



Public Medicines for COVID-19: Tracking Public Investment in International COVID-19 Research and Development

Paper Citation:

Universities Allied for Essential Medicines. (2021). *Public medicines for COVID-19: Tracking public investment in international COVID-19 research and development* [White paper]. <https://www.publicmeds4covid.org>

1. Introduction

COVID-19 vaccines, therapeutics, and diagnostics are critical in the global effort to fight the pandemic and reduce the burden on currently overworked healthcare systems worldwide. The research and development of such life-saving COVID-19 innovations have been supported by taxpayer funds, as the recently approved first vaccines by Pfizer/BioNtech¹, Moderna², AstraZeneca³, and Johnson&Johnson⁴ clearly illustrate. As vaccines begin to be distributed, equitable access must be granted in order to avoid vaccine sovereignty, in which wealthier countries receive prioritized access to the vaccines while citizens in low-and-middle-income countries have to wait significantly longer⁵. The longer vaccine accessibility remains a barrier worldwide, the more time is given for new COVID variants to evolve and for more lives to be needlessly lost. As of March 30, 2021, only 0.1% of COVID-19 vaccines administered worldwide have gone to low-income countries, while 85% of doses have gone to high-and upper-middle-income countries⁶.

This global mapping initiative highlights the role of public funding in research and development for COVID-19 vaccines, therapeutics, and diagnostics. The mapping platform was first launched on May 18th, 2020, and included data from 13 countries in North America, Europe, Australasia, and East Asia. The second iteration of this platform includes updated funding information released after May 2020, three additional countries, and an updated user interface.

Only projects addressing COVID-19 (or coronavirus) from our search criteria were included in this report. However, most diagnostic, therapeutic, and vaccine research on viruses such as coronaviruses draws from existing research on infectious diseases including HIV/AIDS, Hepatitis C, Ebola, and Influenza, for example. These pools of existing research were not included in our search criteria. Thus, the full extent of public



investment towards developing COVID-19 vaccines, therapeutics, and diagnostics extends beyond what was captured in this report.

2. Objectives

This tool aims to evaluate the distribution of public funding for biomedical and other relevant research endeavors related to the development of COVID-19 vaccines, treatments, and diagnostics at research institutions across the 13 included countries. By visualizing where public funding is being directed, this mapping tool is designed to help hold publicly funded institutions accountable to the public and to better ensure access to, and affordability of, these crucial innovations.

3. Methodology

3.1 Data collection

Data collection relied upon publicly available sources and consisted of: a) surveying national government databases for COVID-19-related research projects; and b) using Google as a search tool to survey new COVID-19-related research not yet listed in initial government database search results. Data procured from Google searches were cross-referenced with national government research databases for data veracity.

The search strategy used the key terms “coronavirus”, “SARS-CoV-2”, “COVID-19”, “research”, and the corresponding research institution name. The inclusion criteria for this project were research projects receiving any public funding related to the development of a vaccine, therapeutic, or diagnostic for coronavirus, COVID-19, or SARS-CoV-2. All data entries were independently verified by a minimum of three team members prior to inclusion. Research projects related to COVID-19 in Australia, Austria, Belgium, Canada, Denmark, France, Germany, New Zealand, Norway, Spain, South Korea, Sweden, Switzerland, the Netherlands, the United Kingdom, and the United States were included for data collection. The data collection and analysis process was led by members of Universities Allied for Essential Medicines (UAEM) from each of the respective countries listed.

Any methodological differences amongst regions in data collection are delineated in the section below. Data was collected from August 2020 to December 2020 for the United States, Canada, and Korea. Data for European countries, Australia, and New Zealand was collected from June 2020 to September 2020.



North America

United States

The initial evaluation of American universities was limited to those which received the highest amounts of funding from public biomedical research funding agencies and were originally listed in UAEM's U.S. University Report Card: Global Equity in Biomedical Research⁷. In order to select this list of universities, the total U.S. National Institutes of Health (NIH) funding received by universities between 2010-2012 was added to the total National Science Foundation (NSF) funding received by universities within that same time period. The U.S. funding data was obtained primarily through a detailed search using the NIH Research Portfolio Online Reporting Tools (RePORT)⁸. Additionally, funding data was obtained through the NIH U.S. National Library of Medicine's ClinicalTrials.gov⁹, which includes privately and publicly funded clinical studies.

