting critical diseases, using nanotechnology to underscore the potential of indigenous knowledge combined with modern science.

The DG also said the agency has made significant strides, such as creating a national database of traditional practitioners, starting with groups from the grassroots.

These efforts, he said, aim to document and integrate traditional knowledge into the broader healthcare framework, assuring that giant strides from the sector should be expected soon.

The DG announced the agency's plans to prioritize several key initiatives in 2025, including creating a traditional medicine database, training traditional medicine practitioners, documenting Nigeria's biodiversity, and efforts to combat antimicrobial resistance.

Emeje also highlighted plans to intensify the establishment of research farms across the 774 Local Government Areas (LGAs) and prioritize the Cassava Value Addition Initiative (CVAI), a project highly valued by the National Assembly.

Further, he disclosed the agency's goal to establish a Pilot Plant to scale laboratory research to industrial production levels.

According to him, the Pilot Plant initiative is crucial for bridging the gap between preclinical studies and clinical trials, ensuring the effective transition of research findings into tangible health solutions.

Emeje said, "Our vision is focused solely on harmonizing Indigenous knowledge with modern science, to pave the way for sustainable healthcare solutions for Nigeria and the world."

The unveiling of Journalists for Natural Medicine (JONAMED), a coalition of media executives dedicated to promoting Nigerian natural medicine, was the event's high point.



NNMDA Champions Local Solutions To Reduce Reliance On Imported Pharmaceuticals

By Patience Ivie Ihejirika



The Nigeria Natural Medicine Development Agency (NNMDA) is striving to reduce Nigeria's reliance on imported pharmaceuticals by promoting the development and use of local natural medicines.

This initiative is aimed at ensuring self-sufficiency in healthcare and addressing critical health challenges such as cholera, antimicrobial resistance, and other diseases that continue to burden the nation.

Speaking at the agency's end-of-year media

engagement recently in Lagos, director-general of NNMDA, Prof. Martins Emeje, highlighted the agency's ongoing efforts to harness Nigeria's vast natural resources in providing effective healthcare solutions.

He emphasized the need for sustained focus on indigenous medicine as a way to reduce the country's dependency on foreign drugs and boost local economic growth.

Prof. Martins said the NNMDA has made notable progress in developing indigenous oral medicines to combat diseases such as cholera and sickle cell anaemia. The agency is also at an

advanced stage of seeking approval from the National Agency for Food and Drug Administration and Control (NAFDAC) to begin mass production of these natural remedies, he said.

"By leveraging our natural resources, we can significantly reduce our dependence on imported drugs, which often come at high costs and with adverse side effects. Our goal is to build a self-sufficient health system that relies on locally sourced and scientifically validated solutions," Prof. Emeje explained.

The agency is also developing a national database of traditional medicine practitioners to help integrate indigenous knowledge into Nigeria's broader healthcare system. Prof. Emeje stressed the importance of capacity building, citing that, under his leadership, the agency has started training professionals to conduct research and contribute to the growth of the natural medicine sector.

The DG underscored the potential of combining indigenous knowledge with modern science, particularly through the use of nanotechnology in developing herbal products. "Natural medicine offers holistic solutions because plants naturally contain bioactive compounds that can work synergistically to treat diseases. Unlike conventional medicines, they do not have the same side effects and are more aligned with our environment," he said.

NNMDA's commitment to innovation has garnered international recognition, including a four-year research grant from the Canadian Institute for Health Research.

The agency has also formed partnerships with 16 Nigerian medical professors to advance research and development in natural medicine. This collaboration is expected to elevate Nigeria's global standing in the field of indigenous healthcare solutions.

Looking ahead to 2025, the DG said NNMDA plans to intensify its efforts to create research farms across Nigeria's 774 Local Government Areas and further develop the Cassava Value Addition Initiative (CVAI), a project supported by the National Assembly.

Also, he said the agency is set to establish a Pilot Plant to transition laboratory research into industrial production, ensuring that discoveries in natural medicine can be scaled for mass production

Prof. Emeje reiterated NNMDA's vision to create sustainable healthcare solutions by harmonizing traditional knowledge with modern science.

He also called for greater collaboration from stakeholders and the media to support the agency's efforts in reducing Nigeria's dependency on imported pharmaceuticals, marking a new era for the nation's healthcare system.

As part of the event, NNMDA also launched the "Journalists for Natural Medicine" (JONAMED), a coalition aimed at promoting the benefits of natural medicine through media engagement, further cementing the agency's role in leading Nigeria toward self-reliance in healthcare.



Updated: December 30, 2024

Why Nigeria must invest in traditional medicine – NNMDA DG

By Angela Onwuzoo December 30, 2024



The Nigeria Natural Medicine Development Agency says except the country prioritizes traditional medicines by investing heavily in research and development, it may be difficult if not impossible to achieve drug security and end its dependence on imported drugs.

The Director General of NNMDA, Prof. Martins Emeje, stated this during a media parley organised to induct media practitioners as 'Journalists for

NNMDA DG, Prof. Martins Emeje Traditional Medicines'.

Citing the potential of traditional medicines to address the country's disease burden, Emeje also said the use of traditional medicines cannot be ignored if the country must achieve universal health coverage.

The pharmacist noted that 80 per cent of traditional medicines were highly effective in addressing health challenges, without pronounced side effects.

PUNCH Healthwise reports that Nigeria has continued to import antimalarial drugs worth billions of naira annually amid foreign exchange shortages and struggling local pharmaceuticals.

Experts in 2023 lamented that over N800 billion was spent on the importation of malaria drugs, antibiotics, and vaccines yearly, despite having a sizable number of manufacturing companies in the country.

The National Agency for Food and Drug Administration and Control says Nigeria imports 70 per cent of the medicine being consumed in the country.

Emeje, a professor of Pharmacy, pointed out that allopathic medicine and its composition were currently taught in Nigerian schools, insisting that the same pride of place should be accorded traditional medicines.

The NNMDA DG maintained that there was nothing wrong with traditional medicines while refuting claims in some quarters that traditional medicines did not have dosage.

He noted, "There can be no development without research. It is research, science, technology, and innovation that drive national development.

"We are in an era where we are applying nanotechnology to traditional medicine and we shall be

reinforcing our research and development models.

"The same way you enroll in school to learn pharmacy, we can as well learn traditional medicines in school, and it does not necessarily need to be taught by a professor with degrees."

The Federal Government in March unveiled four herbal products developed by the agency for the management of diabetes and sickle cell disease. Others are for treatment of upper respiratory tract infections and reducing fast aging.

The NNMDA DG emphasized that Nigeria could develop herbal medicines to cure many diseases that appear incurable through orthodox medicines. "We can do it. Nobody should make it look like it's a big deal to do these things", he added.

The don disclosed that the agency was working on modalities to tackle cholera outbreaks in the country with natural medicine, adding that NNMDA had unveiled measures to effectively address antimicrobial resistance caused by the misuse and overuse of antibiotics.

The professor further stated that the agency had secured accreditation from the National Board for Technical Education to award diplomas in Natural Medicine.

The pharmacist also harped on a pilot production plant that would serve as a testing ground to scale up traditional remedies for industrial production.

According to him, the goal is to bridge the gap between laboratory-scale research and large-scale manufacturing and ensure that traditional medicines meet international standards.

Emeje assured the agency was committed to ensuring that all traditional medical practitioners, including churches, mosques, and traditionalists, adhere to standard practices and protocols in their healing activities.

He also stressed the need to create an enabling environment that facilitates collaboration between research institutes, practitioners, private organisations, and other stakeholders in the traditional medicine sector to boost local capacities to develop natural medicines.



NNMDA Targets Transformative Advances In Traditional Medicine, Biodiversity In 2025

By Royal Ibeh

The Nigeria Natural Medicine Development Agency (NNMDA) has unveiled an ambitious roadmap for 2025, emphasizing enhanced research and the systematic documentation of traditional medicine practices, alongside targeted strategies to combat antimicrobial resistance and livestock diseases.

The Director General of NNMDA, Prof. Martins Emeje, outlined these initiatives during his presentation, "The Media as Natural Medicine Ambassador," at a media parley in Lagos.

According to Emeje, for decades, Nigeria has lacked structured documentation and review of traditional medicine processes, but this will change in 2025, as NNMDA aims to create a comprehensive traditional medicine database while also reviewing the country's biodiversity to bolster research efforts.

Highlighting the agency's strides in securing competitive research grants, Emeje disclosed plans to utilize these funds to address antimicrobial resistance. "We will focus on identifying medicinal plants endemic to specific regions and developing products tailored to the prevalent diseases in those areas," he stated.

This approach, he added, seeks to empower local communities by reducing dependence on foreign medicinal aid. "The solutions to our health challenges are within our reach; we only need to harness them," he emphasized.

NNMDA's 2025 agenda extends to addressing livestock diseases, with partnerships already established with the Netherlands and India to develop herbal remedies. Additionally, the agency is prioritizing cures for snakebites, a significant public health concern, particularly in regions like Katungu, Gombe State, known for venomous snake populations.

"Snakebites represent a critical health insecurity. With funding, we are poised to develop effective treatments and deploy them without delay," Emeje assured.

Reflecting on 2024, Emeje celebrated NNMDA's pioneering use of nanotechnology to create indigenous herbal products for cholera treatment, a feat that positioned the agency at the forefront of innovation in traditional medicine.

"Our model is built on research, science, technology, and innovation. We view every disease as a challenge that requires immediate and strategic action," he stated.





By Chioma Umeha On Jan 1, 2025

NNMDA Combating Pharmaceutical Dependency, Championing Medicines Security In Nigeria -Prof. Emeje



LAGOS – Prof. Martins Emeje, Director General, Nigerian Natural Medicine Development Agency (NNMDA), has assured that NNMDA would lead the country in massive production of natural medicines to tackle its dependency on imported pharmaceuticals and boost medicines security.

Prof. Emeje's call to action highlights the potential for Nigeria to enhance its self-sufficiency in healthcare and promote the use of natural medicinal resources.

Prof. Martins Emeje While stressing the urgent need to reduce Nigeria's dependence on imported medicines, the DG called for deliberate, sustained efforts to harness the country's comparative advantage in the mass production of natural medicines.

Prof. Emeje who spoke during a hybrid end-of-the-year media parley in Lagos, titled, "The Media as Natural Medicine Ambassador," also announced that the agency is making significant progress towards developing solutions to address cholera outbreaks in Nigeria with natural medicine.

He stressed his agency's commitment to tackling the growing issue of antimicrobial resistance, which has been exacerbated by the misuse and overuse of antibiotics.

This initiative reflects NNMDA's ongoing dedication to improving public health through innovative and sustainable approaches, even as it unveiled, earlier this year, four Indigenous oral medicines as part of its commitment to promoting local solutions to healthcare challenges.

The NNMDA boss also stated that the agency is actively engaging stakeholders and regulators to facilitate the mass production of promising indigenous medicines, particularly for diseases such as cholera and sickle cell anaemia.

He said that the process has reached an advanced stage, with the agency awaiting approval from the National Agency for Food and Drug Administration and Control (NAFDAC).

According to him, obtaining NAFDAC's approval will enable the transition to the next phases of clinical studies and trials, paving the way for the mass production of the medicine.

Underscoring the importance of adhering to rigorous regulatory processes to guarantee the safety and efficacy of natural medicines, Emeje added that, while awaiting approvals, the agency is committed to

ongoing research and is preparing for the unveiling of future products.

"While we are waiting for approvals, we have also moved on. We shall be unveiling new products in 2025," Emeje assured.

Expressing concerns over the challenges posed by antimicrobial resistance, Emeje emphasized the agency's strong commitment to addressing this critical issue, given its far-reaching impact on the nation's medicines and health security.

NNMDA boss noted that Nigeria has no reason to remain dependent on external solutions, citing environmental contamination, such as the presence of tetracycline in water systems, as a factor that diminishes the effectiveness of orthodox treatments.

Emeje contrasted this with the holistic potential of natural medicine, where plants naturally contain thousands of bioactive compounds synergistically combined to combat diseases effectively.

"We will focus on identifying medicinal plants endemic to specific regions and developing products tailored to the prevalent diseases in those areas," he stated.

He added that this approach seeks to empower local communities by reducing dependence on foreign medicinal aid. "The solutions to our health challenges are within our reach; we only need to harness them," he stressed.

He insisted that the agency would lead the country to integrate natural medicine into Nigeria's mainstream health system, highlighting the growing global recognition of the agency's achievements on international platforms.

According to him, his agency is repositioning the country as a global hub for natural medicine.

Emeje also revealed that the NNMDA agency has secured the accreditation of the National Board for Technical Education (NBTE) to award diplomas in Natural Medicine.

He specifically stated that, in addition to a four-year grant from the Canadian Institute for Health Research to boost natural medicine development, 16 Professors of Medicine from Nigeria's tertiary institutions are already working with the agency on natural medicine efforts.

The strategic partnership is aimed to standardize traditional medicines and facilitate their integration into the country's healthcare system.

Prof. Emeje stressed the agency's prioritization of capacity building to address the reliance on outsourcing research to contractors, a situation he encountered upon assuming office.

This strategic shift has enabled the agency to actively participate in global scientific conferences for the first time in nearly three decades. Notably, the agency achieved first and third positions in international research competitions in August and November this year, marking a significant milestone just one year into Emeje's leadership.

According to him, NNMDA's achievements in 2024 included developing and unveiling four herbal products targeting critical diseases, using nanotechnology to underscore the potential of indigenous knowledge combined with modern science.

The DG also said the agency has made significant strides, such as creating a national database of traditional practitioners, starting with groups from the grassroots.

Specifically, he said that NNMDA is set to oversee the practice of spiritual healing within religious organisations. According to him, any practitioner found operating outside its established guidelines will face appropriate sanctions.

The CEO of NNMDA stressed that spiritual healing, classified as a form of natural medicine, falls under the agency's jurisdiction, necessitating this regulatory enforcement.

He tasked religious leaders across the country who engage in spiritual healing to comply with the new regulations implemented by the NNMDA. He highlighted the importance of establishing individualized agreements with each spiritual leader to ensure compliance.

"The NNMDA is the sole government agency responsible for the research and development of natural medicines in Nigeria, which includes practices in both churches and mosques. Many individuals choose not to rely on conventional medications when ill, instead seeking healing through their faith," he stated.

"This is a call for all pastors, imams, and religious practitioners- regardless of faith – to understand that if you are claiming to improve people's health through your practices, we are watching you."

The Nigeria Natural Medicine Development Agency (Establishment) Act of 2019 outlines the agency's mandate to establish, research, develop, promote, document, and preserve Nigeria's indigenous healthcare systems and healing practices, and to facilitate their integration into the national healthcare system.

Prof. Emeje further underscored that the standardization of indigenous drugs should be free from Western influences and tailored for the Nigerian populace. "We must establish our own methods and execute them effectively. Individuals are free to heal themselves as they choose; however, if you intend to use your faith to heal others, we need to collaborate to ensure adherence to established

standards," he noted.

He elaborated, "We will develop mutual standards – not legalistic ones – but agreements between us. When we come to an understanding and someone deviates from that agreement, it will be clear that they have strayed from the established norms. Our standards will not mimic those from other countries; we are Nigerians, and our practices should reflect our unique culture and needs."

Prof. Emeje also noted the necessity for standardization in healing practices across different religious contexts, including churches, mosques, and traditional healing practices, all of which fall under the umbrella of natural medicine.

These efforts, he said, aim to document and integrate traditional knowledge into the broader healthcare framework, assuring that giant strides from the sector should be expected soon.

The DG unveil other strategic initiatives which the agency plans to prioritize in 2025, including creating a traditional medicine database, training traditional medicine practitioners, and documenting Nigeria's biodiversity, apart from efforts to combat antimicrobial resistance.

According to the NNMDA boss, his agency's 2025 agenda also includes addressing livestock diseases through partnerships already established with the Netherlands and India to develop herbal remedies.

In addition, he said, the agency prioritizes cures for snakebites, a significant public health concern, particularly in regions like Katungu, Gombe State, known for venomous snake populations.

"Snakebites represent a critical health insecurity. With funding, we are poised to develop effective treatments and deploy them without delay," Prof. Emeje assured.

Similarly, he highlighted plans to intensify the establishment of research farms across the 774 Local Government Areas (LGAs) and prioritize the Cassava Value Addition Initiative (CVAI), a project highly valued by the National Assembly.

Further, he disclosed the agency's goal to establish a Pilot Plant to scale laboratory research to industrial production levels.

According to him, the Pilot Plant initiative is crucial for bridging the gap between preclinical studies and clinical trials, ensuring the effective transition of research findings into tangible health solutions.

He said, "Our vision is focused solely on harmonizing indigenous knowledge with modern science, to pave the way for sustainable healthcare solutions for Nigeria and the world."

The event's high point was the unveiling of Journalists for Natural Medicine (JONAMED), a coalition of media executives dedicated to promoting Nigerian natural medicine.



Agency plans pilot plant to enhance drug development

By: Ijeoma Nwanosike Date: 2 Jan 2025



The Nigeria Natural Medicine Development Agency (NNMDA) plans to establish a pilot plant aimed at bridging the gap between laboratory-scale research and industrial-scale drug production.

The initiative is poised to revolutionize the nation's drug development

landscape by ensuring that laboratory breakthroughs can be effectively translated into market-

ready products.

Speaking at a media parley held recently by the agency, the Director General, NNMDA, Prof Martins Emeje, explained the critical role of pilot plants in drug development. "This is essential to demonstrate that what we achieve in the lab can be scaled up efficiently and economically for mass production," he said

Emeje noted that the establishment of such a facility aligns with the agency's mandate to enhance the research and development of natural medicines in Nigeria. He emphasized its importance in preclinical and clinical studies, highlighting that the plant would facilitate the production of drugs for clinical trials after securing regulatory approvals.

He said NNMDA has secured a four-year grant from the Canadian Institute for Health Research in collaboration with the National Agency for Food and Drug Administration and Control (NAFDAC), the Pharmacy Council of Nigeria, and the University of Waterloo to advance research and development in the natural medicine sector against antimicrobial resistance.

Reflecting on his experiences, Emeje explained how his observations of harmful practices in food production, such as the use of suboptimal doses of antibiotics in fish farming, inspired his dedication to addressing public health concerns such as antimicrobial resistance through research.

"When you consume suboptimal doses of antibiotics over time, it renders the prescribed dose ineffective for treatment," he warned. He also shared insights on broader issues affecting public health, including the misuse of antibiotics in aquaculture, which leads to antibiotic resistance. He emphasized the importance of natural medicines in advocating for research-driven standardization and integration of traditional medical practices into Nigeria's healthcare system.

Emeje also emphasized the potential of natural medicines in combating drug resistance. "Natural products rarely lead to resistance because the organisms do not know which compound is killing them," he stated, advocating for increased research and standardization in traditional medicine practices.

He further announced plans to incorporate traditional medical practices into national skills acquisition programmes. "The use of herbs, water, and even animal parts in traditional medicine are the areas being addressed through training and development," he said. The agency also intends to engage religious and traditional healers to ensure standardization and safety in healing practices across various sectors.



January 2, 2025 by Adekunle Yusuf

How We Plan To Revamp Nigeria's Health Sector, By NNMDA

By integrating indigenous natural remedies with cutting-edge scientific research, NNMDA seeks



Prof. Martins Emeje role in this shift.

to tackle critical health challenges—such as cholera, diabetes, sickle cell disease, and antimicrobial resistance—while championing sustainable, locally-sourced solutions for the future

Nigeria's healthcare delivery system faces significant challenges, from underfunded hospitals to a lack of access to quality care, particularly in rural areas. However, amid these challenges, there is a growing recognition of the potential of natural medicine as a complement to conventional healthcare. The Nigeria Natural Medicine Development Agency (NNMDA), a government agency dedicated to promoting and developing Nigeria's indigenous natural healthcare practices, is poised to play a transformative

During a recent media parley in Lagos, the Director-General of NNMDA, Prof. Martins Emeje, revealed that the agency aims to leverage the rich diversity of Nigeria's herbal knowledge and indigenous healing practices to address the country's healthcare needs while encouraging innovation, sustainable practices, and increased access to affordable treatment. He also shared the agency's strategic vision to integrate natural medicine into the national healthcare framework and how it plans to revamp Nigeria's health sector.

One of the key priorities for the agency in 2025 is combating cholera using indigenous medicine, marking a significant advancement in addressing the persistent public health challenge in Nigeria. The NNMDA boss said that the agency is tapping into traditional remedies that have been effective in treating cholera in local communities for centuries. Emeje explained that the agency's initiative to develop a locally sourced cholera medicine is part of a broader strategy to promote and integrate natural medicine within Nigeria's healthcare system. He expressed confidence in the potential of indigenous remedies, stating, "We believe that traditional medicine holds immense promise. By collaborating with traditional healers, we are working to harness these time-honored remedies in a scientifically rigorous manner to benefit the health of our people."

He also highlighted the agency's ongoing progress, noting, "We are encouraged by the results so far and believe this cholera medicine could have a profound impact, not only in Nigeria but across Africa and beyond." In addition, Emeje stressed the urgent need for enhanced research into indigenous medicine, advocating for its systematic documentation and formal recognition. He also underscored the importance of developing strategies to tackle antimicrobial resistance and to address diseases that impact both human and livestock populations. By strengthening traditional medicine practices, the NNMDA is not only seeking to improve healthcare in Nigeria but also positioning indigenous remedies as a vital component of global health solutions.

Prof. Emeje, a distinguished expert in drug discovery and development, outlined the NNMDA's strategic initiatives for 2025, emphasizing a multifaceted approach to improving public health through indigenous medicine. He shared that the agency is currently working on creating a

comprehensive database of traditional medicine, alongside a detailed review of Nigeria's vast biodiversity, to support and advance research. Emeje also highlighted NNMDA's recent success in securing significant research grants, which will be utilized to combat antimicrobial resistance, a growing global health threat.

"We are focusing on identifying medicinal plants that are specific to certain regions, developing targeted products for the diseases that are prevalent in those areas," he explained, underscoring how the agency's approach is tailored to address local health needs.



Bayelsa Govt Promises Partnership With NDU, NNMDA On Trado-Medical Production

Pauline Onyibe April 14, 2025



The Bayelsa State Government has pledged to partner with the Nigeria Natural Medicine Development Agency (NNMDA) in the production of herbal medicine.

The State also expressed readiness to support any research activity in its tertiary educational institutions that promotes innovation and traditional medical practices.

Deputy Governor Lawrence Ewhrudjakpo made the

commitment on Monday while speaking as the Special Guest of Honour at the 4th Niger Delta University (NDU) Public Lecture, held at the Law Campus of the University in Ovom, Yenagoa.

A statement by his Senior Special Assistant on Media, Doubara Atasi, noted that Nigeria has yet to make appreciable progress in the health and other critical sectors due to its overdependence on foreign products and underutilization of research findings.

Ewhrudjakpo urged private organizations, especially oil and gas companies operating in the State, to align their corporate social responsibility (CSR) efforts toward addressing challenges facing the people.

He commended NDU for its recent innovations and inventions and pledged the government's support for the university's Natural Medicine Institute in areas of training and distribution of its products.

The Deputy Governor announced that each Local Government Area would sponsor at least ten Bayelsans annually to study at the institute.

He also indicated the State's willingness to partner with the University of Africa, Toru-Orua, to ensure the continuous availability of the local delicacy known as "Bayelsa Suya."

"My presence here today is to demonstrate the support of the state government. We want everyone to know that the government is solidly behind NDU in this endeavor.

"Let me once again call on Shell and other oil companies to join hands with us. CSR should no longer be entirely at their discretion—it should align with the needs of the people.

"We've been stagnant for too long. The benefits of research are often hidden and underutilized. We are ready to change that.

"And that is why I want to challenge the University of Africa to develop the capacity to improve innovation and establish a laboratory that will produce Bayelsa Suya for all seasons," he added.

In his welcome address, NDU Vice Chancellor, Allen Agih, noted that Bayelsa has a comparative advantage in natural medicine, which must be harnessed for the state's sustainable development.

He disclosed that the University has taken steps to establish a new faculty and an institute of natural medicine to help provide affordable and accessible healthcare to the people of the state and beyond.

Delivering the public lecture titled "Natural Medicine: The Mainstream of Global Systems of Medicine," Kolawole Ajibesin described Bayelsa as a biodiversity hotspot, rich in flora and fauna capable of supporting the production of world-class natural medicine.

Ajibesin, who is also the Director of the NDU Natural Medicine Institute, emphasized the need for Nigerians to patronize well-researched and locally produced herbal drugs, pointing out that many industrialized countries have integrated herbal medicine into their healthcare systems.

He appealed to the Bayelsa State Government to establish a Ministry of Natural Medicine to drive aggressive research and development of indigenous herbal products.

Also speaking at the event, the Director General of the NNMDA, Martins Emeje, urged Nigerians to free themselves from the remnants of colonialism that continue to hinder self-reliance and national development.

According to Emeje, many Nigerians still suffer from a form of mental slavery that makes them view their own traditions including herbal medicine passed down from their forebears as inferior to imported goods and cultures.

Describing Bayelsa as the global leader in traditional orthopedics, Emeje revealed that the NNMDA plans to promote the recruitment of traditional birth attendants (TBAs) and bone setters to help teach empirical traditional healing methods in academic institutions nationwide.

Highlights of the event included the signing of a Memorandum of Understanding (MoU) between NDU and NNMDA, as well as the unveiling and launch of Wilberforce Herbal Tea, a locally-produced tea by NDU.

VANGUARD NEWS NEWS

April 16, 2025

Give us 15,000 staff to make Nigeria medicinal plant export hub - NNMDA

By Chioma Obinna



As the members of the House of Representatives on Wednesday endorsed natural medicine revolution of the Nigerian Natural Medicine Development Agency, NNMDA, the Agency has asserted that with an investment of 15,000 dedicated staff, Nigeria could pivot from its reliance on oil revenue to become a net exporter of medicinal plants and natural medical products within a mere 12 months.

Declaring the ambitious vision in Lagos during the visit of members of Legislative Compliance

Committee, House of Representatives, the Director General of the agency, Prof Martins Emeje said the agency's plan would not only diversify the nation's economy but also to tap into the burgeoning global market for natural remedies, potentially signaling a significant shift away from its dependence on the volatile oil sector.

Emeje, who recalled that the House of Representatives unanimously endorsed a resolution placing natural medicine at the heart of the nation's healthcare strategy, described the decision as "the beginning of Nigeria's liberation from colonial dependency on foreign pharmaceuticals."

Speaking during the visit of the House Committee on Legislative Compliance to the Nigerian Natural Medicine Development Agency, NNMDA, Emeje said: "I told you from the beginning, I don't need any book to read. I am the roadmap for research in this country."

The visit, led by Hon. Yusuf Ahmed Badau, marks the first-ever oversight of the agency since its formal legal recognition in 2019, despite its establishment in 1997.

Emeje, who noted that the visit was symbolic and strategic, said: "The presence of the committee here shows that the resolution is not just paper—it's action. This day is monumental. It is the day Nigeria begins to regain her healing power."

Emeje said the agency needs 15,000 staff—20 per local government across Nigeria to identify, document, cultivate, and standardise indigenous medical knowledge and plants.

"Give me 15,000 staff, and in 12 months, Nigeria will become a net exporter of medicinal plants and natural medical products. We will stop looking for oil money," he declared.

However, Prof. Emeje was clear: passion alone is not enough. "We are operating with only 136 staff. It is not sustainable. Passion has a limit. We need financial and human support to scale."

He explained that NNMDA has so far documented over 1,750 medicinal plants across all Nigerian geo-political zones, with ongoing collaborations with international partners, including India and the Netherlands.

He said the agency is now preparing for clinical trials on herbal products already approved by NAFDAC, aiming for hospital integration and five-year registrations for indigenous products.

Emeje drew parallels with India and China, whose traditional medicines form multi-billion-dollar industries. "Nigeria can do the same and better if we believe in ourselves. These countries used their brains; we must use ours."

He also emphasised the broader scope of natural medicine, from herbal remedies to religious practices and yoga, all of which contribute to well-being and must be researched, documented, and integrated.

Emeje warned that unless Nigeria invests in its research institutions, "We are jackpotted in reverse—working here but doing research for foreign funders. That's more dangerous than physical migration."

Lamenting meagre N300 million budgets, that have attracted international attention, Emeje insisted that government support is key: "Let's stop depending on handouts. Let's invest in what we own."

The agency has also launched training programmes for traditional medical practitioners and serves as an accredited pharmacy internship centre. "Our interns don't just learn science—they learn ethics and patriotism," he said, before presenting the award for Best Intern of the Year to a young female graduate. "We don't need to copy and paste healthcare models. Let our universal health coverage be built around our own medicine, our own identity. Support us, and watch Nigeria rise."

Responding, the Chairman of the House Committee on Legislative Compliance, led by Hon. Ahmed Badau, expressed strong support for the agency's work: "What we saw is encouraging. It will reduce dependence on foreign medicine and create jobs for our people. We are pledging our support for this vision."

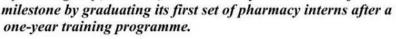
"I am highly impressed and delighted with what I saw in this building, and I promised to help this great institution. However, my hope is for you to have an office and hospital in every ward and local government area of Nigeria to provide opportunities for our youths, and affordable treatment for all Nigerians at a cheaper rate."



Natural medicine agency graduates first set of pharmacy interns

by EDITOR April 16, 2025

The Nigerian Natural Medicine Development Agency (NNMDA) on Wednesday achieved a major





The Director-General, NNMDA, Prof. Martins Emeje, performed the ceremony during the working visit of the House of Representatives Committee on Legislative Compliance to the agency.

The NNMDA was accredited by the Pharmacy Council of Nigeria to serve as an internship centre for graduates of pharmacy from various universities.

Emeje said that the agency took in five best graduating students from their respective universities, and four of them had successfully completed the programme.

He said that the training was not only professional, but also emphasized morals and ethics with a minimum standard of behaviour expected from the interns.

According to the Director-General, even with excellent academic credentials, interns who fail to meet the expected standards of behaviour will be sent away.

"On the other hand, outstanding performers are encouraged and recognized for their positive attitudes.

"The best intern of the year, a lady, was selected and awarded a prize, highlighting the agency's commitment to recognizing and rewarding excellence.

"This achievement marks a significant step in the agency's efforts to produce highly skilled and ethical pharmacists who will make a positive impact in the healthcare sector," Emeje said.

Responding to the award bestowed on her as best intern, Miss Barakat Muritala, a Graduate of Igbinedion University, expressed appreciation for the award and interest in pursuing a career in traditional medicine.

Muritala shared her experience as an intern, where she gained valuable knowledge and skills under the guidance of her mentor.

She described her experience as lovely and appreciated the opportunity to learn from her mentor, the NNMDA director-general, adding that he provided constructive feedback and guidance.

