

Ebola Vaccine Trial Launched in DR Congo

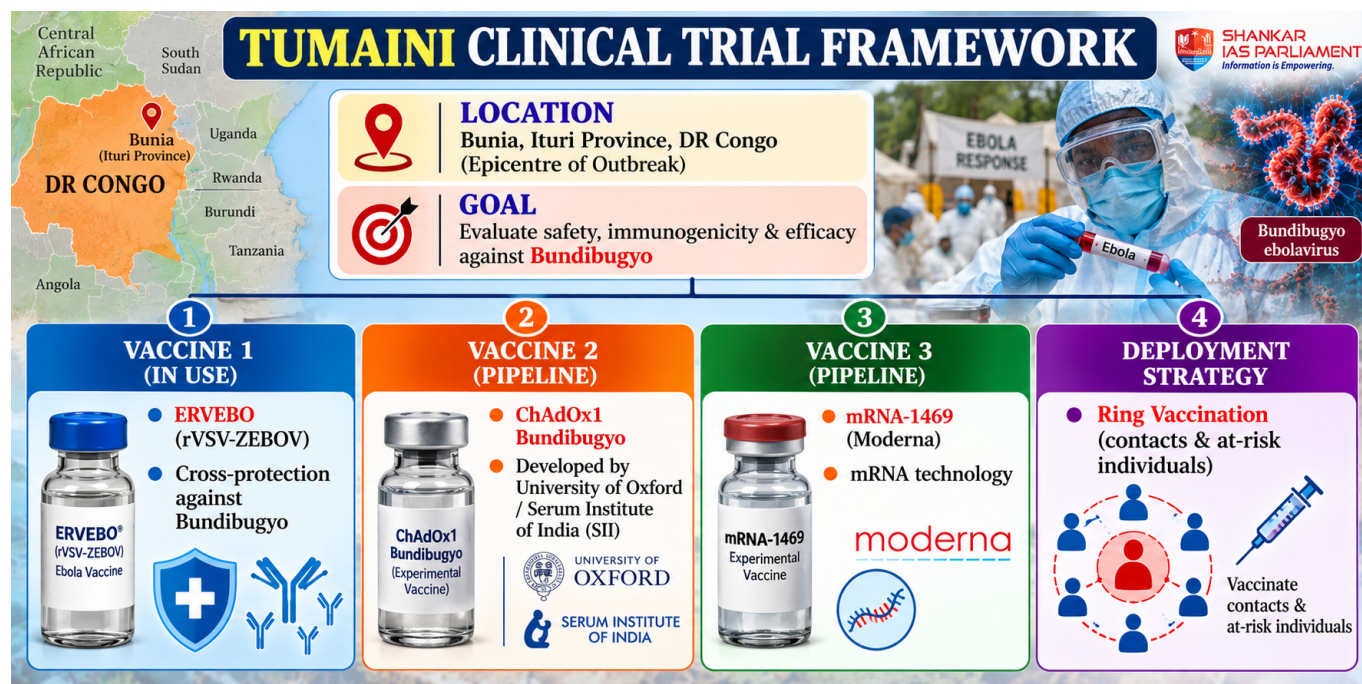
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Why in News?

Recently, the World Health Organization (WHO) launched the historic Tumaini clinical trial in Bunia (Ituri Province).

- The trial seeks to evaluate whether the existing **Ervebo vaccine**, originally approved for the Zaire ebolavirus.
- It can provide cross-protection against the **Bundibugyo virus (Bundibugyo ebolavirus)**, which is driving the worst outbreak in DRC history.

Key Highlights



Component	Operational Mechanism
Current Outbreak Context	- The DRC is facing its largest and deadliest Bundibugyo outbreak on record (>9,700 cases, >4,600 deaths across eastern provinces). - Africa CDC has declared it a Public Health Emergency of Continental Security (PHECS).

Ervebo Vaccine Profile	- Developed as rVSV-ZEBOV (recombinant vesicular stomatitis virus carrying the surface glycoprotein of <i>Zaire ebolavirus</i>). - Fully licensed for <i>Zaire ebolavirus</i>; the Tumaini Phase 2/3 trial tests whether it generates sufficient cross-reactive immunity against the <i>Bundibugyo</i> species.
Pipeline Vaccine Candidates	ChAdOx1 Bundibugyo - Monovalent adenoviral-vector candidate developed by the University of Oxford and Serum Institute of India (SII). mRNA-1469- Messenger RNA-based vaccine candidate developed by Moderna (funded by CEPI).
Vaccination Strategy	Uses a Ring Vaccination approach, inoculating direct contacts of confirmed cases, contacts of contacts, healthcare workers, pregnant women, and children aged 12 and above.

Ebola Virus Species

- There are **6 known species** belonging to the genus *Ebolavirus* (family *Filoviridae*).

Ebolavirus Species	Primary Outbreak Regions	Approved Dedicated Vaccines
<i>Zaire ebolavirus</i>	Central & West Africa	Ervebo (Merck), Zabdeno/Mvabea (J&J)
<i>Bundibugyo ebolavirus</i>	Uganda, DR Congo	No approved species-specific vaccine (Tumaini trial ongoing)
<i>Sudan ebolavirus</i>	Uganda, Sudan	No approved vaccine (Phase 2/3 candidates under evaluation)
<i>Tai Forest / Reston / Bombali</i>	Ivory Coast / Philippines / Sierra Leone	<i>Reston/Bombali non-pathogenic in humans / No human vaccines</i>

Strategic Significance

- Existing licensed Ebola countermeasures target only *Zaire ebolavirus*.
- Establishing cross-protection or validating species-specific candidates (*Bundibugyo*, *Sudan*) is critical for pandemic preparedness.
- By including vulnerable demographics (pregnant women and children ≥ 12 years), the Tumaini trial sets a benchmark for ethical medical research during active humanitarian and epidemiological crises.

Reference

[Aljazeera | Ebola vaccine clinical trial in DR Congo](#)