In the second iteration of the tool, country bids for dosage procurements were also taken into consideration using the Google keyword search, specifically entering the term "[Country] + COVID Vaccine Doses". The time frames that were evaluated included active projects in 2003-2018 and 2019-2020, in order to emphasize the significant increase in funding activity in the last year. Next, the data collection team used Google as a search tool to cross-reference the projects identified through the NIH RePORT tool to the publicized trials in different social media and news outlets in order to ascertain a more comprehensive understanding of the active projects currently under development. Additional university research institutions supported by public funding were added during this search process. Each of the identified projects and their corresponding funding amounts was cross-checked by at least three individuals of the data collection team.

The second iteration of this project further expanded the search to include the Biomedical Advanced Research and Development Authority (BARDA). Data for all of BARDA's funding of COVID-19 research and development was retrieved through their own mapping tool and website¹⁰. All data used in the calculation of COVID-19 related funds were selected by specifying the "Threat Area" of "COVID19". These numbers were then confirmed and cross-referenced with Public Citizen's BARDA Tracker¹¹.

Canada

The Canadian methodology included universities in the U15 Group¹², a collective of Canada's most research-intensive universities which were also listed in UAEM's



Canadian University Report Card¹³. The data collection process was slightly modified for Canadian data collection due to the existence of a government database of funded COVID-19-related projects. First, the Canadian Institutes of Health Research (CIHR) website was evaluated, which contained a detailed list of the funded COVID-19 research projects¹⁴. Secondly, this list was then cross-referenced with the Funding Decisions Database¹⁵ on the CIHR website to confirm that there were no funded studies omitted from the original list. The search terms used were as follows: “Operating grant/COVID-19/Therapeutics”, “Operating grant/COVID-19/Vaccines”, as well as, “Operating grant/COVID-19/Clinical management.” Third, the data collection team used Google as a search tool to identify any new COVID-19 university research projects not listed on the CIHR website nor documented in the Funding Decisions Database. Each of the identified projects and their corresponding funding amounts was cross-checked by at least two individuals of the data collection team. These same terms were also applied to Genome Canada¹⁶ searches, as well as The Natural Sciences and Engineering Research Council of Canada¹⁷ and a final Google search to ensure that as many funding announcements from the Canadian Government and its public agencies were captured.

Australasia

Australia

In Australia, the data collection team focused on recent and ongoing COVID-19 research projects. Australian universities in the Group of Eight¹⁸ were included in this list because these are ranked as Australia’s leading university research institutions. First, the team searched the Australian New Zealand Clinical Trials Registry¹⁹ and the Australian Government’s Australian Clinical Trials²⁰ registries for clinical trials related to COVID-19. Next, the Australian National Health and Medical Research Council (NHMRC)²¹ website was checked for relevant university research projects. Funding data for NHMRC supporting projects was determined from their website²². Additionally, other public funding agencies receiving NHMRC funding, such as APPRISE (Australian Partnership for Preparedness Research on Infectious Diseases Emergencies) Centre of Research Excellence’s COVID-19 fast-tracked new project list, were also checked for research related to COVID-19. Funding data identified through these ways was then cross-checked with the Australian government’s grant information system, GrantConnect. Data collection also included the Medical Research Future Fund (MRFF), a major fund for health and medical research set up by the Australian Government and worth \$20 billion. Relevant Covid-19 projects funded by the MRFF



were determined from their grant recipients list²³. Each university's website news outlet was then checked for COVID-19-related research. Next, the data collection team used Google's search tool to check different social media and news outlets to identify any additional ongoing COVID-19 research at each university. Each of the identified projects and their corresponding funding amounts was cross-checked by at least two individuals on the data collection team.

New Zealand

The New Zealand data collection team also focused on recent and ongoing COVID-19 research. All New Zealand universities were included in this search (the University of Auckland, the University of Otago, Massey University, Victoria University of Wellington, the University of Canterbury, Lincoln University, Auckland University of Technology, and the University of Waikato). A media release from the New Zealand Health Research Council²⁴ was first used, which lists ongoing government-funded studies relevant to COVID-19. Next, the data collection team used Google to check different social media and news outlets to identify any additional ongoing COVID-19 research. Each of the identified projects and their corresponding funding amounts was cross-checked by at least two individuals on the data collection team.