Muritala was hopeful of implementing the knowledge and skills she had acquired in her future career with a focus on traditional medicine.



NNMDA seeks N2b to begin clinical trials

By: Oluyemi Ogunseyin Date: 16 Apr 2025 By Ijeoma Nwanosike

The Director General of the Nigeria Natural Medicine Development Agency (NNMDA), Professor Martins Emeje, has called on the House Committee on Legislative Compliance to approve the sum of N2 billion to facilitate clinical trials in collaboration with the National Agency for Food and Drug Administration and Control (NAFDAC).

This appeal was made during a working visit by the committee members to the agency's headquarters in Lagos.

According to Emeje, the clinical trials would focus on diseases such as sickle cell, diabetes, hypertension, arthritis, and urinary tract infections. He disclosed that the trials would be conducted pro bono over three years, to integrate natural medicine into mainstream healthcare delivery.

In addition, the agency has graduated its first cohort of natural medicine pharmacists following its accreditation as an internship centre by the Pharmacy Council of Nigeria (PCN).

Speaking on the future of the agency, Emeje expressed optimism about the direction the agency is headed.

He stated that he had always envisioned a time when natural medicine would gain national priority, and he described the visit by the lawmakers as a significant step toward achieving that vision.

Emeje further emphasized the need for increased funding and manpower, stating that the agency currently operates with only 136 staff members but would require at least 15,000 to fully harness the potential of Nigeria's natural medicine sector.

"If given the support, we can deploy staff across the country and turn Nigeria into a net exporter of medicinal plants and products. This would ensure universal healthcare access through our own indigenous natural medicine," he added.

Explaining the significance of clinical trials, he noted that they represent the final stage in drug development, which involves administering products to humans or animals to confirm efficacy and safety.

He revealed that some of the agency's products had already received preliminary approval from NAFDAC and would proceed to clinical trials once funding is secured.

He commended the efforts of NAFDAC's Director General, Professor Mojisola Adeyeye, noting that both agencies have been working closely to push the natural medicine agenda forward.

The Chairman of the House Committee on Legislative Compliance, Ahmad Badau (Shanono/Bagwai Constituency, Kano State), described the appeal as "encouraging" and pledged the committee's support. He urged the agency to submit formal proposals for further legislative action.

"The visit has been very encouraging. It will help develop traditional medicine and reduce dependence on foreign drugs. It will also create job opportunities for our youth," Badau said.

Badau expressed confidence that with sustained effort, Nigeria could shift significantly toward

self-reliance in healthcare. He concluded by reiterating that the National Assembly's support would depend on the commitment of the agency.

"What the agency presents to us is what we will act on," he said.



Magdalene Ukuedojor Apr, Thu, 2025

Science & Tech

NATURAL MEDICINE AGENCY GRADUATES FIRST SET OF PHARMACY INTERNS

By Stellamaris Ashinze

The Nigerian Natural Medicine Development Agency (NNMDA) has achieved a major milestone by

graduating its first set of pharmacy interns after a one-year training programme.

The Director-General, NNMDA, Prof. Martins Emeje, performed the ceremony during the working visit of the House of Representatives Committee on Legislative Compliance to the agency.

The News Agency of Nigeria (NAN) reports that NNMDA was accredited by the Pharmacy Council of Nigeria to serve as an internship centre for graduates of pharmacy from various universities.

From Left to Right: Miss Barakat Muritala, best intern; the Chairman, House Committee on Legislative Compliance, Mr. Badau Ahmed; the Director-General, NNMDA, Prof. Martins Emeje

Emeje said that the agency took in five best graduating students from their respective universities, and four of them had successfully completed the programme.

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Muritala was hopeful of implementing the knowledge and skills she had acquired in her future career with a focus on traditional medicine. (NAN)(www.nannews.ng)

Edited by Christiana Fadare



NNMDA seeks support for natural medicine development

Our Reporters 4 weeks ago Health Comments on NNMDA seeks support for natural medicine development

World Stage News online— The Nigeria Natural Medicine Development Agency (NNMDA) has appealed for increased support to advance Nigeria's natural medicine sector.

The agency's Director-General (DG), Prof. Martins Emeje who made the appeal during a visit by the House of Representatives' Committee on Legislative Compliance to the agency's facility in Lagos on Wednesday said the request for support aims to help the agency reach grassroots communities and document their traditional medical knowledge—an essential step toward standardization and national development.

He cited projections indicating that the global trade volume in biodiversity-related products was expected to reach 5 trillion dollars in 2050.

According to him, NNMDA has made significant progress in promoting natural medicine, including the documentation of over 1,750 medicinal plants across Nigeria's six geopolitical zones.

He stressed the importance of field-based documentation, contrasting it with internet-based methods, and highlighted its value in shaping policy and legislative decisions.

"Such data is necessary for informing policy decisions and legislative actions by the National Assembly," Emeje said.

He also revealed that NNMDA had a collaborative agreement with the National Agency for Food and Drug Administration and Control (NAFDAC). He noted that it was aimed at conducting clinical trials free of charge on products targeting common diseases in Nigeria such as malaria, sickle cell anaemia, and diabetes.

"The agency currently has 18 NAFDAC-registered products, "he said.

The DG noted that the agency had been upgraded to serve as a National Skills Acquisition awarding body for traditional medical practitioners, making it responsible for their training and certification.

Emeje disclosed that the agency currently had only 136 staff members in spite of its expansive mandate and achievements.

According to him, it requires at least 15,480 to effectively operate in all of Nigeria's 774 local government areas.

He emphasized that the agency's presence in every local government was vital for identifying and cultivating region-specific medicinal plants for disease treatment.

He added that it aligned with the vision of universal health coverage rooted in indigenous medicine.

Emeje further explained that although the agency's name includes "medicine," its mandate" goes beyond healthcare to include agriculture and education."

He announced the accreditation of a two-year national diploma programme in natural medicine by the Federal Ministry of Education and the National Board for Technical Education.

Highlighting NNMDA's agro-allied status, he explained that agriculture underpinned its health interventions.

According to him, the agency uses science and technology to convert agricultural produce into medicine choosing to collaborate with nature rather than alter it through synthetic, lab-based drug development.

Emeje projected that cultivating medicinal plants across all local governments could generate up to 147 million jobs, significantly reducing poverty in Nigeria.

He also mentioned recent Memorandums of Understanding with the Netherlands and India on herbal products for livestock, positioning NNMDA as a key player in both human and animal health sectors.

He said that currently, most livestock medicines used in Nigeria were largely imported, while the agency was actively producing natural alternatives.

The DG acknowledged the past support of the House of Representatives, which facilitated economic opportunities for traditional healers, local farmers, manufacturers, transporters, and entrepreneurs involved in the value chain.

He expressed gratitude for the resolution that led to the current engagement, saying though" passion drives their efforts, it also has its limitations."

Emeje highlighted NNMDA's selection to lead two other institutions in a European grant-writing initiative as an example of its growing capabilities.

He, however, noted the challenge was that many internationally competitive grants often targeted areas not aligned with Nigeria's national health priorities.

He presented visual evidence showcasing the transformation of agency-managed farms across various states since the 10th Assembly's support, including increased productivity and improved infrastructure.

The agency also reiterated its commitment to staff welfare and international collaboration.

Emeje commended the Deputy Governor of Bayelsa State for directing all local governments in the state to nominate traditional medical practitioners for training.

"An example of the type of support the agency deems essential nationwide, "he said.

He reiterated the need for widespread enlightenment and education on the benefits of natural medicine across all 774 local government areas and proposed the establishment of "NNMDA Fellows" in each LGA.

In appreciation of the House of Representatives' support, the NNMDA declared the House a "People's Parliament" and conferred the title of "Natural Medicine Ambassador" on its leader.

The DG concluded by showcasing innovative product packaging in national colours and the agency's efforts in developing the capacity of traditional bone setters and birth attendants.

He also highlighted the establishment of the first government-owned herbal pharmacy in Nigeria.

The Chairman of the House Committee on Legislative Compliance, Rep Badau Ahmed, assured that the House would do all it takes to encourage the agency consistently.

Ahmed emphasized that promoting traditional medicine in Nigeria would reduce dependency on imported drugs and create economic opportunities.

"The only thing is to encourage him to write down whatever he has in mind and submit it to us, so we can take it up as actionable items," he said.

"It is encouraging and empowering to have traditional medicine in Nigeria. It will reduce our reliance on foreign drugs and help our communities benefit from vital opportunities."





National Assembly Mulls Expansion of Natural Medicine Agency

By Temitope Obayendo 17/04/2025



Chairman, House of Representatives Committee on Legislative Compliance, Alhaji Yusuf Ahmed-Badau (middle), Director General, NNMDA, Prof. Martins Emeje, (2nd from right); Best Intern Award Winner, Pharm. Barakat Murtala; and other members of the representative entourage during the visit.

Towards boosting the production and promotion of natural medicines for enhanced healthcare accessibility for all Nigerians, the National House of Assembly (NASS) has

expressed interest in extending the functional presence of the Nigeria Natural Medicine Development Agency(NNMDA) to every Local Government Area (LGA) across the country, through the creation of offices for the agency in all LGAs.

This, the NASS said will bring about development to the practice of natural medicine in the country, as done in other countries like India, China and Japan, as well as create employment opportunities for Nigerian youths.

The Chairman, House of Representatives Committee on Legislative Compliance, Alhaji Yusuf Ahmed-Badau, made this commitment during a working visit to the NNMDA headquarters in Lagos, on Wednesday.

Alhaji Ahmed-Badau, who expressed his delight in the strides of the agency over the years, and it's potential in becoming a significant source of external revenue for the country, if handled appropriately, pledged to further discuss the possibilities of equipping the agency with 15,000 staff as well as more funds for the advancement of healthcare in the country, with little or no foreign dependency.

"I am highly impressed and delighted with what I've seen in this building" he said, "and promised to help this great institution.

"However, my hope is for you to have an office and hospital in every ward and local government in Nigeria, in order to provide job opportunities for our teaming youth's population and affordable treatment for all tropical diseases in Nigeria and drugs to all Nigerians at cheaper rates."

He continued by emphasizing the economic importance of the agency, if its tentacles are spread to all states and LGAs to harness the natural plants there into standardized herbs for different ailments in Nigeria and beyond, arguing that this will definitely enhance reduction in the cost of drugs, and ultimately reduce dependence on foreign medicines.

The Director General, NNMDA, Prof. Martins Emeje, who received Ahmed-Badau and his entourage with profound pleasure, appreciated the Federal Government of Nigeria's



support to the agency, with pictorial display of projects and outreaches implemented with fund allocated to the agency.

Chairman, House of Representatives Committee on Legislative Compliance, Alhaji Yusuf Ahmed-Badau, in the company of the Director General, NNMDA, Prof. Martins Emeje, presenting a laptop and a certificate to the Best Intern Award Winner, Pharm. Barakat Murtala, during the event.

An enthusiastic and confident Emeje, passionate of the possibilities in natural medicines, averred that the nation will witness a turnaround in revenue generation, if the agency could be entrusted with 15,000 staff to comb all the nooks

and crannies of the country, to harvest and develop medicinal plants for herbal drugs development.

He noted that the agency is not limited to plants development, but also plays a significant role in livestock management for therapeutic formulations to encourage the use of locally made animal medicines.

"We are excited and we feel highly fulfilled to have the Chairman, House of Representatives Committee on Legislative Compliance with us today. With this visit, Nigerians, finally are about to be liberated from the shackles of colonialism and over dependence on importation of medicines that are indigenous to other people because they use their brain, while it appears we are not using our brains.

"The presence of the committee here shows that the resolution is being achieved. So that's the first thing, that the committee left Abuja to come to the agency has been directed, shows that the resolution is being achieved. The next thing is to put life into that resolution, that is provide the two big supports we have requested- the financial support and the human support," he said.

The NNMDA DG continued, "I need at least 15,000 staff to get this country to turn around and nobody will be looking for oil money. I mean nobody will look for oil money if they give me 15,000 staff to be deployed to 20 local governments.

"If this is granted, in 12 months, this country will be a net exporter of medicinal plants and natural medicines both in their raw form processed and standardized and as medical products for intervention. With this development, people will now have what we call 100% access to medicine and universal health coverage, using our own natural medicines as the core."

The highpoint of the event was the decoration of Alhaji Yusuf Ahmed-Badau as a natural medicine ambassador and the presentation of the Best Intern Award to Pharm. Barakat Murtala, who was recognized for her exceptional performance in the pharmaceutical section of the Agency.

VANGUARD NEWS

Hope Rises As FG Renews Commitment To NNMDA Towards Natural Medicines Production

Highlights Potential Of Plant-Based Medicines For Export Earning

By -Chioma Umeha April 18, 2025



Some members of staff and management of Nigeria Natural Medicine Development Agency (NNMDA), members of the House Committee on Legislative Compliance, during the latter's working visit to NNMDA headquarters in Lagos on Wednesday.

The Federal Government has renewed its commitment to enhancing the Nigeria Natural Medicine Development Agency's (NNMDA) initiatives in natural medicine production, regulation, and promotion. It expressed optimism in the potential of Nigeria's plant-based medicines to significantly contribute to export earnings.

Alhaji Yusuf Ahmed-Badau, Chairman of the House Committee on Legislative Compliance, gave the assurance during a working visit to NNMDA headquarters in Lagos, saying the move would enhance healthcare delivery and boost access to affordable drugs.

Ahmed-Badau asserted that if the country's natural medicine is well and properly developed, it would reduce the dependence on foreign and imported medicines, assuring that the lawmakers were ready to support the agency's drive to develop comprehensive natural medicine.

According to the legislator, the development of natural medicine on a large scale will create massive job opportunities across the country.

Ahmed-Badau said, "This move by the NNMDA to develop and promote traditional medicine is encouraging. This will reduce costs and dependence on foreign medicine.

"So, at the same time, this plan will help our teeming youths by creating job opportunities in our communities across the country.

"The NNMDA DG has informed us of their plans, and the only thing is to encourage them to formalize everything in writing and submit it to us. We'll take it from there and put it into action," the committee chairman said.

Speaking earlier, Prof. Martins Emeje, Director-General, Director-General, who appealed for increased support to advance the agency's development roadmap, urged the House to approve a special allocation

for the development of natural medicine.

Emeje said with the lawmaker's support, Nigerians could be liberated from the overdependence on foreign medicines.

"Nigerians are finally about to be liberated from the shackles of colonialism and overdependence on the importation of medicines that are indigenous to other people," the professor said.

He said that with the right allocation and improved staff strength, the country could explore natural medicines from each local government to treat diseases or infections peculiar to the LGs.

The NNMDA boss explained that diseases in every location across the country have something to do with the natural constitution of that environment.

"For each ward, local government, or state, there are peculiar plants, animals, and minerals that cannot be found somewhere else.

"It is the plants, animals, and minerals in that community that can be explored for medicine for diseases found in that community," Emeje added.

The committee's working visit is coming months after the House adopted a motion on the "need for Nigerians to promote and prioritize natural medicine" in the country.

The motion was sponsored by the member representing Ikono/Ini Federal Constituency, Akwa Ibom State, Mr. Emmanuel Ukpong-Udo.

Udo, in a brief synopsis of the motion, noted that globally, the present-day healthcare enterprise leans more towards nature-based remedies, "and this is without exception to any known human ailment."

"Natural medicine is the most accessible and preferred healthcare delivery system in most communities in Nigeria today.

"We are worried that the country could not make the necessary achievements by making traditional medicine subservient to imported medicine," he submitted.

After adopting the motion, the House mandated its committees on Healthcare Services and Science and Technology to "strategize with stakeholders and the Natural Medicine Development Agency."

It further tasked the Committees to "connect the possibilities of natural medicine, reorient Nigerians, and look inwards for solutions to health challenges."



April 21, 2025 by Adekunle Yusuf

Efforts to mainstream natural medicines gaining traction



Amid a global shift toward natural healing, Nigeria is harnessing its rich traditional medicine heritage. With growing legislative backing and global interest in natural healing, the Nigerian Natural Medicine Development Agency (NNMDA) is at the forefront of efforts to legitimize,

regulate and integrate traditional remedies into Nigeria's mainstream healthcare system, reports Associate Editor ADEKUNLE YUSUF

As the global wellness movement leans increasingly towards organic and naturebased solutions, Nigeria is taking bold steps to bring its rich heritage of traditional medicine into the mainstream.

At the forefront of this transformation is the Nigerian Natural Medicine Development Agency (NNMDA), which is steadily working to validate, standardise and promote natural medicine practices across the country.

From herbal teas to plant-based remedies, Nigeria boasts an extensive pharmacopeia built on centuries of indigenous knowledge. Yet, for decades, this vast resource remained underutilized, largely confined to informal settings and often dismissed in modern medical circles. That tide is now turning. With global attitudes warming towards natural health remedies and the urgent need for affordable, accessible healthcare back home, Nigeria is poised for a traditional medicine renaissance.

NNMDA's renewed energy under the leadership of its Director-General, Prof Martins Emeje, is already drawing attention from key stakeholders, including the National Assembly. During a recent visit to the Nigerian Natural Medicine Development Agency headquarters in Lagos, the House Committee on Legislative Compliance, led by Badau Yusuf Ahmed, expressed firm support for the agency's strategic plans to mainstream

traditional medicine and create employment opportunities across all 774 local government areas in Nigeria. According to him, the House of Representatives has committed to fully backing the NNMDA's efforts to advance natural medicine development in the country. Lawmakers, he said, believe that this initiative will not only enhance healthcare delivery but also improve access to affordable, locally sourced medications for Nigerians. They pointed out that with the right investment and support, the growth of Nigeria's natural medicine sector could significantly reduce the nation's reliance on imported pharmaceuticals.

Reaffirming the legislature's commitment, Ahmed emphasised that large-scale development of natural medicine has the potential to drive substantial job creation and contribute to the economic empowerment of communities nationwide. "This move by the NNMDA to develop and promote traditional medicine is encouraging. This will reduce costs and dependence on foreign medicine. So, at the same time, this plan will help our teeming youths by creating job opportunities in our communities across the country.

"The NNMDA DG has informed us of its plans, and the only thing is to encourage him to formalize everything in writing and submit it to us. We'll take it from there and put it into action," Ahmed said during the committee's visit.

Under the visionary leadership of its Director-General, the NNMDA has launched a series of strategic initiatives aimed at repositioning natural medicine as a credible, accessible and scientifically backed option for healthcare delivery in Nigeria. With a mandate to research, develop, document, and promote the nation's natural medicine resources, the agency is bridging the gap between traditional knowledge and modern science. "Our mission is simple yet profound — to mainstream traditional medicine in Nigeria by ensuring it is safe, effective and globally competitive. We are committed to evidence-based research that not only validates indigenous remedies but integrates them into the national health system," said Prof Emeje.

Indeed, NNMDA's blueprint for reform is comprehensive. With a clear focus on research, validation, capacity building and policy integration, the agency aims to ensure that traditional remedies are safe, standardized and effective. More than this, Emeje always enthuses that the agency envisions a Nigeria where the country's vast biodiversity is not only harnessed for improved healthcare delivery but also becomes a pillar of economic growth. "Our goal is to liberate Nigerians from the overdependence on imported medicines and reclaim ownership of our indigenous knowledge. With adequate support and funding, Nigeria can lead the herbal medicine market in Africa and become a net exporter of high-quality, scientifically backed products."

To achieve the ambitious goal, the agency is currently seeking N2 billion in funding to operationalize its plan. One key element of this is the deployment of 15,480 trained personnel across the nation's 774 local government areas. These community-based teams would identify, document and develop natural remedies unique to each region—a model that could revolutionize disease management and prevention nationwide. "Each community has unique flora, fauna, and minerals. These should be explored for diseases peculiar to those communities," Emeje explained.

Indeed, the concept is rooted in science. Diseases, according to the NNMDA, often have environmental factors. Therefore, the local ecosystem is the best place to seek natural solutions. The novel plan by the NNMDA aligns with the World Health Organization's (WHO) push for countries to integrate traditional medicine into their national healthcare frameworks. To ensure quality and safety, the NNMDA boss said his agency is working on a national herbal pharmacopoeia—a scientifically validated database of Nigerian medicinal plants and their uses. A digital pharmaceutical information system and a knowledge repository of traditional healing practices are also underway, designed to give future generations of Nigerians access to validated, regulated indigenous medical knowledge.

The agency is also conducting clinical trials on several herbal formulations to tackle common and chronic ailments, including malaria, diabetes, hypertension, sickle cell anaemia, urinary tract infections, arthritis, and various skin conditions. Such trials are essential not only for domestic approval but also for international acceptance. According to Emeje, NNMDA's strategic goals have also attracted partnerships, including Memorandum of Understanding (MoUs) with strategic health and research organisations to scale up research and commercialization efforts. The NNMDA DG said every partnership his agency entered into is a deliberate agenda that aims to leverage human capacity to broaden the reach of NNMDA's research outcomes and initiatives, contributing to the growth and global recognition of Nigeria's natural medicine research efforts.

Moreover, policy reforms now require traditional medicine practitioners to undergo certified training, ensuring professionalism, safety and standardisation. "Without proper training and certification, we cannot guarantee that patients are getting safe and effective treatments," Emeje said. "We're formalizing the sector—this is no longer an informal, word-of-mouth trade."

Several herbal products formulated and launched

In another significant step toward improving public health and strengthening the country's traditional medicine sector, NNMDA has launched a new line of indigenous herbal products. These formulations are aimed at tackling some of Nigeria's most pressing health challenges, including cholera, antimicrobial resistance (AMR), snakebites and livestock diseases. Developed through a blend of time-tested traditional knowledge and modern scientific research, the products underscore the agency's commitment to making natural medicine a credible and accessible component of mainstream healthcare.

Among the flagship innovations is a herbal remedy specifically designed to combat cholera—a waterborne disease that continues to pose a serious threat in many parts of Nigeria. The formulation, derived from locally sourced medicinal plants known for their antibacterial and anti-diarrheal properties, was developed in collaboration with traditional healers and scientific researchers to ensure its safety and efficacy. This marks a critical advancement in the use of natural medicine for combating endemic diseases.

In addition to cholera, the agency is addressing the global threat of antimicrobial resistance (AMR) by introducing herbal products with potent antimicrobial properties. These natural formulations are intended to serve as alternatives to conventional antibiotics, particularly in rural and underserved communities where access to modern healthcare remains limited. By promoting the responsible use of traditional remedies, the agency aims to reduce dependence on synthetic antibiotics, which is one of the major drivers of resistance.

Beyond the health impact, the initiative has far-reaching socio-economic benefits. NNMDA is deliberately involving local communities by sourcing raw materials from Nigerian farmers and working closely with traditional herbalists. This inclusive approach not only ensures authenticity in the production process but also stimulates rural economies, creates jobs, and supports sustainable agricultural practices. It reflects a broader strategy to integrate healthcare improvement with economic empowerment.

The commercialization of these herbal products is a key component of NNMDA's long-term vision. The agency is currently forging partnerships with local distributors and international pharmaceutical firms to scale up production and extend the reach of these remedies beyond Nigeria's borders. The goal is to make scientifically validated traditional medicines widely available, particularly in remote areas where conventional healthcare services are scarce. With the right investment and regulatory support, these products could position Nigeria as a leader in Africa's traditional medicine market.

The agency's work also extends to other critical health concerns. In regions like Gombe State, where snakebites remain a significant threat, NNMDA has developed a herbal antidote using local plant resources. In collaboration with partners from India and the Netherlands, it is also developing herbal treatments for livestock diseases, addressing a major concern for the country's agricultural sector. To fast-track the integration of these remedies into the national healthcare system, NNMDA is actively engaging with regulatory bodies, including the National Agency for Food and Drug Administration and Control (NAFDAC). Several products are already in advanced stages of development, pending regulatory approval for clinical trials and mass production, with the agency remaining committed to expanding its portfolio of indigenous medicines and new products set for release later this year.

Getting the much-need legislative backing

The House of Representative members have not just expressed moral support—they've begun backing their endorsement with legislative action. Months before their visit to NNMDA, lawmakers had adopted a motion sponsored by Emmanuel Ukpong-Udo of Akwa Ibom State, urging a national shift in mindset toward natural medicine. Ukpong-Udo noted that globally, nature-based remedies are becoming mainstream and that Nigeria should not be left behind. He described traditional medicine as the most accessible and preferred health solution in many communities and cautioned against continued subservience to imported pharmaceutical products.

Following this, the House mandated its Committees on Healthcare Services and Science and Technology to work with stakeholders and the NNMDA to strategize on the full integration of traditional medicine into Nigeria's healthcare framework. Their tasks include creating awareness, boosting local confidence in natural remedies, and encouraging local innovation in pharmaceutical sciences. "We are committed to ensuring that NNMDA's goals are not just dreams on paper but realities that improve lives and reduce our health sector's financial burden," Ahmed reaffirmed.

According to the WHO, over 80 per cent of the global population uses traditional medicine in some form. The global herbal medicine market is projected to surpass \$600 billion by 2033, with Africa's share expected to rise significantly due to increasing interest in biodiversity and natural health. For Nigeria—Africa's most populous country with an estimated 10,000 medicinal plant species—this presents a unique opportunity. If properly harnessed, traditional medicine could become a significant foreign exchange earner, much like cocoa or oil once were. Emeje believes Nigeria is sitting on a goldmine. With the right investments, he says, the country could be exporting medicinal plants and finished herbal products within a year. More importantly, it could bring healthcare to the doorsteps of millions who currently have limited or no access to modern medicine.

Backed by legislation, partnerships, and funding, NNMDA's vision is rapidly becoming reality—driving down healthcare costs, creating jobs, and restoring pride in Nigeria's indigenous knowledge, while positioning the country as a rising force in the global natural medicine economy.



House Of Representatives Endorses Natural Medicine Resolution



L-R: Pharm. Barakat Murtala; Chairman, House of Representatives Committee on Legislative Compliance, Alhaji Yusuf Ahmed-Badau, and Director General, NMMDA, Prof. Emeje, during visit of the House Committee on Legislative Compliance to the NNMDA in Lagos... recently

Appolonia Adeyemi April 24, 2025
...as NNMDA aims to reduce dependence on foreign drugs

In what is being hailed as a historic turning point for Nigerian health sovereignty, the House of Representatives has unanimously endorsed a resolution placing natural medicine at the heart of the nation's healthcare strategy – a move the Director-General of the Nigerian Natural Medicine Development Agency (NNMDA), Prof. Martins Emeje

describes as "the beginning of Nigeria's liberation from colonial dependency on foreign pharmaceuticals."

Speaking during the visit of the House Committee on Legislative Compliance to the NNMDA recently, Prof. Emeje said the development would enhance healthcare delivery and boost access to affordable drugs.

The visit, led by Hon. Ahmed Badau, marks the first-ever oversight of the agency since its formal legal recognition in 2019, despite its establishment in 1997. The symbolic and strategic weight of the visit was not lost on Prof. Emeje. "The presence of the committee here shows that the resolution is not just paper—it's action. This day is monumental.

It is the day Nigeria begins to regain her healing power," he declared. Prof. Emeje outlined an ambitious but achievable roadmap: deploy 15,000 staff—20 per local government—across Nigeria to identify, document, cultivate, and standardize indigenous medical knowledge and plants. "Give me 15,000 staff, and in 12 months, Nigeria will become a net exporter of medicinal plants and natural medical products.

We will stop looking for oil money," he declared confidently. Hon. Badau expressed support for the agency's work: "What we saw is encouraging. It will reduce dependence on foreign medicine and create jobs for our people. We are pledging our support for this vision." However, Prof. Emeje was clear: passion alone is not enough.

"We are operating with only 136 staff which is not sustainable. Passion has a limit. We need financial and human support to scale." NNMDA has so far documented over 1,750 medicinal plants across all Nigerian geo-political zones, with ongoing collaborations with international partners including India and the Netherlands.

The agency is now preparing for clinical trials on herbal products already approved by NAFDAC, aiming for hospital integration and five-year registrations for indigenous products.

Emeje drew parallels with India and China, whose traditional medicines form multi-billion-dollar industries. "Nigeria can do the same—and better—if we believe in ourselves. These countries used their brains; we must use ours."

Prof. Emeje also pushed for a broader understanding of natural medicine, describing it as encompassing not only herbal remedies but also religious practices, yoga, homeopathy and aromatherapy all of which contribute to well-being and must be researched, documented, and integrated.

"Prayer is natural medicine. Fasting is natural medicine. These elements of our culture contribute to health, and we are tasked by law to research and document them," he said.

Emeje lamented that while countries like China and India have monetized their traditional practices into billion dollar industries, Nigeria still imports nearly all its medicines. "What they did, we can do. And we can do it better," he said.

He however warned that unless Nigeria invests in her own research institutions, "We are jackpotted in reverse— working here but doing research for foreign funders. That's more dangerous than physical migration."

The agency's achievements, despite a meager N300 million budget, have drawn international attention. But Emeje insists that government support is key: "Let's stop depending on handouts. Let's invest in what we own." According to Emeje, large-scale cultivation of medicinal plants in all 774 local governments can create up to 147 million jobs and lift over 100 million Nigerians out of poverty.

The agency has also expanded into agricultural and veterinary medicine, signing agreements with international partners including India and the Netherlands.

"Every time you hear of medical tourism to India or China, remember—we have it all here. It's called natural medicine, and it's Nigerian," Emeje said.

According to him, the NNMDA has begun preparations for clinical trials in key disease areas such as diabetes, asthma, sickle cell, and hypertension.

The agency has also launched training programmes for traditional medical practitioners and serves as an accredited pharmacy internship center. "Our interns don't just learn science—they learn ethics and patriotism," he said.

The agency is asking for a modest increase in its workforce to achieve its goals. "With 15,000 staff, we will bring healthcare to every community.

We will identify local diseases, find the plants that treat them, and standardize them for national use," he said. The House resolution, which Prof. Emeje has framed and kept in his home, symbolizes a turning point.

"This is how countries develop—not by copying others, but by believing in what they have. Support us, and see what Nigeria becomes in one year," he concluded.

In his closing message, Prof. Emeje stated: "We don't need to copy and paste healthcare models. Let our

universal health coverage (UHC) be built around our own medicine, our own identity. Support us, and watch Nigeria rise."



Stakeholders Excited Over Executive Order On Local Drug Production By Patience Ivie Ihejirika



Pharmacists and other stakeholders in the health sector have applauded President Bola Tinubu's signing of an executive order aimed at increasing local production of pharmaceuticals, diagnostics, and other healthcare products.

The minister of health and social welfare, Prof. Mohammed Ali Pate, announced via his X (Twitter) handle at the weekend said the president had signed the Executive Order.

He said the Order introduces zero tariffs, excise duties and VAT on specified machinery, equipment and raw materials.

The minister said this will help reduce production costs and enhance local manufacturers' competitiveness.

