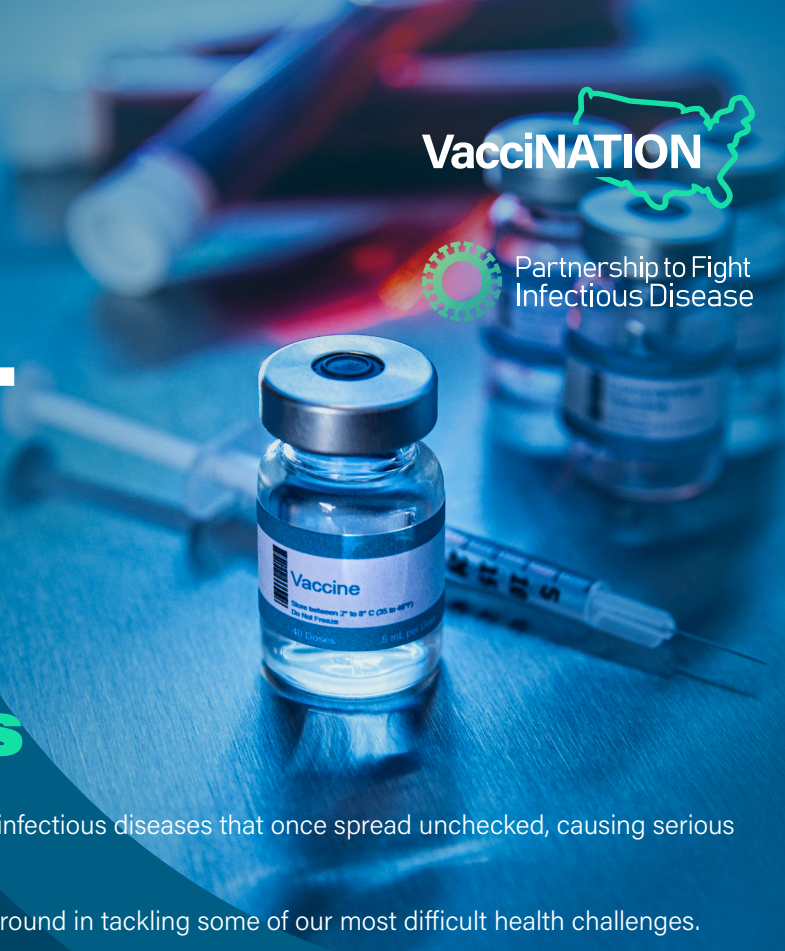


INNOVATIVE VACCINE R&D HOLDS SIGNIFICANT PROMISE in Fight Against Infectious and Chronic Diseases



Vaccines have successfully protected people from a host of infectious diseases that once spread unchecked, causing serious illness and death for generations.

Today, vaccine research and development is breaking new ground in tackling some of our most difficult health challenges.

Vaccines are being studied to prevent the spread of infectious diseases and protect against severe illness from these pathogens. They are also now being studied as potential treatments for a wide range of conditions, including cancer.

VACCINES IN DEVELOPMENT

Research area	Addressing unmet needs	Disease areas with vaccines in development include
Infectious illnesses	More than 13 million people a year die from infectious illnesses; most are under age 5.	HIV, gonorrhea, herpes, norovirus, Epstein-Barr virus, malaria, salmonella, tuberculosis, Ebola, Rift Valley Fever, Zika
Cancers (Existing vaccines protect against viruses associated with liver and cervical cancers)	Many cancer vaccines in development are therapeutic and act to enhance treatment for cancers already diagnosed and prevent cancer recurrence.	Adenomas, leukemias, lymphomas, solid tumors, and brain, breast, colorectal, gastric, liver, lung, melanoma, pancreatic, sarcoma, and uterine cancers
Many non-communicable diseases	Vaccines for diseases not associated with an infectious cause target the underlying causes of chronic conditions—for example, brain plaque development in Alzheimer’s disease. ²	Addiction, Alzheimer’s disease, arthritis, asthma, Crohn’s disease, Type 1 diabetes, high blood pressure, multiple sclerosis, obesity, and psoriasis

Vaccine research and development is concentrated in the United States. Private companies are developing more than two out of three potential vaccines either independently or collaboratively with academic or other non-profit organizations developing the remaining candidates.¹

Lowering the prevalence of severe illness not only protects patients and families but can also reduce overall costs –from time away from work or school to less need for hospital stays and doctor visits for preventable illnesses. Development of new vaccines expands our toolkit of safe and effective measures to prevent many kinds of infectious and other diseases.

¹ Vicidomini C, Borbone N, et al. Summary of the Current Status of DNA Vaccination for Alzheimer Disease. *Vaccines (Basel)*. 2023 Nov 10;11(11):1706. Available online: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC10674988/>.
² Yue J, Liu Y, et al. The R&D Landscape for Infectious Disease Vaccines. *Nature*. July 20, 2023. Available online: <https://www.nature.com/articles/d41573-023-00119-4>