Tracking COVID-19 Vaccine Development and Approvals:
An Online Resource that Simplifies the Evolving Global Landscape of COVID-19 Vaccines

Nicole E Basta PhD[1*], Katie Gravagna BA[1], Shannon B McKearnan PhD[2], Valérie Rodrigue MSc[1], Andy Becker BA[3], Erica EM Moodie PhD[1], on behalf of the VIPER Group[+]

[1] Department of Epidemiology, Biostatistics and Occupational Health, School of Population and Global Health, McGill University, 2001 McGill College, Suite 1200, Montreal, QC, Canada H3A 1A2
[2] Division of Epidemiology and Community Health, University of Minnesota, 300 West Bank Office Building, 1300 S 2nd St, Minneapolis, MN, USA 55454
[3] Division of Biostatistics, University of Minnesota, 420 Delaware St SE, Minneapolis, MN, USA 55455

***** Corresponding author
E-mail: nicole.basta@mcgill.ca

[+] The VIPER *(Vaccines, Infectious disease Prevention, and Epidemiology Research)* Group is led by Dr. Nicole Basta at McGill University and supports the COVID-19 Vaccine Tracker Team. Members of the team who have contributed to COVID-19 Vaccine Development and Approvals Tracker since 2020 include (alphabetical order): Vajini Atukorale (University of Toronto), Dr. Kimberly Bonner (University of Minnesota), Bethany Cheng (McGill University), Echo Gao (McGill University), Dr. Bridget Griffith (University of Minnesota and McGill University), Miranda Horn (McGill University), Jiewen Liu (McGill University), Dr. Meena Murugappan (University of Minnesota), Dawn Nederhoff (University of Minnesota), Alexandra Peebles (McGill University), Dr. Neeta P Regmi (University of Minnesota), Dr. Maria Sundaram (ICES Ontario), Manuela Tomic (University of Edinburgh), Dr. Angela Ulrich (University of Minnesota), Jacqueline Yao (McGill University).

Correspondence

The COVID-19 pandemic led to rapid vaccine development which has vastly outpaced typical timelines.[1] The complexity and scale of the global landscape of COVID-19 vaccine clinical trials and approvals makes monitoring vaccine development and progress both challenging and vitally important.

Our VIPER (Vaccines, Infectious disease Prevention, and Epidemiology Research) Group based at McGill University designed the COVID-19 Vaccine Development and Approvals Tracker (available at *covid19.trackvaccines.org*) in 2020 to provide detailed information about the COVID-19 vaccine landscape for a broad range of users. Our primary aim was to create an expert-driven resource to document the progress of vaccine candidates as they move through clinical trials phases and provide access to information about where vaccines have been approved/authorized for use.

Our tracker continues to be a resource that unifies and simplifies data and reports from multiple sources, including the WHO COVID-19 vaccine tracker and landscape[2], clinical trial registries, and the media, and provides more comprehensive information than any one source. Our team of researchers investigates and verifies all data which we then consolidate to provide an accessible dashboard that tracks the rapidly changing vaccine landscape.

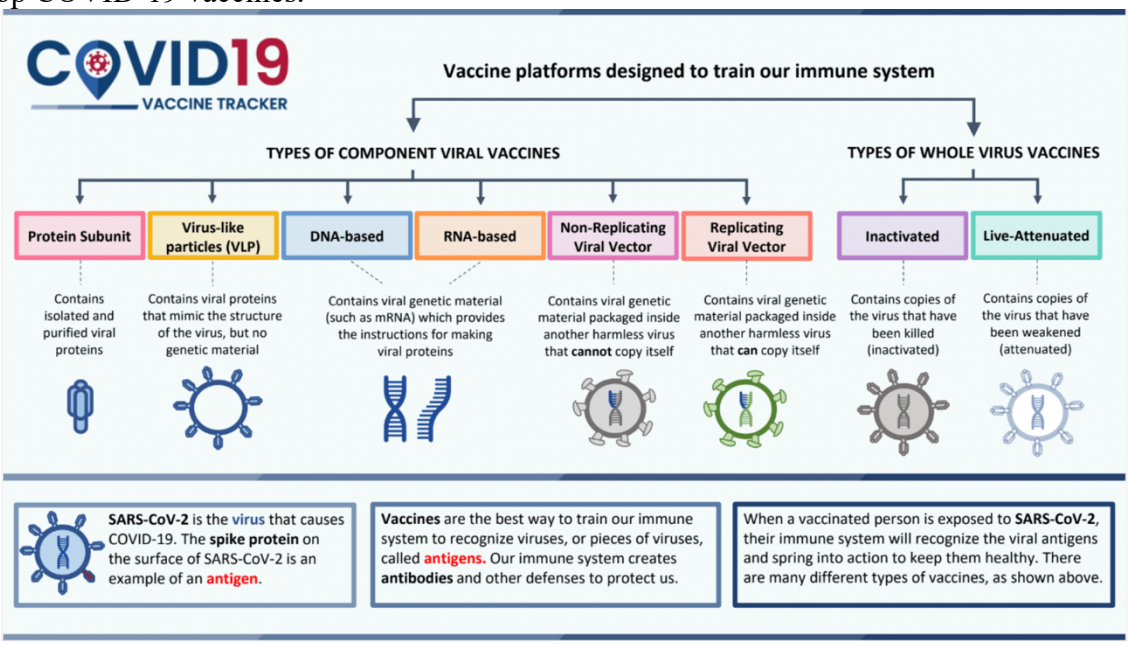
On our home page, we highlight key statistics about vaccine trials and approvals. As of November 2021, we are tracking 159 vaccine candidates, for which there are more than 500 trials (each phase counted individually), and 24 vaccines approved by at least one country or jurisdiction.

The global landscape page includes maps documenting where vaccine trials are taking place, where vaccines are approved, and vaccination uptake data from Our World in Data[3]. Our approved vaccines and vaccine candidates pages display and innovative design using individual "vaccine cards" with summary details about each vaccine. These cards link to detailed vaccine cards that include details about registered trial and a list of countries that have approved the vaccines, along with sources.

Our COVID-19 vaccine tracker has adapted many times to incorporate new and timely information, and has been viewed by nearly 5 million individual users from 240 countries and localities in the past year. By providing vaccine-level, country-level, and global data about COVID-19 vaccines, we provide a valuable global perspective. We also create educational content about how vaccines are evaluated and the many types of vaccines (Figure 1). Content on the site is available in English and can be translated into over 100 languages, powered by Google Translate.

The COVID-19 vaccine development and approvals landscape continues to evolve nearly two years after the first cases of SARS-CoV-2 were identified. Given that many vaccines remain in the development pipeline and new vaccines continue to be approved to meet global demand, we will continue to adapt our COVID-19 Vaccine Development and Approvals Tracker to ensure that it remains a critical resource for researchers, public health practitioners, the media, and the public.

Figure 1: Our COVID-19 Vaccine Development and Approvals Tracker available at covid19.trackvaccines.org provides key summary data about each of the more than 150 COVID-19 vaccine candidates under development and reports which vaccines are approved/authorized for use in countries around the world. Our infographic below describes the many types of vaccine platforms used to develop COVID-19 vaccines.



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Declaration of interests
The authors state that no conflicts of interest exist.

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