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Chair: The Honourable Judy A. Sgro



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• (1110)

[English]

The Chair (Hon. Judy A. Sgro (Humber River—Black Creek, Lib.)): I'm calling meeting number 24 to order.

Today's meeting of the House of Commons Standing Committee on International Trade is webcast and is taking place in the hybrid format, pursuant to the House order of January 25, 2021.

I welcome all my colleagues back today on a beautiful Monday morning, and the start of, hopefully, a very successful week.

Pursuant to Standing Order 108 and the motion adopted by the committee on March 12, 2021, the committee will proceed with its study of Canada's international trade and investment policy with regard to selected considerations concerning the COVID-19 vaccines.

I'd like to welcome our witnesses this morning.

We have, as an individual, Brian Daley, lawyer and partner, Norton Rose Fulbright Canada. Hopefully, he's going to get hooked up to join the committee proceedings.

We have Marc-André Gagnon, associate professor, School of Public Policy and Administration, Carleton University.

From the Canadian Chamber of Commerce, we have Mark Agnew, vice-president, policy and international, and from Providence Therapeutics, we have Brad Sorenson, chief executive officer.

Professor Gagnon, you have the floor.

[Translation]

Dr. Marc-André Gagnon (Associate Professor, School of Public Policy and Administration, Carleton University, As an Individual): Thank you, Madam Chair.

I want to thank the committee members for the opportunity to speak with them. My presentation will focus on intellectual property related to COVID-19 vaccines, along with ways to increase vaccine manufacturing in Canada and abroad.

I'm an associate professor at the Carleton University School of Public Policy and Administration. I specialize in political economy in the pharmaceutical sector, and I have over 150 publications to my name. Aside from my role as an expert witness for Justice Canada in a 2020 Superior Court of Québec trial concerning the price regulation of patented drugs, I have no conflicts of interest to disclose.

In the early days of the COVID-19 pandemic, it was impressive to see how researchers from around the world worked together

based on the principles of open science. They systematically shared data to sequence the virus genome, track the development and variations of the virus, or produce protective or screening equipment.

In Canada, the federal government passed the COVID-19 Emergency Response Act, Bill C-13, back in March 2020. This made it possible to use compulsory licences for six months for any technology related to COVID-19, in order to address potential shortages. This measure wasn't renewed in September 2020. However, the federal government can renew it at any time if necessary.

In May 2020, the World Health Organization, or WHO, established the COVID-19 technology access pool, or C-TAP, based on open science principles, in order to promote the sharing of expertise and knowledge regarding technology to combat COVID-19. The Unitaid-funded medicines patent pool, or MPP, also expanded its mandate to make it possible to share patents related to COVID-19.

Initially, things were very promising. There seemed to be a shift towards a scientific endeavour based on technological collaboration and data sharing to ensure that each country could maximize its efforts to fight COVID-19. Unfortunately, the old mindset of proprietary science for patents and technological monopolies quickly came back into play. No firm has yet agreed to share its technology with C-TAP or MPP.

Instead, each firm works in silos to maximize revenues. Vaccine firms have generally been very reluctant to negotiate licensing agreements to allow for increased production. AstraZeneca has been more flexible than other firms. However, this was part of the conditions that Oxford University established for supplying the vaccine. Since the potential revenues of firms depend on their ability to maintain control over technological expertise, this isn't surprising.

Each firm is seeking to control as much of its vaccine intellectual property as possible, rather than allowing for licensing agreements and maximizing overall production.

Even though governments have invested over \$14 billion in vaccine development, it's still considered normal for vaccines to remain entirely monopolized by the private sector. The development of the COVID-19 vaccines by Moderna, AstraZeneca, Johnson & Johnson and Novavax was fully funded by public investments or non-profit organizations. Yet the vaccine is still monopolized by a firm-owned patent.

The prioritization of corporate property rights over global public health needs has led to the current situation. All countries are elbowing their way to the door of these firms so that the firms will agree to sell and deliver doses as quickly as possible to them, rather than to their neighbour. Regardless of public health priorities, it's everyone for themselves. It's vaccine nationalism.

However, Canada is doing quite well in this game of vaccine nationalism. It has managed to obtain a maximum number of doses amounting to 500% of its needs. Almost a quarter of the Canadian population has already been vaccinated.

Nevertheless, this game is highly troublesome in its own right. Production delays at Pfizer, Moderna and AstraZeneca have created major tensions in international trade. Instead of working together to produce as many vaccines as possible, countries are working against each other in order to distribute vaccines globally based on corporate priorities.

As of April 19, 2021, over 800 million doses of vaccine have been administered worldwide. Of these doses, 82% have been administered in wealthy countries, while only 0.2% have been administered in low-income countries, primarily through the COVAX initiative. It's estimated that the poorest countries will need to wait until 2024 to vaccinate their populations. In addition, Pfizer has just announced that its vaccine may require boosters, a third dose, and possibly annual boosters after that. This may further extend the delays for low-income countries.

- (1115)

Canada has vaccine production capacity. Why isn't that capacity being used right now to combat COVID-19?

In late January, Canada announced a \$126 million investment in the National Research Council to expand vaccine production capacity.

The National Research Council is located on Royalmount Avenue, across the parking lot from PnuVax. For months, PnuVax officials have been touting their Health Canada-licensed assembly line and their readiness to begin producing a vaccine. However, they're unable to enter into licensing agreements with the various firms, and Canada isn't helping them negotiate with the firms. Canada has production capacity that isn't currently being used.

Recently, Biolyse Pharma, based in St. Catharines, Ontario, asked to list COVID-19 products under schedule 1 of the Patent Act. This would make it possible for the corporation to produce and export the Johnson & Johnson vaccine under a compulsory licence, for example through Canada's access to medicines regime, or CAMR. Yet Canada refuses to amend schedule 1 to allow a Canadian company to produce vaccines for low-income countries in the event of a pandemic. This is completely unacceptable.

Currently, about 100 countries, led by countries such as India and South Africa, are asking the World Trade Organization, or WTO, to suspend intellectual property rights related to COVID-19 in order to facilitate technology sharing and to allow for increased vaccine production by the end of the pandemic.

The suspension of the Trade-Related Aspects of Intellectual Property Rights Agreement, or TRIPS agreement, would be a much better tool than the current flexible measures in the agreement. I'm talking about article 31 of the agreement, which says that every country must obtain a licence. A country that applies for a compulsory licence can get one, but it must then figure out how to implement the compulsory licence within the country. A suspension of the agreement provisions related to COVID-19 products would give individual countries the chance to actually work together to use their production capacity. South Africa and India have vaccine production capacity that isn't currently being used because of the lack of flexibility in the TRIPS agreement.

However, Canada, the United States, Europe, the United Kingdom and Switzerland are adamantly opposed to this type of suspension of the TRIPS agreement. In many ways, Canada seems to have chosen to be part of the problem rather than the solution.

In its speech to the WTO on December 10, 2020, Canada blatantly lied—and I'm not saying this lightly. I very rarely use this type of language. Canada argued that the current flexible measures in the TRIPS agreement were sufficient. Canada said that this type of waiver was unnecessary because it was making its access to medicines regime, or CAMR, available to help low-income countries get the necessary treatments when they obtain compulsory licences without having local manufacturing capacity.

CAMR is currently such an ineffective bureaucratic atrocity that a country has used it only once, in 2007. Rwanda used it to get AIDS treatments, and subsequently criticized the ineptitude of the system. The system doesn't work. Instead, the system is designed to make it harder to access drugs during health emergencies.

The House of Commons even voted to reform Canada's access to medicines regime in 2013 because it was deemed completely ineffective. However, the delays in Senate ratification were so long that the reform died on the order paper.

On December 10, Canada even dared to claim that the fact that no one was using Canada's access to medicines regime meant that there was no need for flexibility and therefore no need to suspend the TRIPS agreement. Again, this is unacceptable. I have rarely felt so embarrassed to be Canadian as when I read Canada's downright ill-intentioned statement in the face of the critical global challenge posed by COVID-19.

Canada must stop being part of the problem. First, it must list COVID-19 health products under schedule 1 of the Patent Act now. There are rumours that, as early as this week, a country will ask CAMR to produce COVID-19 vaccines. However, at this time, Canada can't do so since it hasn't listed these products under schedule 1 of the Patent Act.

• (1120)

Second, it's necessary to support a TRIPS waiver for all COVID-19 products now, and to encourage all initiatives that make it possible to share open science technology for all COVID-19 products through patent pools such as C-TAP and MPP. I'm counting on Canada to be on the right side of history in this pandemic.

I'm ready to answer your questions.

[English]

The Chair: Thank you very much, Professor. I'm sure there will be many questions.

We will go on to Mr. Agnew, please.

Mr. Mark Agnew (Vice-President, Policy and International, Canadian Chamber of Commerce): Madam Chair and members of the committee, it's a pleasure to be back at the Standing Committee on International Trade.

Given the ongoing vaccination program under way in Canada and around the world, this study comes at a critical moment. At the Canadian Chamber of Commerce, I have the privilege of working with many leaders in the life sciences industry. As you can imagine, we have been working even more closely with them over the last 12 months.

Like many Canadians, I look back 13 months and consider how rapidly the industry has moved. In preparation for this appearance, I reread some of the press coverage from spring 2020, which said it would take 12 to 18 months for a vaccine to be developed. Instead, industry has developed a vaccine in far less time. That tremendous effort should not be forgotten. I raise this not as a spurious piece of hindsight perspective but instead to underscore the importance of supporting innovation in the life sciences industry.

The committee will be hearing from others who are in the industry and better placed to speak to the science, whereas I'm going to come at this more from the trade perspective.

