



HOUSE OF COMMONS  
CHAMBRE DES COMMUNES  
CANADA

43rd PARLIAMENT, 2nd SESSION

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# Standing Committee on Industry, Science and Technology

EVIDENCE

**NUMBER 018**

Thursday, February 18, 2021

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Chair: Mrs. Sherry Romanado





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Thursday, February 18, 2021

• (1105)

[English]

**The Chair (Mrs. Sherry Romanado (Longueuil—Charles-LeMoyne, Lib.)):** Good morning, everyone. I now call this meeting to order.

Welcome to meeting number 18 of the House of Commons Standing Committee on Industry, Science and Technology.

Today's meeting is taking place in hybrid format, pursuant to the House Order of January 25, 2021. The proceedings will be made available via the House of Commons website. The webcast will only show the person speaking rather than the entirety of the committee.

To ensure an orderly meeting, I would like to outline a few rules to follow.

Members and witnesses may speak in the official language of their choice. Interpretation services are available for this meeting. You have the choice, at the bottom of your screen, of either floor, English or French.

For members participating in person, proceed as you usually would when the whole committee is meeting in person in a committee room. Keep in mind the directives from the Board of Internal Economy regarding masking and health protocols.

Before speaking, please wait until I recognize you by name. If you are on the video conference, please click on the microphone icon to unmute yourself. For those in the room, your microphone will be controlled as normal by the proceedings and verification officer.

As a reminder, all comments by members and witnesses should be addressed through the chair. When you are not speaking, your mike should be on mute.

With regard to the speaking list, the committee clerk and I will do our best to maintain the order of speaking for all members, whether they are participating virtually or in person.

As is my normal practice, I will wave the yellow card when you have 30 seconds remaining in your intervention, and I will hold up a red card when your time is up. I ask all members and witnesses to be mindful of the cards and to respect your time limit to allow all members to participate.

Pursuant to Standing Order 108(2) and the motion adopted by the committee on Tuesday, December 1, 2020, the committee is meet-

ing today to continue its study on the domestic manufacturing capacity for a COVID-19 vaccine.

I would like to now welcome our witnesses.

From the COVID-19 vaccine task force, with us today, we have Joanne Langley, co-chair; Mark Lievonen, co-chair; and Roger Scott-Douglas, secretary.

The panel will have up to seven minutes to present, followed by rounds of questions.

With that, I will turn the floor over to the vaccine task force members for their presentation.

**Dr. Joanne Langley (Co-Chair, COVID-19 Vaccine Task Force):** Good morning.

Thank you so much, Madam Chair, and thank you to the committee for inviting us today.

I'm really honoured to be with you today as the co-chair of Canada's vaccine task force. I think I speak for my colleague, Mark Lievonen, who is here, and all task force members in saying how privileged we all feel that we are able to serve in this way during the COVID-19 pandemic.

I'll speak briefly about our vaccine work and then turn to Mark, who will talk about the biomanufacturing component of our work.

The task force was formed in June 2020 to advise the government on the best strategy to secure safe and effective vaccines for Canadians to mitigate this pandemic. In order to do so, we looked broadly at three aspects of our work: domestic vaccine candidates, international vaccine candidates and biomanufacturing opportunities.

Who are we? We are 11 experts in broad fields. All but one of us are Canadians; we have one international member. We come from fields like clinical medicine, immunology, vaccinology, biomanufacturing and commercialization. We're all volunteers, and we are working in a format where we are looking for the most recent evidence that's available at the time when we're trying to provide advice to the Government of Canada. That evidence includes literature review, meeting with companies and meeting with external experts. We've met with 12 external experts at this point. Six of those are international and six are Canadian. We've also met with task forces from other countries to learn from them as well.

We've been guided by a number of key principles, and probably the most important one is science. The recommendations we make are based on the best available information at the time. Another principle is transparency. We know that the public is interested in our work, and our members have proactively engaged with media on about 135 interviews as of yesterday, I think. We've also participated in outreach events and met with scientific community members across the country: people in academic settings, NGOs and so on.

