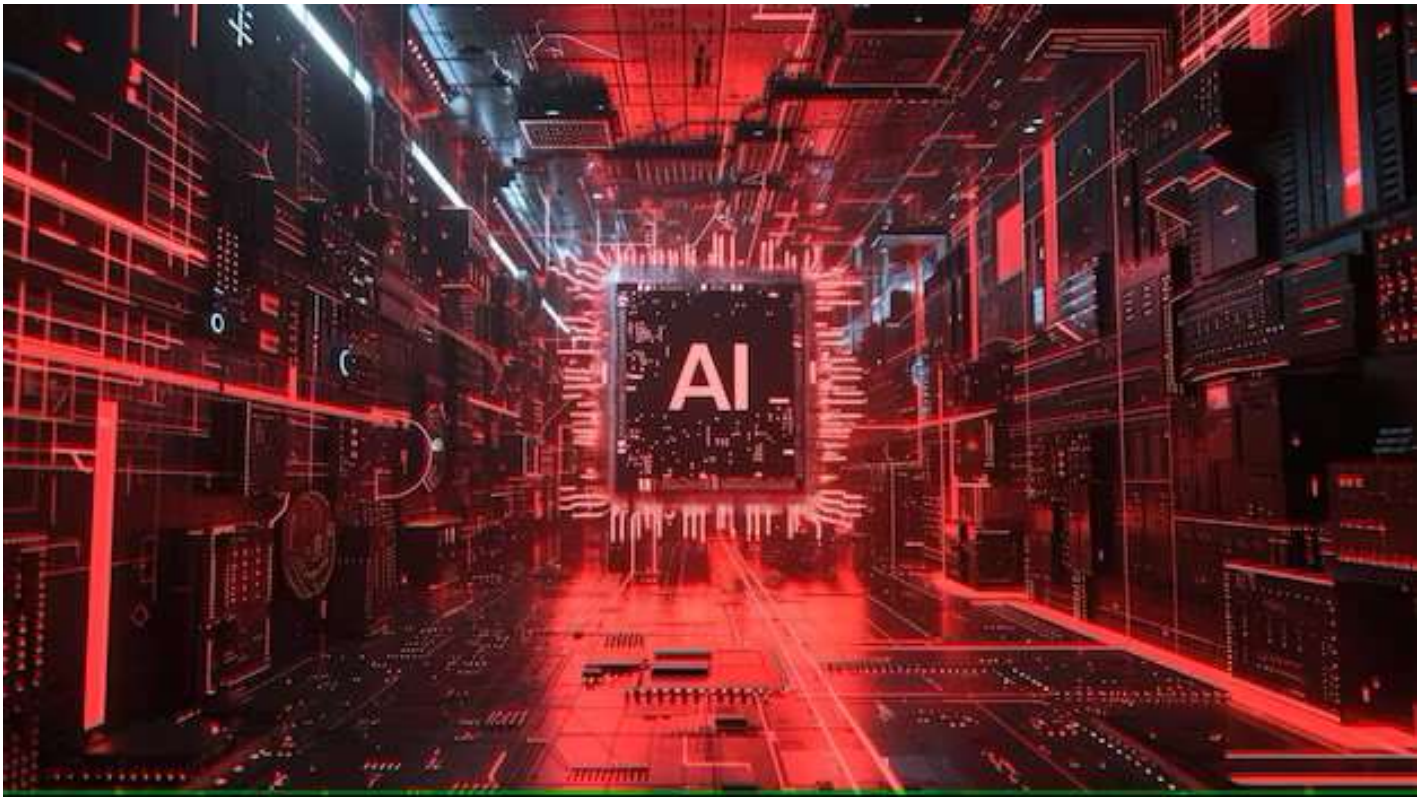
11th African Conference on One Health and Biosecurity

CALL FOR ABSTRACT

Theme: Artificial Intelligence and Biosecurity: Governance, Opportunities and Risk for Africa



Lagos, Nigeria | 5th – 7th November, 2025

GET Global Emerging Pathogens Treatment Consortium

In collaboration with

Lagos State Ministry of Health

Global Emerging Pathogens Treatment Consortium
ONE AFRICA, ONE HEALTH, ONE DESTINY