I want to speak first to the issue of the TRIPS waiver. Intellectual property is a critical element of supporting the innovation ecosystem that creates life-saving medicines. I mentioned a moment ago the breakneck pace at which innovation has occurred for the COVID-19 vaccines. R and D work is both capital intensive and labour intensive. Without strong intellectual property protections in place, this industry-led innovation that we've seen in the last year

would have been tremendously hampered and certainly would not have been able to happen as quickly, because there would not have been adequate infrastructure in place to develop the vaccines.

There has been no evidence that IP rights are actually causing issues with the vaccine rollout globally. The challenges instead are related to the scaling up of production and the very complex supply chains that go into the COVID-19 vaccine process. Pfizer alone, for example, involves 280 components, 86 suppliers and 19 countries. There are also immensely complex storage requirements, sometimes called cold chains, as you may have seen in the media. I don't want to be glib, but this is far more complex than putting a couple of ice packs in a cooler box and shipping them off with some vaccines in vials. In this sense, the IP waiver proposal is a solution in search of a problem, since it would do nothing to address the underlying supply chain issues, such as the shortages of lipid that BioNTech needed Merck to backfill last year.

It's also important to take a longer-term perspective and recognize that if implemented, a TRIPS waiver would create lasting effects for companies and the decisions they make about their future investments in R and D and manufacturing. Certainly there's also the concern of a tit-for-tat war, as countries would go down this path.

It's also worth underscoring that there is already a process, as you heard a moment ago, under article 31 in the TRIPS, for governments to invoke compulsory licensing. Given that there's already a process available, which I would add has safeguards built into it, a broad and sweeping TRIPS waiver is actually an unnecessary mechanism.

Given all of that, we hope the government will not support a TRIPS waiver proposal that's being discussed in Geneva.

I'd like to now shift to talking for a moment about the EU's measures on the export of vaccines.

The Canadian chamber has strongly opposed measures that could restrict the export of vaccines. This is not only in Canada's self-interest, given our lack of domestic biomanufacturing capacity, but also because COVID-19 is a global pandemic that requires global distributions of the vaccines.

Our primary concern with the EU's export measures are twofold.

First, the directive leaves a significant amount of discretionary power to the European Commission and member states in its application. I know first-hand that Global Affairs Canada, including Minister Ng and Ambassador Ailish Campbell, have been working very hard behind the scenes. We have seen the benefits, given that no shipments to Canada have been blocked thus far. The same cannot be said for Australia, as the members of this committee I'm sure will have seen in recent media reporting.

Second, the EU's regulations set a very unhelpful precedent for other jurisdictions and risk making this type of behaviour much more acceptable, such that other countries may be more willing to execute these types of policies. The chamber has been working closely with our business association counterparts around the world to deliver the message to EU decision-makers that we should not be pursuing this message. We hope that the EU will focus instead on automatic approvals and shift efforts toward a transparency-based mechanism.

I'd like to spend a few moments discussing, from a trade perspective, some of the measures that could be pursued to ensure the movement of vaccine supply chains.

First, building on what I said a moment ago about export restrictions, we need to have greater specificity from countries on the export restrictions and their use as a policy tool. Much has been made over the last year about the phrase that export restrictions must be "targeted, proportionate, transparent and temporary". Canada can play a lead role in global discussions to develop something in practical terms to operationalize this. There is the upcoming G7 trade ministerial meeting as well as the G7 leaders' summit, which are potential opportunities to move the dial forward. We also have upcoming bilateral discussions with the United Kingdom.

Second, Canada should also continue to take a leadership role in the Ottawa Group trade and health initiative and the Global Alliance for Trade Facilitation. Given the complexities of vaccine supply chains, we can support the developing countries by providing them with the know-how to get products across borders and into the arms of their citizens as quickly as possible.

Third, Canada should continue to engage in ongoing efforts at the WTO that are being led by Dr. Ngozi on the so-called "third way" for voluntary knowledge sharing. This would stay in line with the spirit of TRIPS article 31(b), which requires consultations with rights holders.

• (1125)

The international chamber has actually been putting some thinking into this, and they're considering the idea of some sort of vaccine clearing house that could act as a forum to help take the heat out of what has been a very fraught issue and allow for evidence-based discussions on supply chains. This is something we hope the committee and Global Affairs Canada will be able to explore further.

Thank you very much for the opportunity. I look forward to your questions.

The Chair: Thank you very much, Mr. Agnew.

We'll go on to Mr. Sorenson.

Mr. Brad Sorenson (Chief Executive Officer, Providence Therapeutics): Thank you very much for the opportunity to join you today.

Messenger RNA is the most effective vaccine technology on the planet. The European Union has indicated that it intends to move exclusively to messenger RNA vaccines beginning in 2022. The U.S.A., while not publicly making this comment, has practically chosen messenger RNA vaccines for its citizens over other options by virtue of how it is procuring and distributing vaccines. This is not to mention the FDA's cautious stance on adenovirus-based COVID vaccines.

I see from the numerous press articles that Canada is now actively competing for 2022 booster vaccines. To date, only messenger RNA vaccine producers have publicly announced that they're working on a variant version of their vaccines for 2022 booster shots. Thus, I can only conclude that Minister Anand, on behalf of Canada, is negotiating with Pfizer and Moderna to secure booster mRNA vaccines for Canadians in 2022.

Providence Therapeutics is Canada's only messenger RNA vaccine company. Despite the fact that Providence has shared early clinical data with the Government of Canada that points towards a potentially best-in-class mRNA vaccine, and despite the fact that Providence, with its partners, has provided a clear path to manufacturing tens of millions of doses, Providence has not been contacted by Canada for its 2022 vaccine needs. We would welcome that engagement. Such an engagement would be consistent with every contract Canada struck with foreign vaccine companies in the summer of 2020 and would enable manufacturing to proceed as the vaccine moves through the regulatory process with Health Canada, just as was the case with foreign vaccine companies in 2020.

If commitments are made soon, Providence Therapeutics can provide enough booster vaccines for every Canadian by the first quarter of 2022. Canada has within its grasp the opportunity to be the first country in the world to fully vaccinate its citizens with an mRNA vaccine designed to protect against variants.

From day one, Providence has been prepared to prioritize Canada's needs. However, other than the purchase commitments by the Province of Manitoba, we have received no indication that Canada is interested in securing Providence vaccines for 2022. On the other hand, Providence has received serious inquiries for 2022 vaccine supply from multiple foreign buyers.

The COVID vaccines industry is worth hundreds of billions of dollars. As a measure of scale of the industry, Canada itself paid \$8 billion for COVID vaccines in 2021 alone. Some portion of that economic activity could be boosting the Canadian economy and creating an export market, instead of simply adding to Canada's import costs.

Providence Therapeutics will be a major participant in the COVID vaccines industry. Here, before the Standing Committee on International Trade, we can all appreciate that Canada can and should lead other countries in demonstrating confidence in Canadian-made vaccines and in buying them. In this context, how sad would it be for the first major commitment for a Canadian-made vaccine to come from a foreign buyer? How unthinkable would it be that Providence would be forced to export world-class vaccines out of Canada when Canadian lives and livelihoods are under threat? None of us would want that. Early action by Canada can prevent what might be an unfortunate possibility.

I would like to formally ask this committee to consider passing a resolution to seek a commitment from the Government of Canada that if Canada continues to pass on its opportunity to buy Providence vaccines, it will not interfere with the exportation of Providence vaccines produced in Canada to countries outside of Canada. Even better, please consider passing a motion that encourages the Government of Canada to support Canadian vaccine manufacturing by buying from Canadian suppliers.

That is the end of my prepared comments, but given the comments from my fellow witnesses, I would like to add that the intellectual property situation related to messenger RNA is a lot more complicated than has been presented here. While my peers would like to suggest that they're willing to share intellectual property—Moderna has said that they wouldn't enforce patents—the reality is that their vaccines have been sequenced, and those sequences have been published. They are 90% alike.

• (1130)

Really, the only gatekeeping intellectual property in messenger RNA is related to lipid delivery. That gatekeeping is actually held by a Canadian company called Genevant, and Genevant is being infringed upon and not protected. We, Providence, are licensed and have secured a licence from Genevant, and we're playing by the rules. We are prepared—as I mentioned, we're negotiating with multiple other countries—to tech transfer. I am not interested in selling doses; I am interested in selling capacity. That's how this pandemic gets fixed.

We are going to be reaching out and contacting the WHO and discussing ways that we can work with them. We have been contacted by a consortium out of Africa and we're looking at doing that. We have been in discussions with the Government of Mexico. We're not focused strictly on first world countries; we're focused on the worldwide problem.

We need Canada's support. We need the ministries in Canada to share information across their ministries so that they can see what's being done.

Providence has shared data that demonstrates that we are safer and have fewer adverse events than our peers. We have a cold chain at -20° for long-term storage and transport, and we already have two months of data on refrigeration storage. Our immunological responses are superior. All of that will be confirmed publicly when we release our data to the public when the report is finalized from our phase I trial, but it is currently available to the Government of Canada for their review.

I don't know what else to do. We're trying to help the Canadian government understand that we have this technology, a world-class technology, at our fingertips.

I welcome questions.

Thank you.

• (1135)

The Chair: Thank you very much, Mr. Sorenson.

We will move on to Mr. Daley, please.

Mr. Brian Daley (Partner, Norton Rose Fulbright Canada, As an Individual): Thank you very much, Madam Chairperson.

I am a partner at Norton Rose Fulbright in Montreal, where I am the pharmaceutical and life sciences international business group leader.

I specialize in patent litigation for pharmaceuticals and medical devices, so I have a perspective on how IP rights holders view and enforce their rights, both in Canada and internationally.

The views I express today are my own and do not necessarily represent the views of Norton Rose Fulbright.

