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Dengue vaccines approach the finish line.

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The spread of dengue virus (DV) via its Aedes mosquito vector throughout most of the tropics has led to a worldwide resurgence of epidemic dengue, including dengue hemorrhagic fever. For the first time in 60 years, the pipeline of dengue vaccines looks promising. Strains of each of the 4 DV serotypes, attenuated by passage in tissue culture or by recombinant DNA technology, have been formulated into tetravalent vaccines and have entered successful phase 1 and 2 clinical trials in the United States and Southeast Asia. Antibody-dependent enhancement of wild-type DV infections by the vaccine represents a unique safety issue, which is under investigation. The Pediatric Dengue Vaccine Initiative (funded by the Bill and Melinda Gates Foundation), the World Health Organization, industry, the US military, and governments of tropical countries are collaborating to accelerate dengue vaccine development and phase 3 vaccine efficacy trials in countries where dengue is endemic. A protective tetravalent vaccine must be licensed soon if dengue is to be brought under control.

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