4. Methodist Church Street, Off Ajanaku Salvation
Ikeja, Lagos.

No. 1 Vogel House, 2nd Circular Road,
P.O. Box 35006 Cantonments,
Accra, Ghana

3 The Maze, Off King Street, Freetown,
Sierra Leone

Admin@getafrica.org

Theme: Artificial Intelligence and Biosecurity: Governance, Opportunities and Risk for Africa

Introduction

Africa's health security landscape faces significant challenges, particularly in the control and prevention of emerging infectious diseases (EIDs). The continent has experienced numerous outbreaks, including the 2014–2016 West African Ebola epidemic, which resulted in over 11,000 deaths and an estimated economic loss of $53 billion across the affected regions due to healthcare costs, reduced trade, and decreased productivity. The 2019–2020 Lassa fever outbreak in Nigeria highlighted persistent gaps in disease surveillance and response, with over 5,000 confirmed cases and significant disruptions to local economies. Most recently, the COVID-19 pandemic exposed the continent's vulnerabilities in global health emergencies, causing over 12 million confirmed cases and hundreds of thousands of deaths, alongside a sharp economic downturn, with an estimated GDP contraction of 2.1% in Sub-Saharan Africa in 2020. These historical events underscore the urgent need for robust biosecurity frameworks fashioned through a transdisciplinary approach consisting of Africa’s brightest scholars, researchers, scientists, experts, and policy makers to come together and devise strategies that will address biosecurity challenges on the continent.

AI's Role in Enhancing Biosecurity

Artificial intelligence has demonstrated its potential in revolutionizing biosecurity efforts in Africa through predictive analytics, real-time monitoring, rapid diagnostics, and resource allocation optimization. For example, HealthMap, an AI tool developed at Boston Children's Hospital, was instrumental during the 2014–2016 Ebola outbreak in West Africa, analysing social media and news reports to identify early outbreak signals. Similarly, the WHO's Epidemic Intelligence from Open Sources (EIOS) platform, employing machine learning, was utilized by Africa CDC to enhance real-time COVID-19 monitoring across the continent. In diagnostics, AI played a pivotal role at the African Centre of Excellence for Genomics of Infectious Diseases (ACEGID) in Nigeria, where genome sequencing of SARS-CoV-2 was conducted in March 2020, enabling swift identification of viral mutations and aiding containment strategies. During the COVID-19 pandemic, AI-powered logistics platforms such as Zipline’s drone delivery network optimized vaccine and medical supply distribution in Ghana and Rwanda, ensuring timely delivery to remote and underserved areas. These examples underscore AI's capacity to strengthen outbreak preparedness and response across diverse applications in Africa.

Global Emerging Pathogens Treatment Consortium
ONE AFRICA, ONE HEALTH, ONE DESTINY

4. Methodist Church Street, Off Ajanaku Salvation
Ikeja, Lagos.

No. 1 Vogel House, 2nd Circular Road,
P.O. Box 35006 Cantonments,
Accra, Ghana

3 The Maze, Off King Street, Freetown,
Sierra Leone

Admin@getafrica.org

The implementation of AI in Africa's biosecurity landscape raises several governance issues, including data privacy, ethical considerations, and the potential for misuse. Furthermore, the digital divide continues to hinder equitable access to AI-driven health interventions. Bridging this divide will be essential for ensuring that AI benefits are distributed equitably.

While AI offers promising solutions, over-reliance on technology poses risks, including system failures, cyberattacks, and algorithmic biases. In 2021, a misconfigured AI system used in South Africa's COVID-19 vaccination scheduling led to double bookings and missed appointments, creating confusion and inefficiencies. To mitigate the challenges posed by AI, African governments must prioritize the development of robust, secure, and context-specific AI systems.

The Annual African conference on One Health and Biosecurity, marks the 11th years of continuous support to community, local, national and regional government to achieve improved resources to combat outbreaks and other public health emergencies. The theme of this year conference, "Artificial intelligence and biosecurity: governance, opportunities, and risks for Africa will focus on maximizing opportunities from emerging technologies, especially Artificial intelligence in areas such as: use of AI in Border Control and Travel-Related Biosecurity Measures, assessing AI-driven models for tracking and predicting disease outbreaks, and Bridging the Digital Divide by ensuring equitable access to AI-powered health services across urban and rural populations. The conference is yet another platform to raise National, Regional and Continental awareness of emerging biosecurity threats and create opportunities to strengthen Health security in Africa.