I'm going to talk a little bit about supply chains and domestic manufacturing and what the implications are for Canada in light of the COVID-19 pandemic. I will talk briefly about some of the controls that already exist in Canada over patents, including compulsory licensing, and then talk a little bit more about the intellectual property context internationally with respect to certain of Canada's international trade agreements. I'll speak to some of the enforcement mechanisms that are available under those agreements, and then I will deal specifically with the issue of the TRIPS waiver.

As all of us know, manufacturing of many goods has shifted over the last decades to locations that offer economies of scale, lower costs, or more favourable tax and regulatory regimes. Medical goods are no exception. For example, China and India have become major manufacturers of active pharmaceutical ingredients and finished dosage forms in the last decades.

Medical devices and personal protective equipment are often manufactured abroad. As Mr. Agnew mentioned in his presentation, and as we have seen over the last year, we've learned a lot from COVID-19. We've seen procurement delays and competition for scarce supplies. We've seen hoarding or export restrictions by some countries, and we've seen political interference in supply agreements.

That leads to the question, which I think we've begun to answer over the last 13 months, of whether Canada should increase domestic production of certain medical necessities, particularly those that are related to COVID-19. In many cases the answer is clearly "yes". Personal protective equipment, for example, will be essential in this and future pandemics, and we should maintain adequate stocks and have domestic sources of supply.

When we talk about medicines, vaccines and medical devices, the answer is less clear. It is impractical to have a completely domestic supply chain; there are simply too many drugs, too many components, and too many devices.

As we've seen, and as Mr. Sorenson explained, some of the vaccines that are available today use cutting-edge technology that is available in very few places. Nonetheless, domestic R and D and vaccine manufacturing capacity is crucial for our country.

In a paper that I published with some colleagues late last year, and which I believe led to my being invited to speak today, we proposed a hybrid solution that would allow regional supply chains for advanced complex supplies. This would allow us to retain efficiencies of scale. It would also allow us to take advantage of trade agreements that we already have in place, such as those with the European Union and with the United States and Mexico. In those circumstances, we would be dealing with trading partners that have comparable environmental, safety and labour standards, and standards that are often enforced by these international trade agreements. We generally share values and similar political systems with these trading partners.

In concert with this regional approach, we would continue to develop a reliable domestic supply for essentials, such as personal protective equipment and vaccines. We all know about the manufacture of N95 masks in Canada by 3M, as well as the recent agreement with Sanofi for vaccine manufacturing capacity in Canada. Those are good examples of encouraging domestic supply, and the government can, and should, continue to encourage innovative Canadian companies in this area as well.

With respect to intellectual property, it's not only medicines and vaccines that can be patented. Medical devices and personal protective equipment can also be patented, and this is the complication that would make the TRIPS waiver very difficult to bring into practice even if it were a good idea, and I'll suggest later that it is not. Encouraging domestic supply requires respecting the rights of intellectual property holders, and particularly patent holders. Patents are the most relevant type of IP protection in this area.

- (1140)

As you probably know, there are already compulsory measures in place under the Patent Act, and it's possible for compulsory licences to be granted in cases of a national emergency. One of the problems is that it's not clear what a national emergency is.

It's also not clear under the Patent Act how patent owners would be compensated in such cases. Section 19.4 of the Patent Act was implemented last March at the beginning of the pandemic. It authorized the commissioner of patents to permit the use of patented inventions, including by private parties, to the extent necessary to respond to the public health emergency. It provided that patentees

were to be paid "adequate remuneration". This expired in September of last year, and it was never used.

That is illustrative of the fact that allowing intellectual property rights to be overridden is not a good idea, and we've seen over the past year that it is not necessary, at least in the Canadian context.

Canada is signatory to several international agreements, such as CUSMA and CETA. Both of these, and TRIPS, allow governments to permit use of patented inventions in national emergencies without the patentee's authorization. Again, there's no clear definition over what constitutes a national emergency, and one country's unilateral declaration of a national emergency could invite complaints or retaliations by other treaty members.

That brings me to the specific TRIPS waiver request. As we know, some WTO members have requested a temporary waiver of TRIPS intellectual property obligations in response to COVID-19. In my view, there are multiple problems with this request.

First of all, and as Mr. Agnew mentioned, we're unaware of any concrete examples that would justify such as waiver. The original proposal, which you can find on the WTO website, cites one example, involving the Governor of Kentucky and N95 masks, from April of last year. That's the only example I saw on the WTO website.

The request also asks for a very broad exemption to sections 1, 4, 5 and 7 of TRIPS Part II. Again, there is no evidence that IP rights have impeded the international response to COVID-19.

One other point, one that has not been touched on, is that even if one were to try to implement this type of waiver, there is no practical way to identify individual patents that relate to fighting COVID-19. Many people have focused on vaccines, for example, but let's look at another important tool in fighting COVID-19, a medical device such as a ventilator. Ventilators per se are not patented. What is patented are certain functions that those devices perform, or components that are incorporated within them. These patents could be owned by the manufacturer of the ventilator, by related companies or even by independent suppliers. The ventilator manufacturer may purchase patented components from third parties or manufacture them under licence. There's no easy way to determine what patents are relevant, and, as I said, this is a wholesale renunciation or waiver of patent rights for an indeterminate period. There's no guarantee that this measure would increase manufacturing capacity, strengthen supply chains or improve distribution to less wealthy countries.

There is also the risk that widespread disregard of IP rights could lead to inferior quality products entering the market and even facilitate counterfeit products entering the international supply chain. Rights holders can and often do license their technology to trusted companies, and they're able to enforce strict quality control. In my view, that's a better solution than a wholesale waiver of intellectual property rights.

Those are my remarks, and I look forward to any questions you may have.

Thank you very much.

The Chair: Thank you very much to all of the witnesses.

We'll begin questioning by committee members.

Mr. Aboultaif, go ahead. You have six minutes.

Mr. Ziad Aboultaif (Edmonton Manning, CPC): Thank you, Chair, and thanks to all the witnesses for their great testimony this morning.

We know that the Europeans did a temporary export transparency and authorization mechanism. It's a protectionist mechanism—we know that—even if it's temporary. I believe the pandemic is also temporary. On the other side, we see India and South Africa asking for a waiver, with push-back from the industries for sure, and also some intellectuals' opinions and some business opinions on the waiver and protectionism.

In Canada we have a history of not being able to protect intellectual property, and we have been losing big deals on businesses, on opportunities. We must remind ourselves that we are leaders on many fronts, whether on a pharmaceutical front or technological fronts or others, but we seem to be failing. We do have a shortage of supply in Canada now. There are delays on the purchase orders we have in place. It could be related to shortages in manufacturing or struggles on the manufacturing side, but at the end of the day, it's affecting us. It's standing in the way of opening our economy as early as other countries, such as the United States, Israel and others.

Mr. Sorenson, you have the technology. You have the capacity. You've been talking to the government. I was a businessman before I entered political life. How can the government work better with

you? This is very critical. Having security over our supplies at all levels is very important, and especially now with the pandemic. How do you see that the government has been working with you? What would you like to see changed in order to be able to have the capacity we need?

• (1145)

Mr. Brad Sorenson: Thank you, Ziad.

So far the government has worked rather effectively when it comes to clinical trials. We've received support from the NRC. We're in phase II with the NRC. We've submitted our application to the strategic innovation fund for phase III.

I do have confidence that as our program progresses through the clinic, we will get appropriate support from the Government of Canada as it relates to the clinical trials.

Mr. Ziad Aboultaif: When did you start talking to the government, if you don't mind?

Mr. Brad Sorenson: Well, phase I was announced last year. We were approached by the NRC for our phase II trial. We've had really good dialogue ever since phase I started. That process has gone on. That started probably about two months ago, as we geared up to conclude our phase I trial and release data. Although the NRC is capped at \$10 million, which is certainly not sufficient to carry out phase II and phase III trials, the NRC has, through the bureaucracy, elevated us back up to the strategic innovation fund. That occurred about three weeks ago. We're now working with the strategic innovation fund.

Would I like it to go faster? Yes, but it's still progressing, and I believe that it will continue to progress and that we'll get the support we need for our clinical trials.

Part of the challenge we have, to communicate specific challenges, is the need of comparator vaccines. That was communicated last week to the finance committee. I've communicated it to multiple departments within Canada. I'm still awaiting a response—

Mr. Ziad Aboultaif: Thank you—

Mr. Brad Sorenson: —so there are certain things there. What we're missing, really, is the manufacturing support. It seems as though all of the manufacturing support is targeted at a facility. They want to go and do a ribbon-cutting. What we need is the backing to go out and buy the raw supplies so that we can start making these important vaccines.

I personally—personally—guaranteed this week \$5.5 million on a purchase contract for lipids so that we can keep our timelines. I don't know what else to do. We need the government to engage, and the government to engage quickly, if we want to have timelines that are relevant for the needs of Canadians and really for what's happening. The worldwide pandemic is still going on. It's still critical.

That's really what's lacking. That's what I need. I need that engagement on the raw materials supply front so that we can purchase those raw materials.

• (1150)

Mr. Ziad Aboultaif: Thank you.

I heard yesterday—

The Chair: Mr. Aboultaif, be very brief, please.

Mr. Ziad Aboultaif: Thank you. I think I have 30 seconds.

The Chair: It's 40 seconds.

Mr. Ziad Aboultaif: I will sneak in a quick question here.

Some provinces are thinking of starting to make some purchasing agreements to buy vaccine. Have you heard of that? What do you think of that?

Mr. Brad Sorenson: My understanding is that they really can't do anything internationally. That's why Manitoba approached us, and we'll be signing a definitive agreement with them this week. We've also had some discussion with Ontario. That discussion is sort of on pause right now. They have their hands full.

As far as I can tell, Alberta has taken a different route. They've asked for proposals because they're looking to build industry. The proposal we have for them is currently being evaluated by PricewaterhouseCoopers.