He said, "In a transformative move to revitalize the Nigerian health sector, His Excellency President Bola Ahmed Tinubu signed an Executive Order to increase local production of healthcare products (pharmaceuticals, diagnostics, devices such as needles and syringes, biologicals, medical textiles, etc.)

"The minister of justice and Attorney General of the Federation, Prince Lateef Olasunkanmi Fagbemi SAN, is to take the next steps towards codifying the new Order.

"Specified items include Active Pharmaceutical Ingredients (#APIs), excipients, other essential raw materials required for manufacturing of crucial health products like drugs, syringes and needles, Long-lasting Insecticidal Nets (#LLINs) and Rapid Diagnostic Kits, among others."

Reacting to the development, the director-general of the National Agency for Food and Drug Administration and Control (NAFDAC), Prof. Moji Adeyeye, said encouraging local manufacturing will create jobs, stimulate economic growth, and reduce dependence on imports.

She said the Order aligns with the broader objectives of the NHSRII and the Presidential Initiative on Healthcare Value Chain (PVAC), approved in October 2023.

"By addressing core challenges and providing a clear path for improvement, this Executive Order sets the stage for a sustainable and high-quality healthcare system for all Nigerians", Adeyeye added.

In the same vein, the director-general of the Nigeria Natural Medicine Development Agency (NNMDA), Prof. Martins Emeje, said that viewing it from the point of commerce, the Order will reduce the cost of drugs because tariffs are part of what leads to a rise in the cost of drugs.

Emeje told LEADERSHIP that if tariffs, excise duties and VAT are removed, the President has removed much of the burden from the point of commerce.

"This is an Executive Order that is targeted at reducing the pains that the populace are going through regarding access or affordability of imported medicines. This will reduce the cost of drugs or health products that will be manufactured by the pharmaceutical companies who were importing finished products.

"It will encourage local production because those who haven't been importing API because of the cost of tariffs will now be able to import them. People who could not bring pharmaceutical equipment to the country because of tariffs will now be able to do that," he said.

The NNMDA boss, however, expressed worry over implementing the Order while tasking those involved in importing these products on patriotism.

He said, "From that perspective, it should decrease the cost of these products but we all know that the implementation on the part of those directly involved may be a problem because it is not the president that is going to carry out the importation. Are those doing importation going to reduce the price of drugs and health products because they are not paying tariffs anymore?

"I hope it will not be an opportunity for them to exploit the system because they may now start complaining that even though tariffs have been removed, the cost of diesel has not been reduced. This is where attitude and patriotism come into play," Prof. Emeje added.

Speaking further, Emeje said the Order is not a research and development Executive Order, saying that "If we have to develop our own innovative products, it can only come through research and development and that can only happen through our research institutions, our universities and the Ministries of Education and Science and Technology."

Also, former president of the Pharmaceutical Society of Nigeria (PSN), Mazi Samuel Ohuabunwa, said the signing of the Executive Order is a commendable development because the removal of tariffs, excise duties and VAT on drugs and Pharmaceuticals will have an effect.

Ohuabunwa told LEADERSHIP that despite the inflation caused by the value of the Naira plus other internal considerations, the cost of energy, this will bring some relief.

"I pray that it will be done speedily so that the citizens of Nigeria, whose government has taken this action for their interest, will begin to see the benefits. It will have some beneficial effect," he added.



By Ijeoma Olorunfemi

The Nigeria Natural Medicines Development Agency (NNMDA), has called on stakeholders in the cassava production value chain to collaborate in their Pharmaceutical Grade Starch project.

Its Director General, Prof. Martins Emeje, made the call at their Consultative Stakeholders Engagement on the Development of Traditional Medicine in Nigeria webinar.

The meeting focused on "Unlocking Nigeria's Potential: Natural Medicine, Cassava Cultivation and Pharmaceutical-Grade Starch Production for Health, Wealth Creation, Student, Youth and Women Empowerment-The NNMDAApproach."

Emeje recalled the project was approved by the National Assembly following an outcry by the agency to develop homegrown cassava starch fit for medicinal purposes.

"It is a shame that Nigeria, as the largest producer of cassava in the world, will be importing pharmaceutical excipients such as pharmaceutical grade starch to make drugs in Nigeria.

"Instead of rushing into the laboratory, we created a sustainability spectrum and came up with the name-Cassava Value Chain Initiative.

"We want to have a seamless synergy and connection with everybody in cassava value chain cultivation and anything relating to cassava production, including those in academia.

"We want to have a database of everyone into cassava production, location, services rendered, products you supply, so we can do proper geo-allocation of our initiative and decide where you can make an impact on the value chain."

He further said that cassava planting for food differed from cassava for medicine, stressing the need to have specialists cultivating cassava for medicinal purposes.

"Those we will take in this area are not going to be planting cassava for starch, for food, but your job will be for our project, pharmaceutical grade, the rest will be left for us to research in our laboratories across the country," he said. we will designate you as the centre for excellent farming in cassava for medicinal use.

"Some of you will be cultivating specifically for us to get the starch that we will convert to pharmaceutical grade starch, the rest will be left for us to research in our laboratories across the country.

Emeje said they were not deterred in spite of few players in cassava production but would bridge the gap to ensure that cassava for pharmaceutical use was produced locally.

The Director-General said the Federal Government had the objective to achieve what was right, which was stopping the importation of pharmaceutical excipients and reactive ingredients.

"We will galvanize people already in the system to achieve this goal and we are not going to reinvent the wheel," he said.

He said they were engaging in a community-based approach to address cassava production for medicinal use, with evidence to discourage resistance in the system.

Emeje recalled that they had stakeholders' engagement with youths in the past week and would engage the National Association of Nigerian Students, and policymakers, among others.

He said reports on the outcome of the engagements would be collated, and experts deployed to the field to bridge existing gaps in the value chain.

Nairametrics

Nigeria Natural Medicine Development Agency projects over 3.8 million jobs from new products



by Ugonnia Ozibo

The Nigeria Natural Medicine Development Agency (NNMDA) has unveiled its ambitious plans to introduce 27 new products to the market, projecting that one of these products alone could generate up to 3.8 million jobs.

This was disclosed by NNMDA's Director-General, Prof. Martins Emeje, at the signing of a Memorandum of Understanding (MOU) with Covenant University (CU) to advance the development of natural medicine in Nigeria.

"We have, at least, 27 products ready to go into the market, and one of these products in the full spectrum will generate at least 3.8 million jobs, so multiply by 27, we do not even need crude oil; what we need is our natural plant biodiversity." He said.

Prof. Emeje highlighted that the agency had previously launched four new products earlier in the year, which included the first oral dosage formulations from the agency.

The agency has also been actively developing new products, with 11 of them currently undergoing assessment by the National Agency for Food and Drug Administration and Control (NAFDAC). These products are expected to become available by October.

Prof. Emeje disclosed that in a few years, precisely six to seven years from now, natural medicine is expected to generate \$347 billion to the global economy by 2030.

The Director General said that, by 2050, the projection by Global Mart would be a five trillion US dollar market for

plant-based natural medicine alone, without the animals. Nigeria would not earn or have a share in revenue from that market if natural medicine was not developed.

He stressed that the focus on natural medicine is essential for Nigeria's economic growth and job creation, particularly as the country seeks to diversify its economy beyond crude oil.

Strategic partnership with Covenant University

Prof. Martins Emeje highlighted the potential of the partnership with Covenant University to transform the natural medicine landscape in Nigeria.

According to Prof. Emeje, the partnership will see the institution contributing its expertise in human capital development, while NNMDA will bring its extensive experience in research and development.

"This partnership is set to elevate our research institutes to a level comparable to global standards. Covenant University's strength in human capital development and our expertise in research and development will complement each other perfectly."

"When we talk about human capital development, Covenant University is very good at it so they will be doing that for us.

"When it comes to research and development, we are very good in that, so we are complementary, they bring what they know best, we bring what we know best, and both of us will be winners." He said

Covenant University's Vice-Chancellor, Prof. Abiodun Adebayo, emphasized the importance of integrating indigenous medicinal plants into the national healthcare system and fostering new discoveries and innovations in the field.

"This collaboration represents a significant step forward in recognizing and utilizing our Indigenous medicinal plants,

"By combining our strengths, we aim to unlock the full potential of Nigeria's natural medicine resources, which could transform the sector and contribute significantly to the nation's economic growth." Prof. Adebayo said

What you should know

Nigeria Natural Medicine Development Agency (NNMDA) was established in 1997 and operates under the Federal Ministry of Innovation, Science and Technology.

The agency is tasked with researching, developing, documenting, and promoting Nigeria's natural medicine which encompasses traditional and indigenous healthcare systems, medications, non-medications, healing arts, and related sciences and technologies to enhance the nation's healthcare and economic standing.

These practices are to be integrated into the national healthcare delivery system and contribute to the nation's wealth, job creation, and socio-economic growth.



INTERVIEW: Why Nigeria's traditional medicine is not advancing – Regulator

Prof. Martins Emeje discusses the potential of traditional medicine to create millions of jobs, the need for academic recognition, and his vision for its integration into Nigeria's healthcare system.



Mariam Ileyemi

Traditional medicine has been an integral part of Nigerian culture for centuries, yet it continues to face skepticism by millions of citizens. Several reasons have been adduced for this, including the absence of standards, weak regulation and a colonial mindset.

In this interview with PREMIUM TIMES, the Director General of the Nigeria Natural Medicine Development Agency (NNMDA), Martins Emeje, discusses traditional medicine, the agency's efforts to standardize and regulate the field, and how innovations like nanotechnology are transforming herbal treatments.

Prof. Emeje, a professor of drug delivery/Nano-medicine, also discusses the potential of traditional medicine to create millions of jobs, the need for academic recognition, and his vision for its integration into Nigeria's healthcare system.

PT: Traditional medicine has been a part of Nigerian culture for centuries, yet it has faced skepticism from many, especially in the medical community.

What would you say is the biggest challenge facing traditional medicine today?

Prof. Emeje: This is the first time a journalist has framed the question this way, acknowledging that skepticism primarily comes from the medical community rather than saying "most people." That distinction is important.

The people who hold these misconceptions are what I call the "minority elite" of this country. Studies have shown that at least 80 per cent of Nigerians patronise traditional medicine. If Nigeria has a population of about 218 million, and we estimate 80 per cent of 200 million, that means around 160 million Nigerians use traditional medicine. The remaining 40 million are mostly elites—educated individuals who live in places like Abuja, Lagos, and Port Harcourt. They have access to foreign drugs, private hospitals, and allopathic medicine because they can afford it.

These are the same people who get appointed as consultants by organisations like the UN, WHO, UNICEF, and UNESCO. They sit in hotels, write reports, and spiral-bind documents about what is happening in my village, Agaliga, without going there.

The issue is largely colonial mentality. Many in this elite group refuse to liberate themselves from the shackles of colonialism. They badmouth traditional medicine not because it is ineffective but because they rely on foreign funding.

This is not to say that traditional medicine is perfect, far from it. But neither is allopathic medicine. I'm a pharmacist, and I can confidently say that many diseases cannot be cured by modern drugs, yet traditional medicine has solutions for them, and vice versa.

For those of us deeply involved in this field—by experience, study, and passion—we know what needs to be done. Thankfully, I have been given the privilege by President Bola Tinubu to do just that, and I am fully committed to the task.

PT: One of the major concerns about traditional medicine is the lack of standardization and regulation. What are you doing to address this?

Prof. Emeje: First of all, those who truly understand traditional medicine know that standardization is not an issue.

The idea that traditional medicine lacks dosage comes from applying foreign parameters to judge it, which is incorrect. People who are not familiar with traditional medicine often assume it does not have proper dosing, but that is simply not true.

A dose does not have to be defined strictly by colonial curricula. As people trained in modern medicine, pharmacy, and other health sciences, our role is to apply our knowledge to improve traditional medicine – not to dismiss its existing principles. Currently, traditional medicine is not taught in universities as a standalone discipline. That is why we are advocating for full academic programmes, including bachelor's degrees, master's degrees, PhDs, and professorships in Nigerian traditional medicine. Once we have graduates who specialize in this field, they will be able to define and explain traditional medicine dosing scientifically.

For now, the assumption that traditional medicine lacks dosage only comes from a lack of understanding. Traditional medical practitioners do provide dosing instructions. Some may say, "Take a cup," just as some foreign medicines require drinking a specific liquid quantity. Others use natural indicators, such as the sun's position, to determine when a dose should be taken. These are legitimate dosing methods.

Where do modern scientists come in? Our role is to collect, study, and document these practices

properly to ensure they are well-understood and applied effectively.

At NNMDA, we have taken concrete steps toward this. We run a four-year college where students earn a National Diploma in Natural Medicine.

Recently, we were also designated as the official awarding body for traditional medicine certifications in Nigeria.

The federal government recognizes that traditional medicine is affordable, accessible to people, and resonates with our culture.



Interview with DG, NNMDA

PT: How is NNMDA working with regulatory agencies like NAFDAC to prevent misinformation, protect public health, and ensure that only safe, regulated traditional medicines reach the public?

Prof. Emeje: Our relationship with NAFDAC is excellent. The Director-General, Mojisola

Adeyeye, is one of the strongest advocates for traditional medicine in Africa, even though she doesn't publicly emphasize it. I call her my "Mama" because of her commitment to this field.

NNMDA and NAFDAC were the first two public institutions in Nigeria to collaborate and win a competitive grant for research in traditional medicine. We are continuing this work with another major project planned for 2025. If you listened to her 2025 press conference, you would have heard her mention at least three projects she intends to carry out with NNMDA.

Beyond NAFDAC, we also work closely with the Pharmacy Council of Nigeria, led by Ahmed Babashehu. These are the two most important regulatory agencies in Nigeria when it comes to medicine, and we collaborate effectively to ensure standards are met.

When discussing substandard and counterfeit medicines, it's important to note that the issue isn't limited to traditional medicine. In fact, there are far more fake and substandard foreign medicines circulating in Nigeria than traditional remedies. We all remember the late Dora Akunyili, who almost lost her life while fighting against fake drugs. Her battle wasn't against traditional medicine—it was against counterfeit foreign pharmaceuticals. So, the problem of substandard medicines is largely a foreign one, not just an issue within traditional medicine.

PT: Recently, you recommended the introduction of traditional medicine into schools. How do you envision this working? Will it be a standalone course, or will it be integrated into

medical and pharmaceutical education?

Prof. Emeje: Traditional medicine will stand as an independent discipline, offering degrees at all academic levels: Bachelor's, Master's, and PhD—with professors specializing in Nigerian traditional medicine. It is not about merging it with medicine, pharmacy, or other healthcare courses. Instead, those pursuing careers in medicine, nursing, and medical laboratory science can take elective courses in traditional medicine to gain a formal understanding of the field.

There is often a colonial mindset that places Western medicine above traditional medicine, leading some to argue that traditional medicine should be integrated into modern medical education. But why not the other way around? Traditional medicine is vast and deeply rooted in our indigenous knowledge systems. In fact, it should not even be taught in English.

Across Asia, students studying traditional medicine do so in their native languages. If a foreigner wants to study traditional Chinese medicine or Ayurveda, they first learn the language for six months. Yet here, we insist that students must have five credits in English to study traditional medicine—why?

This is why I supported President Bola Ahmed Tinubu's idea of establishing a university of languages. Unfortunately, the idea faced criticism, mostly from people whose expertise is criticism. If we truly value our heritage, we should embrace education in indigenous languages, particularly in fields like traditional medicine.

Look at the mass migration of Nigerian healthcare professionals—doctors, pharmacists and nurses are leaving the country in large numbers because their training aligns with foreign healthcare systems. That tells us something is wrong with our curriculum. If we trained people for Nigeria's healthcare system, they wouldn't be in such high demand abroad. Graduates of Ayurveda and traditional Chinese medicine don't "japa" because their expertise is primarily useful in their home countries, helping to develop local healthcare.

Many traditional medical practitioners today should be university lecturers, but the system does not recognize their knowledge. If you are a professor of medicine or pharmacy, you may know little about traditional medicine, yet traditional practitioners can diagnose and treat conditions in ways that modern medicine sometimes cannot. For instance, a traditional healer may use specific plant mixtures and techniques to restore mobility to an injured leg that Western medicine would have amputated. This depth of knowledge deserves academic recognition.

PT: You projected that just one of NNMDA's 27 new products could generate up to 3.8 million jobs. Which specific sectors will benefit the most from this job creation?

Prof. Emeje: That estimate is a modest one. Every white powder imported into Nigeria, by pharmaceutical companies, originates from plants, and in other countries, the entire process of cultivation, harvesting, transportation, extraction, purification, and formulation creates massive employment opportunities. But here, we simply import the finished product, paying not just for the powder but also for the salaries of those who processed it abroad. Essentially, we are outsourcing jobs that should be created within our economy.

With this initiative, we are reversing that trend by producing medicinal products locally, creating employment across multiple sectors. Agriculture will see a major boost because medicinal plants are the raw materials. Large-scale farming will be essential, and we already have farms in 14 states with plans to expand to over 8,600 medicinal farms nationwide. Every community has diseases and local plants traditionally used for treatment, and cultivating these plants will generate significant employment for farmers and agricultural workers.

Transportation will also be heavily involved. Moving raw materials from farms to laboratories and production facilities require a strong logistics network. We will need transporters at every stage, just as INEC partners with the National Union of Road Transport Workers (NURTW) during elections. We will also collaborate with transport unions, creating employment opportunities for drivers, logistics coordinators, and other transport workers.

Education and skills training will play a crucial role. To sustain this industry, we must train professionals in traditional medicine. That's why we have established a college and are launching a National Skills Acquisition Programme to certify traditional medical practitioners. This will open up jobs for educators, researchers, and trainers.

The healthcare and pharmaceutical sectors will benefit as well. Once raw materials reach the lab, we need highly skilled professionals—chemists, pharmacists, medical doctors, clinical trial experts, and analysts—to ensure product safety and efficacy. The demand for healthcare workers, including nurses and laboratory scientists will increase as more products are developed.

Marketing and distribution will also see significant job creation. After production, the medicines must reach consumers, requiring marketers, distributors, and retailers to ensure accessibility and public awareness.

All these sectors combined contribute to our job creation estimate.

Currently, we have 27 products, with five already approved by NAFDAC and others in the final stages. We are proud to be the only public institution in Nigeria conducting healthcare research with NAFDAC-approved products and facilities.

PT: NNMDA is applying nanotechnology to traditional medicine, which is quite fascinating. Can you explain how this innovation is improving the safety and effectiveness of herbal treatments?

Prof. Emeje: I'm smiling because this is my area of expertise—Nano science. It's something I'm very passionate about. When people criticize the development of natural products, I simply laugh because we have moved far beyond basic preparation and delivery. At this agency, we have a fully equipped nanotechnology laboratory, and I'm already pushing to expand it into a Pico-technology laboratory. In fact, we have already launched some nanotechnology-based products.

Nanotechnology allows us to improve the precision and effectiveness of herbal treatments through targeted drug delivery. For example, take a common medication like paracetamol, which is usually given as a 500mg dose. The body doesn't need the entire 500mg; only a fraction of it is needed. The rest is lost through metabolism and waste removal. With nanotechnology, we can deliver only the exact amount needed directly to the target area in the body. This enhances efficiency, reduces waste, and minimizes potential side effects.

Beyond that, we are also advancing machine learning applications to improve our research. In the next two years, our data will demonstrate just how much progress we've made. Additionally, our nanotechnology is environmentally friendly—it falls under green technology. We don't use harmful chemicals in our processes; instead, we rely on natural compounds, ensuring that our innovations align with global efforts to combat climate change.

PT: Looking ahead, what is your ultimate vision for traditional medicine in Nigeria? Where do you see its place in our healthcare system and economy?

Prof. Emeje: Whether I achieve it or not, my vision is clear—I want to be at the forefront of transforming traditional medicine in Nigeria. I envision a future where traditional medicine is respected, recognized, and formally integrated into our healthcare system. I want Nigerians to see it as a viable career path, with structured educational programmes leading to degrees, master's, and even PhDs in traditional medicine.

More importantly, I want these studies to be conducted in our local languages, eliminating the barrier of English proficiency. My goal is for people to confidently walk into licensed traditional medical facilities—just as they do with modern hospitals—where they can receive trusted, professional healthcare.



Status For Medicinal Plants, Others

By Royal Ibeh and Christiana Ezekiel



Nigeria is setting sight on becoming a net exporter of medicinal plants and natural medicines within the next 12 months.

The Director-General, Nigerian Natural Medicine Development Agency (NNMDA), Prof. Martins Emeje, who made the projection at a press briefing in Lagos, said the agency had rolled out a comprehensive national strategy to mainstream and commercialize traditional medicine.

Emeje said with adequate funding and support, Nigeria could lead Africa in the global herbal medicine market, adding that the agency was seeking N2 billion in funding and approval to deploy 15,480 personnel across the 774 local government areas to execute its nationwide traditional medicine initiative.

The Director General said the goal was not only to improve healthcare delivery through the use of scientifically validated herbal remedies but also to tap into the immense economic potential of Nigeria's rich biodiversity.

"With the right investment, Nigeria will become a net exporter of medicinal plants and natural medicine products within one year," he stated.

Key elements of NNMDA's plan include conducting clinical trials on herbal formulations for diseases such as malaria, sickle cell anemia, diabetes, hypertension, arthritis, urinary tract infections and skin diseases.

The agency is also working to establish a national herbal pharmacopoeia, a digital pharmaceutical database, and a repository of indigenous medical knowledge.

"The agency has already taken significant steps toward international collaboration, signing a Memorandum of Understanding (MOU) with Niger Data Invest and partnering with global health organisations to advance traditional medicine research and commercialization.

"NNMDA's work is also backed by policy reforms. Traditional medicine practitioners will now be required to undergo certified training through a national skills acquisition program

to ensure standardization and safety in the sector," he said.

In his remarks, the chairman, House Committee on Legislative Compliance, Hon.

Badau Yusuf Ahmed, assured the agency of the legislature's commitment to its goals.

He described the agency's plans as "encouraging" and underscored their potential to reduce healthcare costs and promote economic development.



Agency To Establish Herbal Clinics In 774 LGAs

Written by Patience Ivie Ihejirika

Nigeria Natural Medicine Development Agency (NNMDA) has said that it is geared towards establishing herbal clinics in all the 774 local government areas (LGAs) across the country.

The Director-General of NNMDA, Prof Martins Emeje, who disclosed this in an interview with LEADERSHIP, said that the agency is developing a database of all traditional medicine practitioners in the country.

This, he said, would enable the agency to know the type of services they render, for comprehensive documentation.

"We are starting it already with Alimosho local government, it's a N500billion project that we are starting with Alimosho local government and we are going to use that as a pilot to begin to escalate it in the country," the DG explained.

Emeje stated that the government and the private sector need to join hands and see manufacturing of indigenous medicine as an emergency so that they can pull resources into it and get Nigerians out of this quagmire.



Vanguard Newspaper

Archbishop Onaiyekan lauds agency for restoring Nigeria's natural medicines

By Chioma Obinna

With the unveiling of four locally-formulated drugs for major diseases by Nigeria Natural Medicine Development Agency, the Catholic Archbishop of Abuja, Cardinal John Onaiyekan has lauded the efforts of the agency towards restoring the nation's natural medicine, and remedies, as well as showcasing them on the global space.

Onaiyekan who delivered the keynote address at the Natural Medicine Day in Abuja, stressed the need for Nigeria to learn from what the Indians and Chinese have been doing, to the admiration and amazement of the global medical community. Skit Maker0.00/0.00

According to him, all along, natural medicine remained a better alternative for some medical conditions which seem to defy modern medical remedies.

He said: "We need to remind ourselves that our people relied on our traditional natural medicine to sustain themselves in good health before our relatively recent contact with European medicine.

"However, when modern medicine came onto our scene, and our people embraced much of it enthusiastically, because, compared with our traditional remedies, it had clearly superior effectiveness and advantages. Thus, we accepted modern medications and other therapeutic practices. Today, we have embraced what has become "international best practices" in these matters. This is what guides the training of our various cadres of health personnel: from nurses, lab scientists, doctors, and pharmacists."

He lamented that in the process of adopting modern medicine, some important factors about the country's traditional natural medicine was overlooked.

"First, there was no adequate recognition of the fact that much of modern medicine is based on on knowledge gleaned, without due credit, from our various natural medical products and practices." A case can be made about violation of Intellectual Property Rights, as our natural herbs, roots and animal parts were taken away and repackaged in big pharmaceutical industries into bottled drinks and pills.

Speaking on the religious dimension, he condemned the notion that Nigerian traditional healers are fetish practitioners.

He said natural medicine is often seen as combining medical science with religious rituals, adding that it has been the common image of the "native doctor" — leading to a tragic misunderstanding of the native healer.

"Now, the situation is much clearer, as we can now appreciate better the positive dimension of the spiritual element in traditional medicine. It is basically recognition of the fact that healing entails collaboration between human ingenuity and divine intervention. The healing properties of herbs and roots come from the Creator of plants, God himself. It is well that this be acknowledged as we apply healing remedies.

"This was why healing was an essential part of Christian missionary activities —and still is a major concern of the Church even today. We build and run hospitals to create an environment for the sick to access the healing grace of God, with the devoted care of the health personnel, who carry out their tasks primarily as service of God. We care but only God heals. This is a modern slogan that even many of the best modern medical practitioners have started to recognise as true."

He said the state of health services in Nigeria is a cause of great concern, hence, the need for a serious effort to improve the status quo.

While working on updating our dilapidated health institutions, he said there was need for stakeholders to think outside the box and take a second look at the values of nation's traditional natural medicine, "God's gift to our people since past generations."

Speaking, the Director-General of the Agency, Prof Martins Emeje said the agency is dedicated to festering collaboration, innovation and excellence in the pursuit of advancing natural medicine and committed to harnessing the vast potential of natural medicine in Nigeria.

He said natural medicine remain a viable alternative for many Nigerians who are unable to access expensive modern medicine and for some medical conditions which seem to defy modern medical remedies.

Emeje said there was need for a serious effort to improve the status quo while working on updating the dilapidated health institutions; we do well to think a bit outside the box – and take a second look at the values of our traditional natural medicine, God's gift to our people since past generations.

Graphical Representation of the Director General/Chief Executive Officer, NNMDA

(Prof. Martins Emeje) Media Interviews.

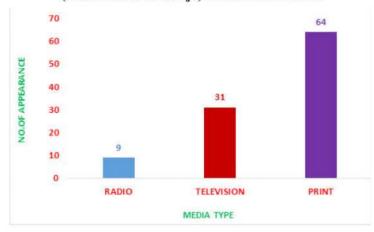


Figure 18: Showing the Number of Media Interviews on Radio, Television and Newspaper granted by the Director General/Chief Executive Officer, Prof. Martins Emeje.

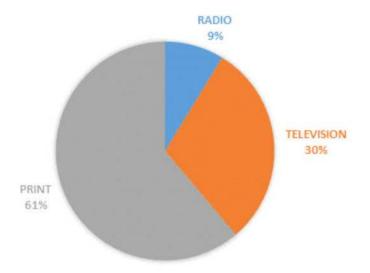


Figure 19: Showing the Percentage Contributions of each Media Platform (the Radio, Television and Newspaper) to the DG's Interviews from June 2023 to May 2025.



Figure 20: Showing the Number of Interviews with the Director General/Chief Executive Officer, Prof. Martins granted on Television, Radio and Newsprint Per Month from June 2023-May 2025

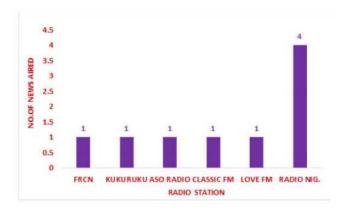


Figure 21: News Aired by Radio Station Due to Interviews by the Director General/Chief Executive, Prof. Martins Emeje. (June, 2023-May, 2025)

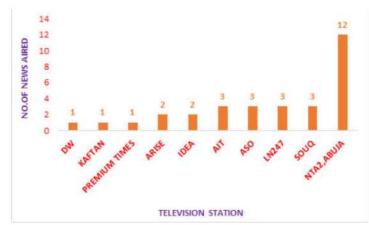


Figure 22: News Aired by Television Station Due to Interviews by the Director General/Chief Executive, Prof. Martins Emeje. (June, 2023-May, 2025)

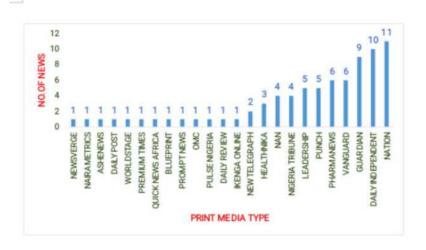


Figure 23: News Aired by Television Station Due to Interviews by the Director General/Chief Executive, Prof. Martins Emeje. (June, 2023-May, 2025)

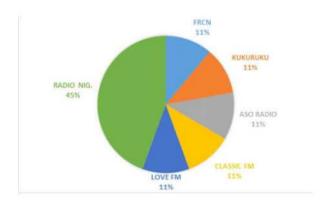


Figure 24: Percentage of Radio Contribution

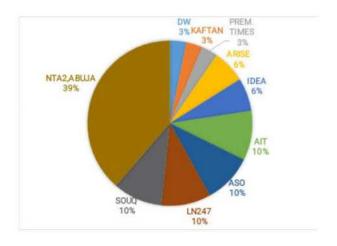


Figure 25: Percentage of Television Contribution.

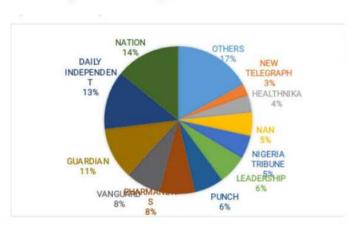


Figure 26: Percentage of Print Media Contribution

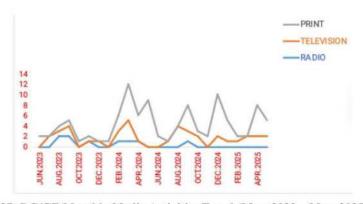


Figure 27: DG/CE Monthly Media Activities Trend (May, 2023 - May, 2025)

2.0.2. MEETING WITH THE NIGERIA GOVERNORS' FORUM.

On the 3rd of August, 2023, in line with his advocacy and campaign strategy to promote the image of NNMDA, and justify the importance of traditional medicine in Nigeria the Director General / Chief Executive, Prof. Martins Emeje delivered an exceptional enlightened presentation to the Nigeria Governors' Forum; which addresses funding the Research and Development of the Nigeria Traditional Medicine to



serve greater population in our country in consonance with Nigeria National Health Delivery System. As a result of his address, a 4-man committee was inaugurated to work with the DG and NNMDA on how Governors can collaborate with the Agency to provide an enabling environment to promote and develop the Nigeria Indigenous /Traditional Medicine and also provide necessary supports to the Agency in its efforts to ensure the well-being of all Nigerians.

Figure 28: Prof. Martins Emeje at the office of the Chairman, Nigeria Governor Forum, Abuja.