Thematic Areas and Sub-Themes for the 11th African Conference on One Health and Biosecurity

1. AI Governance

- Ethical Frameworks for AI in Public Health and Biosecurity
- Policy and Legal Frameworks for Regulating AI in Africa
- Balancing Privacy and Security in AI Deployment
- Addressing Algorithmic Bias in AI Applications
- International Collaboration for AI Governance in Developing Economies

2. Bio Shielding Lagos State

- AI-Enhanced Disease surveillance and Mitigation Strategies
- Building Smart Biosecurity Infrastructure in Urban Lagos

Global Emerging Pathogens Treatment Consortium
ONE AFRICA, ONE HEALTH, ONE DESTINY

4. Methodist Church Street, Off Ajanaku Salvation
Ikeja, Lagos.

No. 1 Vogel House, 2nd Circular Road,
P.O. Box 35006 Cantonments,
Accra, Ghana

3 The Maze, Off King Street, Freetown,
Sierra Leone

Admin@getafrica.org

- Predictive Models for Air and Water Quality Monitoring
- AI Solutions for Vector Control and Disease Surveillance
- Public-Private Partnerships for Strengthening Lagos' Health Security

3. importance of AI in Health and Pandemic Response

- Leveraging AI for Real-Time Disease Surveillance
- AI-Powered Diagnostics for Emerging Infectious Diseases (EIDs)
- Predictive Analytics for Pandemic Preparedness and Mitigation
- AI-Driven Vaccine Development and Distribution Strategies
- Digital Health Innovations for Strengthening Health Systems

4. AI in Biosecurity

- AI and Pathogen Genomics: Transforming Disease Management
- Enhancing Biothreat Detection through Machine Learning
- AI-Powered Risk Assessment Models for Zoonotic Diseases
- Integrating AI in Laboratory and Field-Based Biosecurity Measures
- The Role of AI in Countering Bioterrorism

5. AI Innovation in Africa

- Bridging the Digital Divide: Expanding AI Access in Rural Areas
- AI Startups Driving Solutions for African Challenges
- Capacity Building and Skills Development in AI Technologies
- Exploring Indigenous Knowledge Systems in AI Development
- Funding AI Research and Development in Africa

6. AI in Banking and Private Sector (Special session)

- AI-Powered Fraud Detection and Prevention in Financial Services
- Enhancing Customer Experience Through Chatbots and Predictive AI
- Risk Management and Credit Scoring with Machine Learning
- AI Innovations in Insurance for Health and Pandemic Risks
- The Role of AI in Cybersecurity for Banking Systems

8. **Other emerging issues with the following sub-themes:**

- AI and climate change response
- Importance of AI in vaccine production
- Bioethics in Africa and AI

Global Emerging Pathogens Treatment Consortium
ONE AFRICA, ONE HEALTH, ONE DESTINY

4. Methodist Church Street, Off Ajanaku Salvation
Ikeja, Lagos.

No. 1 Vogel House, 2nd Circular Road,
P.O. Box 35006 Cantonments,
Accra, Ghana

3 The Maze, Off King Street, Freetown,
Sierra Leone

Admin@getafrica.org

Guidelines for Abstract Submission

- A 200–300-word electronic abstract must be submitted latest by July 30, 2025.
- Kindly submit your abstract to bobadoyed@getafrica.org

Kindly specify platform or poster presentation preference. You will be notified of the fate of your submission by August 15, 2025.

IMPORTANT DATES TO NOTE:

- **Abstract Submission Due:** July 30, 2025.
- **Abstract Acceptance Notifications:** August 15, 2025.

CONFERENCE REGISTRATION FEES

The fees cover conference materials, coffee breaks and a lunch buffet.

In-person participants

- $50 (Students)
- $150 (African Delegates)
- $250 (non-African Delegates)
- Delegates with accepted abstracts will have a 25% reduction in their registration fee.

Virtual participation

- $100 (African delegates)
- $200 (non-African delegates