We held our very first meeting on June 16, and the tenor of the room was one of extreme urgency. We have since met about 39 times. Despite this commitment to transparency, of course we are dealing with confidential business information, so the secretariat put in place a rigorous protocol to declare, manage and record potential conflicts of interest. This process means that we do end up recusing ourselves from providing advice on projects where there's a conflict or an appearance of one, and this has happened about 30 times so far. All of our potential conflicts are registered on the public access NRC website.

Back in the early spring/summer, we recommended a portfolio of candidates, a portfolio because we were recognizing that there was a risk that any of these potential candidates might not make it into clinical trials and ultimately to regulatory authorization. Ultimately, the government has announced seven advance purchase agreements with promising candidates, and two of these are now being rolled out in programs across our provinces and territories.

We did recommend purchasing more vaccines than we might potentially need, knowing that some of these might fail and wanting to have safe and effective vaccines for Canadians. We knew that the option for donation of excess vaccines was always available if the vaccines were authorized.

We reviewed, with regard to Canadian proposals, 24 Canadian options through the strategic innovation fund. The most promising back in the spring/early summer were Medicago, Variation Biotechnologies, VBI, and Precision NanoSystems, PNI. Other domestic candidates were funded through the National Research Council and the industrial research assistance program. Those include Providence Therapeutics, IMV, Entos, Symvivo, Biodextris and Glycovax. These will play an important role in developing Canadian candidates in the more medium term.

I think I will pass over at this point to Mark to discuss the biomanufacturing.

Thank you.

- (1110)

**Mr. Mark Lievonen (Co-Chair, COVID-19 Vaccine Task Force):** I'd like to start by echoing the remarks of my co-chair. I am delighted to be with you today. It has truly been an honour to serve on the vaccine task force.

I have been struck by how much can get done in a relatively short period of time when you bring together the right people across government, academia and industry. I have often said that we are operating in battlefield conditions, making recommendations on urgent issues with very limited information.

Along with my role as co-chair of the vaccine task force, I chair a subcommittee on biomanufacturing. All members of the vaccine and therapeutics task forces are able to participate in joint biomanufacturing subcommittee meetings. We employ the same rigorous process on declaring interests and recusing ourselves if there is a conflict or the appearance of a material and direct conflict.

The joint biomanufacturing subcommittee was tasked with providing advice to the government in three areas. First, we were asked to assess biomanufacturing projects proposed to the government under the strategic innovation fund. Second, we were asked to develop an overall strategy to increase Canada's biomanufacturing capacity. Third, we advised the government on other biomanufacturing matters related to securing COVID vaccines and therapeutics for Canadians, including efforts to attract international vaccine candidates to manufacture some of their vaccines in Canada.

We began meeting on June 23 of last year and now the subcommittee has met 22 times, for a combined total of about 55 hours.

In recommending biomanufacturing proposals, we considered criteria such as demonstrable experience with manufacturing; production planning, readiness and flexibility; manufacturing facility readiness; solid management and project risk management capabilities; and the potential to contribute to developing Canada's vaccine R and D sector.

As with the domestic and international vaccine candidates, we also invited experts from outside of Canada to learn about the ways that other countries, particularly the U.S. and the U.K., have built capacity or plan to do so.

The joint biomanufacturing subcommittee identified early on that strengthening Canada's biomanufacturing capacity is a key element of our COVID-19 response. Our advice in this area has included recommendations on critical, immediate investments to respond to COVID-19, and on a series of medium- to longer-term measures that aim to protect the health of Canadians when faced with future pandemics, while also promoting economic growth.

We reviewed 21 domestic projects, which were for the most part biomanufacturing projects for either vaccines or therapeutics.

It's a pleasure to be with you today, and we look forward to answering your questions.

- (1115)

**The Chair:** Thank you very much.

We will now go to our rounds of questions.

We will start with MP Baldinelli.

You have the floor for six minutes.

**Mr. Tony Baldinelli (Niagara Falls, CPC):** Good morning, everyone.

Thank you to our witnesses for appearing here today.