2.0.3. MEETING WITH THE SENATE COMMITTEE ON SCIENCE AND TECHNOLOGY

The Director General/Chief Executive Officer, NNMDA, Prof. Martins Emeje, met with the 10th Senate Committee on Science and Technology on the 17th of October, 2023, to seek for their support in terms of sufficient budget allocation to NNMDA to enable the Agency carry out in-depth research on the Nigerian Indigenous/Traditional Medicine. Indeed, it was a great day for the Agency, and being a very vocal, highly experienced Professor of Pharmacy and passionate about the Traditional Medicine, Prof. Martins Emeje delivered a powerful presentation which made positive impact on the image of the Agency.

2.0.4. COURTESY VISIT TO DEPUTY MAJORITY LEADER OF THE FEDERAL HOUSE OF REPRESENTATIVES.



To gain more Legislative backing to support NNMDA both morally and financially, the Director Genera//Chief Executive officer, Prof. Martins Emeje, paid a courtesy visit to the Rt. Hon. Abdullahi Ibrahim Ali Halims, the House of Representative Deputy Majority Leader in Nigeria on the 22nd of August, 2023. It was indeed another success recorded for the Agency; while Hon. Abdullahi pledged to support the Agency to achieve her mandate.

Figure 29: The House of Representative Deputy Leader, Rt. Hon. Abdullahi Ibrahim with the Director General/Chief Executive, NNMDA, Prof. Martins Emeje, during the Courtesy Visit to his Office in Abuja

2.0.5. VISIT OF WORLD HEALTH ORGANIZATION (WHO) REPRESENTATIVE ON NATURAL/HERBAL MEDICINE TO NNMDA

Several Interviews granted in the media by the Director General/Chief Executive Officer of NNMDA, Prof. Martins Emeje, had positive and great impact on the Agency. For the first time in the History of the Agency, the WHO Representative on Natural/Herbal Medicine, Pharm. Tayo Hamzat, on the 12th of January, 2024, visited NNMDA to acquaint himself with the Agency's activities regarding the Research and Development (R&D) of herbal medicine in



Nigeria. Pharm. Hamzat during his courtesy visit was taken round the research facilities in the Agency after which the Director General/Chief Executive Officer made a presentation on the Agency at the Seminar room. Pharm. Hamzat expressed his satisfaction with the facilities on ground and pledged the WHO support for NNMDA on his Research and Development of Herbal Medicine in Nigeria.

Figure 30: The WHO Representative on Natural/Herbal Medicine, Pharm. Tayo Hamzat with the Director General/Chief Executive Officer, Prof. Martins Emeje and the Research Staff of the Agency.

2.0.6. VISIT TO HIS ROYAL MAJESTY, OBARILWAN BABATUNDE AKIOLU, OF LAGOS

It was indeed a great day and another Milestone for NNMDA and indeed one of the greatest achievements in 2023 for the Director General /Chief Executive Officer, Prof. Martins Emeje, when he visited the Palace of Oba of Lagos, Oba Rilwan Akiolu, located at Idumagbo, with his Principal Officers on the 10th of August, 2023. As a Prince, the DG/CEO paid a very respectful homage by prostrating together with is Management Staff to Oba of Lagos where he explained the essence of his visit, which was to seek support in the implementation of NNMDA Mandate and Functions. Some of the key issues that were addressed are to seek for his support as a father to facilitate the visit of President Bola Ahmed Tinubu to launch some herbal products being developed by the Agency. Other key issues centered on the kind of



ailments common to the people in Lagos State, where Oba of Lagos pointed out that it's the sugar disease (Diabetes) that is most prevalent, and what they use to manage it is a plant called Abere. The DG, as a very proactive Administrator and Researcher swung into action and today, the Agency has formulated and Trade Marked four Products from Abere, which include; NAMDAMUNE™ for anti-aging-200mg, NANOBERE™ for Upper Respiratory Infection -50mg, ABERECIN™-200mg for Diabetic, and NAMDASAN™ for Sickle Cell Anaemia.

Figure 31: Prof. Martins Emeje explaining the activities of NNMDA during his Official Visit to Oba of Lagos Palace, Oba Rilwan Akiolu.



Figure 32: Some Nanotech Herbal Products Developed from Abere

2.0.7. COURTESY VISIT TO CHINESE AMBASSADOR, HE CUI JIANCHUN IN ABUJA.

China as a country and the Chinese have been known for several decades to be one of the foremost country using the Indigenous/Traditional Medicine to treat and manage various ailments common to the people of China. Prof. Martins



Emeje, Director General/Chief Executive Officer of NNMDA, being one of the few knowledgeable Nigerians who had lived and trained on Traditional Chinese Medicine (TCM), paid a courtesy call to the Chinese Embassy in Abuja on the 1st of August, 2023. There was a robust deliberation on the partnership and collaboration between Nigeria and China to support and promote the development of Nigeria Indigenous /Traditional Medicine and training of NNMDA Research staff in the area of Research and Development of the Nigeria Medicinal Plants.

Figure 33: The Chinese Ambassador, HE CUI JIANCHUN with the Director General/Chief Executive Officer, NNMDA, Prof. Martins Emeje, and the two (2) female staff of the Agency during the courtesy visit to the Chinese Ambassador's Office in Abuja.

2.0.8. VISIT TO THE INDIAN HIGH COMMISSIONER IN NIGERIA, SHRI G. BALASSUBRAMANIAN



The Director General/Chief Executive Officer, Prof. Martins Emeje with some staff of NNMDA in Abuja Office was on the 30th of June, 2023, visited the office of the India High Commissioner, Shri G. Balassubramanian in Abuja. The visit was aimed at Strengthening the Bilateral Cooperation between India and Nigeria in the field of the Nigeria Indigenous/Traditional Herbal Medicine.

Figure 34: The India High Commissioner, Shri G. Balassubramanian Abuja with the Director General/Chief Executive Officer, NNMDA,
Prof. Martins Emeje and some staff of NNMDA, Abuja Office during the DG's Courtesy visit to the India High Commission Office, Abuja.

2.0.8.1 VISIT OF INDIA CONSULATE GENERAL CHANDRAMALIKAR KERN

As part of his strategy for the Promotion, Collaboration and Advocacy for the Traditional Medicine in Nigeria on NNMDA activities, the Director General/Chief Executive Officer, Prof. Martins Emeje, on the 10th of July, 2023, received the Consulate General of India, Mr. Chandramalikar Kern at NNMDA



Laboratory Headquarters, 9, Kofo Abayomi Street, Victoria Island, Lagos.

Consequently, a Memorandum of Understanding was signed between India and NNMDA. Signing of this MoU has brought positive impact on the Agency as five (5) Staff of the Agency had travelled to India on different trainings.

Figure 35: The Consul General of India, Mr. Chandramalikar Kern with the Director General/Chief Executive, Prof. Martins Emeje and the Staff of NNMDA, Lagos, during the visit of the India Consul General to the Agency.



Figure 36A: Some Staff of NNMDA Attending a Training Course in India arising from the Collaboration between Nigeria and India in the Field of Indigenous / Traditional Herbal Medicine.

2.0.9. VISIT OF THE NIGERIAN UNION OF PRACTITIONERS OF COMPLEMENTARY AND ALTERNATIVE MEDICINE (NUPCAM), LAGOS STATE CHAPTER.

On the 17th of July, 2023, the Nigerian Union of Practitioners of Complementary and Alternative Medicine (NUPCAM), Lagos State Chapter visited the Agency. NUPCAM is endorsed by the Federal Ministry of Health as the umbrella body for all practitioners of Complementary and Alternative Medicine in Nigeria. Their visit is aimed at collaborating with the Nigerian Natural Medicine Development Agency (NNMDA) to advocate for its place as a veritable partner in healthcare delivery system in Nigeria. Present at the visit were; the Chairman, NUPCAM, Dr. Isaac Ayodele, the Deputy Chairman, Prof. Baderinwa Adewale, some Executive members of NUPCAM, as well as all the Directors and Heads of the Departments of NNMDA.

The Lagos State NUPCAM chairman, Dr. Isaac Ayodele, thanked the federal government for appointing Professor Martins Emeje as the new Director General/Chief Executive Officer of NNMDA, who he described as a right peg in the right hole. He maintained that Professor Emeje, who is a professor of pharmacy and a frontline natural medicine advocate will take natural medicine to greater heights in Nigeria. In his own comment, the deputy national president of NUPCAM, Professor Baderinwa Adewale pledged the support of the union to make the dream of training more pragmatic practitioners a reality.





Finally, in his remarks, Professor Martins Emeje established the fact that if natural medicine is not placed as a second fiddle, it is capable of solving the problem of brain drain popularly known as JAPA syndrome in medical practice in Nigeria. Hence, natural medicine should not be regarded as an alternative medicine

Figure 36B: Showing the Director General/Chief Executive Officer, NNMDA, Prof. Martins Emeje, NUPCAM Executives, NNMDA Directors and Heads of Departments at the meeting.

2.0.10. VISIT OF THE FEDERAL MINISTRY OFFICIALS TO NNMDA'S SERVICOM OFFICE IN ABUJA-PLEDGES SUPPORT TO STRENGTHEN SERVICOM AT NNMDA

On July, 21st 2023, Mrs. Emma Ekpo, Deputy Director of the Reform Coordination Department, and Michael Oyibo, the Nodal Officer of SERVICOM, from the Federal Ministry of Innovation, Science, and Technology, paid a courtesy visit to Director General/Chief Executive Officer of the Nigeria Natural Medicine Development Agency (NNMDA), Prof. Martins Emeje at NNMDA's Headquarters' Office in Abuja. During the meeting, the visitors expressed their commitment to bolstering the SERVICOM (Service Compact with All Nigerians) initiative at NNMDA. The primary objective of SERVICOM is to ensure efficient and effective service delivery to the public, and with this promising alliance, the NNMDA is poised

to further enhance its service standards and meet the expectations of the Nigerian citizens.

Prof. Martins Emeje warmly welcomed the support and cooperation offered by the Federal Ministry officials, emphasizing that a strengthened SERVICOM will significantly contribute to advancing the Agency's mission and vision. He expressed his gratitude for the acknowledgment of NNMDA's dedication to serving the people of Nigeria through Natural Medicine Development. The Federal Ministry officials assured that they would work closely with Prof. Martins Emeje and the entire NNMDA team to identify



areas of improvement and implement best practices to further elevate the agency's performance under the SERVICOM framework. This promising development signifies a significant step forward in the pursuit of excellence and reinforces the commitment of both the Federal Ministry of Innovation, Science, and Technology, and the Nigeria Natural Medicine Development Agency to uphold the highest standards of service delivery. The visitation is also expected to streamline processes, improve transparency, and enhance overall service quality. As a result, citizens can look forward to even more accessible, reliable, and customer-focused services from the Nigeria Natural Medicine Development Agency.

Figure 36C: Prof. Martins Emeje (Centre), Mrs. Emma Ekpo, Deputy Director of the Reform Coordination Department, Michael Oyibo, the Nodal Officer of SERVICOM and Ms Blessing (NNMDA SERVICOM)
Nodal Officer during the visit of Federal Ministry Officials to NNMDA's Servicom Office in Abuja

2.0.11. COURTESY CALL ON THE DIRECTOR GENERAL OF THE NIGERIA TELEVISION AUTHORITY (NTA), ABUJA, SALIHU DEMBOS

The Director General/Chief Executive Officer, NNMDA, Prof. Martins Emeje in his advocacy drive for the promotion of Indigenous/Traditional Medicine in Nigeria, and to bring to the limelight, the activities of the Nigeria Natural Medicine Development Agency in the area of Research and Development of the



Indigenous/Traditional Medicine visited NTA Headquarters on the 13th November, 2023 in Abuja. He was received by the Director General, NTA, Mr. Salihu Dembos. Prof. Emeje highlighted the mandate, functions and activities of the Agency during his meeting with the NTA DG. The outcome of this meeting led to more coverage of NNMDA activities by NTA.

Figure 37A: The Director General/Chief Executive Officer, NMMDA, Prof. Martins Emeje making presentation at the NTA's Office Headquarters in Abuja during his Courtesy visit to the Director General/Chief Executive, NTA, Salihu Dembos.

2.0.12. VISIT OF THE IMMEDIATE PAST NATIONAL SECRETARY OF PHARMACEUTICAL SOCIETY OF NIGERIA (PSN) TO NNMDA, PHARM. GBENGA FALABI, FPSN

On April 12th, 2024, the Nigerian Natural Medicine Development Agency (NNMDA) welcomed a courtesy visit from the immediate past National Secretary of the Pharmaceutical Society of Nigeria (PSN), Pharm. Gbenga Falabi, FPSN. This high-level meeting suggests potential collaboration between the private sector and NNMDA to explore the growing field of natural medicine in Nigeria, for harnessing the potential of



traditional medicine to improve healthcare access and affordability. This visit is a major step towards achieving the directives of the Honorable Minister of Innovation, Science and Technology to the Agency on commercialization of research results. The DG opined strongly that there's no better way to renew the hope of Nigerians, especially the rural poor than to deploy Science, Technology and Innovation to help them achieve health and well-being using their own hitherto rejected methods of healing.

Figure 37B: Prof. Martins Emeje with Pharm. Gbenga Falabi during the Courtesy visit of the latter

2.0.13. OFFICIAL VISIT OF HIS EXCELLENCY ALHAJI AHMED YAKASSI, MNI, FPSN, FNAPHARM, HONOURARY CONSUL GENERAL TO PAKISTAN; AND MR. KOLAWOLE OWODUNMI, CHIEF INVESTMENT OFFICER OF NIGERIA SOVEREIGN INVESTMENT AUTHORITY (NSIA) TO THE NIGERIA NATURAL MEDICINE DEVELOPMENT AGENCY (NNMDA) ON THURSDAY 18TH APRIL, 2024.

On the 18th of April, 2024, Prof. Martins Emeje hosted the visit of Alhaji Ahmed Yakassi, MNI, FPSN, FMIN FNAPharm, Honourary Consul General to Pakistan, and Special Adviser to NSIA to NNMDA. With him were Pharmacist and Chartered Associate Funke Folade – Head of Pharmaceuticals NSIA and Officer Reporting to Mr. Kolawole Owodunmi, Chief Investment Officer, NSIA and Engineer Ms Auwal Baraka – Officer, NSIA; in pursuit of collaboration to set up a world class excipient manufacturing company. The visitors commenced their facility tour with a visit to NNMDA's Hall of Fame that house the pictures of Stakeholders in Indigenous/Traditional Medicine Development. Other facilities toured by the visitors include; the Product Development Unit, Laboratory Complex, Library, Herbarium, Health Clinic, and



College. Before the tour, Alhaji Yakassi signed the condolence register of the Late Honourable Minister of the Federal Ministry of Innovation, Science and Technology, Dr. Ogbonnaya Onu. In his remarks, Pharm. Ahmed Yakassi said he was highly impressed with the Tour of NNMDA facilities. He said nothing prepared him for what they witnessed. He also praised NNMDA for the neatness of the environment within NNMDA, Victoria Island Premises. He promised to be an Ambassador of the need for NNMDA not to be merged with any other government Agency.

Figure 37C: Prof. Martins Emeje with Alhaji Ahmed Yakassi, Engineer Ms Auwal Baraka and Pharm. Funke Folade during their visit.

2.0.14. VISIT OF THE CHAIRMAN, HOUSE COMMITTEE ON LEGISLATIVE COMPLIANCE, ALHAJI YUSUF AHMED BADAU



Alhaji Yusuf Ahmed Badau, the House Committee Chairman on Legislative Compliance visited the Agency for the first time in the history of NNMDA. Speaking during the visit, Prof. Emeje said the House of Representatives has unanimously endorsed a resolution placing natural medicine at the heart of the nation's healthcare strategy. He further stated that this development would enhance National Healthcare Delivery System and boost access to affordable drugs as well as liberating the Nigerians from colonial dependency on foreign pharmaceuticals. The visit, led by Hon. Ahmed Badau, marks the first-

ever oversight of the Agency since its formal legal recognition in 2019, despite its establishment in 1997. Highlight of the visit are request made by the DG/CEO to the committee and these include:

- 1. The deployment of 15,000 staff (20 per Local Government) across Nigeria to identify, document, cultivate, and standardize indigenous medical knowledge and plants leading to Nigeria becoming a net exporter of medicinal plants and natural medical products. He said "With 15,000 staff, we will bring healthcare to every community. We will identify local diseases, find the plants that treat them, and standardize them for national use".
- Broader understanding of natural medicine, describing it as encompassing not only herbal remedies but also religious practices, yoga, homeopathy and aromatherapy all of which contribute to wellbeing and must be researched, documented, and integrated.
- Nigeria invests in her own research institutions, "We are jackpotted in reverse working here but doing research for foreign funders. That's more dangerous than physical migration. Large-scale cultivation of medicinal plants in all 774 local governments can create up to 147 million jobs and lift over 100 million Nigerians out of poverty.

Alhaji Ahmed-Badau, who expressed his delight in the strides of the Agency over the years, and it's potential in becoming a significant source of external revenue for the country, if handled appropriately, pledged to further discuss the possibilities of equipping the Agency with 15,000 staff as well as more funds for the advancement of healthcare delivery system in the country, with little or no foreign dependency. Hon. Badau expressed support for the Agency's work and claimed that It will reduce dependence on foreign medicine and create jobs for our people. He pledged support for this vision. He also made commitment that the NASS will bring about development to the practice of natural medicine in the country, as done in other countries like India, China and Japan, as well as create employment opportunities for Nigerian youths. Also, towards boosting the production and promotion of natural medicines for enhanced healthcare accessibility for all Nigerians, the National House of Assembly (NASS) has expressed interest in extending the functional presence of the Nigeria Natural Medicine Development Agency (NNMDA) to every Local Government Area (LGA) across the country, through the creation of offices for the Agency in all LGAs.

2.1.15. COMMUNITY HEALTH ENGAGEMENT

Advocacy and Promotion of Indigenous/Traditional Medicine must start from the Grassroot. According to WHO, very high percentage of the residents of sub-Sahara Africa (including Nigeria) obtained their health education and healthcare from Traditional Medicine Practitioners (TMPs). The Director General/Chief

Executive Officer, Prof. Martins Emeje, on 23rd February, 2024, made a presentation at the Community Health Engagement, on the Importance of Integrating Indigenous Medicine with Orthodox Health Practice, at the Nnamdi Azikiwe University, Akwa, Anambra State; where he emphasized the integration of the Indigenous/Traditional Medicine into the National Healthcare Delivery System.

It must be highlighted that prior to the emergence of Prof. Martins Emeje as DG/CEO, the issue of Stakeholder Engagements had not been seriously emphasized in the implementation of Research and Development activities of Indigenous /Traditional Medicine in Nigeria. Hence, this concept of Stakeholders Engagements is novel to NNMDA.







Figure 38A: Prof. Martins Emeje at the Community Health Engagement Held at the Nnamdi Azikwe University, Akwa, Anambra State.

2.0.16. EMPOWERMENT OF NIGERIAN YOUTHS THROUGH CASSAVA-GRADE STARCH PRODUCTION



Figure 38B: Participants at the webinar meeting held on 8th December, 2024

On December 8th, 2024, the Nigeria Natural Medicine Development Agency (NNMDA) took significant steps to tackle youth unemployment and promote economic growth through an unprecedented and innovative Cassava-Grade Starch Production Initiative. This program aims to create jobs across Nigeria's Six Geopolitical Zones by establishing cassava farms and processing facilities for Pharmaceutical-Grade Starch.

At the meeting with all the Heads and Representatives of the youths across the Six

Geopolitical Zones in Nigeria, the Director General/Chief Executive Officer, Prof. Martins Emeje explained that local farmers will be provided with specialized training in Good Agricultural and Cultivation Practices, Good Manufacturing Practices, as well as, guaranteed market access. By transitioning from traditional agricultural practices to more sustainable, industry-driven approaches, the NNMDA seeks to reduce unemployment rates and boost Nigeria's pharmaceutical sector.



NNMDA Top Management Staff at the Webinar Meeting with the Director General, Prof. Martins Emeje Addressing the Participants Online

Prof. Martins Emeje further stated that; the initiative has received strong support from the Nigerian National Assembly, emphasizing its importance as a key driver of local economic development. This also aligns with broader national objectives to reduce dependence on imports and promote sustainable agricultural practices. Therefore, by investing, in local communities and agricultural processes, NNMDA aims to contribute to Nigeria's overall economic growth while addressing pressing social issues such as unemployment.

2.0.17. STAKEHOLDER'S MEETING ON PHARMACEUTICAL-GRADE STARCH PRODUCTION

On December 13th, 2024, at the webinar meeting organized by NNMDA with the Stakeholders and Journalists, titled "Unlocking Nigeria's Potential: Natural Medicine, Cassava Cultivation, and



Figure 38C: Prof. Martins Emeje addressing the Participants at the webinar meeting held on 13th December, 2024.

Pharmaceutical-Grade Starch Production," the Director General/Chief Executive Officer, Prof. Martins Emeje stressed the need for collaboration across the cassava value chain. This effort is expected to enhance National Healthcare Delivery System, promote self-reliance, and empower students, youths, and women. He further stated that the Nigerian Natural Medicines Development Agency (NNMDA) is championing an innovative and ambitious initiative to produce Pharmaceutical-grade Starch locally, leveraging Nigeria's vast cassava resources, aims at cutting the nation's \$23 million annual import costs, create jobs, and strengthen economic growth.

At the meeting, Prof. Martins Emeje also explained that the Cassava Value Chain Addition Initiative (CVAI) under this project focuses on cultivating cassava specifically for pharmaceutical applications. Additionally, NNMDA plans to train five million youths in cassava farming and processing, fostering innovation and economic inclusion. Therefore, this bold step positions Nigeria to lead in Pharmaceutical-Grade Starch Production, reducing dependency on imports and unlocking new opportunities in Agriculture and Healthcare.

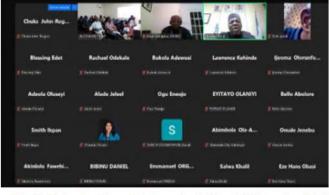


Figure 38D: Participants at the webinar meeting held on 13th December, 2024.

2.0.18. INNOVATION SCIENCE AND TECHNOLOGY EXPO 2024

The Innovation Science and Technology (IS&T) EXPO is an annual event organized by the Federal Ministry of Innovation, Science and Technology to exhibit different products of Research, Technology, Innovation and Development. During this EXPO, NNMDA celebrated her Day by inviting very important dignitaries from all works of life; amongst whom were Arch Bishop Onaiyekan, Director General/Chief Executive Officer, NACETEM, Dr. Olusola Odusanya, and the Permanent Secretary, FMIST, Mrs. Esuabana Nko-Asanye.

Arch Bishop Onaiyekan delivered an enlightened presentation on the importance of Indigenous/Traditional Medicine in Nigeria. Also, the Director General/Chief Executive Officer of the Nigeria Natural Medicine Development Agency, Prof. Martins Emeje made a presentation titled: *The Role of Indigenous Medicines in Sustainable Healthcare Delivery System*. The DG called the attention of the Federal Government to support and fund Research and Development in Indigenous/Traditional Medicine.



Figure 39: The Director General/Chief Executive Officer and the Invited Guests at NNMDA Day during 2024 IS&T EXPO, Abuja.

2.0.19. AFRICAN TRADITIONAL MEDICINE DAY CELEBRATION (ATMD)

To create more awareness on the importance of the Nigeria Indigenous /Traditional Medicine, Nigeria Natural Medicine Development Agency (NNMDA), on 31st August, 2023, celebrated African Traditional Medicine Day (ATMD) to promote the use of Natural Medicine in the treatment and management of different kinds of diseases in Nigeria. The Director General/Chief Executive Officer, NNMDA, Prof. Martins Emeje, led other Staff of the Agency during Health walk round Lagos to mark the Day.







Figure 40A: The DG/CEO, NNMDA, Prof. Martins Emeje leading the March on African Traditional Medicine (ATM) Day.

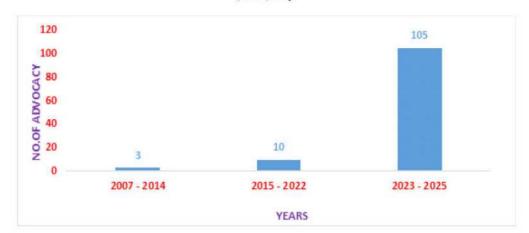


Figure 40B: Showing the level of NNMDA Advocacy from Year 2007 to the Year 2025

CHAPTER THREE

ORGANIZATIONAL RESTRUCTURING

3.0. RESTRUCTURING

On assumption of duty in NNMDA Laboratory Headquarters, Victoria Island, Lagos, the Director General/Chief Executive Officer, Prof. Martins Emeje deemed it necessary to restructure the Organization for effective performance; aimed at making the NNMDA perform much better in terms of Research and Development, Human Resources and Administration, Finance and Accounting, Virtual Library and ICT Literacy, Adherence to Public Procurement Act and Regulations, Functional and Effective Planning Department, Intellectual Property Rights (IPR) and Legal issues, Environment and Horticulture, Security, and Indigenous/Traditional Medicine Manpower Development. The restructuring also put in place necessary facilities for a conducive environment and ensure that capacities of each staff are built towards performing their individual responsibilities at maximum level to attain the Agency's mandates, functions and activities. The restructured parts of the Agency include:

3.0.1. THE DEPARTMENT OF RESEARCH POLICY AND INNOVATION, PLANNING (RPIP)

This Department was created in 2019 to collate and document researches in the Agency, research activities findings, infrastructural facilities and equipments, inventions and innovations that add value to the society. Also, the Department facilitates, collate and document national and international linkages and collaborations between the Agency and different partners; facilitate a participatory approach to planning, programming and budgeting. The Department also houses the Monitoring and Evaluation Section of the Agency. However, the Department was not structured neither was it functioning till May, 2023. Prof. Martins Emeje knowing the importance of this Department started the restructuring of the Department to enable it function properly. First, a Consultant was appointed on Monitoring and Evaluation in the Department. Consequently, an Organogram was drawn and this has made the Department to become functional and very active in its duties.



Figure 41: Organogram of the Department of Research Policy and Innovation, Planning (RPIP)



Mr. LAWAL Hassan Olasunkanmi Head of Department, Research Policy and Innovation, Planning (RPIP)



Some Staff of the Department of Research Policy and Innovation, Planning

3.0.2. ESTABLISHMENT OF MONITORING AND EVALUATION (M&E) SECTION

Monitoring and Evaluation is conducted to know the performance, efficiency, effectiveness, impacts and sustainability of a system, process, and project work; using a set of Standard Key Performance Indictors (KPIs). Before the emergence of Prof. Martins Emeje as the Director General/Chief Executive Officer of NNMDA, there was no Monitoring and Evaluation (M&E) Section. The Section is saddled with the responsibility of Monitoring and Evaluating the Research Activities; Capital Projects; Agency's Infrastructures; Environment; and other activities in the Agency to ensure proper implementation and deliverables using standard Key Performance Indicators (KPIs). Till date, the Section has conducted Monitoring and Evaluation (M&E) on the Agency's Herbal Products to ensure the Standard Operation Procedures (SOPs) are followed. The Section has also carried out M&E Operations on the Agency's Research/Experimental Farm located at Gberigbe, Lagos State, Intellectual Property and Technology Transfer Office (IPTTO), Agency's Website, Webinar meetings and Conferences, Infrastructures,





Environment, In-house Seminars, Collaborating A g e n c i e s a n d Organizations, as well as the Agency's training arm; Nigeria College of Natural Medicine Technology (NICONMTECH) amongst others.

Figure 42: M&E (RPIP Department) interactive session with NNMDA Herbal Ocimum Tea Research Team





Figure 43: Interactive Session between RPIP Department and NNMDA Herbal Amarus Tea Research Team





Figure 44: Seminar delivered by the Head of Admin. and Human Resources, Mr. Adedoyin, A.O.





Figure 45: (1) Collaboration with Aberdeen Commercial and (2) Signing of MoU with the Covenant University (inset is the DG/CEO, NNMDA, Prof. Martins Emeje and the Vice Chancellor, Covenant University, Prof. Adeyemi Abiodun during the MoU Signing)





Figure 46: M&E (RPIP Department) exercise of NNMDA Environment.





Figure 47: At the M&E (RPIP Department) exercise carried out at NNMDA Farm in Gberigbe, Ikorodu.



Figure 48: M&E Team (RPIP Department) at Gberigbe Experimental Farm, Ikorodu, Lagos.

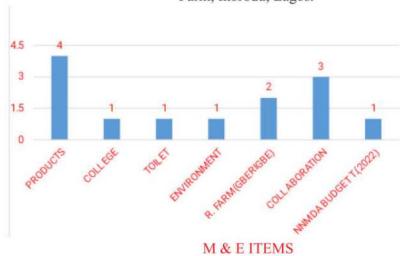


Figure 49A: Showing the Activities Graph of M&E Section

3.0.3. NNMDA SERVICOM UNIT

SERVICOM is an acronym for Service Compact with people. It is a Federal Government Initiative which was established on March 21, 2004 and aimed at rendering effectiveness and efficiency in Service Delivery Procedure and Processes to citizens through Government Offices (Ministries, Departments, Agencies, (MDAs); in a transparent manner to effect implementation of Government Policies. Before the advent of Director General/Chief Executive



Mrs. Aondona Blessing Iveren, Focal Officer, SERVICOM, NNMDA

Officer, Prof. Martins Emeje, Servicom Unit was moribund in the Agency. Consequently, Prof. Martins Emeje reorganized the Servicom and Mrs. Aonada Blessing Inyerem was made the Agency's Servicom Nodal Officer. Also, the DG/CEO directed each Department to nominate a Departmental Servicom Officer. Since her appointment, Mrs. Blessing has begun rejuvenating the NNMDA Servicom Unit, firstly with NNMDA hosting the Federal Ministry of Innovation, Science and Technology (FMIST) Servicom meeting on 26th September, 2023 based on the approval of Prof. Martins Emeje. Present at the meeting were the Director General/Chief Executive Officer, NNMDA, Focal Officers from; NISLT, NBRRI, PRODA, NACETEM, NOTAP, NBTI, NARICT,

FIIRO, NIC, SHETSCO, FMIST; Heads of Departments of NNMDA; as well as Director and Deputy Director, Reform Coordination Department, FMIST. She made a presentation at the weekly seminar on 13th December, 2023 where she briefed the Management and Staff of NNMDA on the Mandate, Functions and Organogram of the Agency's Servicom Unit. Recognizing the effort of the Director General/Chief Executive Officer, Prof. Martins Emeje, in activating Servicom in NNMDA, the Federal Ministry of Innovation, Science and Technology (FMIST) wrote letter of commendation to appreciate his commitment in making Servicom to be active in the Agency. The Ministry also wrote a letter of appreciation to the Director General/Chief Executive Officer for approving and hosting the FMIST Servicom meeting at NNMDA.





