MEETING REPORT

Emergency Scientific Consultation on the Bundibugyo Ebola Virus Outbreak

Democratic Republic of Congo and Uganda

Date	22 May 2026
Participants	Over 1,300 participants
Co-organisers	ANRS MIE, Africa CDC, WHO R&D Blueprint, Filovirus CORC

1. Key Participants

Name	Organisation / Role
Yazdan Yazdanpanah	Director, ANRS MIE (France) — overall moderator
Hervé Raoul	ANRS MIE — co-moderator
Sylvie Briand	Chief Scientist, WHO
Vasee Moorthy	WHO R&D Blueprint (Day 13 in his new role)
Mosoka Fallah	Director of Research & Innovation, Africa CDC
Yap Boum	Head, Emergency Preparedness & Response Division, Africa CDC
Helen Rees	Scientific sessions moderator / WHO RITAG Chair
Placide Mbala	INRB (DRC) — virologist, Co-PI EBOPEP
Barnabas Bakamutumaho	Uganda Virus Research Institute
Eddy Kinganda Lusamaki	INRB (DRC) — genomics
Marie Jaspard	INSERM — EBOPEP trial (post-exposure prophylaxis)
Bruce Kirenga	Makerere University (Uganda) — vaccination trials
Marco Cavaleri	EMA / Chair, WHO TAG on Therapeutics
Armand Sprecher	MSF-OCB
William Dowling	CEPI — vaccine landscape
Beth-Ann Coller	Co-lead, Filovirus CORC Vaccine Working Group
Pauline Byakika-Kibwika	Makerere University (Uganda) — PARTNERS trial
Amanda Rojek	University of Oxford — PARTNERS trial
+ representatives	NIH, US CDC, Gilead, MAP Biopharmaceutical, CEPI, MSF, Wellcome Trust, HERA (EU)

2. Background and Opening

This meeting is an emergency scientific consultation convened in response to the ongoing Bundibugyo Ebola virus (BDBV) outbreak in the DRC and Uganda, declared a Public Health Emergency of International Concern (PHEIC). It is co-organised by the Filovirus CORC, ANRS MIE, Africa CDC, and the WHO R&D Blueprint.

Sylvie Briand (WHO Chief Scientist) three founding principles

- Research is not an activity running alongside outbreak response: it is a fundamental pillar of response itself, transforming uncertainty into evidence and evidence into action.
- The importance of a One Health perspective: human health, animal health, and environmental systems are deeply interconnected.
- Trust in science requires transparency, inclusion, collaboration, and strong engagement with affected communities.
- The CORC model plays a critical role as a trusted scientific space enabling rapid mobilization during emergencies.

Mosoka Fallah (Africa CDC)

- Highlights the speed of mobilization enabled by pre-existing relationships (notably with Yazdan since the 2014 West Africa Ebola response).
- A treatment protocol was produced within 24–48 hours thanks to existing protocols and infrastructure.
- Underscores the value of linking continental organizations (Africa CDC), global bodies (WHO), and in-country scientists.

3. Epidemiological Situation — DRC and Uganda

Yap Boum (Africa CDC) — speaking from Uganda

- Two active foci: DRC (North Kivu, South Kivu — multiple health zones) and Uganda.
- Over 170 deaths and approximately 500 suspected cases as of the meeting date.
- No approved vaccine, no approved treatment; only 1–2 diagnostic tests available for BDBV.
- Tripartite meeting underway with DRC, Uganda, and South Sudan (high-risk neighbouring country).

Placide Mbala (INRB, DRC) — virus history

- Ebola comprises 6 species; 4 have caused human outbreaks: Zaire, Sudan, BDBV, Taï Forest.
- BDBV is genetically distinct from other known species by more than 30%, invalidating many diagnostic tools and countermeasures developed for Ebola Zaire.
- First BDBV outbreak: Uganda, August 2007 (56 cases, 43 confirmed, 17 deaths, ~40% case fatality rate).

- Second outbreak: Isiro, DRC, 2012 — molecular analysis demonstrated an independent new spillover (two distinct spillover events identified), CFR 40–50%.
- Clinical presentation: fever, fatigue, headache, nausea/vomiting, abdominal pain, diarrhea — bleeding in 30–40% of cases (less frequent than Ebola Zaire).
- Long-term sequelae data: persistence beyond 2 years post-illness in survivors.
- Current situation: 3 provinces affected, 7–8 health zones affected. Serious incident reported: arson attack on a treatment center in Rwampara.