I just want to follow up on some of the comments that were made and find out specifically, in terms of the task force's responsibilities, about the data and the research that led them to recommend to the government certain vaccines, rather than others.

**Dr. Joanne Langley:** I could start on that, Madam Chair.

As we looked at the candidates from a vaccine point of view, there are some vaccine platforms that have been used in programs since the 1950s when we started to roll out public health programs, so we would have a lot more experience and knowledge about their technical ability to be ramped up and their safety in big populations, for example, pertussis vaccine or influenza vaccine.

During this pandemic we had some very novel platforms, particularly the mRNAs. What we did was look across the entire science of how you evaluate a vaccine: its immune response; the pre-clinical studies, that is the studies in animals; any toxicology studies; any evidence in humans; and then all those technical aspects of biomanufacturing that Mark has mentioned, to come to a decision and looking at it from all the aspects that we mentioned.

**Mr. Tony Baldinelli:** Thank you for that.

During your comments, you had mentioned that you were looking at the most recent evidence, including literature reviews and meeting with companies and international experts.

I talk about that because, as you're aware, we're hearing from stakeholders and you're seeing the stories in the media about perceived conflicts of interest with regard to membership within the task force.

How does the task force go about ensuring that its recommendations were not biased by the professional interests of any of its members?

**Dr. Joanne Langley:** We had a process in place whereby potential interests were categorized under nine categories, then the impacts of those potential interests were considered by the secretariat.

We were overly disclosing any potential interest. Normally you would disclose something involving an interest within the preceding three years. We disclosed things going back 20 or 25 years, just because we were so aware that the integrity of this process ultimately had to do with Canadian citizens' confidence in the process. We wanted to bend over backwards to make sure everything was made clear. Those interests are all disclosed, and those people would leave the meeting.

I guess ultimately the letter to ministers—every letter of recommendation from the task force—goes dually to ISED and the Minister of Health, to Minister Hajdu and currently Minister Champagne, and they make the ultimate decision. We're giving our best advice, but we are not ultimately making the decision. They are aware of any disclosures we make.

**Mr. Tony Baldinelli:** You mentioned disclosures. Were there recusals of members because of these?

**Dr. Joanne Langley:** Yes, there were. There were, I think, 29 or 30 instances in which people recused themselves.

**Mr. Tony Baldinelli:** I want to go to the timeline with regard to the acquisition of the vaccines here in Canada. We can go back to May, when the National Research Council entered into the agreement with CanSino. On May 12 the NRC publicly announced the deal; on May 16 the Prime Minister then commented on it. Three days later was when the government became aware that the candidate doses were being held back in China, and that wasn't disclosed to the public until July of that year. Subsequently, in August, the government announced its new agreements with Moderna and Pfizer.

Your establishment took place in June. What information was presented to you by the National Research Council or by the government to assist? Were there other candidates that the government had considered at the time or wanted you to proceed to look at before you went ahead with your recommendations to the government on those two vaccines?

It seems to me that we lost those three critical months; that instead of having another recommendation available, you were just starting from scratch.

• (1120)

**Dr. Joanne Langley:** I would say that we looked at all the international candidates on the same shelf. CanSino was one of those international candidates. We were hoping for a domestic candidate and we very much placed equal emphasis on all the domestic candidates, but ultimately our goal was a safe and effective vaccine.

CanSino was thus one of the international candidates, and it was not given preference in any way, I would say.

**Mr. Tony Baldinelli:** To follow up on your mention of Canadian firms, how many Canadian-made vaccine production options came forward for your consideration?

**Dr. Joanne Langley:** There were at least 24 SIF proposals, but there were other ways that support could be accessed.

Mark?

**Mr. Mark Lievonon:** Yes, there were various Canadian proposals at various stages of development.

Just to reiterate one of Joanne's points, all of these were done in parallel. It wasn't a case of looking at CanSino and then waiting to look at others. We looked at the international candidates and the domestic candidates at the same time and we reviewed all of them carefully in view of whatever stage of development they were at.

**Mr. Tony Baldinelli:** Thank you.

**The Chair:** Our next round of questions goes to MP Erskine-Smith.

You have the floor for six minutes.