Europe

Austria, Belgium, Denmark, France, Germany, Norway, The Netherlands, Spain, Sweden, Switzerland, and The United Kingdom

In Europe, public funding from both national and European bodies was tracked. It must be highlighted that the organization of research infrastructures as well as the public funding landscape across Europe is highly complex, often with substantial differences between countries. As a result, the methodology for this mapping had to be amended for every country. Generally, data sources included the websites of national and EU governments and relevant ministries, national public health and research institutes, major public funding institutions for biomedical and health research, universities, and the website of the European Clinical Trials Register²⁵. Additionally, the European data collection team also used Google's search tool to identify additional research projects as well as to cross-reference the already identified projects for missing and/or further information. An exhaustive list of funding institutions per country searched for data collection can be found in Appendix A.

It must be noted that the Mapping tool lists the 'European Commission' as a separate country, rather than only a European funding institution. This is because European Commission's funds for COVID-19 research and development come from its EU budget which does not allow to track back EU member states' individual contributions to grants given by the European Commission.

Asia

South Korea

The South Korean methodology included public research universities, leading private research universities, institutes of science and technology, relevant postgraduate-only institutes, universities with medicine programs, and universities with pharmacy programs. Eliminating repeating results, the data collection team analyzed 59 universities.

The team collected data through four channels:

- a) National Science & Technology Information Service (NTIS, 국가과학기술지식정보서비스)²⁶, the official information platform on national research and development programs;
- b) Google search, of which results were confirmed with official university websites;
- c) NIH U.S. National Library of Medicine's ClinicalTrials.gov⁹, a database with international clinical trials; and
- d) Pharmaceutical Integrated Intelligence System (의약품안전나라 의약품통합정보시스템)²⁷, the Korean equivalent of ClinicalTrials.gov.

Search entries used for NTIS and Pharmaceutical Integrated Intelligence System were "코로나19" (Corona 19) and "SARS-CoV-2". All findings were cross-checked by at least two individuals on the data collection team.

3.2 Data analysis

To maintain standardization across regions with different currencies, currency conversion was calculated through the platform using the grant funding start year and international annual currency conversion averages for that year.

Projects were sorted into the categories of "Vaccine", "Therapeutic", and/or "Diagnostic", based on their research focus. In some instances, research projects were assigned to more than one category. The total funds invested toward research on vaccines,



compared to therapeutics or diagnostics were calculated separately from one other in the platform dashboard. This means the fund amount for a research project categorized as both “vaccine” and “therapeutic” would count toward both the sum invested toward vaccines and the sum invested toward therapeutics.

Percent transparency was calculated based on the number of research projects with disclosed funding amounts compared to undisclosed funding amounts in the database, with the denominator being the total number of research projects listed in the database. It must be noted that some research projects received multiple grants. If a research project received a grant with an undisclosed amount of public funding, the project’s overall fund amount was considered to be undisclosed.

4. Results

Please see the [executive summary](#) (Appendix C) for a summary of the findings from the second iteration of the project.

5. Limitations

This mapping tool is a unique international student-led research project collecting crucial data about the extent of public funding invested into COVID-related research.

Several limitations to our methodology must be mentioned:

- **The methodology for this mapping tool was created from scratch** during the unfolding pandemic. While the methodology has been refined several times to adapt to the emerging COVID-19 funding and research landscape, tracking the mushrooming of funding calls and research initiatives has been challenging.
- As we rely on publicly available data, we acknowledge that **the data presented may not be comprehensive**. Furthermore, data relevant to this mapping tool, notably the amount of funding, has not always been disclosed, posing an obstacle for full transparency and accountability. Thus, the actual amount of public funds invested toward COVID-19 research is likely underestimated by our research. It must be highlighted that especially **during the first months of the pandemic in 2020, the quality and transparency of funding data related to COVID-19 research has been poor**.
- **The diversity of funding and research landscapes** across the different countries made it difficult to develop a single, standardized methodology. To

enable methodological alignment and comparability while safeguarding regional idiosyncrasies, a general methodology that was modified by region was used.

- **The complexity of the funding and research infrastructures relevant for COVID-19 was particularly pertinent in Europe where these structures** often differ substantially between countries. In addition, many of the identified research projects have been conducted by consortia extending across various European countries, complicating the data validation process. Language also posed a barrier for the European data collection team as they were dependent on people speaking a country's language in order to be able to collect data there.
- **The data collection and analysis for this mapping tool relies entirely on student volunteers.** Due to their differing availability and other responsibilities, data collection periods differed between countries.
- The reliance on UAEM student volunteers also means that **the first two iterations of this mapping tool have only included a limited list of countries, notably wealthy Western countries**, as UAEM chapters in these countries were able to commit the resources for data collection and analysis. We recognize the lack of a global representation in our data and strive to fill these gaps in future iterations.

