



## COVID-19 Africa Rapid Grant Fund Project Abstracts

### Science Advice Strand



**Title:** Dr Aliyu Muhammad

**Institution:** Nigerian Young Academy

**Country:** Nigeria

**Project Title:** MURDER COVID-19 in Africa - Multifaceted Response Development from Research on COVID-19 in Africa

#### **Project Abstract**

The ongoing COVID-19 pandemic has had a tremendous impact on the global economy, with nearly 7.7 million confirmed cases and over 427,000 deaths by mid-June, 2020. In Africa, over 167,000 cases have been reported and around 4,000 of these have died as of June 14. Containing and mitigating the impacts of the COVID-19 pandemic require a comprehensive policy response that incorporates health and economic considerations. Developing such responses will benefit from adopting an evidence-based approach. Given the urgency of the situation, sound evidence needs to be accumulated as quickly as possible, to fill existing knowledge gaps and inform appropriate responses. As the evidence is accumulated, a pathway to research uptake and impact needs to be developed. Against this background, the Nigerian Young Academy (NYA) proposes a multifaceted and sustainable science advisory project to bridge the science-policy gap in Africa especially in relation to COVID-19. The project focuses on gathering and documenting state-of-the-art research evidence and policy messages, and communicating these to the policymaking community and the general public in Africa. In addition, the project will facilitate the emergence of an information sharing network to boost response capabilities to diseases now and in future. The project activities will concentrate on Nigeria, Ghana, Cameroun and Senegal – each of which has a young

academy of scientists - together accounting for 24% of all confirmed cases and 19% of all deaths in Africa as of June 14, 2020.

### **Expected Outputs**

- a. Infographics and policy briefs to be distributed to all relevant stakeholders via print and electronic means.
- b. Videos of all webinars: to be openly available on YouTube and Facebook.
- c. Two (2) technical reports (monographs) that summarise the key scientific and policy lessons as well as action points, one for all webinars and another one for the physical events.
- d. Quarterly NYA Newsletter will feature project activities and bear relevant information.
- e. Articles in high-impact outlets such as The Conversation, GlobalDev, HealthWatch, Scientific African, among others, to serve the purpose of informing and educating the general public.
- f. Online database of scientific equipment to be highlighted in all tangible output.

**Title:** Dr. Pacifique Ndishimye

**Institution:** University of Rwanda

**Country:** Rwanda

**Project Title:** Rapid Optimal Covid19 Responses Through Science Advice of a Multidisciplinary Multilateral Demonstration Network

### **Project Abstract**

Since the beginning of the pandemic, the responses of the scientific and diplomatic communities have been very different. While world leaders have closed borders and adopted unilateral, uncoordinated and even aggressive measures to defend national interests, scientists, on the other hand, have engaged in unprecedented global collaboration to defeat the new coronavirus together. In Africa, despite the many research structures (universities, research centers, research institutes, etc.) working on different development sectors, there is a notable lack of a formal liaison mechanism to facilitate exchanges between scientific communities and advisory institutions and/or those responsible for formulating public policy. In this covid19 pandemic, the diversity and acuteness of the challenges facing African governments require not only a good mastery of the use of scientific evidence and knowledge, but also effective coordination at national, regional and sub-regional levels to develop internal mechanisms for informed decision-making. This is compounded by the fact that many African countries have underfunded their scientific communities to discover evidence-based information for public policy development. Even more aggravating is the fact that each country has its system sometimes very correlated to the system of the former colony. Despite the slow arrival of Covid-19, the 1.2 billion people living in Africa are at risk; this will remain so until an effective vaccine is available. Compared to developed countries such the United States, which has over 30 beds for every 100,000 people, most African countries have less than 1000 effective beds and only a few ventilators available for millions of people. In urban communities, health facilities tend to be understaffed and overcrowded, while in rural areas, poor roads and unreliable transport make it difficult for people to access health care. Thus, this innovative and unifying project in its approach and objectives is designed to analyse the successes and failures of scientific councils and coordination measures of the response against covid19. This project will reflect on the limits of traditional national and community public policy instruments to address global threats, including whenever participating countries need to be able to anticipate measures that include even geopolitical ramifications of the pandemic and its impact on the international system. The project specifically aim to engage and sensitize target groups including Government, Parliamentarians, Civil Societies, Enforcement Agencies, Youths, Women, Children and Vulnerable Groups to develop evidence-based prevention and control policies based on socio-political and socio-cultural realities.