The Chair: Thank you, Mr. Sorenson.

We'll go on to Mr. Sarai for six minutes, please.

Mr. Randeep Sarai (Surrey Centre, Lib.): Thank you, Madam Chair, and thank you to all our witnesses. You guys are very insightful in your respective fields.

Mr. Sorenson, you've completed phase I and are still doing phase II in trials. Am I correct?

Mr. Brad Sorenson: Our phase I trial is complete. The last follow-up visit for our subject is tomorrow. We will then lock all the data. Our CRO that's supporting us will complete the report. That report should be available within four or five weeks.

Mr. Randeep Sarai: I believe you've received funding from the federal government in the amount of \$5 million. Is that correct?

Mr. Brad Sorenson: That is correct.

Mr. Randeep Sarai: What's your expected approval date if all goes well in your phase II trials?

Mr. Brad Sorenson: We need phase II and phase III in order to receive emergency use authorization. We went to Health Canada seeking a combined phase II-phase III trial, and Health Canada felt that it would be more appropriate for us to split those trials into discrete trials. That has the effect of extending the program by about three months.

We were hoping to have an approved vaccine in October or November. I would expect that our vaccine will now be approved in January or February 2022.

Mr. Randeep Sarai: Then currently the vaccine is not approved. You're still hoping to have it approved. We're obviously optimistic that we can get some Canadian-made vaccine, and yours is very promising. However, as of now, is it correct to say that it's not approved and you're expecting approval at the end of the year or in early 2022?

Mr. Brad Sorenson: That is correct.

If we wait until approval to start manufacturing, given the lead times for manufacturing, we need to start now if we want to have doses ready when approval is obtained.

Mr. Randeep Sarai: Thank you.

My next question is to Mr. Daley. You said hybrid solutions are probably the best in terms of creating regional supply chains, as well as using existing trade agreements. Will trade agreements on their own protect us?

What we've noticed in pandemics is that despite having trade agreements, governments sometimes hijack PPE right off the tarmac. In other places, we've seen domestic interest and NIMBYism occur where nobody wants to have their vaccines leave.

Do you think trade agreements on their own will be able to protect us in the future, or do we need to create domestic production so that licensed products can be made here even if the patent and the product are owned elsewhere?

Mr. Brian Daley: I don't think trade agreements are ever going to protect us in every conceivable situation. As we've seen in emergencies, countries, like individuals, look out for their best interests, and they're always going to do so. Nonetheless, I believe a regional idea allows us to rely more heavily on people with whom we have long-term and trusted relations so that those types of problems are less likely to arise in the future.

We see, and have seen in the past year, that a lot of our supplies come from countries with whom we do not have very good relations and with whom those relations are deteriorating. I think the regional model would minimize some of the risks, but you can never eliminate all of them.

Mr. Randeep Sarai: What would be the best solution for that? Is it to have more production facilities and R and D here?

As you can see, you can't always bet that a Canadian manufacturer will come up with the solution. You have to hedge your bets everywhere. As you said earlier, Canada had the largest procurement, but we had to cross the globe to secure enough doses for Canada, and that might be the case in the future as well.

What is the best way to maintain a secure supply chain for Canada?

• (1155)

Mr. Brian Daley: I think you're right that we have to increase our domestic capacity. There's no doubt about that. That's the lesson we've learned in the last year. We've seen some of the weaknesses of allowing a widely dispersed global supply chain.

That said, as I mentioned in my presentation, the whole world of pharmaceuticals, medical devices and vaccines is too vast and too complex for even very large countries to manage on their own. It's simply not possible for Canada to be completely self-sufficient in every possible medical device or pharmaceutical that we might ever need.

Increasing domestic capacity, encouraging research and development and encouraging innovative Canadian companies is a great idea, and I think it's something we should do, but we're never going to be completely self-sufficient.

Mr. Randeep Sarai: Thank you.

My next question is for you, Mr. Agnew. I know you've said that you're more from the commerce side of things and not the research side, but I understand that the economic recovery is dependent on mass vaccinations. How do you think the additional eight million Pfizer doses this government recently secured are going to help speed up economic recovery and support Canadian businesses?

Mr. Mark Agnew: Well, I suppose it's ultimately up to the provinces to get them into arms quickly, and certainly anything that gets more vaccines into the country helps, but we do need to have better underlying infrastructure to get the vaccines into folks. One of the things that we think would help, for example, is prioritizing essential workers for the receiving of vaccines. More supplies help, but you then have to distribute them once they're in the country.

The Chair: Thank you very much, Mr. Sarai.

We'll go on to Mr. Savard-Tremblay for six minutes.

[Translation]

Mr. Simon-Pierre Savard-Tremblay (Saint-Hyacinthe—Bagot, BQ): Madam Chair, there were some sound issues earlier, but the technical team didn't call me to check on this matter.

Can you confirm that the sound is good and that you can hear me now?

[English]

The Chair: Yes, we can, sir.

[Translation]

Mr. Simon-Pierre Savard-Tremblay: Perfect.

[English]

The Chair: I'll start your time now, Mr. Savard-Tremblay.

[Translation]

Mr. Simon-Pierre Savard-Tremblay: Thank you, Madam Chair.

Good morning, everyone.

I want to thank the witnesses for their presentation.

Mr. Gagnon, we used to have expertise in Quebec. We need only think of the Institut Armand-Frappier, which doesn't really seem to exist anymore. What happened and how can this help to show us that this isn't the way to go?

Over the past year, and even since the SARS crisis in 2003, we've missed many opportunities to develop our own expertise.

What hasn't been done, and what should we do from now on?

Dr. Marc-André Gagnon: Thank you for the question.

You must understand that, for a long time in Canada, public vaccine manufacturing capacity was very high. There's a significant difference between public and private production capacity. In the case of public production capacity, the public authorities decide on the priorities for the use of its facilities. There's a great deal of talk here about intellectual property. There's a serious general issue when it comes to this matter. Intellectual property incentives don't always align with public health needs. Additional tools are needed to make the necessary products when intellectual property incentives aren't sufficient.

For a long time, there was Connaught Laboratories in Toronto. In Canada, this company was the hub of vaccine manufacturing. There was also the Institut Armand-Frappier, in the Quebec City area. Connaught Laboratories was sold to Sanofi. In terms of the Institut Armand-Frappier, there was a public-private partnership, which became IAF-Biochem Pharma. This company was subsequently sold to the Shire multinational company. Shire sold the parts end to end. The vaccine manufacturing facilities became the property of Glaxo-SmithKline. The facilities still exist, but private companies now decide how they're used. The companies do so based on the priorities of their shareholders, not public health priorities.

When the Institut Armand-Frappier was privatized, the argument was simple: the public sector shouldn't step on the toes of private enterprise, against which there shouldn't be any unfair competition. However, this involved much-needed production capacity. More public production capacity is needed. Now, a type of comeback has been announced. The government announced \$126 million for the National Research Council of Canada. However, a public-private investment of half a billion dollars has just been announced for Sanofi, which owns the Connaught Laboratories facility in Toronto. This agreement is still confidential and it isn't yet clear who can decide on the priorities for the use of these facilities. In my opinion, this situation is extremely troublesome.

I'll give you the example of another pandemic, the Ebola virus. Canada developed the Ebola vaccine in the public sector. Canada then did what it always does. It sold the licence to a private firm so that the firm could manufacture the vaccine. This firm did nothing for 10 years. It wasn't until the latest Ebola outbreak that suddenly panic arose. The licence was simply sold back to Merck so that Merck could make the vaccine.

Many people were very upset that a small company would purchase a public licence at a low price and sell it to a large company at a very high price. I, for one, was outraged that it took the deaths of 10,000 Ebola victims to get this vaccine, which we had developed ourselves, made. That's unacceptable. In these situations, the financial incentives for intellectual property don't meet the overall public health needs.

• (1200)

Mr. Simon-Pierre Savard-Tremblay: Thank you.

On the subject of intellectual property, industry representatives have told us that waivers from patents would be pointless, because the problem lies with the lack of production capacity and labour.

I gather you don't agree.

Dr. Marc-André Gagnon: I do not agree in the slightest. Canada and other countries do have production capacity. It's a complex endeavour when it comes to vaccines. On top of that, vaccines in this case use messenger RNA technology, so things get even more complex. Even with the formula to manufacture the vaccine, a company would have a very hard time beginning production overnight. It would require co-operation; technological know-how would have to be shared.

The capacity to foster that transfer of know-how does not currently exist. Any attempt to co-operate, share information and allow the use of existing vaccine-making capacity, would likely meet with legal challenges under the TRIPS Agreement or intellectual property provisions. It is a serious problem.

Now, we have tools to increase production, stem the pandemic and ensure Canadian companies have access to a swifter economic recovery, but we are not using them under the pretext that intellectual property must be protected.

[English]

The Chair: Thank you very much, Professor. I'm sorry to interrupt.

Mr. Blaikie, you have six minutes, please.

[Translation]

Mr. Daniel Blaikie (Elmwood—Transcona, NDP): Mr. Gagnon, I'd like to give you an opportunity to finish what you were saying.

Dr. Marc-André Gagnon: Thank you.

I wanted to point out that BioNTech developed the vaccine, and Pfizer went on to manufacture it. The University of Oxford developed the AstraZeneca vaccine. Initially, AstraZeneca was supposed to have a non-exclusive licence, but in the end, it became an exclusive licence. Moderna's vaccine was wholly funded by the public sector.

Now, it's being argued that the vaccines were developed thanks to the protection of intellectual property, but that is not true. There is a difference. Some big companies are raking in huge profits under the guise of intellectual property. It is in their financial interest to ensure that as little knowledge as possible is shared about the manufacturing of the vaccines. As long as they control the technology and expertise, they keep their profit margins, and that's unacceptable.