**Mr. Nathaniel Erskine-Smith (Beaches—East York, Lib.):** I first want to say that I very much appreciate your volunteer efforts in the course of this crisis to help us get through it.

Like many Canadians, I have family in the United States and I have family in the United Kingdom. There is recent news that the United Kingdom has vaccinated 15 million people. Largely, they have been successful in that rollout, from what I can tell, because of AstraZeneca.

I have a few questions going forward, but I first want to spend a little bit of time looking back.

When we look at AstraZeneca in particular, they seem to have had a great head start in their research. The U.K. entered into an agreement with them at the end of April, and I'm curious about what the exploration process was. We've heard some testimony related to how the NRC could have produced AstraZeneca's vaccine and has produced similar vaccines previously. I'm wondering what the exploration was of that opportunity—licensing AstraZeneca and building at the NRC.

**Dr. Joanne Langley:** Every possible candidate was explored, and AstraZeneca was one of them. Our current option is to get it through COVAX.

Perhaps Mark or Roger could speak further to the AstraZeneca option.

**Mr. Mark Lievonen:** I would comment that AstraZeneca, as you know, is one of the seven vaccines we recommended. In terms of being able to get it to Canada as quickly as possible, it was deemed that would be best through providing it from other countries. There is always the possibility to look at manufacturing vaccines in Canada, but across the board, the shortest time frame for bringing it into Canada was through importing it from other countries.

**Mr. Nathaniel Erskine-Smith:** I have a follow-up question.

I'm a layperson and I respect your expertise. When I look at the Novavax deal, though, I'm thankful we're going to be producing vaccine and building up that domestic supply, but in terms of that timeline from announcement to manufacturing processes being up and running, is it possible that had we in July said we're going to license AstraZeneca, we're going to move it to the NRC, we're going to copy what the U.K. has done effectively in some respects, we would have that supply, say, today? Do you think it's possible?

**Mr. Mark Lievonen:** Vaccine manufacturing is very complex and it takes time. To think that one could announce a concept to do that and actually sign a licensing deal, do the technology transfer, bring it here, and have it up and running faster than when we expect to receive it, I don't think that would have been possible.

The time frames we're operating under are extremely tight. Before, the shortest period to develop a vaccine and commercialize was four to five years. Typically, it takes 10 to 15 years. To think that this is being done within a year is truly remarkable.

If you think about where we were a year ago, and to have vaccines being delivered, and including plans for the AstraZeneca vaccine if it is licensed, when it is licensed, to be coming forth in the second quarter is a pretty remarkable achievement. I don't think we could have done it faster with any type of licensing in or tech transfer agreements.

Licensing in, tech transfer and Canadian production all make sense to pursue, particularly in the medium term, but they would not be part of the solution for 2021.

• (1125)

**Mr. Nathaniel Erskine-Smith:** Again, I'm certain there's a good answer, but why pursue with Novavax and not, say, AstraZeneca, where we know AstraZeneca is already now approved by the EU,

by the WHO and by the U.K.? I expect Novavax will be successful; I hope it will be successful, but why not pursue through NRC, in the medium term, as you say, a proven vaccine?

**Mr. Mark Lievonen:** My understanding is that the Government of Canada has spoken with all the companies to see who might be interested in manufacturing in Canada. It would seem to be that Novavax was a company that wanted to do that.

Again, it's unprecedented to make billions of doses of vaccines in a very short period of time. If you look at worldwide supply and capacity for these vaccines, typically the constraint is the drug substance, the bulk manufacturing, fill and finish or formulating it and converting it into drug product. That is the bottleneck, so to start with looking at how you can have fill and finish capabilities and then transfer bulk manufacturing into Canada certainly is a way to go to fortify us for the intermediate and the longer term.

**Mr. Nathaniel Erskine-Smith:** My last question is in relation to that medium term.

Novavax seems to be a medium-term goal, to have domestic manufacturing capacity up and running. We will hopefully have all Canadians vaccinated by then, but there are obviously considerations as it relates to variants; and we should contribute to the global supply as well, because it is obviously a global challenge.