Barnabas Bakamutumaho (Uganda Virus Research Institute)

Historical perspective on the 2007 virus discovery. Key points:

- In 2007, standard diagnostic tools (tests for known species) initially missed the virus. Discovery required broad pan-filovirus screening followed by specific confirmation.
- Emergency development of random-prime sequencing covering >70% of the genome.
- Core lesson: knowledge, tools, networks, and partnerships acquired during each outbreak must be converted into durable preparedness infrastructure.
- Critical role of healthcare workers: significant mortality observed among HCWs in previous outbreaks — their protection and psychosocial support must be central to the response.

4. Genomics, Phylogenetics

What genomics has revealed

Several speakers addressed BDBV genomic data, notably Barnabas Bakamutumaho and Eddy Kinganda Lusamaki.

Genetic divergence and implications

- At the genome level, BDBV is more than 30% divergent from other known Ebola species — a major phylogenetic divergence.
- This divergence has direct consequences for diagnostic tools (RT-PCR primers/probes developed for Ebola Zaire do not reliably detect BDBV) and for medical countermeasures (vaccines, monoclonal antibodies).
- A substantial number of sequences from the current outbreak have been deposited in the public domain — critical to maintaining diagnostics adapted to viral evolution as the outbreak progresses.
- Continuous genomic surveillance is essential to detect any viral divergence as the outbreak evolves.
- Phylogenetic analysis of previous outbreaks (2007 Uganda and 2012 DRC) showed that each corresponded to an independent new spillover from the animal reservoir, not sustained cryptic human-to-human transmission.
- For the current outbreak, available genomic data had not yet established with precision when the virus began circulating prior to official detection.
- The ongoing outbreak should not be treated as an isolated event but as reflecting a broader dynamic: increasing human activity is expanding contact with the animal reservoir, making new spillovers increasingly likely.

- The animal reservoir of BDBV remains unidentified — without it, the date and mechanism of the spillover at the origin of the current outbreak cannot be established with certainty.

One Health perspective and future emergence risk

- Eddy Kinganda Lusamaki concluded that future BDBV outbreaks are predictable unless environmental conditions and human-animal dynamics change.
- Reference to lessons from SARS-CoV-2: the importance of acting rapidly to halt spread before it expands.
- Hervé Raoul posed the question directly to panelists: is BDBV an isolated emergency event, or part of a broader pattern of increasing filovirus emergence linked to ecological and climate pressures?
- Participant consensus: the current outbreak fits a broader pattern and the Filovirus CORC must integrate BDBV as a “new player” in its R&D roadmap.

5. Diagnostics

Speaker: Steve Ahuka Mundeke (INRB, wild virology department)

Available tools and their limitations

Tool	Advantages	Limitations
RT-PCR	Gold standard, high specificity, compatible with sequencing	Low viral load in early infection (false negatives), heavy infrastructure requirements, poorly adapted to remote areas
Rapid diagnostic tests (RDT/Ag)	Field accessibility, no electricity required	Limited sensitivity, not validated for BDBV
Serology (ELISA / multiplex IgM-IgG)	Enables community extent studies and cohort studies	Requires cold chain, electricity, skilled personnel

Core problem

- Almost all diagnostic platforms optimised for Ebola Zaire — no automated platform currently validated specifically for BDBV.
- The dual administrative structure in eastern DRC (government zones + rebel-controlled zones) fragments surveillance and delays diagnosis.

Identified priorities

- Optimise and decentralise RT-PCR in eastern DRC.
- Deploy portable, platform-flexible systems suited to field conditions.
- Repeat-testing algorithm (at 24–48h intervals) to reduce false negatives.

- Validation of new tools (RADI South Corea) in the current outbreak context.
- Broad pan-filovirus screening as first line, then BDBV-specific confirmation.

6. Post-Exposure Prophylaxis (PEP) — EBOPEP Trial

Speakers: Marie Jaspard (INSERM), Placide Mbala (INRB, Co-PI)

Trial design

- Multi-arm multi-stage (MAMS) randomised controlled trial, adapted from the original EBOPEP protocol (designed for Ebola Zaire).
- Adaptive architecture allowing arms to be added or removed as new data emerges.
- Target population: high-risk contacts within 5 days of exposure.

Definition of high-risk contact

- Direct contact with a confirmed EVD case presenting “wet” symptoms (diarrhea, vomiting, external bleeding).
- Contact with a body confirmed for EVD.
- Needle stick injury, delivery or breastfeeding from an affected mother.