Figure 49 B Figure 49 C
Figures (49b and 49C): Showing letters of Commendation and Appreciation by FMIST

3.0.4. ABERDEEN CONSULT WORKSHOP/RETREAT

This Strategic Workshop took place at NNMDA's Laboratory Headquarters in Lagos on Monday 23rd August, 2023; with the Theme: 'Shaping the Future of NNMDA'. The Workshop adopted a RETREAT





Figure 50: A Group of NNMDA Staff during the Technical Session at 2023 NNMDA Retreat with Aberdeen Consult

format where almost all the staff (both junior and senior) of NNMDA Laboratory Headquarters, Lagos participated in. The participants were over Seventy(70) Staff including the Directors, and Heads of Department/Units.

Before this Retreat, Two (2) previous Retreats were held which only involved some selected Staff of the Agency. However, a visible difference was observed between this workshop held on the 23rd August, 2023 and the previous retreats held at Abeokuta (Strategic Plan, 2019-2023) and Ibadan (Strategic Plan,

2023-2027), respectively. The one at Ibadan had only thirty three (33) Staff of NNMDA participants restricted mainly to Heads of Departments and Senior Staff, while the Lagos workshop had over Seventy (70) staff participants. Secondly, the method adopted in the Lagos workshop was more participatory in terms of different levels of Staff including middle level and lower level Staff and hence the Staff felt much more involved and that they owned the outcome of the Retreat.

3.0.5. REACTIVATION, REMODELING AND REDESIGNING OF NNMDA WEBSITE

In order to increase the visibility of Nigeria Natural Medicine Development Agency to the public, the Director General/Chief Executive Officer, Prof. Martins Emeje, within the eight (8) months of his Administration fully reactivated, redesigned and remodeled the NNMDA Website to increase its quality and performance. Consequently, NNMDA Website has been very functional, far more active, user friendly, and fast. People from our country Nigeria and other countries such as United States of America (USA), France, China, United Arab Emirate (UAE), Netherland, India, and Caribbean, have been visiting the Website to get information on the activities of NNMDA.

Currently, Seventy four (74) countries have viewed the Website (Figures 51, 52, 53 & 54 below). The

Website features pages on the Director General, Nigeria College of Natural Medicine Technology (NICONMTECH), NNMDA's Top Management Committee (TMC) and Award for Fellowship etc. People of different Professions have equally visited these pages for update information concerning activities of NNMDA.

3.0.6. STATUS OF NNMDA WEBSITE BEFORE AND AFTER

Before

After

- i. Website was redesigned in Year 2021. Before then, there was a Consultant managing the facility for the Agency.
- ii. Staff interactions: Very low with the Website
- iii. Speed: Very Slow

There was re-designing of the Website in Year 2023 to make the Website:

A. more Appealing

B. more User friendly

C. provide each Staff of the Agency with an official personal email to enable the officer access the Website (www.nnmda.gov.ng)

3.0.7. ASSESSMENT OF THE WEBSITE BY COUNTRY

Country	Before (February,2023)	As at April 2024	As at May, 2025
Nigeria	192	2,622	3,887
USA	30	261	575
France	14	24	33
China	11	134	220
UAE	5	5	0
Netherland	3	35	54
India	3	25	57
Caribbean	1	1	0
*Ghana	0	4	10
*Kenya	0	5	64
*Canada	0	51	64
*UK	0	63	109
*Netherlands	0	35	54
*Norway	0	29	46
*Japan	0	3	7
*Denmark	0	10	0
*Ireland	0	0	40
*Indonesia	0	0	31
*Germany	0	0	14
*South Africa	0	0	13
*Poland	0	0	11
*Finland	0	0	9
*Sweden	0	0	8
*Uganda	0	0	6

*New users between February, 2023 and May, 2025

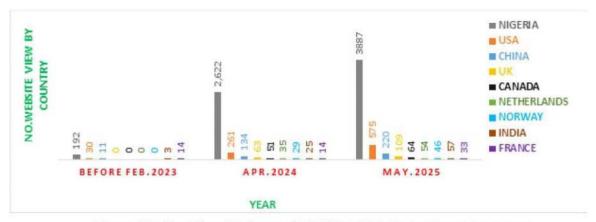
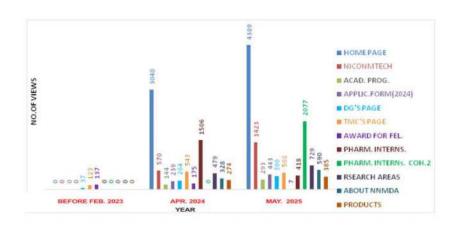


Figure 51: Top Nine (9) Users of NNMDA Website by Countries across the World (February 2023 –May, 2025)

PAGES ON WEBSITE

page	Before	(February, 2023)	As at April 2024	As at May 2025
Home page		0	3,040	4,389
NICONMTECH		0	570	1,423
Academic Programmes		0	144	293
Application (2024)	Form	0	239	443
DG's Page		37	264	390
TMC's Page		123	543	508
Award Fellowship	for	137	175	7
Pharmacy Internship		0	1,506	418
Pharm Int	terns	0	0	2077
Research Areas	Research Areas		479	729
About NNMDA	About NNMDA		328	590
Products	Products		274	385





NNMDA'S WEBSITE NEW USERS SOURCES

NEW USERS SOURCES (F	Before ebruary, 2023)	As at April 2024	As at May 2025
ORGANIC SEARCH	0	2,665	2,279
DIRECT	0	2,569	2,740
REFERRAL	0	158	308
UNASSIGNED	0	140	9
ORGANIC SOCIAL	0	81	0



3.0.8. NNMDA SOCIAL MEDIA HANDLES

To facilitate public awareness and enhance access to information on NNMDA activities, four (4) Social Media Handles were launched on the 15th of June, 2023 by the Director General/Chief Executive Officer, NNMDA, Prof. Martins Emeje. The four Social Media Handles are: Twitter, now X (@nnmdanigeria), Instagram (@nnmda_ng), Facebook (@NNMDAFMST) and LinkedIn (@NNMDANIGERIA). All these Social Media Handles have been in active operation since they were launched as shown in the figures below:

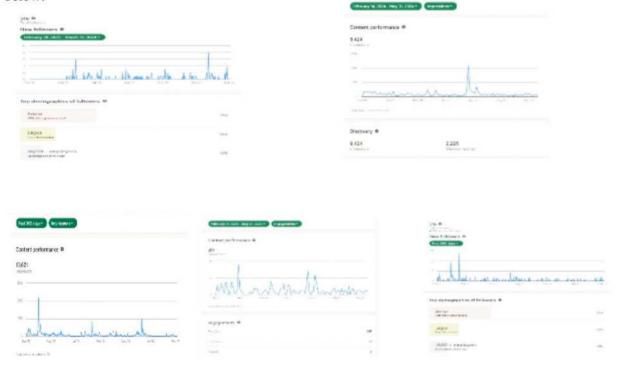
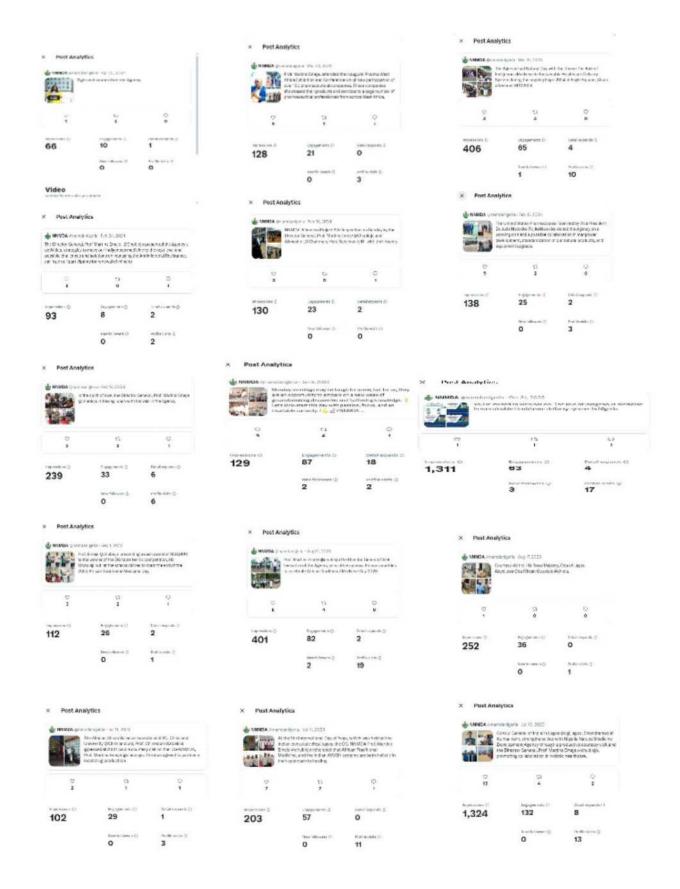


Figure 54B: Showing the performance of LinkedIn (@NNMDANIGERIA)



Figure 54C: Showing the performance of Facebook (@NNMDAFMST)

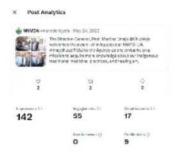














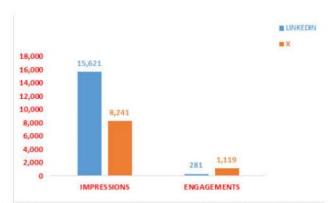












Figures 54D: Showing the performances of X (@nnmdanigeria) and LinkedIn (@NNMDANIGERIA) Impressions and Engagements

3.0.9. VIRTUAL LIBRARY

The digital library was established in accordance with NNMDA Establishment Act No 25 of 2019 Section 6g; which states that the Agency shall "establish and maintain a virtual and digital library and national databank information references centre on Nigeria's indigenous (traditional) health systems, medication and non-medication healing arts, sciences and technology". All Researchers now have access to free Journals and over 150 million Articles. Also in the previous time, there was no attendance register in which the users of the library would register their names. Currently, the status of the library has changed. A book is available for library users to register their names on daily basis. This has given opportunity of getting data and generating statistics on library use. It is documented that about 10 -15 people use the library on a daily basis. Also, the library catalogue has been taken online while the library card has been designed for visitors using the library.





Some Staff of the Department of Library and Information Communication Technology

3.10. PROCUREMENT DEPARTMENT

This Department is saddled with the responsibility of ensuring the supply of quality goods, works and services to specification in consonant with the Procurement Act 2007. Related to this, the 2020 - 2023 Bureau of Public Procurement (BPP) Audit Team commended the Agency by saying: the Nigeria Natural Medicine Development Agency has substantially complied with the Extant Laws, Regulations and Circulars on Public Procurement in the Procurement Processes for the Years under review as enshrined in the provisions of the Public Procurement Act 2007. The Director General/Chief Executive Officer, NNMDA, Prof. Martins Emeje introduced and implemented a policy that all the Departments in the Agency should be involved in the planning of the Agency's yearly annual budget. Hence, the year 2024 budget was inclusive of all the Heads of Departments. Consequently, people contributed and worked as a team to prepare the year 2024 budget. This practice was adopted and has been repeated in the preparation of the year 2025 annual budget. Also, he reconstituted the Procurement Planning Committee (PPC) to include all Heads of Departments which hitherto was not the practice in the Agency. Aside from this innovative act of the DG/CEO, there is also the inclusiveness of the anti-corrupt Agencies such as Independent Corrupt Practices and other related offences Commission (ICPC) during opening of the Bids and there is now a transparency in the mode of operations in the Procurement Department. It should also be noted that for the first time, NNMDA received intervention/constituency fund from the National Assembly on four (4) projects totaling Four Hundred and Fifty Million Naira (N450, 000,000.00) implying significant recognition on NNMDA and confidence in the Management. Furthermore, the procurement threshold for the MDAs (Minister, Permanent Secretary and the Director General/Chief Executive Officers) was reviewed in the Year 2025.



Mr. Fatai Olatunde Fashina Head, Department of Procurement



Some Staff of the Department of Procurement

3.11. FINANCE AND ACCOUNT DEPARTMENT

Finance and Account Department handles financial management and accountability, risk management, debt management, payroll and internal control, budget preparation, taxation management and reporting, public private partnership amongst other. All these Statutory functions of the Department were performed as at when due. However, there has been a tremendous improvement in the performance of the Department since Prof. Martins Emeje assumed duty as the Director General/Chief Executive Officer.



Mr. Ojo Omotayo NelsonHead, Department of Finance and Accounts



Some Staff of the Department of Finance and Accounts



Mr. Ude Chidi Malachy, Head of Budget



Some Staff of Budget Department



Figure 55: Showing NNMDA'S Capital Budget Peformance in the Years 2023 and 2024

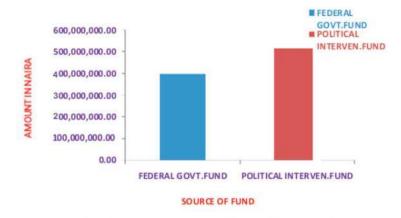


Figure 56: Showing NNMDA's Capital Budget Funding Sources

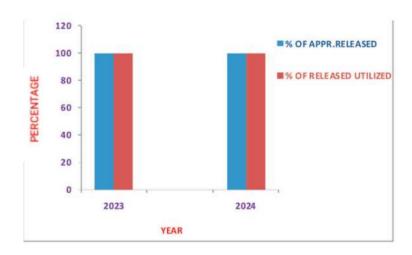


Figure 57: Showing NNMDA years 2023 & 2024 Capital Budget Performance in Percentages

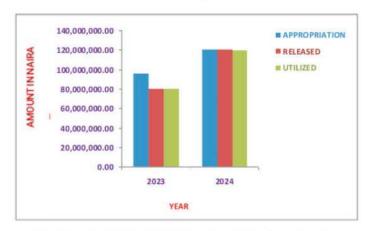


Figure 58: Showing NNMDA'S Overhead Budgets Performance in years 2023 and 2024.

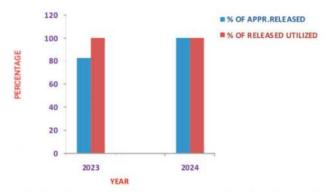


Figure 59: Showing NNMDA'S Percentage Overhead Budget Performance in 2023 and 2024.

(3) AUDITED FINANCIAL STATEMENT

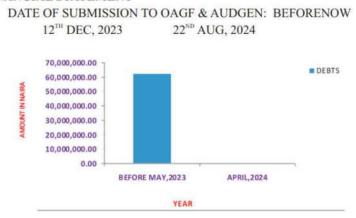


Figure 60: Showing NNMDA's Liabilities/Debts before and after May 2023.

3.12. HUMAN RESOURCES DEPARTMENT

Human Resources Department of NNMDA is established to facilitate the running of Administrative works as it concerns the Agency as well as the Staff of the Agency. The Department has four (4) sections. These include: Discipline, Record and Establishment; Appointment and Promotion; Staff Training, Welfare, and Union Matters; Pension and Insurance. Each section in this Department has been performing its statutory functions as scheduled. However, between May, 2023 and April, 2024, since the inception of Prof. Martins Emeje as the Director General/Chief Executive Offcer of NNMDA, there has been tremendous improvement in the activities of the Human Resources Department.

There have been support from management and appreciable improvement in staff attendance in the office with the repair of broken down staff buses. Signing of attendance register by staff is now reinforced in line with Public Service Rules (PSR). The information of all staff of NNMDA is being digitalized in compliance with the Head of Service of the Federation (HSOF) directives. Format for staff promotion briefs has been reviewed, changed to incorporate both Public Service Rules and Regulations; as well as norms peculiar to research institutes and universities.

As part of restructuring the Human Resources Department of NNMDA, there is now a provision for engagement of consultants as well as staff on sabbaticals. NNMDA now lay much greater emphasis on research and development activities carried out in its Laboratories and research farms all over the country. Interns, IT students and post-doctoral candidate with high academic resume are engaged.

The weekly seminars have been revived and improved upon with mandatory attendance of all NNMDA staff. During these seminars, researchers present results of the works carried out by them in Agency's

Laboratory. This is critique by the staff (researchers and non-researchers) with the hope that researchers can go back to Laboratory and come back with better end results. The same is done when a non-researcher, and intern or IT student is making a presentation during the weekly seminar. NICONMTECH, in line with her statutory mandate has offered more training (Onsite and Online) to many Indigenous / Traditional Medicine Tractitioners (TMPs) during the era of Prof. Martins Emeje.

General trainings for staff have improved. For instance, the training organized by the Human Resources Department titled: "Ensuring Optimal Staff Performance in a Challenging Economy" delivered by resource persons from outside the Agency. Also in 2025, there was 3day in-house trainings on Drug and Substance Abuse delivered by Consultant Pharmacist Ngozika Okoye and Prof. Martins Emeje who stood in for Pharmacist Sule Bibinu who was away on official duty

The three (3) Industrial Unions (ASURI, SSAUTHRAI and NASU) in the Agency are now enjoying support and attention from the management, while they have also been assigned new responsibilities which includes; Management of NNMDA staff bus. Issues affecting staff on Pension and Health Insurance, has now been promptly resolved through regular engagement of Pension Commission (PENCOM), Pension Fund Administrator (PFA), and National Health

Insurance Authority (NHIA)



Mr. Adedoyin Abraham Olayemi Head, Department of Human Resources and Administration



Some Staff of the Department of Human Resources and Administration

3.13. INTERNALAUDIT UNIT

The Internal Audit Unit is part of Management Internal Control System designed to ensure that all system of accounts, stores including rules and regulations established by the management are carried out as stipulated amongst others. The Unit functions by Measuring and Evaluating the Effectiveness of the Internal Control System in NNMDA.

Since the beginning of Prof. Martins Emeje's era, the unit has been greatly reinforced to carry out its statutory functions which include amongst others, verify physical assets and inventory such as costs of goods and supplies to the Agency through market survey during annual procurements; investigate employee compliance and alleged fraudulent activities, and provide additional oversight to internal accounting practices that external auditors may not focus on. The Unit also functions to check vouchers and auditing of Agency's staff salary.

In line with Prof. Martin Emeje's drive to enhance human capacity development in NNMDA, a number of Audit Unit staff have been encouraged to acquire their professional certificates and the cost of doing this were refunded after they passed their exams which hitherto was not the case. The audit staff were also encouraged to obtain higher degree certificates to enhance their on the job performance.

The Internal Audit has also assisted in speeding up the rate of accounting work in the College (NICONMTECH) and has also helped in updating the payment receipt and records of the College.



Mr. Oluwatunmise Amos Ekunday Head. Internal Audit



Some Staff of Internal Audit

3.14. ENVIRONMENT

Clean and well-arranged environment is key to a conducive working environment. Realizing the fact that the first point of attraction to the visitors entering the Agency is the Environment which actually portray the kind of people domicile or working in the Agency and being a Health Research Institution, there is need to maintain a very healthy environment. Hence, Prof. Martins Emeje, within few months of his administration as the Director General/Chief ExecutiveOfficer, ensured staff are working within a conducive and very healthy environment. There is a recent upgrade in the beautification of the Agency with ornamental and medicinal plants both within and outside the compound Offices and other areas in the Agency are cleaned on a regular basis to ensure a clean and hygienic working environment. Finally, the Minister of the Federal Ministry of Innovation, Science and Technology, Chief Geoffrey Uche Nnaji; during his official visit to NNMDA on 8th March, 2024 declared the Agency as the cleanest FMIS&T Agency he had visited so far. In order to enhance and strengthening the security within the premises of the Agency, the Director General/Chief Executive Officer, additionally employed the services of the personnel from the Nigeria Legion Office who usually are retired police or military personnel. This occurred in the later part of Year 2024.



Figure 61A: NNMDA Ornamental Garden

Figure 62A: NNMDA Laboratory Headquarters Front view Gate of Kofo Abayomi Street, Victoria Island, Lagos



Figure 62A: NNMDA Laboratory Headquarters back view Gate of Mbadiwe Street, Victoria Island, Lagos



Figure 62B: NNMDA Premise at the Backyard Gate close to Ozumba Mbadiwe Street.

FIGURE 62C: Inside the Main Area of NNMDA Multipurpose Hall









Figure 62D: Front Area of NNMDA Restaurant

FIGURE 62E: Corridor to the Backyard Gate and the Surrounding Areas of PDU and NICONMTECH





FIGURE 62F: NNMDA Entrance Area at Kofo Abayomi Street



Figure 62G: NNMDA Premise infront of the Library and Multipurpose Hall

3.15. STAFF BUS

Majority of the Staff working in NNMDA Lagos Laboratory Headquarters, Victoria Island do come to work from far distance, spending many working hours on the road due to heavy traffic. This usually results into loss of valuable productive hours that would have been expended on the job. This scenario has been on for quite a number of years before Prof. Martins Emeje became the 5th Director General/Chief Executive Officer of NNMDA on May 9th, 2023. Having spent quite some time as the DG/CEO in Lagos, he observed that people were not resuming to work at the appropriate time. Hence, Prof. Martins Emeje met with the three (3) Unions (ASURI, SSAUTHRAI and NASU) in the Agency and had fruitful and prospective discussions with them. At the meeting, it was agreed that the two (2) Staff Buses are to be repaired by the Management and handed over to the Unions to coordinate and manage. Consequently, the two staff buses were repaired. On



Figure 63 A: The two repaired NNMDA staff Buses

the 5th of July, 2023, almost two months after assumption as the DG/CEO, Prof. Martins Emeje on behalf of the Management, handed over the two buses to the Unions. The two buses are now plying Ikorodu and Iyana Ipaja routes. This has brought relieve to some of the staff using the two buses and has led to amongst others improved punctuality and work productivity at NNMDA Lagos Laboratory Headquarters office. In the later part of the Year 2024, the Toyota Siena Saloon car which has been abandoned for 5years was also repaired and put into use for the Agency.



Figure 63B: The repaired NNMDA Official Toyota siena salon car /NNMDA Two (2)Staff Buses and put on the road

3.16. HEALTH SHOP

NNMDA Health Shop is established to showcase the results of R&D in the Agency in the form of Herbal Medicines products developed form indigenous Nigerian medicinal plants. Hitherto, only herbal



medicinal products developed by the TMPs were showcased in NNMDA's herbal shop called Emporium. Prof. Martins Emeje saw this as very abnormal and immediately directed NNMDA's Product Development and Quality Assurance (PDQA) Department to ensure that only Agency's R&D results (Herbal Medicines) are showcased in the Health shop. Formally, it was called "Emporium" but now it is known as "HERBAL PHARMACY".

Figure 64: Showing the current arrangements of NNMDA Herbal Pharmacy

3.17. ONLINE STAFF PROMOTION EXERCISE

Four months after his resumption as the Director General/Chief Executive Officer of NNMDA, Prof. Martins Emeje organized the first ever Online Promotion Exercise for those Staff of the Agency that are due for the 2023 promotion exercise. This promotion exercise took place on the 29th of September, 2023. It is indeed a great value addition and a Novel approach compared to the previous way of doing promotion for the staff in which all staff from NNMDA Zonal offices outside Lagos State would travel down to Lagos to take their promotion exams. This online promotion exercise has since then been consistent in the Agency; as the Staff of NNMDA that were due for their promotion in both Years 2024 and 2025 also carried out the exercise online. The last promotion exercise took place on the 2nd of June, 2025; also the earliest first ever promotion interview to be conducted in NNMDA. The advantage of this online promotion exercise is enormous. These include: Staff safety, Cost reduction, Speed and effective monitoring. It is indeed a great and better approach which has brought a lot of succor to the Staff of the Agency working outside Lagos State to enable them take their promotion exams wherever they are.



Figure 65A: 2023 NNMDA Onsite and Online Staff Promotion Exercise



Figure 65B: 2025 NNMDA Onsite and Online Staff Promotion Exercise

3.18. STAFF VERIFICATION EXERCISE

On February 23rd, 2024, three staff from Human Resource Department of the Office of the Head of the Civil Service of the Federation in charge of Integrated Personnel and Payroll Information System (IPPIS) (Messrs Dashi and Samuel-Assistant Director; Ogeyin Bazooka- Principal Analyst 1; and Jyceuk Zaccheus-Executive Director) came to NNMDA Laboratory Headquarters in Lagos to carry out Human Resource Verification for the staff of the Agency for two days. However, another directive came from the Head of Service of Federation (HSOF) that verification of all staff of Federal Government should be carried out again in line with the new Digitalization initiative of the Federal Government Civil Service. Exactly on 22nd, March, 2024 (One Month after the previous staff verifications), the verification exercise was carried out by the Top Management Committee (TMC) of the Agency led by the Director General/Chief Executive Officer, NNMDA, Prof. Martins Emeje. The exercise which involved not only the staff of the Agency working in Lagos office but all the staff at the Zonal Centers and the office Headquarters in Abuja were captured in the Agency and the Director General/Chief Executive Officer being involved throughout the period for the first time. Compared to the previous verifications, this verification exercise became the best due to the fact that every staff certificates (the originals) were properly scrutinized by the TMC and finally checked by the Director General/Chief Executive Officer; hence, a good procedural Legacy is left to be copied



Figure 66: Showing the Director General/Chief Executive Officer, Prof. Martins Emeje, The TMC Members and the Staff of NNMDA during Staff Verification Exercise.

CHAPTER FOUR

LINKAGES

AND

COLLABORATIONS

4.0. ALLIANCES

One of the new initiatives adopted by the Administration of Prof. Martins Emeje since his Appointment as the DG/CEO of the Nigeria Natural Medicine Development Agency (NNMDA) is the drive for Memorandum of Understandings (MoUs) and Memorandum of Agreements (MoAs) for Manpower Development and Sensitization of NNMDA's functions, mandates and activities. Prof. Martins Emeje, considered it necessary that "A Tree cannot Make a Forest", therefore, joining hands with relevant Organizations such as; International Organizations, National Organizations, Research Institutions, Pharmaceutical Companies, Pharmacy Council of Nigeria (PCN), Government own Institutions, Higher Institutions, Manufacturers, Traditional Rulers/Traditional Medicine Practitioners etc. for partnerships and collaborations. This is aimed at building the Staff Capacity, enhance Quality Herbal Product Development, improve educational qualifications of NNMDA Staff, promote and create awareness on NNMDA's Research and Development activities, enhance the capacity of NICONMTECH Lecturers in the area of training of Traditional Medicine Practitioners and Traditional Medicine Practices.

In the previous time, between, 2001 and April 2023, in the eras of Late Prof. Oluyemi Akinadewo, Dr. Koripamo Agary, Mr. Tamunoibuomi Fredrick Okujagu and Dr. Samuel Oghene Etatuvie; the Agency collaborated with China that led to the trainings of Two (2) Agency's staff; and One (1) other Agency's staff in South Africa. Similarly, NNMDA had a Memorandum of Agreement (MoA) with the Traditional Medicine Practitioners (TMPs) in the area of trainings.

However, between May, 2023 and May, 2025 (Two years after his assumption of duty as the Director General/Chief Executive Officer of NNMDA), Prof. Martins Emeje has signed the Memorandum of Understandings (MoUs) and Memorandum of Agreements (MoAs) with Twenty (20) different Organizations; which include Research/Academic Institutions, International Organizations and Private Organizations. These are:

- 1. United State Pharmacopoeia (USP)
- 2. Evans Baroque Pharmaceutical Industry
- 3. Indian High Commission to Nigeria
- 4. Embassy of the People's Republic of China
- 5. The Ensieca Real Homes Ltd
- 6. Chrisland University
- 7. Nnamdi Azikwe University
- 8. University of Southampton
- 9. Nigeria Association of Pharmacists in Academia (NAPA)
- 10. The Nigeria Union of Complementary and Alternative Medicines (NUCAM),
- 11. The Nigeria Television Authority (NTA),
- 12. Standard Organization of Nigeria SON),
- Pharmaceutical Society of Nigeria (PSN),
- 14. Songhai Farm in Porto-Novo, Benin Republic
- Alimosho Local Government Area in Lagos State,
- 16. World Health Organization (WHO)
- 17. Pharmacy Council of Nigeria (PCN),
- 18. Association of Lady Pharmacists of Nigeria (ALPS)
- 19. Nigeria Institute for Trypanomiasis Research
- 20. Niger Delta University

It should be noted that this Twenty (20) Agreements are functional agreements whose implementation is being monitored. The Statistical graph below shows the breakdown of the different collaborative Organizations with NNMDA:

monitored. The Statistical graph below shows the breakdown of the different collaborative Organizations with NNMDA:



Figure 62: Showing the number of Organizations NNMDA is collaborating with, initiated during Prof. Martins Emeje's first and second years in office.



Figure 63: Showing some of the NNMDA Collaborators (A: Alimosho LGA, B: United States Pharmacopeia, America, C: Pharmacy Council of Nigeria, D: Standard Organization of Nigeria, E: NITR, F: Covenant University, G: SOUQ TV) with the DG/CEO, Prof. Martins Emeje

4.0.1. DELIVERABLES FROM THE LINKAGES AND COLLABORATIONS

Outcomes of the Linkages and Collaborations with different organizations at National and International levels has resulted in:

4.0.2. RESEARCH STAFF PARTICIPATION AT THE NIGERIA ASSOCIATION OF PHARMACISTS IN ACADEMIA (NAPA) CONFERENCE

As a result of the collaboration between the Nigeria Natural Medicine Development Agency (NNMDA) and



the Nigeria Association of Pharmacists in Academia (NAPA), Four (4) Research Staff of the Agency attended the Conference organized by NAPA, held on the 23rd of August, 2024 at the Faculty of Pharmacy, Olabisi Onabanjo University (OOU), Shagamu, Ogun State. The Four Research Staff presented their accepted Abstracts at the Conference, and one of the Abstracts was placed first out of all Abstracts presented at this Conference.

Figure 64: Showing the Four Researchers; Standing from left is; Amarachi, Antonia, Samuel and Dr. Roko during their presentation to the Vice Chancellor, Covenant University, Prof. Abiodun Adeyemi by the DG/CEO, NNMDA, Prof. Martins Emeje for their outstanding Performance at the NAPA Conference.

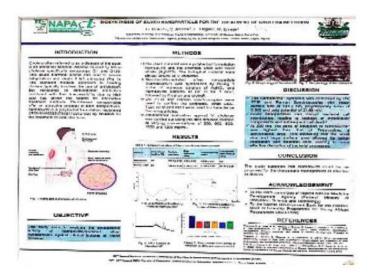


Figure 65: Abstract that placed first at NAPA Conference.

4.0.3. RESEARCH STAFF PARTICIPATION IN HERBAL MEDICINE CONFERENCE AT CHRISLAND UNIVERSITY.

Between 14th and 18th October, 2024, Six (6) Research Staff of NNMDA, attended Herbal Medicine Conference organized by Chrisland University, Owode, Abeokuta, Ogun State. The Conference was organized in collaboration with the Nigeria Natural Medicine Development Agency as part of the Memorandum of Understandings signed with Chrisland University. The Research Staff at this conference performed well, taking the third position in Abstract presentations.