When we look at mRNA technology, at least with the science we have to date, that mRNA technology seems to be better suited to respond to the variants. Who knows? That could change.

We're spending hundreds of billions of dollars on supporting Canadians, individuals and businesses, through this pandemic. Should we not be spending a significant amount to build out mRNA capacity here in Canada?

**Mr. Mark Lievonen:** There have been a number of SIF proposals that we've reviewed, and there have been some investments. One of them is Precision NanoSystems, where investment has been made to expand the mRNA capacity there. There are other proposals under discussion and the government is committed to investing in biomanufacturing capacity.

**Mr. Nathaniel Erskine-Smith:** Thanks very much. I really appreciate it.

**The Chair:** Thank you very much.

[Translation]

Mr. Lemire, you have the floor for six minutes.

**Mr. Sébastien Lemire (Abitibi—Témiscamingue, BQ):** Thank you very much, Madam Chair.

My thanks to the witnesses for their visit, which we really have been waiting for and looking forward to.

Canada had the sequencing of the virus in our hands as of January 11, 2020. The public announcement of the first case came on January 25, 2020. According to the information that you have just given us, the first meeting of the COVID-19 vaccine task force took place on June 16.

Decisions were made between January 25 and June 16. Do you know who was making the decisions in the government and how that happened? Then, do you know whom the government consulted during the five months between the first case of COVID-19 and the first meeting of the committee?

[English]

**Dr. Joanne Langley:** I'm not getting translation, but you related the timelines for the pandemic and asked who made the decision about the task force and who they consulted.

I think that would be a question for the secretariat. Would that be correct, Roger?

**Mr. Roger Scott-Douglas (Secretary, COVID-19 Vaccine Task Force):** Yes, I'm happy to answer, Joanne.

The task force was constructed in May of 2020 and held its first meeting on June 16, 2020. Until that time there were other groups that were also advising the government. For instance, the chief science officer, Dr. Mona Nemer, has other committees that supported expert advice. There were also, obviously, significant science capabilities within Health Canada and the Public Health Agency of Canada. This expertise was also drawn on in those early months as the vaccine task force was being established.

• (1130)

[Translation]

**Mr. Sébastien Lemire:** So we gather that the government wasted time or improvised before it called on you.

Let's move on.

Between June 2020 and August 2020, the committee's activities remained basically secret. You met for six weeks and you made recommendations to the federal government, but neither the public nor its elected representatives knew the composition of the committee.

Who was sitting on the committee and with which companies were they associated? Why did that remain secret for six weeks? Were mechanisms to prevent conflicts of interest established at that time?

[English]

**Mr. Roger Scott-Douglas:** The committee was established in early June. As Joanne indicated in her opening remarks, an extraordinary amount of work was done by these volunteer experts in the immediate months thereafter. As soon as the appropriate due diligence could be done both by committee members and then also, importantly, advice was being given, therefore before approval

could take place, experts within the ministry of ISED and other groups were reviewing and doing follow-up due diligence. As soon as that had been done and agreements were signed on August 5, that was made public. All the names and roles that had been played by the task force were made public at that point.

[Translation]

**Mr. Sébastien Lemire:** In terms of the sums allocated, we know that the government's decision to choose CanSino Biologics as a partner was announced in May. It was actually the first decision that the committee ratified in June at its first meeting. However, the agreement with China collapsed in August.

Were the \$56 million allocated to CanSino Biologics spent?

[English]

**Mr. Roger Scott-Douglas:** It's not quite factually correct. The task force was asked to review SIF proposals and international candidates. As Joanne mentioned, CanSino Biologics was one of a number. There were 19 international companies looked at. There were 24 Canadian companies that were examined. CanSino was in that mix. They were reviewed initially by the task force. Further evidence was provided and the task force ruled and their advice to ministers was that new science suggested not backing CanSino further.

The relationship between the National Research Council and CanSino was entirely independent of anything that the task force was doing. The early relationship you were talking about was independent of the task force's advice.

