



REPORT OF THE 11TH INTERNATIONAL CONFERENCE AND GENERAL ASSEMBLY OF THE NIGERIAN YOUNG ACADEMY

Conference Theme: **“Linking Academic Research, Industry and Policy Engagement amidst
COVID-19 Pandemic”**

Arrival- 23rd August 2021

CONFERENCE DAY 1- 24TH AUGUST 2021

Venue: Physics Lecture Theatre, Physics Complex, near Faculty of Science, University of Abuja, Main Campus, Abuja, Nigeria.

Number of Participants: 100 +

Day 1 of the conference featured the **Opening Ceremony** which took place in the morning, and the **Technical Session 1**, which took place in the afternoon.

1.1 The Opening Ceremony

The opening ceremony featured among other activities welcome remarks from the President of the Nigerian Young Academy, an address by the President of the Nigerian Academy of Science, the lead paper presentation, induction of 18 researchers/academics as members of the NYA and presentation of five different awards of excellence to young researchers.

Remarks of the NYA President: in his welcome remarks, the President of the Nigerian Young Academy (NYA), introduced the vision and mandate of the academy, its strides in the past 11 years and the aspirations of the academy. He also commended and appreciated the Nigerian Academy of Science and other senior academies in the nation for the role they have played in the establishment and continued growth of the NYA. The President went further to speak about the current conference, its focus and goal of stimulating better linkages between research, industry and policy for better response to the COVID-19 pandemic.

Address by the NAS President: The President of the Nigerian Academy of Science (NAS), Professor Ekanem Ikpi Braide, recalled the role the Nigerian Academy of Science played in establishing the Nigerian Young Academy in 2010. She expressed her pleasure in the progress of the Nigerian Young Academy over the years and pledged the continued support of NAS for NYA. The President noted that NAS is playing a strategic role in battling COVID-19 in Nigeria and that it was therefore pleasing to know that the NYA is also playing its role in demonstrating that national problems can be solved by joint action. Furthermore, the NAS President noted that the keynote topic of the conference was in tandem with the Tertiary Education Trust Fund (TETFund) plan to promote research via a foundation. This would involve all stakeholders coming together in addressing national problems. Finally, the president expressed her hopes that the conference would be impactful in addressing issues in the country and in stimulating national growth and progress.



Lead paper presentation: the keynote speaker, Prof. Abubakar Sani Sambo, OON, NPOM, FAS, expressed his profound gratitude and appreciation for the invitation as keynote speaker of the 11th International Conference of the NYA. He also noted that his keynote speech would be a reflection of his thought and experience. The speaker noted that Education, Science, and Technology are now the nerve center of national development and thus it would be important to build a human capital base that would transform the nation via teaching and research. Researchers were challenged to view themselves as servants of local, national, and global communities and that they must be dedicated to research and collaboration. Furthermore, the speaker noted the need for strategic alignment between universities, research institutes, industry and policymakers to conduct research and publish whilst remaining independent.

Furthermore, the speaker noted that Nigeria is not seen as a leading nation in Africa and the world in terms of research and technological breakthroughs and thus there is a need for a change and collaboration between industries, research institutes, and government in line with the goals of the upcoming foundation of the TETFund. The speaker further noted that industries in Nigeria complain about doing business with Nigerian institutions and hence the need to embrace the idea of working for the greater good of the nation by all stakeholders. Indeed, the jobs in the future rely on how well institutional research is linked with industries leading to commercialization.

Additionally, the key role of interdisciplinary research especially on the role of art, humanities, and social sciences was also emphasized as this would help implement solutions in a human context. There was also emphasis on the need to bridge the imbalance in academics to make up for developments needs for research and equip young researchers to provide solutions for local problems. Finally, the speaker encouraged NYA to leverage available grants due to COVID-19, from industries and other donor agencies.

Induction of New Members: 18 persons were successfully selected and inducted as NYA members out of a total of over 100 applications received. The members were administered the oath and inducted into the NYA by the President of the Nigerian Academy of Science (NAS), Professor Ekanem Ikpi Braide.

Recognition of Exiting Members: a total of five (5) members exited the NYA after fulfilling the five-year period as members and they were conferred with the fellowship award of the NYA (*FNYA*) by the President of NAS.

