Tulane researcher awarded $1.6 million grant to advance oral polio vaccine

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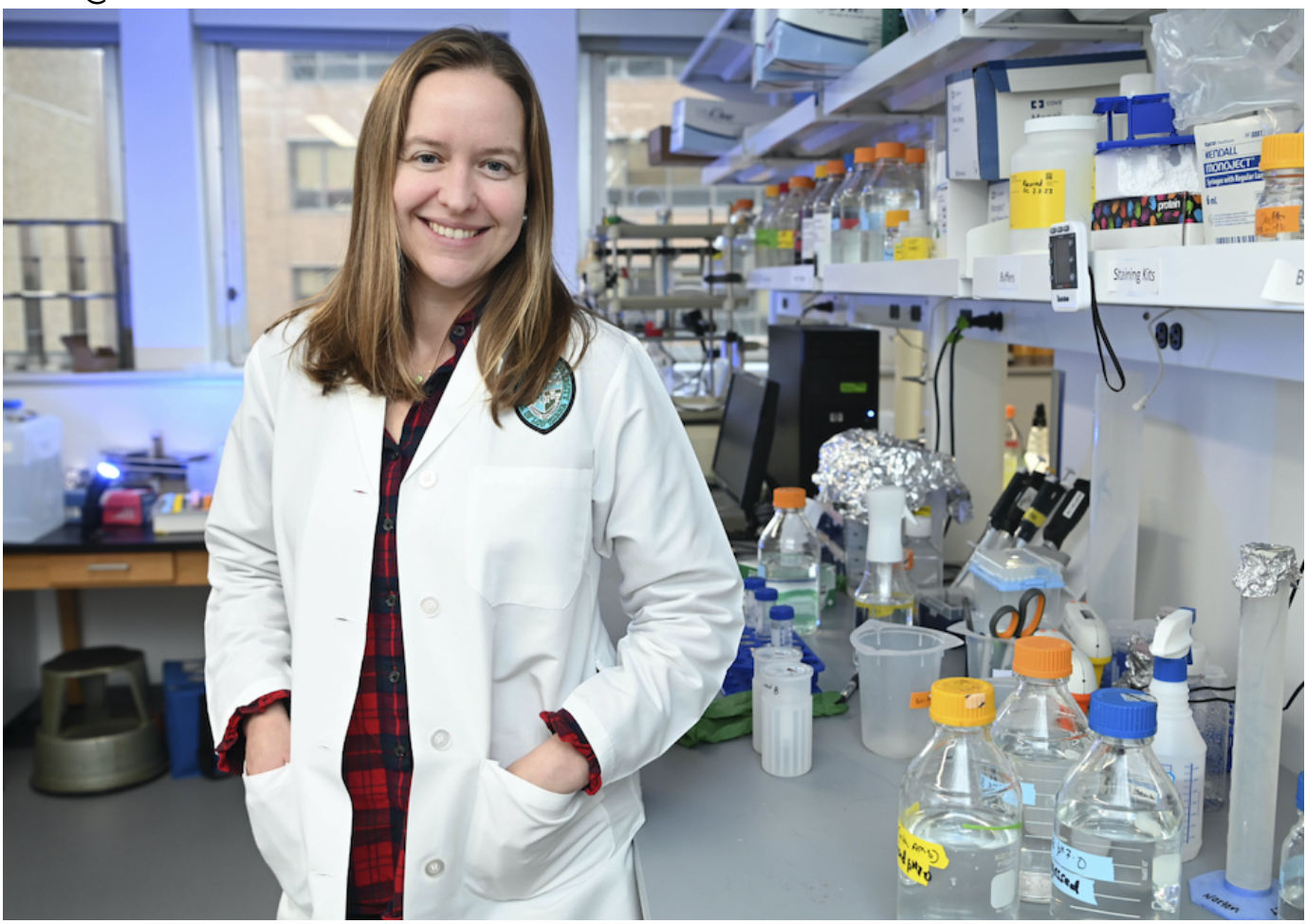

Elizabeth B. Norton's work on oral polio vaccines supports global eradication of the disease.

Tulane University immunologist Elizabeth B. Norton, PhD, has received a $1.6 million grant from the Gates Foundation to develop a next-generation oral vaccine against polio.

The award will fund Norton’s research into a new vaccine formulated with a novel combination adjuvant developed at Tulane in partnership with Q-Vant Biosciences. The vaccine would be taken orally, using either a liquid or fast-dissolving tablet

formulation. The adjuvant system combines material derived from a soapbark tree with a modified bacterial protein in order to guide vaccine components through gut tissue and trigger the right amount of immune activation to develop immunity to the polio virus.

According to Norton, this adjuvant system will work with non-live vaccine antigens, which have a lower risk of reversion than existing oral polio vaccines.

“Our goal is to create a safe, easy-to-administer vaccine that not only protects individuals from disease but also helps stop the virus from spreading in communities,” said Norton, associate professor of microbiology and immunology at Tulane University School of Medicine.

The highly infectious polio virus primarily targets under-vaccinated communities, including children below the age of five, and sometimes leads to permanent paralysis and even death.

While largely eliminated in most of the world, a number of countries continue to report new cases of the disease every year. This underscores the need for more accessible, effective and safe vaccines, Norton said.

According to the Centers for Disease Control, over 650 cases of polio were confirmed in 39 countries between January 2023 and June 2024. Norton noted that her effort supports global polio eradication efforts by exploring sustainable ingredients and alternative delivery routes that could be more practical in low-resource settings. If successful, the vaccine could offer a significant new tool in the fight to eliminate polio worldwide.

PATH, a global health nonprofit, is also a key partner in the project, helping to create and evaluate multiple formulations for stability and ease of use.