MEETING MINUTES

Bundibugyo Ebola Research Meeting

4 September 2026

Meeting Objectives

This meeting, organized by ANRS-MIE, brought together stakeholders involved in research and outbreak response efforts in France and the Democratic Republic of the Congo (DRC). The objectives were to:

- Provide an epidemiological update on the outbreak
- Share recent scientific findings
- Identify key research priorities and response challenges
- Foster collaboration among French, Congolese, and international teams.

Opening Remarks

Tribute to Vasee Moorthy

At the opening of the meeting, Professor Yazdan Yazdanpanah paid tribute to Vasee Moorthy, who had recently passed away. He was responsible for coordinating research activities at the World Health Organization (WHO) during the ongoing outbreak and played a major role through the WHO R&D Blueprint programme. Professor Yazdanpanah acknowledged his outstanding commitment to epidemic preparedness and response.

Update on the Outbreak Response in the DRC – Steve Ahuka (INRB)

Steve Ahuka, appointed by the President of the Democratic Republic of the Congo to coordinate the national response to the Bundibugyo outbreak, began his presentation by paying tribute to Vasee Moorthy. He recalled his significant contribution to preparedness efforts and international research coordination during previous Ebola outbreaks and highlighted the impact of his loss on the global public health community

From an epidemiological perspective, Steve Ahuka indicated that a slight downward trend appears to be emerging, although it remains to be confirmed in the coming weeks. He provided an update on the main areas affected by the outbreak:

- **Mongbwalu**, the historical epicentre of the outbreak and a major gold-mining area, is showing a gradual decrease in case numbers. The epidemic curve now appears to be trending downward.
- **Nizi** is also showing a declining trend, although this trend has not yet consolidated.
- **Bunia-Rwampara** is showing a generally favourable trend, despite persistent challenges, particularly related to the stigmatization of affected individuals. Continued vigilance is required to detect any resurgence of transmission.
- **Nia-Nia**, another mining area affected by the outbreak, is showing early signs of declining transmission. However, reconstruction of transmission chains suggests that this area has been involved in exporting cases to the Haut-Uele, Tshopo and Bas-Uele provinces.
- **North Kivu** remains the second most affected province in terms of transmission. The situation remains concerning due to high mortality and the persistence of active transmission chains.

Regarding medical countermeasures, Steve Ahuka emphasized that post-exposure prophylaxis (PEP) activities are not limited to provinces reporting locally acquired cases. Teams are also intervening in areas where imported cases have been detected in order to prevent the establishment of new transmission chains. This approach aims to limit the geographical spread of the outbreak by rapidly deploying interventions around high-risk contacts, including in regions located outside the main transmission hotspots.

Contribution of French Research to the Outbreak Response – Martine Peeters (IRD)

A longstanding collaboration between IRD and INRB has led to the establishment of a PRISME (Global Health International Research Platform). Numerous joint projects are being conducted in the field of emerging infectious diseases, including Ebola, HIV and mpox. These initiatives include a strong capacity-building component, encompassing staff training, PhD funding and support to research infrastructure in the DRC.

CORC Filovirus: Research Priorities for BDBV and Ongoing Studies – Mélanie Nguyen-Marzin (ANRS-MIE)

The CORC Filovirus is an international research consortium established by WHO that brings together experts, institutions and partners to prepare for and coordinate responses to epidemic-prone filoviruses. ANRS-MIE has been tasked by WHO with coordinating the CORC Filovirus and translating discussions into operational documents. The consortium has already been mobilized during seven filovirus outbreaks since 2024 (four Ebola outbreaks and three Marburg outbreaks).

CORC has identified ten research priorities, encompassing both medical and non-medical countermeasures, which will soon be published by WHO:

- Natural history, pathogenesis and transmission of BDBV
- Social and behavioural research
- Diagnostics and genomic surveillance
- Optimization of supportive care
- Monoclonal antibody therapies
- Development of broad-spectrum antivirals
- Post-exposure prophylaxis
- Vaccine development
- Survivor cohorts and viral persistence
- Operational research on infection prevention and control.

Several clinical studies and projects are currently being monitored by CORC, including EBO-PEP, PARTNERS, AREBO and several vaccine development programmes, including SOLIDARITY.