Presentation of Award Prizes: a total of five (5) researchers were awarded with various prizes as shown in the table below:

S/N	Award	Awardee
1	Prof. Friday Okonofua National Young Researchers' Prize in Health Sciences	Dr Oluwafemi Ezekiel Kale
2	Prof. Kayode Adebawale National Young Researchers' Prize in Chemical Sciences	Dr Collins U. Ibeji



3	Prof. Kayode Adebawale National Young Researchers's Prize for Women in Chemical Sciences	Dr Cynthia Nkolika Ibeto
4	Prof. Olurotimi Taiwo Prize in Linguistics	Dr Omotayo Ibukun Olalere
5	Prof. Hilary Inyang Prize in Geoenvironmental Sciences	Dr Emmanuel Chukuma

Vote of Thanks: the chairman of the Central Organizing Committee (COC), Dr Muhammad Auwal Ibrahim gave the vote of thanks. The immense contribution and support of the Nigerian Academy of Science and the COVID-19 Africa Rapid Grant Fund administered via the South African National Research Foundation was acknowledged. The support from the University of Abuja was also acknowledged. Finally, the Chairman appreciated the NYA Executive Council, the Central Organizing Committee members, the new NYA members and the Awardees.

1.2 Technical Session 1

This session was moderated by Dr. Emmanuel Awosanya, and it featured six oral presentations as shown in the table following:

S/N	Title	Name of Paper Presenter	Presentation Highlights
1.	OP-01: Reducing the Impact of Pandemic-Induced Economic Inactivity Rate Amongst Women: The Policy Imperatives	Rahila Christopher Wakawa, PhD	▪ The research sought to investigate the effect of the COVID-19 pandemic on women especially in terms of employment and other gender-based social vices. ▪ Based on the outcome of the questionnaires administered on women, it was discovered that 90% approved entrepreneurial development, short term financing, farmermoni, collaboration between the researchers and the policymakers as ways the gaps of the pandemic effect could be bridged.
2.	OP-02: Detection of SARS-CoV-2 RNA in Wastewater Samples from Anthropic Sites in Lagos Metropolis, Nigeria: Implications for Community Surveillance and Management	Iseoluwa Moses Akinwumi	▪ There is a need to develop an early warning system for new cases of COVID-19 in developing countries like Nigeria with poor and limited access to health care. ▪ A monitoring regime was implemented in targeted areas with a focus on monitoring populations at high risk of COVID-19 by

			detecting and quantifying SARS-COV-2 RNA from both treated and untreated wastewater. Due to the observed trends of positive samples for SARS-CoV-2 during the sampling period, the employment of surveillance of SARS-COV-2 in wastewater samples was suggested as an early warning signal to track the environmental dissemination and community spread of COVID-19 in order to inform appropriate mitigation strategies.
3	OP-04: Energy-related COVID-19 Studies – A Bibliometric Analysis with Literature Review	Kazeem Abubakar, PhD	- The study was a review on the rate of power-consumption during the COVID-19 pandemic due to high energy demand because of the lock down, which could have increased the amount of CO₂. - It was recommended that there is need for the government to create policy, awareness and plan on the conservation of energy during any subsequent form of crises.
4	OP-05: Scavenging Potential Lead in <i>Annona muricata</i> (Sour Sap) as Inhibitors of SARS-CoV-2 Main Protease (M^{pro}) and Spike Glycoprotein using Computer-Aided Drug-Design Approach	Ibrahim Adedotun Olaide	- The presentation was on the use of computational predictive methods to identify a potential biologically active compound from <i>Annona muricata</i> (Sour Sop) as inhibitors of Mpro protein in the COVID-19 virus. - The experiment was carried out using already identified 132 compounds from this plant. - It was found that only 2 compounds Roseoside and Coreximine were active against the protein target receptor sites 6LU7 and 6LZJ meaning they could serve as potential inhibitors of COVID-19 virus, however, animal studies was recommended.
5	OP-06: <i>In Silico</i> Simulation of Potential SARS COV-2 Inhibitors from the Immunomodulatory and anti-Inflammatory	Mmesoma Ernest-Eze Ebube	The aim of the study was to determine the binding affinities of ligands from <i>Alchornea cordifolia</i> and <i>Alchornea floribunda</i> against SARS-COV-2 receptors; 5mu8, 6m2n, 5c8t and 3tzm using <i>in silico</i> simulation.

	constituents of <i>Alchornea Cordifolia</i> and <i>Alchornea Floribunda</i>		- Four of the very active ligands with their binding affinities as -11.475 kcal/mol, -11.20 kcal/mol, -7.8 kcal/mol and -8.8 kcal/mol for 5c8t, 3tzm, 5mu8 and 6m2n respectively are promising front-runners when compared to Remdesivir, Ribavirin and Chloroquine that had a range of binding affinities from -7.2 to -4.9 kcal/mol. - A total of 17 front-runners from the phytoconstituents of <i>Alchornea cordifolia</i> and <i>Alchornea floribunda</i> were discovered to be potential inhibitors of SARS-COV-2, thus validating the proposed use of formulations from the plants in the management of COVID-19.
6.	OP-12: Consequences of Tropical Geometry on Star-like Classical full Tw_n^* Transformation Semigroups	Sulaiman Akinwunmi Awwal	- The presenter discussed the use of graph theory in geometric structure of a starlike transformation semigroup. - The research focus was to establish some tropical properties that reflects the graph theory of the star-like full Tw_n^* transformation semigroup is better than the former model used.