6. Conclusion

The mapping tool makes a critical contribution to COVID-19 research. It presents important data about public funding of COVID-19-related research into vaccines, therapeutics, and diagnostics and curates this in **an innovative tool that is easy to understand and use**. It provides evidence about lack of transparency, privatization of publicly-funded initiatives, and where strategic COVID-19 research projects are coordinated and led. The tool has an **international scope** while also remaining sensitive to regional specificities. Each region had a team of researchers who are knowledgeable about that specific research landscape. UAEM encourages students, researchers, policy-makers, and citizens to use the tool's information to advocate at the global, regional, institutional, and/or project-specific level for **COVID-19 vaccines, therapeutics, and diagnostics which must be available and affordable for all**.

7. Acknowledgements

This project was made possible with the help of our international team of research volunteers (Appendix B), support and guidance from Universities Allied for Essential



Medicines (UAEM) and UAEM Executive Director Merith Basey, and collaboration with Public Citizen for the inclusion of BARDA projects in the dataset. No external funding was received for this project.

Universities Allied for Essential Medicines (UAEM)

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Release date: April 14, 2021

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Appendix A: List of European funding institutions

Below is an exhaustive list of funding institutions in the European countries that have been searched for data collection.

Country	Funding institutions
Austria	<ul style="list-style-type: none"> - Wiener Wissenschafts-, Forschungs- und Technologiefonds (WWTF) - Medizinisch Wissenschaftlicher Fonds des Bürgermeisters der Bundeshauptstadt Wien - Österreichische Diabetesgesellschaft (ÖDG) - European League against Rheumatism (eular)
Belgium	<ul style="list-style-type: none"> - Department Economie, Wetenschap & Innovatie (EWI) van de Vlaamse Overheid - Fonds Wetenschappelijk Onderzoek (FWO) - Vlaams Instituut voor Biotechnologie (VIB) - Federaal Kenniscentrum voor de Gezondheidszorg (KCE) - Flanders Make (Initiative of the Flemish government) - Sciensano
Denmark	<ul style="list-style-type: none"> - Uddannelses- og Forskningsministeriet - Innovationsfonden Denmark - Danmarks Frie Forskningsfond
European Union	<p>European Commission via:</p> <ul style="list-style-type: none"> - European Research Council - Horizon 2020 - MSCA projects researching COVID-19, SARS-CoV-2 and related topics
France	<ul style="list-style-type: none"> - Ministère de l'Enseignement Supérieur, de la Recherche et de l'Innovation (MESRI) - Ministère des Solidarités et de la Santé (MSS) - Alliance nationale pour les sciences de la vie et de la santé (aviesan) - REACTing (a multidisciplinary research consortium) - Agence Nationale de la Recherche (ANR) - Assistance publique – Hôpitaux de Paris (AP-HP) - Institut National de la Santé et de la Recherche Médicale (INSERM) - Université de Bordeaux - Covid-19 Research Lille - Taskforce
Germany	<ul style="list-style-type: none"> - Bundesministerium für Bildung und Forschung (BMBF) - Bundesministerium für Gesundheit (BMG) - Bundesministerium für Wirtschaft und Energie (BMWi) - Deutsches Zentrum für Infektionsforschung e.V. (DZIF) - Deutsche Forschungsgemeinschaft (DFG)

	<ul style="list-style-type: none"> - Relevant ministries at <i>Länder</i> level (e.g., education, science and research)
The Netherlands	<ul style="list-style-type: none"> - ZonMW - Ministerie van Volksgezondheid, Welzijn en Sport (VWS) - Ministerie van Onderwijs, Cultuur en Wetenschap (OCW) - Nederlandse Organisatie voor Wetenschappelijk Onderzoek (NWO) - Nederlandse Organisatie voor Toegepast Natuurwetenschappelijk Onderzoek (TNO) - Koninklijke Nederlandse Akademie van Wetenschappen (KNAW)
Norway	<ul style="list-style-type: none"> - Norwegian government - Forskningsrådet
Spain	<ul style="list-style-type: none"> - Instituto de Salud Carlos III (Ministerio de Ciencia e Innovación) - Consejo Superior de Investigaciones Científicas (CSIC) - Fondo SuperaCOVID (colaboración entre CRUE Universidades Españolas, CSIC, Banco Santander) - Centro para el Desarrollo Tecnológico e Industrial (CDTI, Ministerio de Ciencia e Innovación) - Direcció General de Recerca i Innovació en Salut del Departament de Salut (DGRIS Catalunya)
Sweden	<ul style="list-style-type: none"> - Vetenskapsrådet - Forte
Switzerland	<ul style="list-style-type: none"> - Schweizerischer Nationalfonds zur Förderung der wissenschaftlichen Forschung (FNS)
The United Kingdom	<ul style="list-style-type: none"> - Medical Research Council (MRC) - UK Research & Innovation (UKRI)