Therapeutic candidates

Candidate	Route	Duration	Status
Obeldesivir (oral prodrug of remdesivir)	Oral	10 days	Lead candidate — advanced discussions with Gilead
Molnupiravir	Oral	TBD	Preclinical data on Marburg + Ebola Zaire; Phase 1/3 safety data (COVID); Merck outreach ongoing
Ervebo vaccine	IM	Single dose	Partial cross-protection to be evaluated (likely control arm if recommended by TAG)

Open questions

- Acceptability of a placebo arm in the field (under discussion with DRC and Uganda teams).
- Inclusion of pregnant women and children (insufficient data on obeldesivir for these populations).
- Ethics committee submission underway in DRC; submission in Uganda planned within days.
- Parallel option: observational cohort if the randomised trial takes too long to initiate.

7. Vaccines

Vaccine landscape (William Dowling, CEPI / Beth-Ann Coller, CORC)

No approved vaccine for BDBV to date. Landscape document in progress (updated daily).

Available vaccines with partial cross-protection data

- Ervebo (rVSV-ZEBOV): partial protection in a primate model (3/4 survivors vs 1/4 controls) — non-sterile protection (viraemia and symptoms present). Cross-reactive antibody responses observed in Phase 1 human recipients.
- J&J AD26.ZEBOV/MVA-BN-Filo: no convincing cross-protection data identified against BDBV.

BDBV-specific vaccine candidates in development

- VSV-BDBV (lab-derived): 100% protection in primate model; recent unpublished data showing protection at day −7 and day −3 pre-challenge (5/5 animals protected in each group).
- Vesiculovax (quadrivalent VSV vaccine): 100% protection against each species (Zaire, Sudan, BDBV, Marburg) — 6/6 in each group.
- Trivalent HPIV3 (UTMB): protection in ferrets, no primate data yet.
- ChAdOx BDBV and Moderna mRNA BDBV constructs: generated, limited or ongoing preclinical data.
- Bivalent mRNA (Ebola + BDBV + NP, University of China): complete protection in mouse and hamster models.
- rVSV- SUDV GP and a boost of rVSV-EBOV GP 14 days: protection of 3/3 in monkey.

Vaccination trial strategies (Bruce Kirenga, Makerere University)

Strategy	Description	Comment
Ring trial	Vaccination of contacts and contacts-of-contacts of a confirmed case	Gold standard, most robust; used successfully against Ebola Zaire; requires fast-acting vaccine, robust surveillance
Stepped-wedge cluster trial	Phased geographic rollout; unvaccinated areas serve as delayed control	Methodologically less powerful
Rollout approach	Vaccine offered to all contacts; retrospective matched case-control analysis	Lower methodological quality

- Recent experience: ring trial for Sudan Ebola conducted in Uganda in 2025 (150 contacts enrolled; study closeout this very week — results pending).
- Absolute priority: single-dose, fast-acting vaccine (protection must occur before disease develops after exposure).

8. Therapeutics — WHO TAG Recommendations

Speaker: Marco Cavaleri (EMA / Chair, WHO TAG on Therapeutics)

Small-molecule antivirals

- Remdesivir (IV): confirmed in vitro activity against BDBV; already used in Ebola Zaire trials (PALM study); maintained as a treatment candidate.
- Obeldesivir (oral, 10 days): prodrug of the same active moiety (GS-441524); highly promising primate data against Zaire and Marburg — high survival when administered from day 1 post-infection; prioritised for PEP.

Monoclonal antibodies

- MBP134 (pan-Ebola cocktail, Regeneron/MapBio): two pan-filovirus antibodies; Phase 1 data available; efficacious in primates even when treatment begins at day +7 post-challenge — highly promising treatment candidate.
- Mefitivimab (component of Inmazeb, Regeneron): most potent neutralising antibody of the anti-Zaire cocktail; retains neutralising activity against BDBV (IC50 comparable to Ebola Zaire); in vivo validation ongoing.
- Inmazeb (FDA-approved cocktail for Ebola Zaire): partially active against BDBV through its mefitivimab component.

Combination therapy

- Preclinical data (Sudan and Marburg models) demonstrate synergy between a small-molecule antiviral (remdesivir) and a monoclonal antibody.
- Strongly recommended to incorporate combination arms in clinical trials, particularly for patients with high viral load.

TAG recommendation summary

Indication	Priority candidates
Treatment	MBP134, Mefitivimab/Inmazeb, Remdesivir (± combination)
PEP	Obeldesivir (oral 10 days) ± monoclonal antibodies

Armand Sprecher (MSF) — operational perspective

- Obeldesivir as PEP could be a game changer: contacts who do not develop disease do not shed virus in the community — no onward transmission.
- Also provides something tangible to offer contacts when following up on exposure chains — improves adherence to contact tracing.

- Two most operationally ready protocols: PARTNERS trial (MSF/ITM/Oxford) for MBP134 + remdesivir, and EBOPEP.