CONFERENCE DAY 2 - 25TH AUGUST

Venue: **The Consort Luxury Suites, Abuja, Nigeria**

Number of participants: **80+**

The second day of the conference featured a Panel Session, the Technical Session 2, the Poster Exhibition, and the General Assembly of the Nigerian Young Academy.

2.1 The Panel Session

Title: Actionable Roadmaps and Linkages for Improved Response to COVID-19 Pandemic in Africa

The panel session was moderated by Dr. Aliyu Muhammad. The panelists were:

- Dr. Magatte Ndiaye (President, Senegalese Young Academy)
- Prof. Matthew Kolawole (University of Ilorin)
- Mr. Abdullahi Tsanni, (A freelance journalist and Fellow, African Science Literacy Network)



iv. Dr. Anjorin A. AbdulAzeez (2021 NYA Inductee)

A Speech by Dr. Anjorin A. AbdulAzeez focused on the need for a responsible government to embrace and support virus surveillance as the host animals like bats, pigs, monkeys, etc. are in abundance in the villages. He made the following recommendations:

- Government must support surveillance within the countries.
- With surveillance done, the scientists should embark on gene sequencing
- Universities should be actively involved in COVID-19 assignment testing, etc.
- Experts from universities such as virologists should be given the chance to play active roles in the national response.
- Local production of vaccines like in Europe and countries like India.

Various participants (in-person and virtual) addressed the topic from various angles. Following is a summary of the highlights of some of the discussions/recommendations from the panel session:

- The Nigerian government is combating COVID-19 but needs to do more in areas of virus surveillance.
- A large population of people doubt that there is COVID-19; hence the need to get rid of misconceptions as a fundamental approach to reach the people first before the virus surveillance.
- The need for enhanced living space by way of good hygienic practices.
- The need for enhanced livelihood of Nigerians and robust survival strategy.
- The need to address the issue of undue fluctuation of case statistics to restore public confidence in the system.
- COVID-19 magnified the people's mistrust for the government. It was stated that people believe the government have no genuine interest in the COVID-19 cases but only pretend to show interest in order to take advantage of the situation in syphoning the public funds.
- It was also stressed that the people have relied on herbs for decades
- The need to try herbs as the remedy to respiratory issues associated with COVID-19.
- The need for adequate storage facilities to preserve the vaccine integrity.
- The use of village heads in enlightening the rural populace.
- The use of appropriate education strategy and the dissemination of COVID-related information using simpler and more effective approaches such as town criers etc.
- Various testing centres should be linked to the national collation centres and the statistics should be collated on daily basis and announced to the populace.
- The need for synergy between local, state, and federal government. It was acknowledged that the Federal government of Nigeria has done much by providing funding. The states were called upon to utilize the available resources to enhance awareness and increase testing capability.
- There is need for monitoring and evaluation of COVID-19 responses on the real-time.
- Nigerian Young Academy (NYA) should involve actively in community outreach/advocacy to enhance information delivery. It was recommended that NYA lead in advocacy.



- That journalists should be trained on basic science to be in a position to report on the pandemic. The robust collaboration between the governments, universities, and journalist on scientific reporting was encouraged.
- That local language be used in communications about the COVID-19 pandemic.
- The need to guide against the upsurge of other diseases.
- The need for intensified training in science dissemination.
- The integration of COVID-19 and emerging disease in the curricula of academic institutions.

2.2 Technical Session 2

Four papers were presented in this session as shown in the table following:

S/N	Title	Presenter	Presentation Highlights
1.	OP-07: Lessons Learnt from the deployment of an open-access digital platform to promote Evidence-Informed Decision Making in Environmental Management in Nigeria	Temitope Sogbanmu, PhD	▪ The use of digital platforms for science communication should be encouraged ▪ Digital platforms should also be used to promote evidence informed decision making ▪ The Evidence Use in Environmental Policymaking in Nigeria (EUEPiN) website and the Environmental Evidence Portal for Nigeria (EEPoN) are two of such platforms that have been created by the research team to support science communication and evidence informed decision making in Nigeria.
2.	OP-08: Development of an educational pamphlet to enhance family collaboration during pregnancy in Nigeria: A Critical Look at Post COVID-19 Era	Gloria Lalai Musa	▪ Nigeria contributes 14% to global maternal death ▪ Pregnant women need support especially physical, spiritual, and financial support. ▪ From the findings of the research, an educational pamphlet was developed to educate the community on the needs and care for pregnant women
3.	OP-09: Interdisciplinary Collaborative Approach To Patient Care In Health	Dr. Joseph Dlama Zira	▪ Healthcare professionals in Nigeria do not embrace collaboration due to claims of superiority and dominance