• (1205)

Mr. Daniel Blaikie: We've also heard about differential pricing that does not necessarily reflect production or transportation costs, but we still do not have adequate publicly available information on the prices companies are charging for their vaccines.

Mr. Gagnon, how important do you think it is to have access to data on not just the technology and manufacturing of the vaccines, but also the profits being made?

It is extremely hard to determine how much private companies are acting in the public interest and in a transparent manner, something governments should do as well. Information on how much money is being made on the vaccines stays confidential, so it's hard to know just how much companies are benefiting financially from the public funds they received and from intellectual property protections, to turn profits that go undisclosed, all during a global pandemic.

Dr. Marc-André Gagnon: Thank you for asking such a great question.

It's actually a huge problem right now, one that affects vaccines and patented drugs overall. Simply put, everything in the current marketplace is done under the table, through confidential agreements, and everyone is in on it. As an outside analyst looking in, I have no way of knowing who is paying what and under which terms. This is the new drug marketplace: everything is done under the table without a shred of transparency regarding who is doing what in relation to a product that is essential to public health.

Take the Moderna vaccine, for example. No private money went into developing the product, and yet Moderna is charging the most of all the vaccine makers. It even won the Shkreli Award for being the worst profiteer in health care.

Moderna's vaccine was funded first and foremost by the United States government, so it's to be expected that, under their confidential agreement, the company is charging the United States a very low price. However, Moderna can charge extremely high prices outside the United States and make a large profit on a product that it did not pay to develop. Not a single cent of private money went into developing the vaccine.

Mr. Daniel Blaikie: A popular argument is that we should leave vaccine production and distribution in the hands of the private sector, because that's the most efficient and effective way to go. Do we really have the necessary data, though, to say whether the private sector production model in place during this pandemic is the most efficient and effective?

Must we take it on faith since we don't have enough data to conduct a proper assessment?

Dr. Marc-André Gagnon: That's a great question as well.

Intellectual property and the private market are said to be the best mechanisms to advance science.

Consider, though, the Montreal Neurological Institute-Hospital, which decided to fully adopt open science to address rare diseases. The Structural Genomics Consortium did the same. From a researcher's standpoint, intellectual property protection has, above all, become a barrier to research and product breakthroughs.

Obviously, the business world disagrees, because the intellectual property regime is the best way to keep profit margins very high. When it comes to research, breakthroughs and the development of new products, however, intellectual property protections are an ever-growing barrier, a factor that isn't being taken into account.

In the first few months of the pandemic, everyone worked on the open science model, and the knowledge base grew in leaps and bounds. During a public health emergency, the proprietary science model does more to fuel parasitic behaviours and price gouging, and does not necessarily meet the current public health needs, as we have seen.

• (1210)

Mr. Daniel Blaikie: Since we are on the subject of—
[English]

The Chair: I'm sorry, Mr. Blaikie. Your time is up.

We'll go on to Mr. Lobb for five minutes, please.

Mr. Ben Lobb (Huron—Bruce, CPC): Thank you, Madam Chair.

I'm just going to lay out some context. I'm from Ontario and I think we're vaccinating about 110,000 to 120,000 people a day, as you all know. We probably have the capacity to vaccinate anywhere from 400,000 to 500,000 people a day. In my area of Huron—Bruce, and if you want to go up into Grey, the population's just over 200,000 people. At some of our clinics we can do 2,000 a day. In Hanover, one day they did 3,500 in a day.

The issue in Ontario and the issue in my area is supply. Everybody on this panel knows that today. That's what led to all these lockdowns and the situation we're in in Ontario.

The question is, how do we get more supply, not only for Canada and Ontario, but for the rest of the world?

Looking at Mr. Sorenson there, I think to myself that his open letter to the Prime Minister indicated that at some point in 2021 there would be a potential production capacity of 50 million doses. Is that in your own facility or is that through a consortium?

Mr. Brad Sorenson: In terms of our 2021 production, there are two stages for mRNA vaccines. First there's a drug substance stage to make the mRNA. That is taking place in North Dakota, and we already have that space secured for us. This is at a facility that has a tremendous amount of experience. We've already tech transferred, so they know how to do what we need them to do to produce at scale.

The second part of that is done in Winnipeg, Manitoba, by Emergent BioSolutions. We are tech transferring to them this month so that they know how to do the formulation portion of the process, and then they do the fill-finish.

With just that existing capacity alone, once we start the process, the reason we could commit 50 million doses at that time is that we would be up and running. Assuming we had bought the raw materials in January, we could have been up and running in July and producing. That would have allowed us to make 50 million doses. We did not get the support for the raw materials. The soonest we could be up and running now would be in September. We could still make tens of millions of doses.

It's just there, waiting to be turned on.

Mr. Ben Lobb: I'm not in your industry, so you're going to have to bear with me with this question. It's my understanding that Moderna—and you did touch on some of the Moderna stuff—made kind of an open letter or an open commitment to say that their intellectual property is available.

I'm probably naive here, but in the meantime, while you're doing this, why not just scoop that in and piggyback on their approvals?

Mr. Brad Sorenson: I'm sorry, Ben; that was just a PR exercise. The reality is that Moderna and all mRNA manufacturers understand that in the mRNA space, there's actually very little IP. It's a trade secret.

You can share your IP. You can share the sequence of your mRNA, but it's a trade secret with regard to how you optimized it, what codons you used and what your purification process is. Moderna's not going to share that. They'll share their IP, but nobody will know what to do with it. The reason they took that stance was so they could sound like they're above the fray while they are trampling on a Canadian company's IP for the delivery. It was a strategic move.

Mr. Ben Lobb: Well, thank you for that honest answer there, for sure.

Mr. Daley, I've been on the industry committee through the years and on the health committee through the years, and the discussion and the debate around IP rights at the education level and partnering with companies or some young person who comes up with a great idea have been going on for years. These arguments and debates about who owns the IP, whether it's the student or the university, have been going on for a long, long time.

I'm wondering if Canada should look at a partnership with the United States and Mexico so we could be one economic zone here. When the next issue hits—pandemic, what have you—we need to have not just an Operation Warp Speed but three countries coming together in equal shares to have the benefit that the United States has right now.

Is that possible, or is that pie in the sky?

• (1215)

Mr. Brian Daley: There are two answers to that, or at least two aspects of an answer to it.

The first is that your idea is in keeping with what I suggested, which was that a regional approach to producing products to combat pandemics such as COVID is desirable, and this region includes the United States and Mexico. That's definitely something that I would encourage.

Whether these countries would be willing to merge their intellectual property regimes is a different question, and not one that I'm qualified to answer. I expect that countries like the United States are going to insist on maintaining control over their own intellectual property laws. That doesn't mean that we can't work out ways to share technology and co-operate with each other in areas where our interests are the same.

The Chair: Thank you, Mr. Daley.

We go on to Ms. Bendayan for five minutes, please.

[*Translation*]

Ms. Rachel Bendayan (Outremont, Lib.): Thank you, Madam Chair.

I would like to thank all the witnesses for their presentations today.

Mr. Gagnon, you spoke of the importance of pooling technology and expertise. My father is a medical researcher, so I'm familiar with the field. I don't disagree with much of what you said about the importance of open science.

A few days ago, a number of experts told the committee that the problem wasn't necessarily the WTO's TRIPS Agreement. The problem was that many countries, including nearly all developing countries, lack the necessary capacity. A waiver from the application of the agreement would not fix the problem.

Where do you stand on that?

Dr. Marc-André Gagnon: Thank you for your question.

Essentially, my answer is this: that is not the position of the WHO, which is also of the view that vaccine production capacity is not being used right now.

What's important to understand is that we created a system where the ability to make a profit depends on the ability to control the vaccine. We need to encourage a system where the financial incentive works differently: the more people who are vaccinated and the more doses that are produced around the world, the greater the profit that can be made.

It would be very easy to set up a system like that. The vaccine is purchased, it goes to a patent pool, and the company making it earns 4% on each vaccine it produces. At that point, the company has every interest to maximize expertise pooling and co-operation with different countries and producers to—

Ms. Rachel Bendayan: Sorry to cut you off, but I have a limited amount of time.

You brought up the idea of establishing another system. We are facing a very specific issue right now. Should Canada pledge its support to developing countries, which are calling for a waiver from the application of the TRIPS Agreement? A number of the witnesses we've heard from say that would not solve the problem in the immediate term.

Dr. Marc-André Gagnon: I think the long-term solution lies in an alternative system. Right now, suspending the TRIPS provisions in relation to COVID-19 products is the first step we must take to get out of this mess we're in, and the first step to come up with an alternative system for certain types of products going forward.

• (1220)

Ms. Rachel Bendayan: Thank you.

[*English*]

I'll turn now to Brian Daley. Just for full transparency, Mr. Daley and I were colleagues at Norton Rose while I was in private practice.

Mr. Daley, one of the things you mentioned that certainly piqued my interest and, quite frankly, my concern was quality control. You mentioned towards the end of your opening remarks that there may be issues of elements or products going into supply chains that wouldn't have sufficient quality control and could therefore impact the health and security of Canadians and, quite frankly, of all people.

Could you expand a little on that?

Mr. Brian Daley: Certainly, Ms. Bendayan. Thank you.

As I said, I read the request for waiver on the WTO website. It's framed in very general terms. Let's take patent rights as an example. It simply asks for a wholesale suspension, essentially in several countries.

If you were an IP rights holder and you wanted to license production of your patented product in another country, you would enter into a licensing agreement with a third party. In that licensing agreement, you would have quality control provisions. You would say that your product must meet certain standards. That's how you would do it normally.

If you just say that all bets are off, that all patent rights are suspended, you don't have any control over who's going to make those products, who's going to practise those patented inventions, and that's where you lose control over the process. I think that is an area that the waiver request simply doesn't address, as far as I have seen.