Appendix B

Below is a list of volunteers who contributed to the second iteration of the COVID-19 Mapping Project.

Australasian team: Jennifer Nguyen, Tessa Marshall, Jenny Shi, Jessie Li-Tan, and Annu Chacko

European team: Natalie Rhodes, Lisa Dieminger, Irene Romero Bhathal, Xavier Masset, Hanna Schenk, Luce Mosselmans, Alexandra Ng, Rhiannon Osborne, Charlotte Menart, Rachel Nirmal, Ismail Elouafiq, Joanna Bordersen, Poppy Horsford, Dorothea Sträßner, Nicola Hochberger, Henna Reddy, Krsna Mohnani, Meryam Benaichouche, Charlotte Leung, Marie Vadstrup Pedersen, Asbjørn Krom-Thaysen, Fiona Davey, and Irshad Irfanah Shaik Fareed

Korean team: Soyeon Park and Hannah Chang

North American team: Jennifer Nguyen, Sapna Ramappa, Varoon Mathur, Avani Reddy, Klara Lou, Varun Srikanth, Sumin Lee, Sungmin Lee, Jessica Situ, Claire Ross, Julia Briggs, Michelle Hennessey, Olivia Bonardi, Fred Choi, and Ryan Seo



Appendix C

COVID-19 MAPPING PROJECT: EXECUTIVE SUMMARY

Released April 14, 2021

Background:

COVID-19 vaccines, therapeutics, and diagnostics are critical in the global effort to curb the pandemic and reduce the burden on currently overworked healthcare systems worldwide. Our tracking tool aims to visualize the extent to which taxpayer funding has supported research and development (R&D) for COVID-19 vaccines, therapeutics, and diagnostics.

As vaccines begin to be administered worldwide, ensuring equitable global access is imperative to bring the pandemic to an end and mitigate the impact of new variants. Furthermore, significant public investment in the development of these vaccines should be reflected accordingly in public accessibility to the vaccine. Two key global issues have arisen regarding access to the COVID-19 vaccine:

- a) Vaccine nationalism, where countries compete with one another for first access to the COVID-19 vaccine; and
- b) Vaccine sovereignty, where wealthier countries pre-purchase vaccine doses in bulk, blocking low-and-middle-income countries (LMICs) from access to the vaccine and also driving up the purchasing price.

Equitable access worldwide to the COVID-19 vaccine is key to bringing the pandemic to an end. If other countries are blocked from accessing the vaccine, it prolongs the pandemic, thus giving more time for virulent and contagious strains making current COVID-19 vaccines less effective. Data collection for the tracking tool commenced on March 15, 2020, and was released two months later in May. The second iteration of the tool was released on April 14, 2021.

Key Findings:

- Globally, 68% of total funding towards COVID-19 biomedical research was dedicated to vaccine research and development. Only 82% of those total funds were disclosed, highlighting a gap in transparency in research funding.
 - Such lack of transparency inhibits institutions from taking accountability in the accessibility and affordability of resulting technology. As a result, this should be noted as a potential limitation in our research, as the funding amounts available publicly are therefore likely to be an underestimate of the total funding invested in research. Importantly, this demonstrates the need for increased transparency of publicly funded research funding.
- The United States has committed the most funding for COVID-19 research from public, private, and philanthropic sources, with more than \$16 billion USD invested.
- Pharmaceutical corporations ModernaTX, Inc., AstraZeneca, Sanofi Pasteur/GlaxoSmithKline, and Pfizer Inc. have received the most public funding for COVID-19 R&D, with a total of over \$8 billion USD. Despite this massive investment, no conditions have been made to ensure the fruits of these public funds such as the COVID vaccine remain equitably accessible and affordable to the public. In fact, Moderna, AstraZeneca, and Pfizer are [raising their vaccine prices](#), and Pfizer is expected to make [\\$15 billion in profit](#) from the COVID-19 vaccine this year.