	Institutions: A Post COVID-19 Approach		- There is need for Multi-, Trans-, and Interdisciplinary research among healthcare workers - Teamwork and collaboration should be included in the curricula for medical school students
4.	OP-11: COVID-19, Housing, Urbanism And The Built Environment In Nigeria: A Review	Dr. Olumuyiwa Bayode Adegun	- The Covid-19 pandemic has created emerging issues in the urban and housing environment including but not limited to - Space re-appropriation - Introduction of new features - Housing affordability - Service inadequacies in slums - Adequate service should be provided in slums and informal areas - Parks and green spaces should be incorporated in cities to improve physical health

After the Technical Session 2, there was a session for exhibition of posters, and then the General Assembly of the Nigerian Young Academy. Prizes were also awarded to the best oral and poster presentations as shown below:

Best Oral Presentation	Mmesoma Ebube Ernest-Eze	OP-06: <i>In Silico</i> Simulation of Potential SARS COV-2 Inhibitors from the Immunomodulatory and anti-Inflammatory constituents of <i>Alchornea Cordifolia</i> and <i>Alchornea Floribunda</i> .
2 nd Best Oral Presentation	Iseoluwa Moses Akinwumi	OP-02: Detection of SARS-CoV-2 RNA in Wastewater Samples from Anthropoc Sites in Lagos Metropolis, Nigeria: Implications for Community Surveillance and Management.
3 rd Best Oral Presentation	Joseph Dlama Zira	OP-09: Interdisciplinary Collaborative Approach to Patient Care in Health Institutions: A Post Covid-19 Approach.
Best Poster Presentation	Mayen David Inim	PP-19: The Expression Level of Neuraminidase 1 Gene in Some Organs of Type 2 Diabetic Rats.
2 nd Best Poster Presentation	Olusola O. Elekofehinti	PP-07: Molecular Effect of <i>Bridellia ferruginea</i> Extract on Endoplasmic Reticulum Stress Induced by Streptozotocin in Rats.
3 rd Best Poster Presentation	Mohammed Sada Ibrahim	PP-31: Development and Experimental Assessment of Timber Lattice Column made from <i>Alstonia boonei</i> Timber Species.



2.3 Some Outcomes from the General Assembly

- Unveiling and distribution of the publication: “THE NEXT DECADE OF MY SCIENTIFIC CAREER: The Academic Trajectory and Ambition of NYA Members (2010 – 2020), Volume I.”
- Election of New Executive Council members to steer the wheel of NYA for the next two years (2021 – 2023). The new executive council members are shown in the following table:

Office	Name	Affiliation
President	Dr. Mohammed Auwal Ibrahim	Ahmadu Bello University
Vice President	Dr. Temitope Sogbanmu	University of Lagos
General Secretary	Dr. Charles Adetunji	Edo University, Uzairue
Assistant General Secretary	Dr. Peter Okoli	Alex Ekwueme Federal University, Ndufu Alike
Financial Secretary	Dr. Kaisan Muhammad Usman	Ahmadu Bello University, Zaria, Kaduna State
Treasurer	Dr. Oluwaseun Adedokun	Ladoke Akintola University of Technology, Ogbomosho, Oyo State
Publicity Secretary	Dr. Ibrahim Malami	Usmanu Danfodiyo University, Sokoto, Sokoto State
Technical & Logistics Secretary	Dr. Idika K. Idika	University of Nigeria, Nsukka, Enugu State
Ex-Officio I	Dr. Abiodun Egbetokun	National Centre for Technology Management (NACETEM)
Ex-Officio II	Dr. Kazeem Idowu	Lagos State University, Ojo

Departure: 26th August 2021

Media Reports

Below are links to some media reports related to the conference:

- i. <https://sciencenigeria.com/research-creates-opportunities-economic-competitiveness-sambo/>
- ii. <https://www.opinionnigeria.com/nigerian-researchers-students-in-stem-less-than-25-percent-don-by-abdullahi-tsanni/>

Conference Videos

To see the videos of the 11th International Conference of the NYA, check the NYA YouTube Channel: https://www.youtube.com/channel/UCYwoV_vaUHGxyWVRkVTM_tA.

Compiled by:

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Nigerian Young Academy- <https://nigerianyoungecademy.org/>

Conference Pictures



More conference pictures can be found here:

<https://drive.google.com/drive/folders/1zIWJIK8Kj7KaGj8Izfae-YDs0C9qqF-R?usp=sharing>.