

HUMAN GENE EDITING-A VIEW FROM NIGERIA

FOLA ESAN

NIGERIAN ACADEMY OF SCIENCE

AFRICA



NIGERIA



NIGERIAN POPULATION

- 170 MILLIONS, MANY NATIONAL GROUPS AND TONGUES
- HIGH MATERNAL AND CHILD MORTALITY
- ABOUT 25% HETEROZYGOUS FOR **SICKLE GENE**
- **‘NIGERIANS ARE A DEEPLY RELIGIOUS PEOPLE’**- churches, mosques, traditionalists, others. Are gullible and poor, have low scientific culture.

NIGERIAN ACADEMY OF SCIENCE

[**www.nas.org.ng**](http://www.nas.org.ng)

- **INAUGURATED IN 1977**
- **MERIT BASED; FELLOWS NGA 200, FOR 4**
- **PROVIDES POLICY ADVICE TO GOVERNMENT**
- **COLLABORATES WITH OTHER ORGANIZATIONS**
- **BENEFITTED FROM ASADI PROGRAM
(USNAS/GATES)**
- **CHARTER BILL YET TO BE PASSED**

NIGERIAN ACADEMY OF SCIENCE

- DRAFT OF NAS POLICY STATEMENT ON GENETICALLY MODIFIED ORGANISMS
- **Policy Brief [No.-----]**
- Genetically Modified Organisms
- **A policy brief by the Nigerian Academy of Science**
- **SUMMARY**
- **SUBMITTED 2015***
- ***GMO BILL PASSED**
-

NIGERIAN RESEARCH

- **FUNDED PREDOMINANTLY BY GOVERNMENTS**
- **UNIVERSITIES AND RESEARCH INSTITUTES**
- **LOW PRIVATE SECTOR R&D**
- **FUNDS: (% OF GDP) EDUCATION 0.5 (2CHN), R&D 0.6(15UGA)**
- **OUTPUT: JOURNAL ARTICLES 462(74,819CHN), PATENTS 49(415,828CHN)**

BIOTECHNOLOGY ACTIVITIES

- **NAtional Biotechnology Development Agency**
- **(NABDA)**
- **established 2001, www.nabda.gov.ng**
- **promotion, coordination, and development of cutting edge biotechnology research & development processes and products for the socio-economic wellbeing of the nation**
- **Food security, job/wealth creation, affordable health care delivery and sustainable environment**

BIOTECHNOLOGY ACTIVITIES

NATIONAL BIOSAFETY AGENCY LAW

One of large number of bills passed into law at one sitting in closing weeks of a government

NAS informally consulted but parliament acted fast

ENFORCEMENT DIFFICULTIES EXPECTED

GENE EDITING RESEARCH IS MINIMAL

LARGEST POOL OF SICKLE CELL ANAEMIA PATIENTS

XENOTRANSPLANTATION 'PRACTICE' BY NON-SCIENTIFIC 'PRACTITIONERS'

THE WAY FORWARD

- MAJOR REORGANIZATION
- APPROPRIATE FUNDING
- FORGE LOCAL AND INTERNATIONAL PARTNERSHIPS

- P—R—A—Y ! ! ! !

NATIONAL FLAG

