R&D Reflections from the Global Vaccine Stage

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The past few years have been full of changes across the globe – economic, political, scientific and cultural shifts have all played a part in how individuals view vaccines. Having participated in many medical and scientific meetings throughout 2025, I've had the opportunity to discuss the importance of scientific collaboration to tackle some of the world's most significant health challenges, the current trends in vaccination, as well as Novavax's technology and pipeline.

As we move into a new year, the reflections below serve as reminders of the importance of our work. Central to these considerations is the advancement of our innovative technologies aimed at addressing significant health challenges. Our strategic objective for 2026 and beyond is to enhance, scale-up and partner our technological platforms to catalyze transformation in global health outcomes.

1. Scientific rigor and knowledge sharing are vital to preventing infectious diseases, improving lives, and solving some of the world's most significant health challenges.

Throughout my career, attending scientific gatherings has been a priority, where we can explore major health questions beyond our desks and offices. I was fortunate to attend the following medical meetings this last quarter:

- World Health Summit (WHS) in Berlin, Germany
- World Vaccine Congress Europe (WVC) in Amsterdam, Netherlands
- European Scientific Working Group on Influenza (ESWI) in Valencia, Spain
- International Pandemic Preparedness Secretariat (IPPS) meeting in Tokyo, Japan
- American Society of Tropical Medicine and Hygiene (ASTMH) in Toronto, Canada

Several themes emerged across these meetings, including the need to: strengthen global health security, bring innovative vaccine science to help solve unmet needs across many disease areas, and prioritize global equity and access to vaccines. While each step is important, it's clear that we cannot achieve these without collaboration between public health agencies, academia and industry. As a company, we are committed to sharing timely and transparent updates on our science, and we will also continue to foster partnerships that drive innovation and safeguard global health.

2. While we're currently seeing declines in vaccination rates due to misinformation and lack of trust, we are optimistic that vaccination rates and vaccine confidence will improve globally.

As we know, infectious diseases and the need for vaccination know no borders, and while the need for vaccination globally remains constant, we continue to see regional differences in actual vaccination rates and vaccine confidence.

Vaccine confidence is a leading indicator of vaccination rates and varies worldwide, influenced by political, historical, cultural and socio-economic factors, with highs and lows, sometimes varying as much as 50-60% in the same region or country, year to year.

This is something we have seen in the flu vaccine market over the years and to some degree more recently in the U.S. with respiratory syncytial virus (RSV), shingles, measles, COVID-19 and other vaccines. For example, less than half of U.S. adults have been immunized against any respiratory virus this year, according to a recent survey. Only 6% have been vaccinated against RSV, a leading cause of hospitalization in infants and older adults. The survey outlined that top barriers to vaccination included concerns about side effects, lack of recommendations from healthcare professionals, doubts about efficacy, and concern about getting sick from the vaccine.[1]

Moving forward, it's clear that the scientific community must innovate to help address consumer concerns, such as tolerability and side effects.

By meeting vaccine needs in infectious diseases and expanding vaccine candidates for noninfectious diseases, it is estimated that the global vaccine market could grow at an average annual rate of 6-8%, to reach a size of over $75 billion by 2030.[2] At Novavax, our goal is to offer vaccines with improved tolerability to help create positive impacts on people's lives. With the needs of people at the forefront, we're optimistic that vaccination rates could improve.

3. **We are steadily advancing Novavax's R&D innovation and our early-stage pipeline to meet the needs of the future global vaccine market.**

Throughout the year, I had the opportunity to speak more about our technology and its incredible potential in vaccine R&D. I am energized by the reception I received from colleagues, researchers and industry participants. Like us, they see opportunities for our technology to optimize both new and existing vaccines and are excited to watch our early-stage programs evolve.

One of the key topics we have been presenting at medical meetings is the tolerability profile of Matrix-M-containing vaccines, a key differentiator of our technology platform. For example, active comparator studies of Nuvaxovid™ versus mRNA COVID-19 vaccines suggested a positive trend toward lower frequencies and intensities of local and solicited AEs (including muscle pain, fatigue and discomfort) and lower impacts of reactogenicity among our vaccine's recipients.[3,4] These findings are consistent with systematic reviews and meta-analyses, which are expected to be published in the near future. Importantly, these results may increase consumer confidence and lead to higher rates of vaccine uptake.

Our platform is fueling innovation in infectious diseases and beyond, and I'm personally excited about where cutting-edge technology can solve problems that haven't been preventable with vaccines before.

For example, clostridioides difficile colitis (C. diff) has no approved vaccine, so there's a tremendous opportunity to help those impacted by this bacterial infection that causes diarrhea and colon inflammation. There are about 500,000 cases each year in the U.S. alone,[5] and each case represents a friend, a parent or a colleague that is dealing with a serious medical condition impacting their daily lives. Our work strives to help address their needs.

We're advancing many other early preclinical vaccine candidates too, including ones for shingles, a RSV triple combination and pandemic influenza. COVID-19 reinforced the value of preparing for future viral threats, and our technology could help address several influenza strains with pandemic potential. For our Matrix-M adjuvanted pandemic influenza vaccine candidate, we're exploring the potential of a single dose vaccine option in individuals who had a previous exposure to seasonal influenza or received a seasonal influenza vaccine. Further, our candidate could potentially be given either intramuscularly or intranasally. These features may be critically important in the context of a future public health emergency given options for administration and fewer doses needed for protection.

Our team is focused on innovation that can help address these therapeutic areas. Alongside the broader scientific community, I'm encouraged by the prospect of improving vaccination rates in the future by advancing solutions that address unmet needs and meet consumer preferences.

References

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