Figure 66: Abstract that placed third at herbal medicine conference.

4.0.4 NNMDA STAFF PARTICIPATION AT THE INTERNATIONAL CONFERENCE IN INDIA

Consequent upon the collaboration between India and NNMDA through the India High Commission in Nigeria, Five (5) Research Staff of the Agency were invited to attend the 4th and 5th training on the Public Health Policy and Management (PHPM) organized by India Technical and Economic Cooperation, Government of India at Postgraduate Institute of Medicine Education and Research (PGIMER) Chandigarh, India, between 11th and 15th of September, and 21st to 30th November, 2023.







Figure 67: Some Staff of NNMDA at the International Trainings (International Publi Health Management Development Program) organized by India Technical Economic Corporation (ITEC)

4.0.5A. NNMDA STAFFATTENDANCE AT ZIMBABWE TRAINING

In the spirit of collaboration with International Organizations, One (1) staff of the Agency travelled to Zimbabwe to obtain his Master degree in Intellectual Property (MIP) at African University, Mutare, Zimbabwe. The scholarship program was awarded by World Intellectual Property Organization (WIPO). This program covered Distance Learning Phase (May to July, 2023), Residential Phase at African University (August to December, 2023), Finalization and Dissertation Phase (December, 2023 to April, 2024).



Figure 68: Staff of NNMDA that Attended Master degree programe in Intellectual Property Right (IPR) in Zimbabwe

4.0.5B. NNMDA STAFF ATTENDANCE IN A ONE-DAY WORKSHOP ON ADVANCED FIREFIGHTING AND PREVENTION/SECURITY RISK AND EMERGENCY RESPONSE MANAGEMENT AT WORKPLACE/PUBLIC PLACES



Figure 68B: Showing the Three Staff of NNMDA with Their Certificates of Attendance

A One-day workshop on Advanced Firefighting and Prevention/Security Risk and Emergency Response Management at Workplace/Public Places was conducted by the Lagos State Fire Service Corporation on the 24th April, 2025 and attended by Three (3) Staff of the Agency (Ihekorom Chinedu, Adegbola Solomon, and Omotunde Francis) as part of the capacity building for NNMDA Staff to enhance their skills and knowledge in identifying, evaluating and mitigating fire risks and occupational hazards in workplaces. The participants at the workshop include; safety officers, facility managers, engineers and interested individuals drawn from

- both public and private organizations. The objectives of the workshop were:
 - To enable participants to learn the purpose and importance of setting policy for health and safety
 - To understand the principle of fire risk assessment
 - · To learn how to identify potential fire hazards
 - To evaluate risks associated fire hazards
 - To implement effective control measures to mitigate fire risks
 - To ensure compliance with relevant fire safety legislation and standards

The workshop covered both theoretical and practical sessions. These include:

- Health and Safety policies and standards at work/public places
- Fire risk assessment and evaluation of fire equipment and its uses
- Security risk management and emergency response

First aid administration at work/public places

4.0.6. WINNING OF COMPETITIVE GRANT

Through collaboration with International Organization, Two (2) grants in Dollars were won by NNMDA in Year 2024. These were the Grants from the University of Southampton, United Kingdom; and a 4-year Grant from the Canadian Institute for Health Research (CIHR). These Grants are specifically targeted at developing human capacity in the area of Indigenous /Traditional Medicine Practice; and the other for the educational development of the staff up to the Doctorate degree level.

4.0.7. ADMISSION OF RESEARCH STAFF INTO POSTGRADUATE SCHOOLS.

With effective collaboration with some Universities in Nigeria, handful number of Research Staff are currently in various Universities to obtain their postgraduate degree programs (M.Sc and Ph.D) in different field of studies. Some of these Universities include; Covenant University, Ota, Ogun State; Benue State University, Makurdi, Benue State; University of Lagos, Akoka, Lagos State; Federal University of Technology, Minna, Niger State; University of Jos, Jos, Plateau State; Federal University of Technology, Akure, Ondo State; Federal University of Agriculture, Abeokuta, Ogun State and Modibo University, Yola, Adamawa State, Lead City University, Ibadan, Oyo State, Joseph Sarwuan Tarka University, Makurdi, Federal University of Agriculture, Abeokuta, amongst others.











Figure 69A: Some NNMDA Staff undergoing their postgraduate studies in Nigerian Universities

4.0.8. WORKSHOP ON CAPACITY BUILDING FOR ICT, BUDGET, FINANCE, AND PLANNING OFFICERS IN ABUJA.



Figure 69B: NNMDA Staff at a Workshop and Planning Officers in Abuja.

The Training organized by the National Information Technology Development Agency (NITDA) was held on the 17th of February, 2025 at the Public Service Institute of Nigeria (PSIN), Kubwa, Abuja and attended by Three (3) key officers of NNMDA (Lawal Hassan, Rose Eneduwa and Chisom). Over One Thousand (1000) participants drawn from various Federal Ministries, Parastatals and Agencies were trained on Information Technology (IT), and Project Clearance processes in creating a digitally viable workforce in the public sector; towards achieving the desired digital transformation mandate of the present Administration. The training was aimed at enhancing collaborative planning, budgeting, and management of ICT system acquisition,

on Capacity Building for ICT, Budget, Finance, deployment, operation, and sustainability in the public sector, thereby ensuring a whole-of-government approach to digital projects.

At the event, the Director General/Chief Executive Officer of NITDA, Kashifu Inuwa, emphasised the critical role of strategic planning and funding in enhancing public sector service delivery. He highlighted the critical role of ICT, project, finance, and planning officers, and admonished participants to take full advantage of the programme's sessions, designed to strengthen their expertise in strategic planning, monitoring, evaluation, and financial management.

4.0.9. ADVOCACY AND WIDE COVERAGE OF NNMDA, FUNCTIONS, MANDATES AND ACTIVITIES.

NNMDA Act No. 25, 2019, states that "The Agency shall demystify and increase public awareness and interest in the development, promotion and rational utilization of appropriate natural medicines, products and services". Consequently, Prof. Martins Emeje initiated collaborations with Media Organizations (both Print and Electronic), resulting currently in a very wide coverage and publications of NNMDA activities; and several interviews highlighting the mandates, functions and activities of the Agency. These Media Organizations include; Nigeria Television Authority (NTA), News Agency of Nigeria (NAN), Channels Television, Arise Television, African Independent Television (AIT), SOUQ Television and Radio, Voice of Nigeria (VON), Radio Nigeria; and newspapers such as Nation Newspaper, Daily Independent, Leadership, Guardian, Punch, Vanguard etc. The NNMDA Website and the Social Platforms (twitter known as X, facebook, Instagram, linkedin) were redesigned, improved upon to be more users friendly and accessible. Hence, NNMDA has gained popularity in terms of awareness amongst the Nigerian populace, than used to be the case since her establishment.

4.10. DEVELOPMENT OF MODEL RESEARCH FARMS

NNMDA has established research farms located at different States in all the Six (6) geopolitical zones of the country. These farms are in Abakaliki (Ebonyi State), Akure (Ondo State), Gberigbe, Ikorodu (Lagos State), Jesse (Delta State), Jos (Plateau State), Kano (Kano State), Calabar (Cross River State) and Karu (Nasarawa State). These farms are aimed to cultivate the Medicinal, Aromatic and Pesticidal Plants (MAPPs) that are peculiar to the community in which the farms are situated; and also for Research and Development activities. They also serve as training centres for Traditional Medicine Formulations and Productions.

The purpose and the objectives of the research farms were not fully realized until the emergence of Prof. Martins Emeje in May, 2023, who strived to fully exploit the utilization of the farms by replicating some of what was observed when a delegation of the Agency visited an international organization-Songhai Farm in Porto-Novo, Republic of Benin. NNMDA intends to establish at least One (1) research farm in each of the Seven Hundred and Seventy Four (774) Local Governments in Nigeria.









Figure 70: DG/CEO, Prof. Martins Emeje and NNMDA Delegation during the visit to Songhai Farm in Port-Novo, Republic of Benin

4.11. ACQUIRING HECTARES OF LAND AT ALIMOSHO LOCAL GOVERNMENT, LAGOS STATE

There is a MoU between NNMDA and Alimosho Local Government. The Agency has been provided with Seven (7) hectares of land and a block of flats as part of the collaboration between both parties. This was presented to the Director General/ Chief Executive Officer, Prof. Martins Emeje by the Alimosho Local Government Chairman, Honourable Suleiman Jelili. The land is to be used for the cultivation of Medicinal, Aromatic and Pesticidal Plants peculiar to Alimosho Local Government and the building is to serve as training ground for the Traditional Medicine Practitioners in Alimosho Local Government.





Figure 71: Chairman, Alimosho Local Government, Honourable Suleiman Jelili and the DG/CEO of NNMDA, Prof. Martins Emeje during the Agency's Team visit to Alimosho Local Government for a Project Site Inspection in collaboration with NNMDA

4.12. TRAINING OF PHARMACY INTERNS

The Agency through its collaboration with the Pharmacy Council of Nigeria (PCN) started the training of Pharmacy Interns which is the first of its kind in NNMDA. There were Five (5) Pharmacy Interns in the Agency who were trained on Research, Formulation and Development of Indigenous/Traditional Medicines, Preparation of Excipients, and application of Nanotechnology in medicine. These Interns were graduates of Pharmacy from within Nigeria University and the University from abroad



Figure 72: Pharmacy Interns undergoing their Internship at NNMDA

4.13. COMMUNITY ENGAGEMENTS

Through Collaboration with the University of Southampton, United Kingdom, NNMDA won a competitive Grant, part of which was used to organize a community engagement with the stakeholders in Traditional Medicine; to discuss health and economic growth of Nigeria through Research and Development of the Nigeria Indigenous /Traditional Medicine. The event was held at the Nnamdi Azikwe University, Awka, Anambra State with several stakeholders present at the meeting.







Figure 73: Prof. Martins Emeje at the Community Health Engagement Held at the Nnamdi Azikwe University, Akwa, Anambra State

4.14. TRAINING WORKSHOP ON QUALITY MANAGEMENT SYSTEM AND ISO 17025:2017

This training was sponsored by the United States Agency for International Development (USAID) and facilitated by the United States Pharmacopeia (USP), Nigeria; as part of the implementation of the Memorandum of Understanding(MoU) between NNMDA and the United States Pharmacopeia (USP). It is a Two (2) year training programe. The first phase began on 14th of August 2024, and was anchored by Dr. Olubukola Irurhe (Ph.D Quality Assurance, FIPAN). The training cut across all staff of the Agency.



Figure 74: NNMDA Staff at the Quality Management System and ISO 17025:2017 training Workshop

CHAPTER FIVE

RESEARCH

AND

DEVELOPMENT

5.0. RESEARCH AND DEVELOPMENT

In accordance with Section 6a of NNMDA Establishment Act No 25 of 2019, "the Agency shall Research, Develop, Promote, Collate and Preserve Nigeria's Indigenous (Traditional) Healthcare System, Medications and Non-Medications Healing Arts, Sciences, Technologies and Bio-resources and facilitate their integration into the National Healthcare Delivery System". Having known this and in view of the fact that the Director General/Chief Executive Officer, Prof. Martins Emeje, being a versatile Researcher, focused on achieving the main aim of the Agency which is Research and Development. Before his era, human capacity building for Researchers, as well as Research and Development activities had been rather low. Therefore in order to correct these anomalies, Prof. Martins Emeje decided to focus on the following:

5.0.1. REORGANIZATION OF NNMDA RESEARCH STAFFTOWARDS QUALITY RESEARCH AND DEVELOPMENT ACTIVITIES

Prof. Martins Emeje, reorganized and restructured the Research and Development activities within NNMDA Laboratory and also the research farms located in all the Six (6) geo-political zones of the country to meet the Mandate of the Agency as a Research Institution. As part of re-organization, all Research Staff were mandated to carry out all research works within NNMDA Laboratories unlike in the previous times where research works were carried out outside NNMDA's Laboratories. Also, the researchers were availed the opportunity to undergo various trainings both within and outside the country in order to enhance their human capacity



Some Research Staff of Nigeria Natural Medicine Development Agency (NNMDA) development on their jobs. Standard Laboratory ethics were reintroduced and enforced in terms of Personal Protective Equipments (PPE); ensuring that all Laboratory facilities are functional and the environment is well enabled for Research activities. Prof. Martins Emeje leads the Researchers in carrying out experimental activities in the Laboratory. During this exercise, researchers were trained in Standard Operating Procedures (SOPs), Data Analysis of experimental results, Drug Formulation and Development. This has greatly improved the Performance of the Researchers in NNMDA.



Figure 75: The Director General/Chief Executive Officer, Prof. Martins Emeje (A: wearing green face cap and Laboratory overall) with the Researchers in the Chemistry Laboratory.







Figure 76: Research Staff working in the Chemistry and Microbiology Laboratories





Figure 77: Research Staff working in the Product Development Unit Laboratory

5.0.2. WEEKLY SEMINAR

NNMDA has a Strategy whereby a Research Team presents their Research Work to Staff of the Agency every Wednesday by 10.00am. This acts as a mechanism for evaluating the works of the Research Team before similar presentations are made to the Public (either at a Conference, Workshop, Webinar Meeting etc.). This gives room for constructive critic of the Research Work and helps the Institution in two major ways:

- The Research Team is able to fine-tune their Research Work before presentation to the general public
- ii. It enables the Staff of NNMDA to be enlightened about what is done in the Agency with regards to Research activities, and makes the Staff to be Ambassadors of the Agency in sensitizing the public about what the Agency functions and mandates are in respect to Herbal/Traditional Medicine Technologies and Natural Therapies.

Before the emergence of Prof. Martins Emeje, Seminars were seldomly being held, while most of the presentations were only based on the literature reviews. Prof. Martins Emeje, reintroduced the weekly Seminar along with Research and Development Committee headed by Dr. E.A. Orgah. The Committee drew up a weekly roaster approved by the DG/CEO mandating all Research Staff to present their R&D works on assigned date in the roaster. The weekly seminar is not only designed for the Research Staff but equally for non-Research Staff to share their knowledge on functions of their Departments and Units.







Figure 78: Prof. Martins Emeje during some of his Presentations at the Wednesday Weekly Seminar



Figure 79: Showing Seminar Presentation by the Director of Human Resources (DHR)



Figure 80: Showing Seminar Presentations for Each Month from July, 2023 to May, 2025

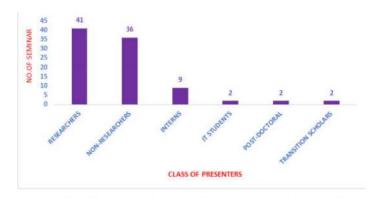


Figure 81: Classification of Seminar Presentation from July, 2023 to May, 2025

5.0.3. CONFERENCES, WEBINARS, AND ZOOM MEETINGS

Online Conferences, Webinars and Zoom Meetings are novel addition targeted at enhancing the propagation of NNMDA's Functions, Mandates and Activities within the first year of Prof. Martins Emeje's Administration; with the Agency's Staff participating in the exercises or at times the Director General/Chief Executive Officer representing the Agency.

One of these meetings was a zoom meeting held to discuss 'The Role of Indigenous Medicine in Sustainable Healthcare Delivery System' presented by the Honourable Minister of Innovation, Science and Technology, Chief Uche Geoffrey Nnaji, ably represented by his Senior Assistant (SA) Prof. Martins Ekewunzo. The Honourable Minister's Speech had three (3) Key Performance Indicators (KPIs) for NNMDA, namely:

- Honourable Minister charged NNMDA to become the Hub of local production of Indigenous Medicine in West Africa within the next12-18months (latest by the end of the year 2024 or April 2025).
- ii. Honourable Minister directed the DG of NNMDA to develop in concrete terms, a Workable Plan for Herbal Drug Production.

iii. Honourable Minister directed NNMDA to commence Training for Traditional Medicine Practitioners (TMPs) in the area of Scientific Research and Development leading to scale-up or patented Drugs.

Basically, KPIs (ii and iii) have been achieved with reasonably great amount of successes. KPI (i) is still work in progress. Other Participants at this zoom meeting were; Indian High Commissioner to Nigeria Mr. Shri G. Balassubramanian, Dr. Merlin Wilcox, Dr. Jude Nwokike, Dr. Atmaram Pawar, the Director General/Chief Executive Officer, Prof. Martins Emeje (Host), Staff of NNMDA.

Other Conferences hosted by the Agency also includes the 2023 African Traditional Medicine Day held on 31st August, 2023 with the Theme "Preserving the Past, Empowering the Future". Another Conference meeting was focused on the "Traditional Complementary and Integrative Medicine"

Activities that were involved during these meetings have made the world to know that an Agency like NNMDA exists in Nigeria. Furthermore, it is serving as a form of Capacity Building for staff of NNMDA (especially the Researchers).



Figure 82: Showing the Participants at the Zoom Meeting of the "The Role of Indigenous Medicine in Sustainable Health Care Delivery System" Held on 2nd November, 2023

5.0.4. PRODUCT FORMULATION AND DEVELOPMENT

NNMDA is mandated to Research, Collate and Develop herbal drugs focusing on diseases of National priorities such as Malaria, Hypertension, Diabetics, Cancer, Hepatitis A&B, Sickle Cell Anaemia, Respiratory Disorder, High Maternal death rate and Child malnutrition. Before the administration of Prof. Martins Emeje, this Agency developed Sixteen (16) herbal medicinal products. However, Prof. Martins Emeje re-engineered the Sixteen (16) herbal products to pass NAFDAC's Regulatory Safety and Efficacy Tests. Consequently, the Sixteen (16) herbal drugs has been well formulated, developed, submitted to NAFDAC for Listing, and trademarking. Similarly, efforts are on to get these products patented. Within this period under review, Prof. Martins Emeje formulated and developed four oral dosage herbal drugs. This include: NAMDAMUNE™ for anti-aging-200mg, NANOBERE™ for Upper Respiratory Infection-50mg, ABERECIN™-200mg for Diabetic, and NAMDASAN™-200mg for Sickle Cell Anaemia. The four drugs have been trademarked, registered with NAFDAC and filed for Patenting. These four herbal drugs were unveiled by the Minister of the Federal Ministry of Innovation, Science and Technology, Chief Uche Geoffrey Nnaji on the 8th of March, 2024 at NNMDA Laboratory Headquarters in Lagos.



Dr. Orgah Adikwu Emmanuel Head, Research and Development Committee



Mr. Ifreke Luke Michael Head, Department of Product Development and Quality Assurance







Figure 83: NNMDA Research Staff processing the Plant Raw Materials for Herbal Drug Productions







Figure 84: Four products of R&D Results and their unveiling by the Honourable Minister, Federal Ministry of Innovation, Science and Technology (FMIST); Chief Uche Geoffrey Nnaji

5.0.5. DEVELOPMENT OF PHARMACEUTICAL GRADE STARCH/EXCIPIENT FROM NIGERIA CULTIVATED CASSAVA TUBERS

The strategic objectives of this project is to:

- 1. Identify sources of primary raw materials (Cassava) of APIs and Excipients;
- 2. Develop excipients (Pharmaceutical Grade Starch) from Cassava.

The process involved the purchase of cassava tubers, sensitization on the importance of the project through Electronic and Print Media, processing, grinding and extraction of Starch and processing of the extracted starch into Pharmaceutical Grade Excipients. The following pictures showed the processes involved during the development of the Pharmaceutical Grade starch and Excipients:





Figure 85: Research Staff peeling the cassava tubers with the Director General/Chief executive Office, Prof. Martins Emeje (wearing white laboratory coat)





Figure 86: Soaking of the peeled Cassava Tubers in Water and cutting them Into smaller pieces before grinding





Figure 87: Grinding of the peeled cassava tubers





Figure 88: Extraction of Pharmaceutical Grade Starch from the grinded cassava tuber







Figure 89: Drying of Pharmaceutical Grade Starch from the grinded cassava tuber





Figure 90: Grinding of the dried Pharmaceutical Grade Starch from cassava tubers



Figure 91: Preparation of Pharmaceutical Excipients from the dried Pharmaceutical Grade Starch produced from cassava tubers





Figure 92: Packaging of the Pharmaceutical Grade Starch and Pharmaceutical Grade Excipient obtained from Cassava Tubers



Figure 93: NNMDA's Pharmaceutical Grade Starch

5.0.6. GRANT WINNING





Figure 94: Picture of Community Engagement sponsored by Grant.

This Agency has been depending solely on the Federal Government Budget Allocations which has never been sufficient to carry out its activities as a Research Institute. Consequently, in the first One (1) year of his administration (May, 2023 – April, 2024), Prof. Martins Emeje as the Director General/Chief Executive Officer of the Agency for the first time, enabled NNMDA to win Three (3) Competitive Grants; one of these Grants amounts to One Million

US Dollars (\$1,000,000). The Deliverables from these grants are:

- 1. Manuscripts written and published in a reputable peer review Journals
- 2. Community Engagements were held with the Stakeholders in Traditional Medicines
- More than Hundred (100) Traditional Medicine Practitioners were trained at different level of their Professions.
- Training (within and outside Nigeria) of researchers and non-researchers of NNMDA in various disciplines requisite to the discharge of their jobs.

5.0.7. PHARMACY INTERNS

NNMDA only trained the University Students that come for Student Industrial Work Experience Scheme (SIWES) for a period of Three (3) to Six (6) months and accepts number of National Youth Corp Members (NYSC) to undergo their mandatory National Service. This has been the tradition before the appointment of Prof. Martins Emeje as the Director General/Chief Executive Officer. Thereafter, he got approval of the Pharmacy Council of Nigeria (PCN) for NNMDA to be designated as a Training Institution for Pharmacy Interns. Consequently Five (5) Pharmacy Interns were accepted to be trained on Drug Research and Development, Techniques in Drug Formulations and Productions.



Figure 95: Pharmacy Interns undergoing their internship at NNMDA.







Figure 96: Corpers (NYSC Members) undergoing their Primary Assignment at NNMDA.

5.0.8A. STAFF CAPACITY BUILDING

At the onset of his career as the Director General/Chief Executive Officer of NNMDA, Prof. Martins Emeje directed every Research Staff having B.Sc or M.Sc degree to go back to school for their Masters degree and Doctoral degree in various field of studies. To achieve this, Prof. Martins Emeje, for his love for human capacity building and development made contacts with some higher Institutions (Public and Private) in the country. He assisted these researchers to gain admission to some of the Nigerian Universities. Many Staff have also been enabled to attend Administrative, Financial, Procurement, Audit, ICT, Planning, Maintenance trainings amongst others; to build their capacity and improved their performance on the job. Some of these trainings and workshops include:

- 1. Workshop on "Framing the future" organized by Aberdeen Commercials Ltd, and held on 25th of August, 2023.
- Writing a Good Manuscript by the Director General/Chief Executive Officer, NNMDA, Prof. Martins Emeje held on 4th of October, 2023.
- 3. International Conference Webinar held on 2nd of November, 2023
- Ensuring Optimal Staff Performance in a Challenging Economy organized by the NNMDA Admin. Department and held between 13th-14th May, 2024
- Product development, Analysis and Standard Operation Procedure in formulation of drugs. held between 17th-21 May, 2024 and facilitated by the erudite Professor of Pharmacy; Prof. Samson Amos from USA
- International Public Health Management Development Program organized by India Technical and Economic Corporation (ITEC) and held on 11th-15th September, 2023.
- International Public Health Management Development Program organized by India Technical and Economic Corporation (ITEC) and held on 21st-30th November, 2023.







Figure 97: Staff of NNMDA on Training and Workshop titled; Ensuring Optimal Staff Performance in a Challenging Economy organized and Workshop on "Framing the future"





Figure 98: Training Session of the NNMDA Research Staff by Professor Samson Amos (Professor of Pharmaceutical Science) from USA.

5.0.8B. NATIONAL SKILLS ACQUISITION CENTER FOR TRADITIONAL MEDICINE

In a groundbreaking move to advance Traditional Medicine in Nigeria, the Federal Government officially designated the Nigeria Natural Medicine Development Agency (NNMDA) as the **National Skills Acquisition Center for Traditional Medicine**. This development underscores the government's commitment to professionalizing Traditional Medicine Practice and ensuring it aligns with global standards. The designation follows NNMDA's landmark training program held on December 17, 2024, which focused on the National Skill Qualification for Traditional Medicine Practice. The training equipped research staff with the skills needed to meet global standards for occupational competency assessments in the sector. Participants of the program engaged in hands-on sessions covering critical aspects of Traditional Medicine, including identifying medicinal plants, preparing basic formulations, and dispensing traditional medicinal products. The event marked a significant step towards establishing a structured framework for skill certification in Traditional Medicine.

At the first training held in the Agency and anchored by the designated staff; Consultant Pharmacist Ngozika Okoye, and speaking at the event, the Director General/Chief Executive Officer, Prof. Martins Emeje, emphasized the Agency's pivotal role in transforming the Traditional Medicine Sector. He stated, "This training is a stepping stone towards

positioning NNMDA as a Center for Excellence in skill certification. It equips us to lead the way in enhancing professionalism and standards in Traditional Medicine." The certification framework, highlighted during the program, is competency-based and focuses on developing practitioners at the Assistant Traditional Medicine Practitioner Level 1. Participants are assessed against specific performance criteria to ensure they meet clearly defined learning outcomes. With this new designation, NNMDA is poised to play a central role in the development of a skilled workforce, fostering innovation, and strengthening the credibility of Traditional Medicine in Nigeria. He further stated that the Agency's efforts align with international trends, ensuring Nigeria remains at the forefront of global advancements in Traditional Medicine Practice. This milestone therefore, reflects the Federal Government's dedication to promoting Traditional Medicine as a viable component of the nation's Healthcare Delivery System and a significant contributor to economic development.







5.0.9. START-OFF THE COLLEGE

NNMDA is mandated to establish a model school of Natural Medicine, as training arm of the Agency and seek accreditation and affiliation with the appropriate bodies and higher institutions, to carry out manpower development and training of interested individuals and entrepreneurs. The Nigeria College of Natural Medicine Technology (NICONMTECH) was given approval and authorized to commence operation on the 15th August, 2022 by the National

> Board for Technical Education (NBTE), Federal Ministry of Education (FME); to admit students for the Business Informatics program and the Natural Medicine Program.



Dr. Fawehinmi Akinlolu Bankole Rector, Nigeria College of Natural

The College through the Agency, had made contact at JAMB office in Abuja which facilitated its inclusion into the JAMB admission portal. As a result, the Joint Admissions and Matriculation Board (JAMB) sent a letter to the College to indicate its cut off point for the admission of students. This was the Status of the College before the Administration of Medicine Technology (NICONMTECH) Prof. Martins Emeje in May, 2023.

Shortly after he assumed duty as the Director General/Chief Executive Officer, NNMDA, Prof. Martins Emeje considered the first admission into the Nigeria College of Natural Medicine Technology (NICONMTECH) on Two (2) major courses:

- National Innovative Diploma (NID) in Natural Medicine
- ii. National Innovative Diploma (NID) in Business Informatics

This was announced on the 23rd of June, 2023. After creating an enabling environment, the Director General/Chief Executive Officer mandated the Principal Officers in NICONMTECH to begin lectures using an in-house and

outsourced lecturers (International Professors) to teach the students. Therefore, on the 18th of July, 2023, the NICONMTECH flagged off its First Semester lectures for the 2023/2024 Academic Session with Fourteen (14) Students (Both Onsite and Online); and has conducted Two (2) examinations in Two (2) semesters within the same period. The college has also conducted Vocational and Skill Acquisition Trainings for Fifty Eight (58) Traditional Medicine Practitioners (TMPs) on Traditional Birth Attendants (TBAs) and Herbal Medicine Production Techniques.



Some Staff of NICONMTECH

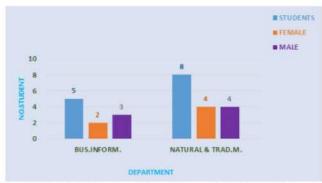


Figure 100: NICONMTECH Students' Enrolment (2023/2024 Academic Session)

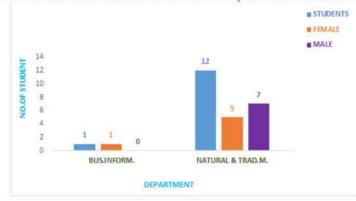


Figure 101: NICONMTECH Students' Enrolment (2024/2025) Academic Session



Figure 102: NICONMTECH Students' Enrolment for the Two Academic Sessions (2023/2024 and 2024/2025 Sessions



Figure 103: NICONMTECH Onsite/Online Training for Traditional Medicine Practitioners (TMPs) from March, 2023 to May, 2025







Figure 104: During Vocational/Skill Acquisition Trainings of the Traditional Medicine Practitioners on Traditional Birth Attendants (TBAs) and NICONMTECH students receiving lectures in the class



Figure 105: The Trained Traditional Birth Attendants (TBAs) and the College Managements

5.10. RESTRUCTURING AND REDESIGNING OF NNMDA EXPERIMENTAL/RESEARCH FARMS LOCATED AT DIFFERENT GEOPOLITICAL ZONES IN NIGERIA

The Nigeria Natural Medicine Development Agency (NNMDA) Act mandates the Agency to;

- Promote the active cultivation of Medicinal, Aromatic, Pesticidal Plants and other raw materials through the development of appropriate species identification, good agricultural and collection practices, and technologies for adoption by farmers;
- 2. Develop and Disseminate MAPPs Post Harvest Processing Technologies and Techniques to ensure good quality materials, value addition, herbal therapies formulation and production.
- Cultivate and grow medicinal, aromatic and pesticidal plants and ensure proper identification of
 active substances used in natural medicine practice and translation of relevant information into
 Nigeria Languages.
- 4. Establish model experimental farms and activity centre in each of the six geopolitical zones.

Currently, Eight (8) Research Farms have been established. There are Two (2) farms in the South-West, two (2) in the South-South, Two (2) in the North-Central, One (1) in the Northeast and another One (1) in the Southeast. These Eight (8) Farms are located in Kano; Kano State, Jos; Plateau State, Abakaliki; Ebonyi State, Akure; Ondo State, Karu; Nasarawa State, Gberigbe; Lagos State, Calabar, Cross River State and Jesse; Delta state.

However, since the establishment of these farms, a number of them never really took off and hence the objectives and aims of some of the farms were never met until the appointment of Prof. Martins Emeje as the Director General/Chief Executive Officer. Prof. Martins Emeje ensured that construction of farm house really took off in all the farms based on government releases of capital budgets as per construction of the farm houses.



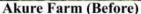
Secondly, Prof. Martins Emeje brought a novel initiatives that medicinal plants cultivated in each of the farm addresses the health issues common to that community and that those plants are peculiar and grow in that area. Cultivation of the plants is expected to be in line with Good Agricultural Practice (GAP), and Techniques. Efforts are ongoing to ensure that NNMDA staff in each of the farms are trained along this Good Agricultural Practices. It is also hoped in the future that NNMDA Researchers posted to the various farms will also be able to carry out R&D activities especially on the medicinal plants cultivated in those farms.