Discussion

Steve Ahuka indicated that three vaccination scenarios are currently being considered as part of the response strategy:

- Use of Bundibugyo-specific vaccines within SOLIDARITY protocols
- Inclusion of Ervebo® in a SOLIDARITY evaluation arm
- Observational evaluation of Ervebo® through the BRAVO study led by MSF and Africa CDC.

Epidemiological Situation, Recent Scientific Findings and Research Priorities

1. Recent Data on the Immune Response Induced by Ervebo® Against BDBV – Yves Lévy (VRI)

Analyses from the PREVAC and PREVAC-UP cohorts demonstrate long-term persistence of humoral immune responses following vaccination against Ebola Zaire. Available data suggest partial cross-reactivity against Bundibugyo despite incomplete genetic homology between the two viral species.

Durable CD4 cellular responses have also been observed. Assessment of cross-reactive immune responses against Bundibugyo is ongoing and may help clarify mechanisms of protection.

Discussions

It was recalled that the WHO Technical Advisory Group (TAG) considered, at the beginning of the outbreak, that available evidence was insufficient to recommend the use of Ebola Zaire vaccines as a protective measure against Bundibugyo. However, several initiatives have been launched to assess the real-world effectiveness of these vaccines during the current outbreak.

2. Genomic Sequencing: Genomic Updates – Eddy Kinganda Lusamaki (INRB, IRD)

The first cases identified using broad-spectrum diagnostic tools were rapidly sequenced. Analysis revealed a strain distinct from those responsible for the 2007 and 2012 outbreaks (98 mutations and 17 amino acid changes), resulting from an independent zoonotic spillover event. The outbreak declaration led to the deployment of diagnostic capacities. To date, 716 circulating genomes have been published, including 693 by INRB, covering 3 of the 6 affected provinces and 32 of the 60 health zones.

These data enable transmission-chain tracking and support field operations. A key priority is to improve coverage in underserved areas, particularly North Kivu, through the strengthening of the Bunia laboratory. Sequencing capacity should also be prioritized for samples requiring transmission-chain investigation.

3. Social Sciences and Humanities: French Perspectives – Jules Villa (Institut Pasteur)

The work presented is based on an anthropological investigation conducted in Mongbwalu to document the early stages of the outbreak and identify factors that delayed its detection. This approach aims to move away from narratives centred on identifying a “patient zero” and instead better understand local dynamics of transmission and detection. Findings suggest that substantial transmission was occurring before laboratory confirmation on 14 May 2026. The study examines factors contributing to delayed alerting and the social traces left by the outbreak.

The TAMBUA project was also presented. It aims to document exposures within healthcare facilities and to develop complementary approaches alongside the national survivor follow-up programme. The project team emphasized their willingness to establish new collaborations with social sciences and humanities researchers.

Clinical Research: Recent Advances

AREBO-BUDSEV: Assessing Whether Prior Ervebo® Vaccination Is Associated with Reduced Risk of Infection and Severe Disease – Antoine Nkuba (IRD)

The study aims to characterize humoral immune responses among different populations exposed to Bundibugyo (survivors, suspected but test-negative individuals, and healthcare workers) using multiplex serology technologies. The study plans to enroll 540 participants from the Rwampara, Bunia and Nizi areas.

Its objectives include:

- Characterizing antibodies directed against different Ebolavirus species
- Comparing immune response profiles across study populations
- Assessing cross-reactive responses induced by Ervebo®
- Identifying demographic factors associated with BDBV-specific responses.

The study compares vaccinated and unvaccinated groups to document the potential impact of prior Ebola Zaire vaccination. AREBO-BUDSEV has received ethical approval and has initiated participant enrolment and data collection.

2. EBO-PEP Trial and Strategies to Prevent Disease Following High-Risk Exposure – Jepsy Yango (INRB) and Marie Jaspard (AP-HP)

EBO-PEP is an international trial funded by EDCTP, sponsored by INRB and co-sponsored by ANRS, aimed at evaluating post-exposure prophylaxis strategies applicable to various filovirus outbreaks. The master protocol is designed as a pan-filovirus platform adaptable to different outbreak settings, populations and interventions. The Bundibugyo-specific sub-protocol evaluates obeldesivir in high-risk contacts through a double-blind comparison of obeldesivir versus placebo. An additional compassionate-use arm evaluates remdesivir for breastfeeding women and children under 12 years of age, who constitute an observational cohort.