9. PARTNERS Trial — Therapeutic Treatment

Speakers: Pauline Byakika-Kibwika (Makerere University, Uganda) and Amanda Rojek (University of Oxford)

Design

- Multi-country, multi-outbreak, open-label, randomised adaptive platform trial.
- Factorial 1:1:1:1 randomisation creating 4 groups: monoclonal (MBP134) + remdesivir, monoclonal alone, remdesivir alone, standard supportive care alone.
- Primary endpoint: all-cause mortality at day 28.
- Secondary endpoints: time to viral clearance, viral load at day 3/5/7/10, organ dysfunction progression, safety data.
- Eligibility: all patients admitted to a treatment facility with a positive filovirus RT-PCR (or neonate born to an affected mother).
- Regulatory submissions underway in both countries; aiming to start as soon as treatment units are operational.
- Long-term follow-up planned via linkage with national survivor programme.

10. Social Sciences in the Ebola Response in Ituri

Speakers: Jules Villa (medical anthropologist, Institut Pasteur) highlights the role of social sciences in the Ebola response in Ituri, DRC.

- Ebola is described as a bio-social event, shaped by both biological and social factors.
- The region faces major challenges: insecurity, humanitarian crisis, fragile health system, and high population mobility.
- Movement between urban areas and mining sites is a key driver of transmission, including cross-border spread to Uganda.
- The health system was already weakened, requiring long-term strengthening beyond the outbreak.
- Social sciences help understand local behaviors, mobility patterns, and community dynamics to improve response strategies.
- A central principle is to **place communities at the center** of interventions rather than stigmatizing their movements.
- Ongoing initiatives include expert networks, a community of practice on community protection, and an international Ebola social science roundtable.
- Overall, social scientists are actively engaged in an operational, emergency-focused response.

11. Cross-Cutting Issues and Discussions

Community engagement

- Vasee Moorthy: community engagement is not about maximising enrolment — it must inform whether the research should be conducted at all and how the design should be optimised for the local context.
- Nina Gobat (WHO) designated as lead on this component across all protocols.
- The arson attack on the Rampara treatment centre is a major warning signal on community acceptance.

Coordination — one protocol per domain

- Vasee Moorthy makes a strong call for one protocol per type of trial (treatment, PEP, vaccine) to avoid fragmentation and inter-team competition.
- WHO convenes and coordinates, but does not need to sponsor — local scientists must be in the lead.
- Special thanks to US NIH and CDC teams for participating despite current difficulties.

Modelling

- Unified modelling group being constituted: Mosoka Fallah + Prof. Alex (ARMA) + Ara Longini's team + Olivier (IMST EPI lead) + Oliver Morgan (Berlin Hub) + UK expertise.
- Vasee Moorthy insists: modelling groups must answer specific questions for Africa CDC and WHO, not publish unilaterally in The Lancet.

Funding

- EDCTP funds the EBOPEP trial.
- HERA (EU) supports the WHO R&D Blueprint operations.
- Wellcome Trust, CEPI, Gates Foundation: engaged.
- WHO Strategic Response Plan (SRP) under development — full financial needs mapping expected the following week.

Regulation

- Marco Cavaleri (EMA): regulatory coordination ongoing; all developers invited to submit data to WHO for review and prioritisation.
- Helen Rees suggests engaging the African Medicines Agency (AMA) alongside national regulatory authorities.
- WHO SAGE Working Group meeting scheduled for the following Monday for vaccine deliberations.

12. Summary — Identified R&D Priorities

Domain	Immediate Priority	Concrete Actions
Diagnostics	BDBV-specific RT-PCR decentralisation	Deploy portable systems; validate ROADI and new tools; implement repeat-testing algorithm
Genomics	Continuous genomic surveillance	Systematic sequencing; public deposition; monitor viral evolution
PEP	Launch EBOPEP-Bundibugyo trial	Ethics submissions DRC + Uganda; obeldesivir lead arm; molnupiravir under evaluation
Treatment	PARTNERS trial (MBP134 + remdesivir)	Regulatory submissions underway; start as soon as treatment units operational
Vaccine	Cross-protection evaluation + ring trial when vaccine available	TAG vaccines meeting following Monday; BDBV-specific single-dose vaccine as absolute priority
Modelling	Unified group for epidemic forecasts	Coordinated by Vasee Moorthy; focused on specific Africa CDC/WHO questions
Community engagement	Central in protocol design	Nina Gobat (WHO) lead; lessons from Rampara treatment centre incident

Document produced from the recording of the meeting of 22 May 2026.