

Naobios and Tokyo Metropolitan Institute of Medical Science to develop new vaccine against mpox

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To develop a new vaccine based on a non-replicating highly attenuated vaccinia virus in most of mammalian cells



France-based Naobios, a CDMO providing bioprocess development and GMP production of clinical batches of virus-based products, and the Tokyo Metropolitan Institute of Medical Science (TMIMS), have announced their collaboration for the development of a new mpox vaccine using a live-attenuated vaccine.

Mpox is a viral illness caused by the monkeypox virus. It spreads mainly through close contact with an infected person, causing a painful rash, enlarged lymph nodes and fever.

Currently two mpox vaccines recommended by the WHO are in use:

- One developed in the EU based on the Modified vaccinia virus Ankara (MVA) strain
- One developed in Japan based on the LC16m8 strain

This collaboration aims to develop a new vaccine based on a non-replicating highly attenuated vaccinia virus in most of mammalian cells. This is of interest due to the extremely low possibility of seeing the emergence of a revertant strain that has mutated and is pathogenic to humans, which ensures a high level of safety.

The process development activities started this year and should be completed by end of Q3, 2025. For the rest of 2025 and into 2026, the partners will work on manufacturing the first technical batch, mimicking GMP conditions. The production of the GMP batch for phase I clinical trials will take place in mid-2026. The clinical studies spearheaded by TMIMS are planned for the end of 2026 and the beginning of 2027.