The teams highlighted the following achievements:

- Establishment of an international consortium involving European and African institutions and NGOs
- Development of SOPs and the study database
- Implementation of monitoring procedures
- Regulatory and ethical approvals
- Strengthening of local capacities.

Two PEP centres were operational at the time of the presentation, and enrolment had begun on 16 July. As of 4 September, 171 participants had been enrolled in the obeldesivir arm and 60 in the compassionate-use arm. Opening of an additional site in Nizi and deployment of mobile teams are planned.

A protocol amendment is scheduled for mid-September to incorporate Gilead recommendations regarding eligibility criteria and EMA feedback on statistical analyses before submission to health authorities.

Discussion

Investigators emphasized the importance of working closely with local communities. A dedicated work package focuses on community engagement to improve acceptability of interventions and address access challenges in some areas.

3. Management of a Suspected or Confirmed Ebola Patient in France: Isolation of the BDBV Strain and Research Opportunities from Patient Samples – Xavier Lescure (COREB/AP-HP), Sylvain Baize (National Reference Centre, Institut Pasteur), Aurélie Wiedemann (VRI)

The speakers reviewed the first imported Bundibugyo case managed in France. The patient, vaccinated with Ervebo® in 2020, developed PCR-confirmed infection after arriving in Paris. Treatment with remdesivir was administered under the PARTNERS protocol. A decline in viral load was observed within 10 days, and compassionate administration of MBP134 was ultimately not required.

The National Reference Centre reported very low viral RNA levels at admission, followed by an increase in saliva and subsequent decline until two negative PCR tests allowed discharge. Serological analysis based on the Ebola Zaire strain was negative, whereas testing using recombinant BDBV glycoprotein was positive. The low viral load prevented virus isolation, including at peak viral load in saliva. Access to samples from the DRC would facilitate virus isolation for in vitro studies. The complete viral genome sequence was nevertheless successfully obtained.

The biological data generated open several research avenues, including:

- Neutralizing memory B-cell responses against Ebola Zaire and Bundibugyo
- Mechanisms underlying cross-reactivity between Ebolavirus species
- T-cell responses associated with recovery.

The teams indicated their openness to future collaborative projects.

4. TEMBO Cohort: Natural History and Morbidity-Mortality Associated with Filovirus Diseases – Matthieu Revest (CHU Rennes)

TEMBO is a prospective cohort designed to document the natural history, morbidity and mortality associated with filovirus infections among patients managed in French high-level isolation and treatment facilities.

The primary endpoint is day-28 mortality. This research infrastructure aims to improve knowledge of the clinical management of filovirus infections and facilitate future therapeutic studies.

French Industrial Contribution: Diagnostics

1. Deployment of BioFire During the BDBV Outbreak – Marc Haribou (bioMérieux)

bioMérieux has launched the deployment of 7,000 diagnostic tests in the DRC, Uganda and Rwanda. The BioFire system is a syndromic test referenced by Africa CDC and currently under WHO review. It is capable of simultaneously detecting 16 infectious agents, including different Ebolavirus species.

The test offers several operational advantages, including the use of whole blood, no cold-chain requirements and automated processing. More than 2,400 tests had already been shipped at the time of the meeting.

2. Rapid Diagnostic Test for Bundibugyo Ebola – Laurent Bellanger (CEA)

CEA presented its work on monoclonal antibody generation and rapid diagnostic test development, building on earlier programmes targeting Ebola Zaire and Sudan virus, including the eZYSCREEN rapid diagnostic test developed in 2014.

Evaluations demonstrated insufficient cross-detection between existing antibodies and Bundibugyo, justifying the launch of a new programme dedicated to generating Bundibugyo-specific antibodies. The work is funded through the French governmental programme on CBRN threats.

VEDALAB confirmed its interest in the industrial development of the diagnostic device, a key step toward future operational deployment.

Conclusion

The organizers acknowledged the quality of the discussions and the collaboration opportunities highlighted throughout the meeting. They noted that substantial work remains to be undertaken, while emphasizing the scientific opportunities that emerged from the exchanges. All participating teams were thanked, particularly partners from the DRC, the researchers involved and the ANRS-MIE teams. Additional thematic discussions and follow-up meetings on project progress are planned.