### **Expected Outputs**

- Capacity building, knowledge gap and needs assessment
- Future research and innovation
- Compilation of network recommendations and output
- Local, national, international events
- Restitution of the Final Science Advice Report

**Name:** Professor Jerome Amir Singh

**Institution:** South African Young Academy of Science (SAYAS)

**Country:** South Africa

**Project Title:** Scientific Advisory Group for Emergencies (SAGE): COVID-19 and Future Pandemics

**Project Abstract**

In November 2019, a novel virus, Severe Acute Respiratory Syndrome CoronaVirus 2 (SARS-CoV-2), caused a cluster of pneumonia cases in Wuhan, China. Since then, coronavirus disease-2019 (COVID-19), as the disease has been officially labelled, has spread globally, prompting the World Health Organisation (WHO) to declare COVID-19 a Public Health Emergency of International Concern on 30 January 2020. South Africa recorded its first COVID-19 case on 5 March 2020. Since then, the country has declared a State of Disaster on 15 March 2020, a strict 3 week “lockdown”, effective 26 March 2020, – which was subsequently extended until 30 April 2020 – and a 5-level “risk adjusted strategy”, effective 1 May 2020. South Africa currently shoulders Africa’s highest burden of COVID-19, but is also leading the continent’s response to the pandemic.

The issues facing governments because of the unfolding COVID-19 pandemic are increasingly complex and require time-sensitive decisions that have profound impacts on societies and economies. The COVID-19 pandemic has led to varied leadership responses globally -- from well-articulated and timely directives driven by scientific advice, to politically oriented responses devoid of any scientific basis. In a time where our collective scientific knowledge increases daily, and misinformation spreads rampantly, the need for proactive and accurate science advice to all levels of government is crucial. Expertise and competence lie at the heart of the interpretation and translation of scientific findings. This important role is best played by inter-disciplinary Academies of Sciences, which endeavour to promote, apply and disseminate scientific thinking in the service of society. This is done through their members as a collective resource for evidence-based solutions to societal problems. When faced with an overwhelming amount of information and complexity, the role of academies in distilling complexity into a finite number of evidence-based recommendations, is critical. In a recent World Economic Forum article on the possibilities of ‘science diplomacy’ helping to contain COVID-19, Soler and Oni note that scientists have played a crucial advisory role in the COVID-19 crisis, informing governments, anticipating risks and ensuring research findings guide policy. But many countries also lack such advisory systems, making it harder for them to form evidence-based decisions. It is, therefore, important to work on collaborative efforts to identify such gaps, engender best practise and realise human capacitation through regional economic mechanisms, such as the Southern African Development Community (SADC), the East African Community (EAC), and continental bodies such as the Africa Union (AU). Public trust is also an important element in the dispensing of science advice. The abundance of social media platforms with immediacy and the ability to transcend time and geographical spaces means that there has never been a greater need for reliable and trusted sources of information. Our increasing inter-connectivity offers opportunities for scientific and lay communities to learn from each other and to adopt best practices. Although the impact of social media is lower on the African continent compared to developed regions due to lower levels of internet penetration and digital connectivity gaps, digital platforms can have a significant impact on public trust, as well as decision-making by governmental agencies. It is, therefore, vital to counteract misinformation through science advice that is responsive to damaging messages that thrive on social media platforms. This will require science advisory structures to not simply sift through information to dispel falsehoods, but to proactively promote and amplify verified and accurate information from credible sources.