North America

There were roughly 600 research projects in North America: 464 projects in the United States (US) and 131 projects in Canada. While America invested more than \$16 billion USD toward COVID-19 research, Canada invested over \$71.1 million USD (\$95.9 million CAD) in public funding. In the United States, the total funding from the Biomedical Advanced Research and Development Authority (BARDA), a division of the Department of Health and Human Services, one of the federal entities leading this effort, committed more than \$14 billion dollars of public funds by November 2020. American universities with the most funding from public sources were The University of North Carolina at Chapel Hill, Vanderbilt University, and Emory University, each receiving at least \$91 million, \$65 million, and \$53 million USD respectively. In Canada, the institutions that received the most funding were the University of Alberta, the



University of British Columbia, and McMaster University. Both the United States and Canada had relatively high transparency percentages regarding public funding, with 95.4% of US funding amounts disclosed, and 96.6% of Canadian funding amounts disclosed.

Europe

Overall, Europe has carried out 612 total research projects across 11 countries: Austria (52), Belgium (18), Denmark (25), France (76), Germany (138), Norway (12), the Netherlands (59), Spain (117), Sweden (17), Switzerland (29), and The United Kingdom (69). While Denmark, Germany, Norway, Spain, and Switzerland spent more on research for COVID-19 therapeutics, Austria, Belgium, the European Commission, Sweden, and the United Kingdom spent more on vaccines and the Netherlands spent more on diagnostics. Throughout Europe, the institutions that received the most funding were the University of Oxford (United Kingdom), Charité Universitätsmedizin Berlin (Germany), and CureVac AG (Germany). In several European countries, including Austria and the Netherlands, there was little transparency in the amount of funding received, for which funding amounts were disclosed for 16.7% and 5.3% of grants, respectively. Full transparency with regards to public investment for COVID-19 innovations is crucial, as it further holds institutions accountable to increasing accessibility and affordability of these discoveries.

Australasia

Australia and New Zealand performed 44 research projects in total, with 30 research projects in Australia and 14 research projects in New Zealand. Australia invested more than \$22.8 million USD (\$37.9 million AUD) of public funds into the research and development of COVID vaccines, therapeutics, and diagnostics. The majority of this was invested into vaccines, with the University of Queensland receiving over \$17 million USD (\$25 million AUD) for vaccine research and development. Minimal information was available for New Zealand regarding public funds invested into COVID research and development. Overall, transparency was a key barrier in collecting data regarding public funds allocated to COVID-19 research in both Australia and New Zealand. There was minimal transparency regarding Australian and New Zealand project funding and funding distribution from government sources, which greatly limited the search results.

Asia (South Korea)

In total, the Republic of Korea had nearly \$1.3 million USD (\$1.6 billion KRW) of public funds invested into its 17 COVID-19 related diagnostics, therapeutics, and vaccines projects, with a bulk of the funds invested towards diagnostics. Jeonbuk National University, Kyungpook National University, and Chosun University received the majority of the capital.

Recommendations:

1. The COVID-19 Mapping Tool demonstrates the crucial role of public funding in COVID-19 R&D. In order for the public to receive a fair return on investment, we must ensure that these life-saving innovations are accessible and affordable worldwide.
2. Universities and publicly-funded research institutions have a responsibility to be accountable to the public, focusing first on the health needs of the global population instead of profits, especially in the midst of a global pandemic. We urge universities and institutions to sign the World Health Organization's recognized Open COVID Pledge, which calls for COVID-19 related intellectual property to be available and free of charge for use in ending the COVID-19 pandemic and minimizing the impact of the disease. Further, universities can support the WHO's COVID-19 Technology Access Pool (C-TAP), which will compile, in one place, pledges of commitment made under the Solidarity Call to Action to voluntarily share COVID-19 health technology-related knowledge, intellectual property, and data.
3. Governments should support an emergency COVID-19 waiver of the World Trade Organization's (WTO) Council for Trade-Related Aspects of Intellectual Property Rights (TRIPS) to ensure enough vaccines, treatments, and diagnostic tests can be manufactured in as many places as possible to meet the needs of people everywhere.

The COVID-19 pandemic cannot be stopped everywhere unless vaccines, treatments, and diagnostics are available everywhere so that new variants which evade current vaccines do not continue to proliferate. It is time for universities and research institutions to be held accountable for responsibly stewarding the public funds and trust placed in them by the public in order to save lives around the world.