Mr. Ajaegbu Henry Chukwudi Head and Zonal Farm Coordinator NNMDA's National Research Farms



Some Staff of NNMDA Experimental/Research Farms Located at Akure (Ondo State), Abakaliki (Ebonyi State), Kano (Kano State), Jos (Plateau State), Calabar (Cross River State), Jesse (Delta State), Karu (Nasarawa State), and Gberigbe (Lagos State)







Akure (Now)





Newly Prepared Land for Cultivation of MAPPs in Akure Farm





Abakaliki (Before)

Abakaliki (Ongoing Work)









Ongoing Cultivation of MAPPs in Abakaliki Farm





Kano (Before)

Kano (Ongoing Work)





Jesse Farm (Work Ongoing)



Calabar Farm (Now)



Gberigbe Farm (Before)





Gberigbe Farm (Now)





Jos Farm (Now)











Karu Farm (Now)

Figure 106: Showing the ongoing and completed works at Kano Farm, Jos Farm, Karu Farm, Jesse Farm, Akure Farm, Gberigbe Farm, Abakaliki Farm and Calabar.

5.11. BIORESOURCES DEVELOPMENT AND CONSERVATION

The Department in the past conducted Ethnobotanical Survey of Medicinal, Aromatic and Pesticidal Plants (MAPPs) in some parts of the Country.



During Prof. Martins Emeje's Administration, this Department has begun to identify, document and carry out processes of preservation of the voucher specimens for Medicinal Plants received from Researchers and was able to issue the Agency's first set of Medicinal Plants of Nigeria Herbarium (NPNH) voucher specimen certificate.

The Department is to cultivate and grow Medicinal, Aromatic and Pesticidal Plants (MAPPs) and ensure proper identification of active substances used in Natural Medicine Practices and translation of relevant information into Nigeria Languages.

Mr. Anoruo-Dibia Chibuikem,

Head, Department of Bioresources Development and Conservation



Some Staff of the Department of Bioresources Development and Conservation

CHAPTER SIX

CONCLUSION

6.0. CONCLUSION

On assumption of office as the Director General/Chief Executive Officer of the Nigeria Natural Medicine Development Agency (NNMDA) in May, 2023, Prof. Martins Emeje has been superintending the affairs of the Agency using the following cardinal Government Administrative Tools:

- Implementation of the NNMDA Establishment Act No 25 of 2019
- The revised Federal Government Public Service Rules (PSR) and the Extant Laws and Regulations of the Federal Government of Nigeria. (PSR 2021).
- Federal Government Financial Regulations 2023
- The Public Procurement Act 2007
- The Presidential Priorities Areas of President Bola Ahmed Tinubu 8- Point Renewed Hope Agenda.

6.0. IMPLEMENTATION OF NNMDA ACT NO 25 OF 2019

6.0.2. Research Farms: A recognized Zonal Farm Coordinator not below the rank of Chief Research Officer has been appointed in accordance with NNMDA Act. He supervises all the Research Farms Centers of the Agency spread all over the six geopolitical zones of the country and reports directly to the DG/CEO, Prof. Martins Emeje. Hitherto, this provision of the Act was not implemented.

6.0.3. Advocacy and Creating Awareness of TMPs: Prof. Martins Emeje during his first two years in office in line with the NNMDA Act, had granted numerous interviews on different TV stations, Radio stations, Newspapers, etc. with regards to the Development and Utilization of Indigenous/Traditional Medicine Practice in Nigeria.

This led to the unprecedented awareness of the existence, functions and mandates of NNMDA. Consequently, Government, Private Sectors and the General Public are far more knowledgeable about the relevance/role of the Agency and Traditional Medicine Practice to the National Healthcare Delivery System of the country. This was not the situation before the advent of Prof. Martins Emeje as the DG/CEO of NNMDA.

6.0.4. Department of Research Policy and Innovation Planning (RPIP): In fulfilment of NNMDA Act, Prof. Martins Emeje resuscitated a then very low functional Department which hitherto was moribund in practice, but now very actively functional. Consequent activities and successes of the Department with a full fledge Organogram, Functions, Mandates and Activities have justified the DG/CEO's foresight in this regard.

6.0.5. Research and Development:

This is the primary focus and function of NNMDA. Activities and successes recorded by NNMDA during the period under review (May 2023 to May 2025) far surpasses similar ones attained since the establishment of the Agency.

All the Researchers were reorganized into different Research Teams and the DG/CEO Prof. Martins Emeje was the

Principal Investigator (PI) for all the Research Groups. The hitherto, weekly seminar presentations were resuscitated and reorganized, and instead of presenting literature reviews, the Researchers were directed to make presentations based on actual experimental works (Chemical analysis, Biological analysis, Toxicity analysis, etc.) carried out by them in NNMDA Laboratories. The range of seminar presentations were on diseases and ailments such as Malaria, Glaucoma, Hypertension, Diabetes, Cancer (Breast, cervical, prostate, colon, lung etc.), Insecticides, Erectile dysfunction, Vaginal wash, Nutritional supplement, Anti-snake venom(ASV) etc. The Highlight of these weekly R & D Seminars was the launching of NNMDA's first oral solid dosage formulations in March 8, 2024 by the Honourable Minister of Innovation, Science and Technology Chief Uche Geoffrey Nnaji, developed hundred percent from Nigeria Indigenous herbs, namely:

- NAMDAMUNETM for anti-aging-200mg
- NANOBERETM for Upper Respiratory Infection -50mg
- ABERECINTM-200mg for Diabetic
- NAMDASANTM for Sickle Cell Anaemia.

6.0.6. Collaboration

During the period under review May, 2023 to May 2025, the Agency had a number of collaborations with worthwhile Institutions (Federal and State Universities, National and International Professional Bodies amongst others). All MoUs/MoAs signed were monitored to ensure that they are implemented and functional. This is in sharp contrast to what obtained before the advent of Prof. Martins Emeje. The MoUs/MoAs specifically targeted enhancing and provision of trainings of NNMDA's Researchers, Technologists and staff to greatly enhance their on-the-job performance. These collaborations most of the time were at no cost to the Federal Government of Nigeria.

6.0.7. Grants

For the first time, a number of competitive Research Grants were won by the Agency through the dint of hard work and experience of the DG/CEO, Prof. Martins Emeje. For the first time, a foreign student –Dr. Oladele Gautier Roko came to pursue and completed his Post-Doctoral Programme in the Agency within a year, under the supervision of Prof. Martins Emeje.

6.0.8. The Nigeria College Of Natural Medicine Technology (NICONMTECH)

On assumption of duty in May 2023, Prof. Martins Emeje re-engineered the establishment of the College as a training arm of the Agency (NNMDA), in the area of Manpower Development of Indigenous/Traditional Medicine Practitioners, and the enlightenment of the general public. This is in line with NNMDA Act. Consequently, certain relevant accreditations were sought for and approval was obtained from appropriate Professional Bodies; and some innovations brought on board namely:

- Online Training was introduced as part of mode of delivering lectures to the students at far distant (those living outside Lagos State), and those who at times might not find it convenient to attend lectures physically; aside students receiving lectures within the college.
- Pharmacy Council of Nigeria visited, assessed and gave approval for NNMDA to be used for the training of Pharmacy Interns.

6.0.9. THE REVISED FEDERAL GOVERNMENT PUBLIC SERVICE RULES (PSR) AND THE EXTANT LAWS AND REGULATIONS OF THE FEDERAL GOVERNMENT OF NIGERIA.

All cases of Staff Welfare, Discipline, Training, and Promotion in the Agency have and still being carried out in compliance to the existing Federal Government Public Service Rule and Extant Laws and Rules governing Ministries, Departments and Agencies (MDAs) of the Federal Government of Nigeria.

6.10. Promotion

For the first time since NNMDA was established, the year 2023 Promotion Exercise for NNMDA staff was conducted Online. This meant Staff of the Agency who were due for promotion, stayed in their various farm locations and Abuja office for such exercise; as hitherto, this had not been in the practice over the years. This new innovation was possible because the DG/CEO Prof. Martins Emeje sought for and obtained the approval of the Honourable Minister of Innovation, Science and Technology, Chief Uche Geoffrey Nnaji to have the promotion exercise conducted Online. Also, this was in line with the Head of Service of the Federation directives that most meetings and Government works should be done through virtual meetings. Similarly, promotion for the year 2024 was conducted virtually in 31st December, 2024.

6.11. Training

A number of trainings of staff were effected through physical attendance, zoom meetings and webinars. (e.g. Training Workshop on Quality Management System and ISO 17025:2017; Training on Ensuring Optimal Staff Performance in a Challenging Economy in year 2024)

6.12. Welfare

Staff buses were repaired and put for use to convey staff to and from work, and for other official assignments.

6.13. Federal Government Financial Regulations 2023 (Budget)

Prof. Martins Emeje has strengthened the initiatives of Government in the areas of (i) GIFFMIS (ii) IPPIS, (iii) Budgeting (Recurrent and Capital), (iv) Budget Monitoring and Evaluation (M&E) as a means of budget control. On assumption of office, Prof. Martins Emeje met a debt of Sixty Five million naira (N65million). Hence, in addressing the staff of the Agency at one of its interactions with them; he promised staff that whenever he is

finally leaving office as the DG/CEO, he was not going to leave behind any new debt for his successor as the DG/CEO. Some of the initiatives Prof. Martins Emeje has put in place are as follows:

- a) Transfer of Finance & Account Staff to other sections within the Department where the transferred staff will become more useful and productive based on his/her requisite capacity and experience.
- b) Stricter compliance with non-approval of Budgetary Expenditure unless the money to be expended is available in NNMDA's Account, in line with Government Financial Regulations.
- c) Financial Leakages and Mismanagement were blocked. Transparency and Accountability were introduced in the Department of Finance and Accounts, e.g. approval of Staff R&D Projects, Conferences/Seminars Attendance, DTAs etc. are now paid promptly unlike what hitherto was the norm.
- d) A far more transparent and inclusive budgetary mechanism is now in place where the Heads of Departments & Units, are involved in generating their budgetary needs and defending them at a meeting that involves most relevant NNMDA Staff.

6.14. THE PUBLIC PROCUREMENT ACT 2007

This Act emphasizes Six (6) principles namely; (i) Accountability (ii) Fairness (iii) Reliability (iv) Transparency (v) Ethical Standards (vi) Economy to be adhered to in the procurement of Goods, Works, Services and Consultancy when using Public Funds especially those from Federal Government Budgetary Allocations.

Highlights of the key innovations introduced by the DG/CEO, Prof. Martins Emeje for the period of May 2023 to May 2025 are as follows:

- a) Introduction and Adherence to the setting up of the NNMDA's Procurement Planning Committee (PPC) which is an essential component of the Procurement Act 2007.
- b) In-house enlightenment training of NNMDA's Top Management Committee (TMC) on the fundamentals of the Public Procurement Act 2007.
- c) During the opening of the Bids, the DG/CEO, Prof Martins Emeje introduced another novel innovation by inviting Officials of the Independent Corrupt Practice Commission (ICPC) to witness the Bid Opening Process. This was to give more transparency and credibility to NNMDA's Procurement Process.
- d) All NNMDA's Project executions are guided by the Public Procurement Act 2007.

6.15. THE EIGHT (8) POINT RENEWED HOPE AGENDA OF PRESIDENT BOLAAHMED TINUBU'S ADMINISTRATION

6.16. Strengthen National Security for Peace and Prosperity

National Security is strengthened when Nigerian citizens and Government Facilities are safe in any part of the country. Hence during the period under review, May 2023 to May 2025, the DG/CEO, Prof. Martins Emeje introduced the following initiatives:

- NNMDA's Security Guards/Personnel were reoriented and trained to be more aware of visitors, and persons that enter into the Agency premises; and also monitor occurrences outside in nearby vicinity of the Agency.
- NNMDA's Staff were directed to always wear their Staff Identity Cards at all times when within the
 premises as a means of identification; and differentiating them from persons visiting the Agency.
 This directive was contrary to what hitherto was the norm within the Agency.
- 3. An inventory of all the Assets (Furniture, Equipments, etc.) in each office of the Agency and her Laboratories were carried out by the Agency's Stores and Audit Units Officials. Thereafter, staff were told that they are responsible for the safety of equipment and furnitures in each of their respective offices.
- 4. Unlike what hitherto was the norm, the DG/CEO, Prof. Martins Emeje issued a directive to the Director, Department of Human Resources (DHR) that any time there was a Union or National Strike, he should engaged the services of the Nigeria Police for some Police Personnel to be posted to guide the premises and properties of NNMDA; until such a strike action is over. This is to prevent unforeseen destruction of Government Properties by hoodlums, and irate mobs anytime such a strike takes place.

6.17. Boost Agriculture to achieve Food Security

Best Agricultural Technology, Research and Development (R&D) Practices are being employed in the running of NNMDA's Farms. This is to ensure that medicinal plants cultivated and animals reared give maximum yield. Medicinal Plants being cultivated in each farm are the ones peculiar to the environment where the farms are located. Also, to enhance the conservation of Biodiversity and over exploitation of these plant resources; are additional reasons that these plants are cultivated. The best practices are also in line with NNMDA Establishment Act, and the Traditional Medicine Policy for Nigeria. The Nigerian Governor Forum (NGF) members have shown interest to collaborate with the DG/CEO, Prof. Martins Emeje and NNMDA in this area by donation of Land in their states to be used as NNMDA's Research Farms.

6.18. Enhance Infrastructure and Transportation as Enablers of Growth 6.19. Infrastructure:

Some of the major enhanced Infrastructure development on assumption of office by the DG/CEO, Prof. Martins Emeje was the face lift of the DG's Office, DG's waiting Room, DG's Board Room (now equipped with functional Computers and large screens for use during presentations); the reactivation, construction and painting of the canteen cabin, improved general cleanliness of the Agency's environment and toilet facilities, planting of medicinal plants as decorations within the premises and outside of the premises; maintaining the mini-farm garden at the back of Agency's premises close to the canteen, repair of the abandoned 5kv big Generator (which initially was to be boarded) to a now functional Generator used when there is no electricity supply; General Laboratory Complex which hitherto was more or less greatly underutilized and non—functional was resuscitated, stocked with laboratory equipments, provided with enough requisite chemicals needed to be used for chemical, technological and biological analyses and experiments; and made very functional by newly trained research staff and technologists of the Agency. Similarly, the Pilot Product Development Unit (PDU) was uplifted in terms of repairs of broken down production equipments. Also, the broken down signage at the first entrance to the Agency was redone to a more befitting one.

6.20. Transportation

On assumption of duty as the DG/CEO, Prof. Martins Emeje met the Two (2) staff buses grounded and not working. This led to staff coming late to work since coming to and from work with public transportation was stressful and experiencing traffics. The outcome of this was low productivity of work by the staff of the Agency. Prof. Martins Emeje got these buses repaired and are being used by the staff. Maintenance of these buses is in the care of the staff Unions and contributions as transport fares agreed upon by the staff Unions and staff members is used to maintain the buses. This initiative has led to staff coming early to work now and the productivity of staff has drastically improved than was the case hitherto to the advent of Prof. Martins Emeje as the DG/CEO.

6.21. FOCUS ON EDUCATION, HEALTH AND SOCIAL INVESTMENT AS ESSENTIAL PILLARS OF DEVELOPMENT

6.22. Education

During the period under review (May, 2023 to May, 2025), Five (5) Researchers attended trainings on International Public Health Management Development Program organized by India Technical and Economic Corporation (ITEC) under the collaboration between NNMDA and the Indian Government at no cost to the Nigerian Government. The facilitator of the training was the Indian High Commission to Nigeria. Also, the DG/CEO in collaboration with his colleagues in the University of Southampton jointly won a competitive Grant, part of this Grant was used in training the Traditional Medicine Practitioners on the use of the available Nigeria Indigenous Bioresources to develop Indigenous /Traditional Medicines against specific ailments.

6.23. Health

Pharmacy Council of Nigeria accredited NNMDA as a training Agency for the training of Pharmacy Interns. The first batch of such interns; Five (5) in number had undergoing there Pharmacy Internship in NNMDA. Similarly, in the period under review, the Nigeria Sovereign Wealth Investment Company (NSWIC) visited the Agency to seek areas of collaboration. At the end of their visit, NSWIC were willing to collaborate with

NNMDA in the area of using our indigenous Yams, Potatoes etc. to produce Pharmaceutical Grade Starch. They even promised getting the DG/CEO Prof. Martins Emeje at a date convenient for him, to deliver a lecture to some Nigeria Stakeholders who will be willing to contribute to the funding of such project.

6.24. Social Investment

NNMDA's pursuit and Federal Government's subsequent acceptance of Traditional/Indigenous Medicine Practice as a Complimentary part of our National Healthcare Delivery System, is a most welcome Social Investment and an essential pillar of Development. This is because according to World Health Organization (WHO), Eighty percent (80 %) of the populace in Sub-Saharan region of the world use Traditional Medicine because it is effective, safe, cheaper and available to the larger populace of the region than the orthodox medicine.

6.25. ACCELERATE DIVERSIFICATION THROUGH INDUSTRIALIZATION, DIGITALIZATION, CREATIVEARTS, MANUFACTURING AND INNOVATION.

6.26. Creative Arts and Intellectual Property Right (IPR)

The Honourable Minister of Innovation, Science and Technology, Chief Uche Geoffrey Nnaji, on March 8th, 2024, unveiled the first copy right protection granted to any Agency in Nigeria based on innovative rendition of mandate captured as the Agency's Anthem.

6.27. Manufacturing and Innovation.

During the period May 2023 to May 2025, the DG/CEO, NNMDA, Prof. Martins Emeje under the leadership of the Honourable Minister of Innovation, Science and Technology, Chief Uche Geoffrey Nnaji, the very first Oral Dosage formulations by NNMDA, which were developed 100% from Nigeria Indigenous herbs using Science and Technology (including nanotechnology) were launched. They were Four (4) products.

6.28. Industrialization

In the year 2024 approved Intervention Projects for NNMDA, over Fifty percent (50%) of the funding for these Intervention Projects were dedicated to Research and Development; the results of which will hopefully lead to an industrialization revolution within the Health Sector, specifically the Pharmaceutical Industry. This includes the Production of Excipients from our local raw materials.

CHAPTER SEVEN

EPILOGUE

7.0. INTERVIEWS WITH STAFF OF DIFFERENT DEPARTMENTS IN NNMDA

7.0.1. Interview with DR.CYRILAHONSI (DG's Office)



PERIOD BEFORE MAY, 2023

No much responsibities in the DG's Office Not so many in terms of visitors to the DG's Office No functional collaboration with universities

PERIOD MAY 2023 – APRIL 2024

Dr. Cyril and Mr. Kayode are the Head Research Horn of the DG's Office and they report to Dr. Chidebe (STA to the DG). Now visitors to the DG's Office are high in number and rate of visits. Now there are functional collaborations between NNMDA and the Universities

7.0.2. Interview with MRS. STELLAANI (Head, Legal Unit)



.PERIOD BEFORE MAY, 2023

Basically nothing was happening apart from sensitization of NNMDA's staff on Intellectual Property Rights (IPRs)

World Intellectual Property Organization (WIPO) came and discussed with NNMDA on IPR but nothing concrete emanated from it.

A former DG of NNMDA, T. F Okujagu had a vision of promoting IPR. Through him, there was WIPO Collaboration with NNMDA; in an inter government Committee on Traditional Knowledge and Genetic Structure.

In year 2005, NNMDA held the 1st International Conference on IPR and Traditional Medicine Practice in collaboration with NOTAP (National Office for Technology Acquisition and Promotion) where a developed legal document

PERIOD MAY 2023 - APRIL 2024

First instruction from Prof. Martins Emeje was the need to have IPR Agreements with NNMDA Staff and Visitors (i.e. None disclosure Agreement in terms of IPR). Interns, NYSC Corpers, Laboratory Attendants are equally affected.

No M&E Staff has participated in the IPR Classes or Sessions.

Visitors having collaborations with NNMDA, now have to sign MoUs/MoAs with regards to such collaborations (e.g. Alimosho Local Government, Government Universities, Media Organizations such as SOUQ).

These MoUs/MoAs signed make the collaborations more binding.

There is increased awareness and interest in

and Promotion) where a developed legal document on traditional knowledge was drawn up. It was expected to have inputs from the sixgeopolitical zones of the country. One cannot thank this Ex DG (TF Okujagu) for his efforts.

There is increased awareness and interest in taking part in IPR lectures e.g. Mr. Chinedu who works in NNMDA's Laboratory.

There is a need for at least one more staff in the legal unit of NNMDA.

7.0.3. Interview with DR EMMANUE.L ORGAH (Chair. R & D Committee)



.PERIOD BEFORE MAY,2023

2003-NNMDA slated for scrapping and no funding

Dr. Orgah, TF Okujagu and Dr. Etatuvie Samuel and some stakeholders held a conference on traditional medicine, inviting Traditional Medicine Practitioners (TMPs), Academia etc. to contribute to the development of R & D in traditional medicine.

Outcome of the conference:

All traditional medicine R & D across Nigeria documented.

First Book of Abstract on Traditional Medicine compiled (Vol.1, Vol.11 published)

Documentation of all TMPs and Practices across Nigeria. NNMDA's Staff sent across Nigeria for this exercise.

Stakeholders chaired by Prof. Elujoba of Obafemi Awolowo University (OAU), Ile Ife, others included Dr. Esho from Ogun State University.

In year, 2004, stakeholder meeting held included Prof. Coker, Prof. Ajayi, Prof Kemi Odukoya, Prof. Gamali, etc.

This led to the First Policy on Traditional Medicine.

3 Guiding Books on Products, Nigeria Pharmacopeia were produced.

HPPC funded by the Presidency then, resulted in Pharmacist Zainab of Federal Ministry of Health moving the programme to Federal Ministry of Agriculture and then back to Federal Ministry of Health.

Artemisinin development as a drug. Nigeria imported Artemisinin Seeds into the country with the hope of cultivating it so that it can be used for drug development.

Prof. Bright from Bayelsa State was involved in the effort to develop this Raw Materials Research Development Council (RMDC), collaborating with Nigeria Institute of Trypanosomiasis Research, Kaduna.

It was during this pre-year 2023 era that the need for a Library in NNMDA came to be.

National Association of Natural and Traditional Medicine Practitioners (NANTMPs) was established.

7.0.4. Interview with MR HENRY AJAEGBU (Coordinator, Experimental Farms)



.PERIOD BEFORE MAY,2023

Jesse Farm, Delta State and Jos Farm, Plateau State were the only two (2) functional farms out of the supposedly eight (8) farms owned by NNMDA before the Prof Emeje was made Director General/Chief Executive.

Jesse Farm was supposed to produce Raw Materials like Andrographis paniculata (King of Bitters), Bitter Leaf, Scent Leaf, Turmeric, Pineapple, and Pepper).

Enugu Farm is meant for Clinical Trials.

Planting and harvesting of turmeric etc. was performed at Jos farm.

However, the harvested turmeric etc. were never sent to Lagos for Laboratory Experimental Processing

During the time of TF Okujagu as the Director General/Chief Executive, he wanted people to innovate and he designed the PDQA laboratory.

However, prior to the coming of Prof. Martins Emeje as Director General/Chief Executive,, Quality Assurance Experimental Analysis was taken outside of the Agency, to places like other Government Agencies /Universities for characterization to be performed.(Ash test, toxicity test, chemical and biology analysis, etc.).

PERIOD MAY 2023 - APRIL 2024

Currently, Farm Houses in different zonal centers are being constructed.

All farms today are functional with NNMDA Staff present and overseeing the farms.

The concept now is to plant and cultivate medicinal plants in each farm; with those medicinal plants being indigenous to the areas they are planted.

Before the Prof. Martins Emeje became the DG, Gberigbe farm had a toxicology laboratory. Activities have been greatly improved upon and Gberigbe including Fish Pond being put in place.

Prof Martins Emeje like Ex DG, TF Okujagu has laid tremendous emphasis on innovation with all Experimental Analysis being carried out inside NNMDA's laboratories.

7.0.5. Interview with MR. LUKE (Head, Product Development and Quality Assurance)



.PERIOD BEFORE MAY,2023

Initially, nothing like PDQA. What existed was;

- 1. Product Development Department: Production of Herbal Drugs (and only Herbal Teas produced), e.g. Amarus Tea, Ocimum Tea, Zincap Tea etc.
- 2. Quality Assurance Department:
- 1. Observed Quality manual
- 2. SOPs being observed for wearing overall and nose masks, etc

PERIOD MAY 2023 - APRIL 2024

PDQA was merged into one entity

Rearrange the laboratories by moving equipment to more suitable places.

This created a better good working environment.

Received the best training of our time as researchers.

Trainings that researchers have been seeking for years; Prof. Martins Emeje taught the researchers himself practical. (i.e. Prof Emeje trained them practical).

Most of the equipment that have been lying fallow for years, Prof. Emeje taught the researchers how to use them.

During Prof. Emeje's 1st year in office was the first time NNMDA researchers carried out extraction of nineteen (19) medicinal plants to get the active components of the plants. (Ethanolic extraction)

Aqueous extraction Maceration using Soxhlet extractor)

Four new products unveiled by the Honourable Minister of Innovation, Science and Technology. These include:

Namdasan-sickle cell

Namdamune-anti aging

NamdaAberecine-for diabetes

NanoBere - for respiratory tract infection.

Other products are undergoing NAFDAC registration.

NNMDA Staff had in-house training through zoom

Another distinct in-house training held in NNMDA for researchers for one (1) week.

Pharmacopeia training by Dr. Olubukola Irurhe (Ph.D Quality Assurance, FIPAN)

Most researchers have gotten scholarships to further their education (i.e. M.Sc and Ph.D).

Although, Technologists are yet to bring their admission letters to enjoy such sponsorship by

the Agency.

Some of the things taught by Prof. Emeje include amongst others:

Angle of ripple, foaming index, swollen index, swollen capacity, cytotoxicity, etc.

Prof Emeje stopped literature review weekly seminar. He replaced it with seminar on practical experimental work done in NNMDA laboratories, which results are then presented by the researchers at the weekly seminars.

This brought or led to seminars to be in a more evidence based scientific manner or method, during the weekly scientific research seminars. Prof. Emeje taught the researchers how to make use of the freeze dryer.

7.0.6. Interview with MRS. BOLA EFFA (Head of Laboratory and a Technologist)



.PERIOD BEFORE MAY,2023

Laboratory was on its own as a Department(i.e. Quality Assurance Department)

PERIOD MAY 2023 - APRIL 2024

Now PDQA collapsed as one Department. Technologists are now having privilege of being researchers or part of those carrying out research works. They are part of PDQA. Laboratory works are much; unlike before May 2023.

Hands on training. Some equipments in the Laboratory which the technologists did not know how to use; are now being used by them because the Technologists are now more knowledgeable in instrumentation, etc.

7.0.7. Interview with MR. CHINEDU (Laboratory Technologist)



PERIOD MAY 2023 - APRIL 2024

Working with DG, Prof Emeje Aberesine Isolation of Cellulose Some Laboratory tests

Activities now in PDQA is a beehive of activities

Namdasan Project.

Participatory style of leadership exhibited by Prof. Emeje.

This has changed the attitude of NNMDA Staff to work.

Issue of schooling. Working on getting admission to go for a master's programme.

Also on the issue of schooling, Prof. Emeje has done a lot of wonderful revolution by encouraging and getting NNMDA funding for Staff to acquire their masters and doctorate degrees.

Before now, shift is R & D, before anything. Now it is Drug Analysis Expertise in that regard.

.PERIOD BEFORE MAY,2023

Ex Director General/Chief Executive, Dr. Etatuvie tried in the area of Laboratory as per General Laboratory Complex.

Chemistry Laboratories

Small Microbiology works

Some products like Ocimum, Anti-malaria, Real man, Anti-arthritis

Product Development occurred during Ex DG, Dr. Etatuvie

Capacity building for researchers and technologists was below average. This led to staff having a low attitude to work.

7.0.8. Interview with MR.UDE CHIDI (Deputy Director, Special Duties, DG's Office, Former Bursar in NICONMTECH, and Formerly Officer in charge, Budget and Planning, NNMDA)



.PERIOD BEFORE MAY,2023

Mr. Ude Chidi was Head of Salaries in Account Department.

Acting Bursar of NNMDA's College (Pioneer Bursar)

Challenges;

New job without experience

Had issues of collection of payments of staff attending the college

College did not have account

PERIOD MAY 2023 - APRIL 2024

Faster drive to:

Prof. Emeje introduced a functional Monitoring and Evaluation (M & E) Department-RPIP.

Activated the Consult Account for the College. He created Special Duties Office within the DG's Office.

No Organogram

He reengineered Audit as part of the Office

under the DG.

Basically, the Agency (NNMDA) is research driven. If we get the R & D working properly, other Departments will key in.

The Capacity building in terms of going back to school initiative of Prof. Emeje's Administration has never occurred before in NNMDA.

Any Assignment given to a special duty will be delivered.

7.0.9. Interview with MR. ABEL OGUNTOYINBO (Laboratory Technologist)



.PERIOD BEFORE MAY,2023

Normally doing more of microbial analysis mostly on NNMDA's Products: Mosquito repellant, Ocimum herbal tea, etc.

Laboratory works were not frequent.

In terms of trainings, Mrs. Bola Effa and I attended programs at Ethiopia

PERIOD MAY 2023 - APRIL 2024

More work in the Laboratories

Prof. Emeje was working with the researchers and technologists inside the Laboratories. This leadership attribute was not in existence before. Technologists were involved in microbial analysis of the nanoparticles preparation in the Laboratory as an example.

Was involved in the indoor microbial analysis within the Agency, and in the surrounding Local Government Area, limiting the work to government Agencies. Other NNMDA's Staff involved were Dr. Cyril, Oguntoyinbo, Aigboje and Leo. This was during the recent cholera outbreak.

The former PDQA was collapsed into one Department (i.e. Chemistry, Microbial analysis units were jointly working together).

This brought greater interaction among them and was an interesting development.

Knowledge imparted on researchers and technologists during this period was like no other since the creation of NNMDA.

7.10. Interview with MR. SAMUELITOPA (Laboratory Technologist)



.PERIOD BEFORE MAY,2023

Some researchers go outside the Agency to run their analysis

During the Ex DG, Dr. Etatuvie in 2015, Laboratory was headed by Mr. Kwaptoe., Mrs. Bola Effa and Mr. Hassan headed Quality Control, Quality Assurance and Clinical.

Laboratory not funded and no mentor.