## **Expected Outputs**

- Produce Science Advice pieces, Rapid Scoping Reports, Technical Toolkits & Position Papers
- Science-policy Advice pieces
- Rapid Scoping Reports
- Technical Toolkits
- Position Papers
- Scientific peer reviewed articles

**Title:** Professor Peter Mugenyi

**Institution:** Uganda National Academy of Sciences

**Country:** Uganda

**Project Title:** A Pandemic Playbook: Guiding Decision-Making under Uncertainty

**Project Abstract**

The COVID-19 crisis has exposed how much the global scientific community knows about novel pandemics and how different countries have been prepared to respond to novel pandemic diseases. One of the greatest challenges in managing COVID-19 has been uncertainty. Since COVID-19's discovery and spread, the global community has learned about its incubation period, transmission, treatment, and preventative actions often at the same time as the scientific community. The urgency of need and the speed of scientific research, application, and change has created conditions in which mistakes are amplified and successes can be inconsistent. This uncertainty has forced governments to make radical decisions in an effort to buy time: lockdowns, curfews, and closure of businesses have been regular features of the response. However, it is becoming apparent that these actions are unsustainable because the uncertainty of research outcomes and government response are taking a large toll on public trust, patience, and resources. Given that novel pandemic diseases are expected to continue to increase in frequency and danger, the challenges faced in the initial management of COVID-19 present an opportunity to re-examine national systems and provide the evidence that could initiate a mindset shift in leaders regarding how they communicate to and support the public in times of uncertainty and crisis. Given the urgency and threat of COVID-19, the level of preparedness of governments has been reflected in the wide array of approaches and results. Some countries have enjoyed a great deal of success and global support (e.g. South Korea, Taiwan), other countries have seen a complete erosion in compliance and faith in public institutions (e.g. United States), and others are rapidly going from success stories to rapidly concerning ones (e.g. Uganda). With such rapid change, profound negative impacts on the individual, community, national and regional levels particularly for sub Saharan Africa, are placing great strain on formal and informal social protection systems and their respective strengths and weaknesses. The slow erosion of compliance with public health provisions is revealing existing cracks and opportunities for leaders to re-examine and re-think how best to sustain and earn public trust through communication and awareness of the feelings of the public. The grant from the COVID-19 Africa Rapid Grant Fund would provide the financial resources to collate background evidence, mobilize a diversity of highly respected subject experts to analyse the evidence to guide the development of the playbook, convene stakeholders for feedback and dissemination, and conduct the technical drafting of the playbook.

**Expected Outputs**

The major output of this project shall be a pandemic playbook, focusing on socio-cultural aspects of disease transmission, science communication, and mental health resilience during pandemics on the continent using case studies on specific countries as applicable. While some of the playbook's contents may be shaped by the stakeholders in pre-drafting, we anticipate the following components will be present:

The pre-conditions for success (a situational analysis); key knowledge and data necessary to determine your situation (best practices on data gathering and evidence-based guidance on which to prioritize); specific guidance on socio-cultural aspects of transmission, science communication, and mental health in communities during novel pandemics; and recommendations on both present and future action.



**Title:** Dr Renee Street

**Institution:** Medical Research Council (MRC)

**Country:** South Africa

**Project Title:** Enhancing the capacity of Academies of Science in Africa to provide rapid science advice in emergencies such as the COVID-19 pandemic and other emerging infectious diseases

**Project Abstract**

It is imperative to enhance the global science-policy interface in order to improve the potential for evidence informed policy formation at sub-national, national and transnational levels. This project aims to enhance the capacity of academies of science in Africa and to provide rapid science advice in support of regional and continental responses to COVID-19 and other emerging infectious diseases. Firstly, the project aims to develop an INGSA-Africa online portal to document ongoing COVID-19 related research and innovation activities on the continent to enable rapid access to critical knowledge and encourage cooperation among experts. Secondly, in collaboration with Network of African Science Academies (NASAC), we aim to enhance the capacity of the 28 national academies of science on the continent to increasingly function in their role as advisors to their respective governments, regional communities, and the African Union in efforts to fight COVID- 19 and future emerging infectious diseases.