

## **Vaccinology in Africa 2025 – a 5-day Master’s level course**

**23<sup>rd</sup> - 27<sup>th</sup> June 2025,**

**Institut Pasteur de Dakar (IPD), Centre for Africa’s Resilience to Epidemics (CARE), Dakar, Senegal**

---

### **Introduction**

The next ‘Vaccinology in Africa’ five-day Master’s level course, hosted by KEMRI-Wellcome Trust Research Programme and CARE at the Institut Pasteur de Dakar, is scheduled to take place from 23<sup>rd</sup> – 27<sup>th</sup> June 2025.

The course is jointly organised by the KEMRI-Wellcome Trust Research Programme, Jenner Institute and Institut Pasteur de Dakar’s Centre for Africa’s Resilience to Epidemics (CARE), with financial support from the Gates Foundation.

Seven courses have been conducted previously (Accra, Ghana in 2013, Nairobi, Kenya in 2014, Bamako, Mali in 2015, Entebbe, Uganda in 2017, Fajara, Gambia in 2019, a virtual course in 2021 and Nairobi, Kenya in 2024) with excellent reviews from students and speakers. This year, 40 participants from across Africa are expected to participate, with a faculty of more than 15 speakers drawn from prominent vaccine experts globally.

The course, which is aimed at African students, researchers and professionals, will focus on the early stages of vaccine development such as antigen discovery and design, early biomanufacture, pre-clinical studies, and the role of Artificial Intelligence (AI) in vaccine development.

### **How to apply:**

Participation is competitive and places are allocated based on individual applications up to a maximum of forty (40). KEMRI-Wellcome Trust Research Programme will cover course fees, accommodation, meals, and transport for the duration of the course.

### **Eligibility**

Applicants are required to have the following qualifications to be eligible for the course.

- National or citizen of an African country.
- Educational background in life or physical sciences, with a Master’s degree (MSc) at a minimum. (Preference will be given to candidates that completed their MSc in the last 3 years).
- Have at least an advanced level of spoken and written English or French language.
- Demonstrate in the application the relevance of the course to your professional career ambitions.
- Strong passion for vaccine research, development, and manufacturing as evidenced by previous work (e.g., university project, publications, relevant employment etc.).
- Curious, enthusiasm for learning, unquestionable integrity, and a proactive attitude.

Application form available on: <https://forms.office.com/r/je0b7Cgxp1>

The French version of the application form is available on: <https://forms.office.com/r/G28gUePegi>

Application deadline is **Friday 30<sup>th</sup> May 2025, at 1700hrs EAT.**

## Appendix 1. Preliminary programme

The course will cover the early stages of vaccine development such as antigen discovery and design, early biomanufacture, pre-clinical studies, and the role of Artificial Intelligence (AI) in vaccine development. The course is aimed at students, researchers and professionals resident in Africa with a keen interest in vaccinology.

<b>Day 1:</b>	<b>Principles of Vaccinology and Early Vaccine Development</b>	<ul style="list-style-type: none"> <li>History of vaccines</li> <li>Vaccine development pipeline outline</li> <li>Vaccine Immunology</li> <li>Vaccines, platforms and adjuvants</li> </ul>
<b>Day 2:</b>	<b>Vaccines Design and Development</b>	<ul style="list-style-type: none"> <li>Vaccine immunogen design</li> <li>Pre-clinical studies</li> <li>Use of artificial intelligence, databanks/databases in vaccine design</li> <li>Infection challenge in in pre-clinical studies</li> <li>Correlates of protection and regulatory aspects</li> </ul>
<b>Day 3:</b>	<b>Biomanufacturing</b>	<ul style="list-style-type: none"> <li>IPR considerations</li> <li>Introduction to vaccine manufacturing and bioprocessing</li> <li>Vaccine development Quality by Design/GMP</li> <li>Upstream process and Downstream and Downstream Process in detail</li> <li>Chemistry, Manufacturing and Controls</li> </ul>
<b>Day 4:</b>	<b>Vaccine Development Pipeline from Discovery to Deployment</b>	<ul style="list-style-type: none"> <li>Case study 1: Malaria</li> <li>Case study 2: Ebola/Covid</li> <li>Case study 3: Yellow Fever</li> <li>Case study 4: Cholera</li> </ul>
<b>Day 5:</b>	<b>Site Visit and Closing Ceremony</b>	<ul style="list-style-type: none"> <li>Vaccine manufacturing site visit</li> <li>Panel discussion</li> <li>Closing Ceremony</li> </ul>

## Speakers.

The 1-week course will be taught by an exceptional African and international faculty of both academic and industry speakers.

For any queries or further information, please use the subject heading: “Vaccinology in Africa Course 2025” to email: [Vaccinology@kemri-wellcome.org](mailto:Vaccinology@kemri-wellcome.org)