Ms. Rachel Bendayan: Thank you very much, Mr. Daley.

The Chair: I'm sorry; your time is up, Ms. Bendayan.

We'll move on to Mr. Savard-Tremblay for two and a half minutes, please.

[Translation]

Mr. Simon-Pierre Savard-Tremblay: Thank you, Madam Chair.

Mr. Gagnon, it became clear that, under COVAX, it wasn't always possible to secure contracts with vaccine makers. Canada, for instance, is willing to pay more, and claims that it's a huge success.

What is your position on that?

Dr. Marc-André Gagnon: No, it's not.

The international community initially wanted to set up a patent pool, and companies were very reluctant to take part. Instead, they favoured establishing the buying platform known as COVAX, which completely adheres to the intellectual property regime.

Mr. Simon-Pierre Savard-Tremblay: I gather, then, that one of the solutions you are recommending is setting up a patent pool, which you mentioned earlier.

Dr. Marc-André Gagnon: Yes, that's absolutely right. That's what C-TAP and the MPP are.

The problem for COVAX is that it has to compete with yet another player in this war of vaccine nationalism dominated by a fend-for-yourself mentality. COVAX hasn't been able to compete in a marketplace where the wealthiest countries can afford to pay a lot more for vaccine doses. COVAX is really struggling to procure supply.

Nonetheless, it was a promising initiative, and Canada's involvement was a good thing. If, however, Canada once again secures 500% of its vaccine dose requirements elsewhere, thereby competing with COVAX, it will no longer be part of the initiative. We are helping to stop COVAX in its tracks.

Mr. Simon-Pierre Savard-Tremblay: You're saying we are helping to stop the initiative in its tracks. Instead of ensuring efforts are globally aligned, COVAX is becoming just another initiative.

Does that capture your view?

Dr. Marc-André Gagnon: Yes, that's right.

COVAX is becoming yet another competitor in the global marketplace—a dysfunctional marketplace. Only the wealthiest nations

are getting vaccine doses. Low-income countries have received just 0.2% of the 2.5 billion doses distributed thus far. COVAX is unable to meet its objectives. That is a real problem.

Ngozi Okonjo-Iweala, the WTO's director-general, recommended a third approach: urging vaccine makers to enter into more licensing agreements with various partners. That's obvious. If, from the outset, companies had had an interest in pursuing as many licensing agreements as possible around the world, global vaccine manufacturing capacity could have truly been leveraged. Very quickly, however, aside from AstraZeneca—

• (1225)

[English]

The Chair: Thank you very much, Professor. My apologies for interrupting.

We will move to Mr. Blaikie for two and a half minutes.

Mr. Daniel Blaikie: Thank you, Madam Chair.

Mr. Gagnon, when we talk about what's being proposed, which is a temporary and targeted waiver in the TRIPS provisions at the WTO, it often sounds as though some witnesses at committee imply that the governments who are asking for this waiver don't understand the complexities of vaccine production.

We hear a lot about the importance of the privacy of commercial agreements from companies that are producing vaccine. Then, with respect to the waiver, we're told, oh well, governments should be disclosing which companies in their domestic jurisdictions might be able to produce vaccines, and on what terms, if they had an IP waiver.

Is it normal that governments would expend so much time, energy and effort asking for an IP waiver if they didn't believe there was untapped domestic capacity that could actually produce more vaccines?

It's almost as if we're supposed to believe that this is some sort of political hobby horse side project that governments in the middle of a crisis have decided to take on—that either they don't believe this would produce any results or they don't understand the industry well enough and aren't talking to industry players at home.

Is it plausible that they would be spending this much time and energy on something that has no promise of increasing the vaccine supply?

Dr. Marc-André Gagnon: Contrary to Moderna, this is not just a PR exercise. There is real, untapped vaccine manufacturing capacity that does exist, that is not being used fully, and the WHO also agrees with that statement.

What do we do now? It's there, and we're putting in place obstacles in order to make sure we're not using it.

Keep in mind that there's this idea that we're going to get everybody vaccinated and everything will be over. No. We might have to renew vaccinations. There might be new variations of the virus that will emerge as well. We're in this for a very long ride. Let's focus on five or six companies and knock on their doors every six months in order to have new doses.

This is not the way to deal with a global emergency in terms of public health.

The Chair: Thank you, Professor.

I'm sorry, Mr. Blaikie, your time is up.

We will move to Mrs. Gray, for five minutes.

Mrs. Tracy Gray (Kelowna—Lake Country, CPC): Thank you, Madam Chair, and thank you to all of the witnesses for being here today.

I'd like to go to Mr. Sorenson from Providence Therapeutics first.

Many people would be shocked to hear that as a Canadian company, you've received serious inquiries from other countries for vaccine procurement, but not from within Canada, with the exception of Manitoba.

You had mentioned that you're interested in not only producing mRNA vaccines for Canada but also in exporting them, including to developing countries in need. You mentioned in your testimony the company Genevant, which you said "is being infringed upon and not protected."

Can you explain what you meant by that?

Mr. Brad Sorenson: Genevant, prior to being Genevant, was a company called Arbutus, which prior to that was a company called Tekmira. Many of you may remember Tekmira from the Ebola crisis in Africa. Tekmira was at the forefront in Canadian papers a lot. It was another company prior to that.

The group that's in Vancouver that is currently Genevant has been there for probably 20 years. It holds all of the foundational intellectual property related to lipid nanoparticles that are used to deliver mRNA medicines. It has successfully defended itself against Alnylam, Acuitas and Moderna in the past, and multiple other companies. It is now a private company. It has gone through a few different iterations, but it holds that foundational technology. We've licensed that from Genevant.

I won't speak out of turn about the company. You can approach it and talk to it. It's pretty clear that its technology is not being respected throughout the international community, particularly by those that are currently making billions of dollars selling mRNA vaccines.

• (1230)

Mrs. Tracy Gray: Thank you.

You mentioned that Canada paid \$8 billion for COVID vaccines. Would you say that Canada would better secure our future by having investments in domestic capacity to produce mRNA vaccines versus having to rely solely on imports of vaccines subject to potential export control measures at present, and also taking vaccines

from COVAX that are potentially better suited for developing countries?

Mr. Brad Sorenson: Well, all I can point out is that mRNA vaccines, as has been mentioned by this committee, are the more expensive vaccines, and there's a reason for that. It's because it's a quality issue. You have the CEO of Pfizer indicating that prices of vaccines are going to go up, not down.

To answer Daniel's earlier question on how much profit is being made here, I can tell you—we're an open book—that it costs us about \$5 Canadian to make a dose, and we're using third party support right now. Once we have it integrated in Canada, the price to make the vaccine will go down even further, so you guys can do your own math.

With regard to large pharma, large pharma hasn't supported anybody in this besides themselves. J&J got a billion dollars from the U.S. government—a billion—and when they had their vaccine approved, they had five million doses ready for distribution. If I had a billion dollars.... I just can't comprehend how that happens, how the largest pharmaceutical company in the world can get a billion dollars free and have just five million doses ready for distribution.

Mrs. Tracy Gray: Okay.

I have limited time here, so I want to quickly ask about another couple of things.

As you're getting ready to manufacture here at home, once your operation is scaled up, how many vaccines would your facility or facilities be able to produce on a monthly basis, or weekly, or yearly? What kinds of numbers are you looking at?

Mr. Brad Sorenson: At the Emergent facility in Winnipeg, we have a dedicated line within the facility. and with some very modest upgrades, about five million dollars' worth of upgrades, we could do 200 million doses a year.

Mrs. Tracy Gray: I have one other quick question. I think I have time for one more.

The Chair: You have 20 seconds.

Mrs. Tracy Gray: Do you see that your vaccines might potentially be available to low- or middle-income countries?

Mr. Brad Sorenson: That's what I'm focused on right now.

Mrs. Tracy Gray: That's great.

Thank you, Madam Chair.

The Chair: Thank you very much.

We'll go on to Ms. Bendayan for five minutes, please.

Ms. Rachel Bendayan: Thank you very much, Madam Chair. With your permission, I will continue with my previous line of questioning with Mr. Agnew.

Mr. Agnew, I'm picking up on something that another colleague on the committee mentioned earlier with respect to the current third wave that we are in. Of course, I am extremely concerned about the situation, particularly in Ontario right now, as I'm sure all of my colleagues are, but linking vaccines to the third wave is in some ways simplifying a very complex issue.

We see countries around the world, such as Chile, that have had an extraordinary vaccine rollout and are also in a third wave. We also see the situation that Canada is in. We are currently number two in terms of vaccinations per day per capita in the world, and among G20 countries I believe we are third overall, behind the U.K. and the United States, which is quite good company.

We are very much committed as a government to continue moving vaccinations forward as quickly as possible, but there are, of course, a number of different situations and complexities at play when it comes to the third wave and the reasons for it.

I guess I would ask you, Mr. Agnew, if you feel that our business community in particular is engaged on this issue. Is there anything that you think the government could be doing, including, of course, support for vaccines to continue to enter the country? Is there anything that is missing from our strategy at present, Mr. Agnew?

• (1235)

Mr. Mark Agnew: Thanks for the question.

There are a couple of things that come to mind. Foremost is that businesses are looking for clarity, particularly around what variants of concern mean for their operations. We're seeing in other countries that mask mandates are shifting in terms of the types of masks that people should be using. That would be one thing that I would say. As vaccination rates increase, there are also a lot of questions around what I as a Canadian can do once I've gotten my first or second dose, so I think we need that clarity on a national level.

One of the most important areas where we really need to up our game is rapid screening. Right now, we're in a world where there are a lot of warehouses that are filled with rapid test kits, either federally or provincially, and we need to be able to enable more Canadian workplaces to implement rapid screening practices. I think that enabling lay people in particular to take on more responsibility and having provinces change the rules is a big thing that is currently missing.

