

Africa Storytelling Challenge— Notable Submissions: In Chima Amadi's Words

Committed to championing scientific innovations and advancements, Amadi is affecting change in his community and throughout Africa—and this year's judges of the Africa Storytelling Challenge lauded these impressive efforts. Recognized as a runner-up in this year's contest, Amadi shares his essay submission below.

Development of an Anti-Sickling Drug/Agent

Sickle cell disease (SCD) is a group of blood disorders typically inherited from a person's parents (genes) that affect the hemoglobin, the molecules in red blood cells throughout the body. The most common type, sickle cell anemia results in an abnormality in the oxygen carrying protein (hemoglobin) found in red blood cells. My research focuses on developing an effective drug from plant extracts which reverse sickled red blood cells to normal concave shaped red blood cells thereby reducing the risk of crisis (occlusive crisis) associated with the disease and also ensure adequate blood carrying capacity of hemoglobin.

According to the World Health Organization, 90% of global population affected by sickle cell disease is prevalent in sub Saharan Africa with Nigeria having the highest prevalence out of all the sub Saharan African countries. It is estimated that 3% of Nigeria's population (equivalent to 5.4 million people) are affected by this ailment. The Center for Disease Control states that there are 150,000 births of sickled cell babies yearly in Nigeria. Due to poor facilities and inadequate systems put in place in the country, mortality rate of SCD is very high in Nigeria. This shows the urgent need to effectively proffer solutions to curb this menace and reduce mortality rate associated with sickle cell disease. Hence, my work plays an important role in addressing this challenge and contribute to the achievement of sustainable development goal 3, which is to ensure healthy lives and promote well-being among all ages.

The conventional treatment for sickle cell diseases range from use of bone marrow transplant, blood transfusion etc. These approaches are not affordable and accessible for an average Nigerian suffering from sickle cell disease due to low economic status of the country and poor standard of living. My work provides an efficacious, safe alternative which is affordable thereby improving pharmaco-economic outcomes for patients. A tremendous impact will be created because patients will gain better access to medications to manage the sickle cell disease at a lesser cost. It will also proffer a self-sustaining and frugal approach to the management of this ailment because all the materials needed for its formulation

are sourced locally in Nigeria which will also reduce cost of production.

My motivation comes from the passion to improve Nigeria's health sector and Africa at large especially in the pharmaceutical sector through innovation and bringing solutions to address numerous challenges facing the sector. I also draw motivation from my immense love for health care profession. I believe we can embrace leadership at all levels of health care system to make it better not only for our generations but for those unborn. I was personally motivated in this work by the death of two individuals whom I have close relationships with as a result of sickle cell anemia. This fostered my desire to contribute my quota towards eradicating sickle cell anemia in Africa. I am inspired by the works of Melinda and Bill foundation towards eradicating polio and malaria in Africa.

Telling stories of science is very important because it will serve as a source of motivation people to embrace science as a tool in solving global health challenges. It will also foster collaboration between individuals, organisations and institutions towards addressing peculiar health challenges. It will also provide an avenue to create awareness to the government so that good health policies can be made and implemented.

The content and views presented here are those of the individual Challenge participant.

About the Africa Storytelling Challenge

The inaugural [Champions of Science—Africa Storytelling Challenge](#) took place between May and August 2018. Open to all scientists doing innovative work in Africa, the contest drew more than 100 submissions. An independent selection committee of scientists, policymakers and science journalists reviewed the applications and selected the winners. Each winner will be awarded \$5,000 and will have the opportunity to share their stories at the 2019 American Association for the Advancement of Science (AAAS) annual meeting in Washington, D.C.