The AAS not fully utilized

2016; bought HPLC (High Performance Liquid Chromatograph)

PERIOD MAY 2023-APRIL 2024

Prof. Emeje only expanded the knowledge of the technologists

I never knew about excipient isolation (e.g. for even waste materials)

Prof. Emeje taught us how to use the freeze dryer, TLC (Thin Layer Chromatography). Today TLC is being used unlike before.

On mentorship, even after Prof. Emeje has being angry with staff, he will still get across trying to teach that person what and how to get things done the proper way.

On the issue of schooling, Mr. Itopa said he has PDG in Analytical Chemistry. This is not in his personal file because the Senate is yet to approve the result of the school.

Before there was discouragement about going to school to acquire M.Sc and Ph.D because the Agency (NNMDA), then did not encourage Staff to do this.

7.11. Interview with DR. IFEOMA CHIDEBE (STA to the DG)



PERIOD BEFORE MAY, 2023

Never worked in DG's Office before.

PERIOD MAY 2023 - APRIL 2024

Never worked in DG's Office before. A new scenario. Different picture from when (Dr. Chidebe) was in Bio Resources Department.

You are expected to take the initiative, make plans and take responsibility that are not in your care.

DG-Prof. Emeje is given to hard work and output. Results oriented.

Proactive. Also get to transverse borders

understanding the DG himself.

Dr. Chidebe said she has learnt to understand and understudy the DG's staff.

Scheduling for DG'S appointments visitors, calls-mails etc.

Importance of DG'S Security

Prof. Emeje is unique not only for administrative but also for research output

Dr. Chidebe said she learnt a lot on the job

Thank God the colleagues she had worked with.

Prof. Martins Emeje has got wisdom (Native & English) in a lot of things. He also has graces (i.e. Gods graces)

Prof. Emeje does not like mediocrity or excuses. He is a timekeeper and Accuracy to time-keeping.

He is soft and has a hard face. He is very prayerful. He is family oriented and celebrates people and success.

He is the most in-house presenter on training.

He has promoted the researchers and technologists by pricking their consciences.

No more literature review seminars.

Go to the Laboratories and do experimental work, you can then make your seminars based on your experimental output.

Prof. Martins Emeje effortlessly tutors (i.e. he is a born teacher). Ability to think through from inception of a project proposal to definite conclusion, is a hall mark of Prof. Martins Emeje.

If NNMDA's Staff do away with the Internal built over the years, then the staff will benefit most from the tenure of Prof. Martins Emeje as DG of NNMDA.

7.12. Interview with MR. DELE ADEYEMI (The DG's Driver)



.PERIOD BEFORE MAY,2023

Atimes, the Driver's entitlements were not fully paid

PERIOD MAY 2023 - APRIL 2024

During Prof. Emeje's tenure, all his drivers' office assignment is full paid. This is fantastic unlike what hitherto was the case.

Mr. Dele wants the drivers not to lie (i.e. about car maintenance done to wanting to make money, e.g. putting inferior engine into the pilot vehicle)

Anything about vehicles repairs and maintenance, Prof. Emeje immediately responds to it.

Mr. Dele wants the following to be put in place: Drivers Section (maintenance unit)

Need for driver's office under the maintenance unit.

Need for small Imprest for drivers Overtime is now being enjoyed by the DG's driver for the first time unlike what was the practice before Prof. Emeje assumed office as DG.

7.13. Interview with MR. JUDE AND MR. BOLA OLATUNJI (The Agency's Drivers)



.PERIOD BEFORE MAY,2023

Mr. Jude said he was driving long coastal bus from office to Ikorodu then.

There were five (5) drivers the Agency had

- 1.Late Mr. James Agi DG's driver
- 2. Mr. Dele-DG's wife
- 3. Mr. Oliver-Driver
- 4. Mr. Bola Any message or errand.

Driver's entitlements were not fully paid.

PERIOD MAY 2023 - APRIL 2024

When travelling for official trips now, drivers are paid their full entitlements.

Need for drivers' office

Need for "Accident free Yearly bonus" for drivers.

7.14. Interview with MR. UDOH ANIEFIOK (The DG'S Secretary)



.PERIOD BEFORE MAY,2023

Under late DG-Prof Akinadewo,

Mr. Udoh did most of the IT (Information Technology) work because the late DG had a confidential secretary who was not really computer literate.

The current Conference Room beside the IPPTO's office was then set up for Mr. Udoh to do the Agency's IT work.

Ex DG Dr. Mrs. Koripamo Agari recruited two former DGs then, as staff of the Agency (i.e. TF Okujagu and Dr. Sam Etatuvie.

Worked with TF Okujagu

Working with Ex DG –Dr. Etatuvie, most people do not come to work and DG Etatuvie was not concerned.

PERIOD MAY 2023 - APRIL 2024

Under Prof. Martins Emeje, he maximized his leverage with the media persons/houses. Joined the NNMDA's College as a student to acquire knowledge in the area of traditional /indigenous medicine and practice.

7.15. Interview with MR. SOLOMOM ADEGBOLA (DG's Office)



PERIOD BEFORE MAY, 2023

Not really doing nothing

PERIOD MAY 2023 - APRIL 2024

DG Prof. Emeje discovered his ability and drove him to be diligent towards given assignments.

Adegbola is involved in printing of NNMDA's booklets, programs and banners, etc.

Adegbola active in the press unit as a photographer among other things.

Also joined the NNMDA's College as a student to acquire knowledge in the area of Business Infomatices

7.16. Interview with CHIDIMA (DG'S Office)



.PERIOD BEFORE MAY,2023

Duties included welfare
Attending to Ex DG-Dr. Etatuvie
Dispatching files and mails etc.
Underutilized generally
Nothing happens as a union Representative.

PERIOD MAY 2023 - APRIL 2024

Ensures DG eats his food as at when he wanted Entertain DG's Guest in terms of food and drinks

Sense of being fully utilized.

Prof. Emeje made union more functional in the running of the Agency (e.g. Union was involved in the welfare for staff during year 2023 Christmas period).

The broken down buses were repaired by Prof. Emeje and have been used to transport staff to and fro office.

7.17. Interview with DR. OGWO ENEOJO (STA to the DG)



PERIOD BEFORE MAY, 2023

Not applicable since he came in with Prof. Emeje

PERIOD MAY 2023 - APRIL 2024

Two (2) buses were grounded and staffs were coming late to the office.

When I assumed duty as Technical Assistant to the DG Prof. Emeje, transportation committee told the DG that the buses were to be auctioned.

DG replaced the tyres of the buses, repairs certain things in the buses and directed that the buses be run by staff in terms of maintenance. Within the first (1st) month of the operation of the buses, punctuality of staff to work rose tremendously.

On assumption of office, there were complaints from staff that they were not involved in the implementation of the Agency's (NNMDA) Projects (Capital & Recurrent).

Consequently, the staff commended Prof. Emeje that for the first (1st) time, they were fully carried along in drawing up the year 2024 Capital Projects of NNMDA

Many staff increased their capacity to do research through interactions with the DG, and also Prof. Emeje helped them to secure admission in schools for the Masters and Ph.D degrees as long as the schools were willing to offer them admission.

Issue of debts, Prof. Emeje met on ground on assumption of duty as DG NNMDA.

7.18. Interview with PHARMACIST BIBINU SULEIMAN (STA, DG'S Office)



.PERIOD BEFORE MAY,2023

Before, Pharmacist Bibinu said he was the only person as Technical Assistant under the past DG.

PERIOD MAY 2023 - APRIL 2024

Now three (3) Technical Assistants work with Prof. Emeje as DG.

STA1

STA2

PA

Work load in the DG'S Office has greatly increased because of the enormity of the tasks. About five hundred percent (500%) increase of schedules for DG'S Office.

Better efficiency and new timelines to assignments; and people are more alive to work.

Work rate increases and result/achievements is like five hundred (500) times what the Agency achieved in terms of exposure and achievements.

7.19. Interview with the Director of Finance and Accounts, Mr. Omotayo Nelson Ojo



.PERIOD BEFORE MAY,2023

I am a graduate of Accounting from the Olabisi Onabanjo University, Ago-Iwoye, Ogun State and also a Certified Accountant member of the Association of National Accountants of Nigeria (ANAN). I have been in the employment of the Agency since year 2000, where I have worked in various sections/units of the department, such as the Final Accounts, Checking and Expenditure Units. I was appointed Head, Accounts department in year 2015 by Dr. Etatuvie on his assumption of duty as the Director General/Chief Executive of the Agency. Prior to my appointment as Head of Accounts Department, Mr. Okoro was the Head of the Department, during the Administration of TF Okujagu's as DG/CE of the Agency. I worked harmoniously with Dr. Etatuvie during his Eight years two term tenure. During this period, a lot of developments and achievements were experienced by the Agency with the strong supports of the Accounts Department under my leadership of the Department, such as the construction and completion of the General Laboratory Complex (GLC), Research and Development of lots of Herbal Products, such as REALMAN, KOVIRON, AMARUS, OCIMUM etc. Also, establishment of Zonal Offices, Zonal Experimental Herbal Farms and construction of Mini Farm Houses commenced across the six (6) Geo-political Zones of the country under the leadership of Dr. Etatuvie with the supports of the Accounts Dept. The accounting processes of the Agency has been seamless and carried out largely in compliance with laws and regulations under my headship of the dept. The Department under my headship has been hosting various Audit Teams from the office of the Auditor General for the

PERIOD MAY 2023 - APRIL 2024

On assumption of duty of Prof. Martins Emeje as the Director General/Chief Executive of the Agency, he retained me as the Head of Accounts Department, despite that he has the authority to appoint another Head of his choice. And so far, Prof. Emeje has been a source of motivation and encouragement in improvements in the Accounts activities and especially support to me in the interactions and response to over-sighting bodies. I can recall an encounter within barely one week of assumption of duty of Prof. Emeje when an invitation letter was received from ICPC for one of their over sight exercises, which on our visit to the ICPC office in honour of the invitation, Prof. Emeje was able to speak to all issues raised, despite just resuming duty and not yet settled down and yet to get himself acquainted with the workings of the Agency, but drawing from his years of experience as a seasoned Researcher and Administrator from his over 20 years work experience at a sister Research Institute - NIPRD. This experience I can say, has left an indelible mark in my memory about the dedication and capacity of Prof. Emeje as a supportive leader. Prof. Emeje is also a listening leader who do not joke with welfare requests of staff, with the example of the situation of mosquito infestation of the Accounts Department office environment, which when it was brought to the notice of Prof. Emeje, he approved and released the funds for the fumigation. Prof. Emeje also on assumption of duty, took charge of the timely and proper preparation of the Agency's Annual Audited Financial

Federation, the office of the Accountant General of the Federation, Federal Ministry of Innovation, Science and Technology (FMIST), the Budget Office of the Federation, the National Assembly and other related over-sighting establishments. Report of the Agency. He has since ensured that there is a well audited financial Statements, this has made the year 2023 Audited Report to be done and submitted timely. The process of preparation of year 2024 Audited Financial Statement is presently at the point of completion.

Prof. Emeje has been able to make the account staff go for budget trainings, ICPC trainings. Some staff were supported in the pursuit of their professional examinations too. I thank the DG/CE Prof. Emeje for counting two of my Departmental staff suitable and trust worthy enough to be appointed into the Agency's ACTU (Miss. Adebisi - ACTU Chairman & Mr. Animashaun- Member). It is also worthy to note the huge capacity of Prof. Emeje in engaging in massive media advocacies that cut across a large number of Print, Electronic and online media establishments at absolutely no cost to the Agency, as the Accounts Department with a very paltry and limited budgetary allocation for the Advertisements Subhead has not spent any funds for such purpose. He has been able to free up funds for advertisement to be deployed for research activities. Under the leadership of Prof. Emeje, he has ensured that research projects are not contracted out, but used to engage research staff of the Agency to carry out. Also, his relentless advocacies and interactions with stakeholders, especially the National Assembly, has led to increased funding for the Agency. Also, the advocacies of Prof. Emeje has led to a Special Resolution for better recognition and funding and supports for the Agency. Likewise Grants receipts which hitherto was not received by the Agency prior to the assumption of Prof. Emeje, has been won by the Agency.

7.20. Interview with the Registrar, Nigeria College of Natural Medicine Technology (NICONMTECH), Mr. Mike Effa



PERIOD BEFORE MAY, 2023

I was transferred to the Nigeria College of Natural Medicine Technology NICONMTECH in 2022. In July 2022, an accreditation team from the Federal ministry of Education/NBTE paid a visit to assess the facilities of the college.

This visit led to the licensing of the College to commence operations.

PERIOD MAY 2023 - APRIL 2024

However, nothing happened till May 2023, when Prof. Martins Emeje assumed duties as DG/CE. In July 2023, the College welcomed it's first batch of students into both departments of the College. Since then the Nigeria College of Natural Medicine Technology NICONMTECH has been striving to ensure interested Nigerians are trained and informed about Nigeria's traditional medicine.

7.21. Interview with the Head of Bioresources Department, Mr. Anoruo Dibia C. A.



PERIOD BEFORE MAY, 2023

- 1. Mr. Anoruo-Dibia joined the Nigeria Natural Medicinal Development Agency (NNMDA) in 2007 during the tenure of TF Okujagu as Director-General/Chief Executive. He was employed alongside Mr. Barnabas Oche and Mrs. Ifeoma Chidebe.
- They undertook a comprehensive overhaul of the Agency's herbarium as it stands today.
- The Agency's zonal medicinal farms were supervised by the Department, which included both Botanists and Agriculturists. This assisted in monitoring activities being carried out in the Agency's zonal farms.
- 4. They conducted Ethno-botanical and

PERIOD MAY 2023 - APRIL 2024

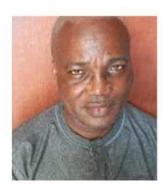
- 1. The Department has begun to identify, document and Preservation of Voucher specimens for Medicinal Plants received from Researchers and was able to issue the Agency's First set of Medicinal Plants of Nigeria Herbarium (MPNH) Voucher Specimen certificates.
- 2. We have begun the implementation of the Standard Operating Procedure (SOP) of the MPNH according to international standards
- 3. We have cultivated and harvested Medicinal, Aromatic and Pesticidal Plants (MAPPs) raw materials, in the Agency's experimental farm in the compound.
- 4. In line with the DG's digitalization of our database, we intend to propose to the ICT Department to create a unique software for the MPNH so as to advance it to a National and International Resource center.
- 5. We have had extensive training on manuscript, proposal and journal writing and publication.
- 6. We have been able to carry out laboratory analysis of MAPPs in the Agency's lab.
- 7. We now participate in herbal drug formulations and production from raw materials to finished

Ethno-veterinary surveys across the six products. geopolitical zones of the country, resulting in the creation of both analogue and digital databases for the herbarium.

- The team collated, documented, and published 12 volumes of "Medicinal Plants of Nigeria." Book series.
- in the herbarium
- They implemented awareness and sensitization programs, where data on traditional medicine practitioners in the visited communities were collected with the Traditional Medicine Practitioners in Practitioners Nigeria.

- 8. We have been unable to carryout routine Ethnobotanical and veterinary surveys which is expected to promote our Agency's core mandate of collating, collecting, documenting and preserving MAPPs by increasing our different databases (Analogue, Digital and Print database) which reaffirms the Agency as a 6. They had about 2,700 Voucher specimens resource center for Traditional Medicine Knowledge and Practice.
- 9. We need to carry out awareness and sensitization programs for TMPs to initiate training and also document the TMPs as we continue to increase the database of TMPs in the country, before we can publish intent to publish a National Directory of the National Directory of Traditional Medicine
 - 10. The Agency has started sponsoring the Staff of the Department to further their education and also boost human capacity and career projection.
 - 11. Under the tutelage of the DG, research staff were trained on Grant proposal writing and submission, and 2 Staff of BDCD were privileged to win international grant awards.

7.22. Interview with the Head of Human Resource, Mr. Adedoyin



PERIOD BEFORE MAY, 2023

Late Professor Akinadewo the founding DG/CE of NNMDA. Ex Honorable Minster of State for Science and Technology, Mrs. Pauline Tallen amongst others travelled to China on tour of herbal/traditional medicine institutions in China some decades ago. The aim of that trip was to seek area of collaboration between Nigeria and China as regards the development of herbal/traditional medicine practices in Nigeria. As a response to the visit, the Chinese Minister ought to took away sample of our NEEM plans

PERIOD MAY 2023 - APRIL 2024

There is now a Top Management Committee (TMC) instead of Senior Management Committee (SMC)

Now we run a system that is Committee based in line with University mode. Now Heads of Department are elected in line with a Tenure of Office. Now staff are been transported to office by refurbished staff buses which had been abandoned for years. Two international students (Dr. Oladele Roko; and Mr. Gilbert) for the first term in this Agency pursued their Post Doctorate degree programs under the supervision of the DG/CE Professor Matins Emeje. Present Administration has continued the exposure of the Agency's staff to external training. The Internal training has been restructured to be more focused and more relevant to the mandate, functions and activities of NNMDA.

which later was found to be able to treat malaria.

Ex DG/CE TF Okujagu came from the banking sector though with a science background. He got the highest Overhead as DG. The Library was restructured. Attendance of some training were done outside the country. He bought the Coaster staff buses, Toyota Hilux. He encouraged research development but they did not come up with any tangible product. TF Okujagu was not too friendly as a DG. Largest number of queries got by staff.

During Dr. Etatuvie era as DG, he ran a conventional public service system. There was a Senior Management Committee (SMC) who deliberated over administrative issues. Staff training had a boost with attendance at center for Management and Development (CND). Some staff had higher degree program e.g. Oche, Chidebe etc. several staff attended internal workshops.

Media Exposure/Publicity

In the past Administrations media exposure/publicity of the Agency was very minimal and irregular. Since Professor Martins Emeje's era the Agency has had and is still having very positive media exposure/publicity. The media organization are looking for news both local and international.

Staff Promotion

This was done on site during the tenures of past DGs since the inception of Professor Martins Emeje's era promotion has been done virtually based on approval of the Honorable Minster of Innovation, Science and Technology. This saved staff unnecessary expenses of having to travel from their different locations to Lagos for the promotion exercise; shielded them from security issues travelling by road etc. even staff overseas participated in the exams virtually though they were outside the country.

Enhanced Efficiency/Productivity of Staff

Unlike in the past where only few staff participated in the work of the office, now most staff participate in the work of the office. Improved staff attendance because of the mandatory weekly seminar that staff have to attend. There is enhanced research and development activities which has led to creation of several new product. Increase in functional MOUs/MOAs signed by the Agency with the Academia, Private sector, Public sector and industry.

Revival of the NNMDA's College

Ex DG/CE Dr. Etatuvie was responsible for obtaining accreditation of National Board for Technical Education (NBTE) and approval for the college however the College was shut down for quite a while it was the effort of the current DG Prof. Matins Emeje that the College was revived. At the end of this Academic Session we will have the first set of Graduants.

Creation of Degree Programme for NNMDA's College

Professor Emeje's administration has constituted a committee made up of reputable academia well versed in herbal/traditional medicine practice to draw up a degree program for NNMDA's College.

7.23. Interview with the Rector, Nigeria College of Natural Medicine Technology (NICONMTECH) Dr. Akinlolu Fawehinmi



.PERIOD BEFORE MAY,2023

I was appointed Rector of the Nigeria College of Natural Medicine Technology (NICONMTECH) on March 8 2023. Prior to Professor Emeje's Administration, the college was totally inactive though approval to commence academic activities was granted in August 2022 by NBTE. The College in collaboration with Green Centre for Alternative Medicine Practitioners held short trainings for Traditional birth attendants.

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The Director General encouraged and gave the impetus to start the college in 2023. By September 2023 college started off with 12 students. Fliers for 2023/2024 and 2024/2025 session were distributed. College now has 27 students in all.

7.24. Interview with the Director of Studies, Nigeria College of Natural Medicine Technology (NICONMTECH) Mrs. Julie Akande



.PERIOD BEFORE MAY,2023

I joined NNMDA as Research Officer in the Year 2003 during TF Okujagu's era.

In the past prior 2003, the Nigeria College of Natural Medicine, owned by the Agency handles Traditional Medicine Practitioners (TMPs) training. When the college was suspended in 2003, the Agency started zonal/state trainings. Then, the Agency collaborated with the National Association of Nigeria. Traditional Medicine Practitioners (NANTMP) at National and State levels to train their members and other stakeholders. This was during TF Okujagu era as Director General/ Chief Executive Officer (DG/CEO). It continued during Dr. Etatuvie S.O. as DG/CEO.

Then, trainings was being handled by Education and Training

PERIOD MAY 2023 - APRIL 2024

The college commenced academic activities under Prof. Emeje as DG/CEO. Nigeria Board for Technical Education (NBTE) gave approval for 60 students with more for Business Informatics against Natural Medicine.

The College also started online training of TMPs. In 2024, the College conducted four online certificates short trainings; e.g. the training of Optimal Academy Students.

Department. The department invites Traditional Medicine Practitioners (TMPs) to a desirable location in a state capital to train them. The TMPs are usually trained in the following areas: Sanitation & Hygiene, Nutrition, Anatomy in Physiology, Ethics, Good Cultivation and Harvesting Practices for Herbal Medicine raw materials, Good Herbal Medicine Manufacturing Practices, Hygiene, Herbal Medicine Registration and Regulations, Good Herbal Medicine Packaging Techniques, etc.

The training started as zonal training (North East, North West, North Central, South West, South-South and South-East). After all the zones have been covered, then State by State training commenced. A number of States were covered. TMPs usually converge at a convenient venue for the training which normally lasts between two to three days. The Agency brings resource persons, provides refreshments, and stipend to assist the TMPs in their transportation cost. As these trainings were going on, Agency was working to restore the college. Through the effort of Dr. Etatuvie and other staff, a national curriculum was approved, and the approval for the Agency to start the Nigeria College of Natural Medicine Technology as a Diploma awarding innovation institution.

7.25. Interview with Ms Munirat Abdullahi: Bio Resources Departmenty



.PERIOD BEFORE MAY, 2023

This department concentrated on Ethanosurvey of medicinal plants all over the country. This was the heart of the function of the Bio-resources Department then. Hence books were published on the surveys carried out. dants.

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Professor Emeje believed in the construction of functional Zonal Farms. He plans to start the cultivation of medicinal plants at the zonal farms. These medicinal plants are peculiar to the place where the Zonal Farms are located. Generally, NNMDA staff do not even know the value of the potentials these farms hold. It is intended that by the rainy seasons the cultivation of the farms will start in earnest. Beans, Zobo are to be cultivated in the Nasarawa farms. Already, Ginger, Turmeric, Andrographis paniculata, Phyllantus amarus, Gongronema latifolia and Lemon grass are now been cultivated at NNMDA's Experimental Farm in Victoria Island, Lagos. All the farms have the same construction model, which is a two bedroom bungalow. In year 2025, there is going to be a farm established for the North Central Geo-political zone at Agalika in Kogi State. Similarly, in the same year 2025, a farm will be established in the North-East Geo-political Zone at Yola, Adamawa State.

7.26. Interview with the Internal Auditor, Mr. Amos Oluwatunmise



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My name is Oluwatunmise Amos Ekundayo (Head, Internal Audit of the Agency and the Bursar of NICONMTECH).

Aside the fact that it is good to be factual. As a chartered accountant, We are trained to show Integrity, Fairness and Objectivity; and as an Auditor, Independence, Diligence and Due care and professional behaviour are very key in our field of work and in the noble profession.

I came to the Agency in October 2011 as Senior Accountant; with TF Okujagu as DG of the Agency and Mr. Eze as head of internal audit from 2011-2015. After spending a reasonable time in the system, I actually did not have a defined direction of what we were doing in the Agency (NNMDA). I couldn't fathom while the Agency was in existence. Looking at the relevant Accounting documents and records, I could not get what we were doing incomparison to the mandate of the Agency. Based on what internal audit should do as an Auditor, my first unpalatable experience on the job always comes to memory each time I remember the then DG. I recall, I had to stand in for my immediate Boss, Mr. Eze who was away from work for some days. A particular voucher was brought to procure a vehicle and discovered that the voucher was deficient of the required evidential documents (naked) and the voucher did not show that the contractor actually procured the vehicle neither was there document in connection with advance payment guarantee (APG) as required by the law at the time that would have justified payment of 15% mobilization Fee. I therefore raised some observations with the voucher. Few minutes later, there was a threat of sacking from the DG. The truth is that I did not query the DG as he

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I need to point out the following few out of numerous leadership traits which I have observed in our Director General, Prof. Martins Emeje which he has displayed since his assumption of duty as the Director General of our dear agency.

1. Image projection.

As an Outstanding leader, Prof. Emeje is a man of focus. Tended to Collaboration and Partnership. I recall Senator Ekwunife visited NNMDA at a time and commented on identity of NNMDA that most people didn't know of the Agency's existence unlike now. Media publicity was scarce before in NNMDA. But now it is well projected with a big story. Granting of interviews by DGs as we are currently witnessing never happened in the past.

2. Capacity, Willingness and Availability. As it is known in economics parlance, While Capacity and Willingness makes a demand, absence of either of the two is a mere want and not demand. And as a matter of fact, capacity, willingness and availability of a leader determines the growth and development of any organization. Professor Emeje has the capacity and he is willing and available to do the work

Before, there was limited capacity in our Laboratories but now Professor Emeje goes very often now to the Laboratories. Various Laboratory equipment bought during the previous administration were lying fallow before; now they are being actively utilized on daily basis courtesy of the knowledge and pragmatic operation and mentorship of Professor Martins Emeje. The increased and improved capacity of the PDQA staff led to the production of many research products in the first year of Professor Emeje's Administration into the office.

3. Impacting on the Researchers

It is one thing to know something, another thing is to allow that thing to be shared. Many of the researchers can now beat their chest to have gained tremendous experience from Professor Emeje's mentor-ship and tutorship through his practical leadership.

4. Bold and Courageous leadership:

must have thought but was protecting the interest of my boss (the DG) and that of the agency, more so that the DG was on a foreign trip when the voucher was presented for payment. Instead of the then DG, TF Okujagu thanking me for not passing the voucher, I got a threat as a reward.

Mr. F. Iwunze took over as the head of Internal audit from Mr. Eze in 2015 almost at the time Dr. S. O Etatuvie also took over from Mr. T.F Okujagu as the DG. Mr. Iwunze was posted from the office of the Accountant General of the Federation. Mr. Iwunze suddenly fell in love with me, according to him, this was based on my availability and the professionalism that I exhibited on the job and so had a better working relationship with him so much that he promised initiating the process required for issuance of official auditor's stamp with the then DG, Dr. Sam Etatuvie before his retirement which was barely four years ahead.

In my objective view, Dr. Etatuvie was relatively better in obeying the laws and working in the Agency when compared with his predecessor based on five years I worked under the latter. Describing the development that led to emergence of Prof Emeje as the DG, what comes to mind is the event where John the Baptist was asked if he was the one to come and he replied 'I am not the one to come, there is someone coming whose sandals I'm not worthy to untie". The reason for the above quoted biblical assertion is not to equate human being to the "Messiah" that has no substitute but to underscore the fact that Prof. Emeje is actually the suitable choice for the job for effective actualization of the agency's mandate because by all standards, he has what it takes to do justice to the mandate. I recall that the same assurance was given by Dr. Etatuvie at our last management meeting which heralded his exit from NNMDA. This impression was created when Dr. Etatuvie got some privileged hints on who was to take over the leadership of the agency from him and he told us of his relief because he was also on the lookout for someone that has passion and capacity for the job.

In reference to the Biblical injunction, God told Moses to be courageous as a leader to the Israelites. While taking over from Moses at his death, God also told Joshua to be courageous saying 'as I was with Moses I will be with you. The moral here is that Courage and Boldness are essential traits to be possessed by a good leader. This trait is obviously present in Professor Martins Emeje. I recall whenever various teams from Board of Survey, OAGF, Auditor General and FMIS&T. came to check our records and books those days, the Agency would be shivering unnecessarily and this usually aroused unnecessary suspicion in the team and had in most cases attracted unwarranted queries. Since the assumption of Professor Emeje as DG/CE, he has taken full responsibility and he has displayed uncommon courage and boldness in attending to whatever issues regarding documentation coming from the various teams. As a matter of fact, Professor Martins Emeje usually use the coming of the various teams as listed earlier as an avenue to market the Agency's Mandates and Functions, and for me as an auditor, this is a big achievement because this get people more informed and also appreciate our work as an agency. To my best knowledge, no team has come here and gave Professor Emeje any problem.

5. Staff Human capacity development

Staff human capacity development under Prof Martins Emeje is superb.

It is the spirit of different presentation (s) at the weekly seminar more about the Agency is known both by the staff and some important stakeholders and partners whose visitation to the agency fall on the day of our weekly seminar.

In the spirit of Staff human capacity Building, our researchers have developed skills with many of them having the opportunity to travel abroad for training and presentation of scientific papers.

6. Passion

Prof. Emeje is widely known as a man of passion who does not get deterred by any barrier and wants to overcome any barrier in the midst of doing his work. This, in my view, is a driving force responsible for the great achievement under this current administration of Professor

Martins Emeje.

7. Staff Discipline

The apathy to work which the DG observed on assumption was because of the way people were brought up in the system at the beginning. Professor Martins Emeje has done a great deal in correcting the attitude of too much indiscipline. This he was able to achieve by leading by example because you can only give what you have.

And for me, it is a welcome development as it has really helped many of us in being productive and proactive.

AS THE NICONMTECH BURSAR

On 27th March 2024, I was appointed by the Director General as Bursar of the college (NICONMTECH) while maintaining my position as the Head of Internal Audit. As a man who loves detailed records of Accountability, The Director General passionately charged me to ensure that no stone is left unturned in the direction of proper documentation and effective financial record keeping and having in place all suitable Accounting books and records.

With the efforts and support of Professor Martins Emeje, it is on record that every essential Financial Books, Accounts and Records are not only in place but also up-till-date. Since emergence of Professor Martins Emeje as the Director General of our dear Agency, the College has experienced a dramatic change in a new dimension of expansion with Proper Documentation of the college activities and financial records of the college being up-till date.

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NNMDA... Promoting Nigeria Traditional Medicine Through Research

- @ @nnmda_ng
- info@nnmda.gov.ng
- (f) Nigeria Natural Medicine Development Agency
- (in NNMDA Nigeria

- X @nnmdanigeria
- math https://nnmda.gov.ng
- LABORATORY HEADQUARTERS 9 KOFO ABAYOMI STREET, VICTORIA ISLAND, LAGOS 09051680856
- ADMINISTRATIVE HEADQUARTERS 1ST FLOOR, PHASE 1 BY SHESTCO FEDERAL SECRETARIAT, ABUJA 4TH 08105574377 08105574377



NIGERIA NATURAL MEDICINE DEVELOPMENT AGENCY (FEDERAL MINISTRY OF INNOVATION, SCIENCE & TECHNOLOGY) 9. KOTO Albayomi Street, Victoria Island, Lagos.