Ms. Rachel Bendayan: Thank you very much, Mr. Agnew.

When it comes to rapid testing and rapid screening, we did provide rapid tests to provinces and territories. Do you get the sense that they are being used on the ground? Have they been deployed by provinces and territories?

Mr. Mark Agnew: Some have been better than others.

In Ontario, notwithstanding what we're seeing with the third wave, there's more work being done to roll those out. Our chamber of commerce colleagues in Cambridge and Kitchener-Waterloo have been stepping up, but certainly other provinces have been less willing to enable the task shifting that needs to take place to allow people to take on more work.

Ms. Rachel Bendayan: Thank you.

We'll turn now to Mr. Daley.

Mr. Daley, we heard from a witness earlier this week about some of the flexibilities that are already included in the TRIPS agreement. He cited three different articles in the TRIPS agreement that provided flexibilities that would help developing countries access

vaccines, and he encouraged all countries to be using those flexibilities.

What is your opinion on the existing mechanisms available under the TRIPS agreement, and do you think that they can be used successfully?

Mr. Brian Daley: Thank you, Ms. Bendayan.

I'm not sufficiently versed in the finer points of the TRIPS agreement to really answer that question. I think, as I said earlier, that wholesale renunciation or waiver of patent rights is not the way to go, but I certainly think that any measures that the international community can implement to encourage production in other countries are welcome.

Ms. Rachel Bendayan: That same witness also cautioned against a waiver of the TRIPS agreement, saying how it would impact our own life sciences sector here in Canada and possibly stymie innovation for Canadian life sciences businesses here at home. Would you agree with that assessment?

Mr. Brian Daley: Yes, I would, and I think there are a couple of things that we need to keep in mind. Some people have mentioned that intellectual property rights prevent the development of new medicines and that it would be great if everybody just had access to open-source intellectual property.

The problem is that this is only the first part of the equation. It takes an enormous investment of time, money and resources to get from the idea to an approved product, and we need to have an infrastructure in place that allows that to happen. Otherwise, we're not going to get the type of intellectual property that we need.

The other thing that we need to think about is this: We were able to achieve vaccines in a record period of time because there are well-financed, large companies with the resources that are necessary to do that type of work. If we don't have the infrastructure in place that encourages that type of work, we're not going to have those large, well-resourced companies to take on the next set of problems that we're going to face.

The Chair: Thank you, Mr. Daley.

We'll go on to Mr. Aboultaif for five minutes, please.

Mr. Ziad Aboultaif: Thank you for opening, again, the question.

I'll go back to Mr. Sorenson.

I'm very curious about the process when it comes to getting ready. I always believe, regardless of which government is in place, that usually it is red tape that stands in the way of any development at such a very important and critical time when we know that we need to act fast and deal quickly with the pandemic and find solutions.

Can Mr. Sorenson tell us the most significant roadblock in his company's way to being able to develop the vaccine and to start producing it, knowing that the United Kingdom, within 10 months, was able to set up the manufacturing capacity and to produce vaccines? They are ahead of us, by far, when it comes to providing vaccines per capita.

• (1240)

Mr. Brad Sorenson: We have the ability to produce vaccines. That work that you're describing has been done in Canada. All of the manufacturing processes, the supply chain, and everything we need to start producing mRNA vaccines in Canada are in place. The only thing that's missing is the capital for us to secure the raw materials and commit to the plant times.

We've put a budget forward to the strategic innovation fund that would accommodate for the clinical trial material, but they've clearly communicated to us that their mandate is strictly on clinical trial and that it does not encompass scale-up for commercial activity.

I've reached out and asked if they would put me in touch with... I spoke to the finance committee. I'm speaking to this committee. Quite frankly, I'm not that familiar with who makes that decision in government. Maybe it's Minister Anand at Public Services and Procurement Canada.

If I had an order... I'm not looking for a handout. I'll take an interest-free loan; I'll take a deposit on an order. I don't care how it comes. I just need the capital so that we can start the process.

Mr. Ziad Aboultaif: We've spent billions of dollars on this. There are other companies in Canada that got some nice purchase orders to supply PPE.

Why not? How much capital are you looking for? I know that could be in the millions, but that's nothing compared to the amount of money we've spent so far. This is very critical, because this is not the solution just for today. I think that having companies such as yours will be a solution for the future, knowing that vaccines and problems as such will be things we're going to have to deal with for decades to come.

How much capital are you looking for? Why haven't you been able to get that? Why not? You mentioned that you don't know who to talk to. This is concerning.

Mr. Brad Sorenson: Well, we're talking to anybody who will listen.

The simple answer is, as I mentioned earlier, that our costs are \$5 a dose. Those costs, 80% of that, \$4 of that, are material costs that we have to spend up front. In this environment, where there's so much demand for this type of product, we have to make commitments six, seven or eight months in advance in order to secure these supply chains. If you want 50 million doses, it's simple: 50 million times \$4 equals \$200 million. If you want to have enough supply for an entire production run of 200 million, that would be \$800 million.

The reality is that once we get there, we're going to be able to sell some vaccines and we'll be able to use those revenues to continue to purchase supplies.

I hope that's a straightforward answer.

Mr. Ziad Aboultaif: Let me ask you a business question. If the government extended a purchase order to your company, wouldn't you be able to leverage that to get some funds to start producing?

Mr. Brad Sorenson: Oh, 100%. People ask me, "Well, if your stuff is so good, why don't you go out and raise money in the mar-

ket?" Well, it's a point of value inflection. Yes, we're going to go to the capital markets. We're going to bring significant capital into Canada, but why would I do that at a competitive disadvantage to other companies that have received significant support from their governments and disadvantage my existing shareholders?

I know what our data is. I know that we are going to be able to do deals based on our data. If we don't get the upfront costs from Canada, we'll get upfront costs from other countries. The problem is that we'll have committed that production to another country, and we'll be exporting it out of Canada when Canada potentially needs it.

The Chair: Thank you, Mr. Sorenson.

We move to Mr. Arya, please, for five minutes.

Mr. Chandra Arya (Nepean, Lib.): Thank you, Madam Chair.

My first question is to Mr. Mark Agnew.

Mark, you and I both support free trade agreements. We have talked, I think, in previous committees too. With CUSMA and with CETA, we have these free trade agreements. Those have made us dependent on our partners to keep the supply of essential goods and services open. Now, with the current situation, do you think our dependence for critical pharmaceutical products due to free trade agreements has come back to bite us?

• (1245)

Mr. Mark Agnew: Well, in terms of how trade agreements have been interpreted historically, governments have very large berths and lots of latitude to interpret what national security exemptions and public health exemptions mean in practice. They have come back to bite us only insofar as they were never really designed to protect us in these types of situations. If the EU decided tomorrow to block a shipment, I don't think we'd be able to bring a case under—

Mr. Chandra Arya: Does it mean that we have to develop a new strategy to have self-reliance on critical items that are required to keep our society functioning?

Mr. Mark Agnew: Yes, and that includes being able to manufacture and source inputs and provide financing, as Brad was talking about, and having the regulatory and labour mechanisms in place, absolutely.

Mr. Chandra Arya: Thanks.

My next question, Madam Chair, is to Mr. Brian Daley.

Brian, you talked about a reasonable approach. You are basically, if I'm not wrong, suggesting a sort of reasonable approach that creates interdependence that will ensure that the supplies are there when we need them, if my understanding is right, and you are opposing the waiver.

You mentioned CUSMA and CETA. They have solutions, but they seem to have not worked, or it may be possible that the solutions currently available may not yield results in the immediate term. What do you think?

Mr. Brian Daley: Well, as one of my colleagues said earlier, we are getting suppliers who honour their contracts with us, so we have not seen our major trading partners impede supplies to Canada.

My idea behind the regional suggestion is that we really shorten some of the supply chains and limit the number of countries we deal with in order to reduce risk.

As everybody knows, in a crisis you're never going to be able to enforce what is essentially a contract between states. You'll never have that contract honoured in cases of national crisis. People are always going to act in their self-interest in a crisis, but I think reducing the number of people we depend on helps us achieve a higher level of security, even though the idea of absolute security is never going to happen.

Mr. Chandra Arya: I think I heard differing views. Mr. Marc-André Gagnon seems to suggest that production capacity is not a constraint, while Mark Agnew seems to suggest that production capacity is a constraint.

Mr. Marc-André Gagnon, can you address this issue, please?

Dr. Marc-André Gagnon: It's not an issue of the production capacity being a constraint or not; it's a question of whether we have available production capacity right now that is not being put to use.

The answer to this question is "yes". The other question is, "Why is this?" On this, trying to maintain the system in place will not help to contribute to production capacity.

We have Mr. Sorenson here, but we would have basically the same story from Donald Gerson at PnuVax, for example, who could tell you exactly the same thing. He has the same issues in trying to start producing the vaccine. If we don't have a government that is applying its weight in order to help these businesses and partners, or by producing these vaccines itself through a public manufacturing capacity, basically we're stuck in the situation we are in right now.

Mr. Chandra Arya: Mr. Agnew, what do you say?

Mr. Mark Agnew: Just to clarify my earlier remarks, when I was talking about the manufacturing piece, it was in reference to the TRIPS waiver specifically. Waving a magic wand over the TRIPS waiver for six months is not going to suddenly make capacity issues in other jurisdictions go away. I think that's a nuance I want to put there.

The Chair: Thank you very much.

Your time is up, Mr. Arya. We'll go on to Mr. Savard-Tremblay for two and a half minutes, please.

[Translation]

Mr. Simon-Pierre Savard-Tremblay: Mr. Gagnon, you talked about the WTO. Do you think certain sections of the agreements themselves should be revised or amended? In other words, are reforms needed?

• (1250)

Dr. Marc-André Gagnon: That's a good question.

Are you referring to regional trade agreements such as the Canada-European Union Comprehensive Economic and Trade Agreement, or CETA?

Mr. Simon-Pierre Savard-Tremblay: Yes, CETA is a good example.

When CETA was signed, there was no indication, under certain sections, that a crisis was going to force the signatories to override certain provisions of the agreement.

Dr. Marc-André Gagnon: There's actually a difference between the agreement and the way in which the agreement can be interpreted. The TRIPS Agreement was signed in the mid-1990s. From that point on, countries sought to interpret the agreement through what are known as TRIPS-plus provisions.

That caused considerable problems, leading the WTO to adopt the Doha declaration, calling on countries to be more flexible. It didn't take long to realize that the TRIPS Agreement was ill-equipped to address public health needs and did not take into account responses to health emergencies.

All that to say, agreements could certainly stand some changing, but it all depends on how they are interpreted.

As Mr. Daley said, the definition of a health emergency is still unclear. Countries have to fight to establish what constitutes a true health emergency. AIDS remains a health emergency in Africa, but the provisions in various agreements are not used to address the emergency.

Canada should stop promoting the TRIPS-plus approach, which calls for the strictest interpretation possible.

Not suspending the TRIPS Agreement is one thing, but not including COVID-19 products in schedule 1 of the Patent Act makes no sense. Accordingly, the flexible measures in the TRIPS Agreement can't be applied to those products. That is unacceptable.

The way to achieve better results is to suspend the TRIPS Agreement. Technology and expertise could then be pooled and shared, which would give the current fight against COVID-19 a significant boost.

Mr. Simon-Pierre Savard-Tremblay: Thank you.

[English]

The Chair: I'm sorry. Your time is up, Mr. Savard-Tremblay.

We'll move on to Mr. Blaikie for two and a half minutes.

Mr. Daniel Blaikie: Thank you.

Mr. Sorenson, we know that in the rush to try to get the initial vaccination done, Canada is very reliant on some of the large pharmaceutical companies. I think that's an understatement. We also know that as the pandemic continues, if COVID-19 vaccines are going to be part of a regular vaccination course, it seems to me it would be in the long-term interest of Canadians to have a more competitive market and a domestic supply, but the behaviour of the government in not providing support for what you guys are doing out of Calgary and Winnipeg is inhibiting that.

Do you have any concern that the short-term imperatives of the current vaccination rollout are causing the government to behave in ways that discourage competition in the long term?

Mr. Brad Sorenson: I'm not sure what goes into the negotiations as Canada is negotiating with these large pharmaceutical companies for additional supply, so I don't know if competition restrictions are involved in those negotiations or not. I would hope certainly not—

Mr. Daniel Blaikie: What I'm hearing from you at committee today is a pretty open approach in terms of transparency on your part and on your company's part. Do you think the larger companies are meeting that same standard, and do you think that if they aren't, they should be? What do you think that looks like in practical terms?

Mr. Brad Sorenson: I have the advantage of being a private company that I have a lot of control over, so I don't need to go through a board of directors and shareholders and all the requirements associated with a publicly traded company to provide that type of clarity, and obviously there is differential pricing across different countries, so I have an advantage. I can be a lot more open and transparent, and I've given the commitment to Manitoba that they can disclose our purchase agreement once the definitive agreement is in place. I have no problem with that, but it's unfair to say I'm doing better than they are; I'm in a different circumstance.

• (1255)

Mr. Daniel Blaikie: Dr. Gagnon, could you speak quickly to the extent to which, over the medium term, in the next several years, we're going to continue to need vaccinations?

From a public policy point of view, is this something that really ought to become a cash cow for large pharmaceutical companies, or is this something that we're going to continue to have a public interest in? There's an economic cost of not having that ongoing vaccination effort, and this really isn't the kind of thing that should be for private profit. At the very least we should be able to monitor it to see if those profits are excessive.

The Chair: Please answer very briefly.

Dr. Marc-André Gagnon: You are totally right, and let's keep in mind that many companies pledged that they would not make a profit during the pandemic. However, once the pandemic is declared over, the vaccinations will still have to continue for generations, basically, and then we do not have a clue how much these vaccines will cost.

The Chair: Thank you, Professor.

Mr. Hoback, you have five minutes.

Mr. Randy Hoback (Prince Albert, CPC): Thank you, Chair.

Thank you, witnesses.

Mr. Agnew, the EU brought in this implementation list, the restriction list on the exportation of vaccinations. Canada didn't get an exemption. Does that not concern you?

Mr. Mark Agnew: Yes, it does.

Mr. Randy Hoback: A verbal agreement means nothing unless you're on the exemption list, I've heard it said.

Mr. Mark Agnew: Yes, it is true that there's a lot of discretion, so a shipment could be blocked at any time.

Mr. Randy Hoback: Mr. Daley, you talked about creating supply chains and looking at our supply chains in a more holistic fashion with other like-minded countries. I'm hearing that quite often from other people around the world who are saying the exact same thing.

One thing I'm concerned about is that this government relied on China at the start to do its supplying, and we don't have an FTA with China. We have quite a few other issues with China that we don't agree on.

Is that a prudent approach, or are we better off working with the U.K. and maybe France, Australia, New Zealand, the U.S., together, and making sure we have the capacity to take care of all our needs within that bloc, for example?

Mr. Brian Daley: Well, that's largely what I've been suggesting—that we have a more regional, more limited concept of supply chains. As I said, it gives us the advantages of economies of scale, but it also reduces at least one level of risk from our supply chains.

Mr. Randy Hoback: Okay.

Mr. Sorenson, when you talked about your facility, you said that you've already signed an agreement. Is that facility not being used right now? If not, why isn't it doing vaccines for Pfizer or somebody else at this point in time, until it's ready to take on your product? Why is it sitting there vacant and not being utilized?

Mr. Brad Sorenson: Randy, it's not so simple as to just say that we're going to make this, we're going to make that. As was mentioned by the witnesses, it's more than just a recipe. You have to do the tech transfer. You have to do an audit of the facility and all the quality control that's associated with all the release criteria. You see what's happening in the States, where 15 million doses of Johnson & Johnson were lost.

Mr. Randy Hoback: That makes the argument, then, that to go and say "Here's the recipe" to other countries just doesn't work. You actually would be better off making sure you have a good strong system for producing them here in Canada, or in another like-minded country. You could say we have capacity to help you out, and we're going to help you out by donating or giving the intellectual property and sharing it, instead of having it stolen in a situation that may not be safe for the people who are getting that product at the end of the day. Is that fair to say?

Mr. Brad Sorenson: Yes. Providence's approach on this is... The countries that we're discussing were actually talking about jointly putting in a facility in that country and doing training and having control over the quality of that facility.

We're open to tech transfer. We're open to sharing the technology so that Australians will make vaccines for Australians, but there's a certain process and a standard that we expect as a company so that our vaccine isn't going to be produced inappropriately.

Mr. Randy Hoback: Mr. Sorenson, before the COVID crisis, VIDO here in Saskatoon, Saskatchewan, was doing great research work in regard to different COVID variants, different strains. They applied two or maybe three years ago to set up a manufacturing facility under the clusters, but they were just totally ignored. Why are we not seeing that being revived, and why are we not seeing those types of investments happening now? If we know that this is going to be an ongoing thing, why aren't we making that investment here in Canada?

Again, I find it so frustrating, because we're willing to invest in other countries and we're willing to buy from other countries, yet if you want something from Canada, it seems like you have to go to the U.S. to get it, whether it's electronics or wine or anything else. Now it's vaccines.

Can you explain that to me? Maybe it's unfair to ask you.

• (1300)

Mr. Brad Sorenson: I can't get into specific case scenarios, Randy. What I can say, though, is that a lot of the focus seems to be on the manufacturing, getting the large fill-finish facilities and being able to go and cut a ribbon and say, "Look—we're making these here."

The truth of the matter is that there's an overbuild going on throughout the entire world for manufacturing capacity. Everybody's doing the same thing Canada's doing, and they're building up manufacturing everywhere. In five years, if this pandemic tapers down, or even if it just mitigates somewhat, we're going to have such an overwhelming oversupply of biomanufacturing capacity that it's going to be breathtaking.

What they won't have are the products to go into those facilities. Besides Providence, there are fantastic companies doing tremendous R and D in Canada. We keep talking about the manufacturing, but manufacturing will come where there are successful products. We didn't have to go out and create new manufacturing in order to do what we're doing at Providence. We created a successful product and we found and secured the manufacturing necessary for it. Any group can do that.

Mr. Randy Hoback: That feeds into the age-old argument about Canadian research: We're great at research, but we're horrible at bringing it to market—

Mr. Brad Sorenson: Yes.

Mr. Randy Hoback: —so we take that research and we give it to somebody like China, and then they bring it to market.

How do we change that?

The Chair: Answer very briefly, Mr. Sorenson.

Mr. Brad Sorenson: Honestly, I have a strategy for that. I worked with The Terry Fox Foundation, The Princess Margaret Cancer Foundation, the Alberta Cancer Foundation, the OICR. We were going to prove that method out in cancer. It's on hold because of the pandemic. If anybody is interested in learning more about it, please feel free. I don't have time to go into the details at this meeting.

Mr. Randy Hoback: That's unfortunate.

Thank you.

The Chair: Thank you to our witnesses today for their very valuable testimony. We appreciated it.

For the committee's information, I am suggesting that we conclude the examination of the two draft reports on Friday, April 30, and that on May 1 we start the study of the Canadian exportation of green, clean and low-carbon technologies. The names of all of your suggested witnesses should be in by this coming Wednesday.

Thank you all very much, and have a great day.

The meeting is adjourned.

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