[Translation]

**Mr. Sébastien Lemire:** I understand, but the heart of the Canadian strategy at that point was to go ahead with CanSino Biologics as a partner. Who decided that? Were \$56 million given to CanSino Biologics, or do we still have that money?

[English]

**Mr. Roger Scott-Douglas:** I think, Madam Chair, with great respect, CanSino was not at the heart of the Canadian strategy, by any means. It was a much more balanced approach. The task force, as Joanne and Mark indicated, recommended strongly for a diversified portfolio across both vaccine platforms and companies. At all times, a full-court press was put on all fronts. There was no effort made by anybody to privilege one company over another, and certainly not CanSino.

[Translation]

**Mr. Sébastien Lemire:** So you did not recommend CanSino Biologics.

[English]

**Mr. Roger Scott-Douglas:** CanSino was initially recommended. Then, when further evidence materialized, the advice was given not to recommend pursuing it.

[Translation]

**The Chair:** Thank you very much.

[English]

Witnesses, if you're having difficulty with translation, please let us know. We can make sure that IT reaches out to you. If you need translation, make sure that on the bottom of your screen you've selected English.

Our next round of questions goes to MP Masse.

You have the floor.

• (1135)

**Mr. Brian Masse (Windsor West, NDP):** Thank you, Madam Chair.

Thank you to our witnesses for being here and for your work.

One thing that is crucial is public confidence. There's no doubt that we're recommending what people put in their bodies to fight a deadly situation. Some people already have reservations about vaccines. Some people have reservations about the length of time it should be tested and so forth. One of the best things we can do is to provide more openness and accountability for that.

One of the concerns I've had with regard to the task force is the transparency aspect. You mentioned the NRC site with regard to the declarations of conflict of interest. I have that, and I've looked at it.

Ms. Langley, you noted that you worked at the university and "collaborated with Janssen in the past on clinical trials". Under "Action Taken", this says, "As there are no direct, material linkages, it was not considered a conflict and recusal was not deemed necessary." That's not a lot of information for Canadians to see. I want to know whether that's the same or equivalent to when you publish conflicts of interest in journals and other types of materials. If you just look at the surface of that, it doesn't really explain a lot. From those conflicts of interest that were declared, I think I found only one or two where action was taken.

Maybe you can comment on those things, please.

**Dr. Joanne Langley:** I can speak to the question about me. Roger, perhaps, could do the second part.

You're right that it's very similar to what we do for journals. For every trial that we publish the results for, for every talk that we give, particularly in a university, we have to have a slide that lists every company our employer has had a relationship with. For me, for example, I'm a professor at a university, at Dalhousie. I'm an employee of the university. When we do clinical trials here at the Canadian Center for Vaccinology, some of our funding would be from CIHR and some of it might be from a company like Janssen doing a phase one trial. We'd negotiate a contract—it would be the university with the company—and then the money would be used to pay the research nurses we have and so on.

None of the money in Canada, when you do those kinds of clinical trials, goes to investigators, at least when you're in an academic setting. I think that answers the Janssen part. We had previously done Janssen studies—

**Mr. Brian Masse:** You're saying, then, that this website from the NRC is equivalent to what you have to do for the journals and other types of conflicts of interest. I'm just looking to find out whether this is equivalent in terms of the disclosure of information and the way it's actually being done here.

**Dr. Joanne Langley:** I can tell you what the disclosure was to the NRC. I listed every possible relationship I would have had to Janssen. Not all of those would have been listed, potentially.

**Mr. Brian Masse:** Okay: so it's not equivalent to what you have to provide for journals and other types of conflict of interest declarations, then.

**Dr. Joanne Langley:** No, journals are very different, so you can't make a general statement about journals, I think it would be fair to say.

**Mr. Brian Masse:** I don't know how this is a difficult question. I'm really just trying to find out whether what's being published on the NRC website is as robust as what's normally disclosed when you publish in journals and so forth. That's all I'm looking for.

**Mr. Roger Scott-Douglas:** Perhaps I could jump in.

Thank you, Joanne.

Madam Chair, a very exhaustive effort was done to make sure that the conflict of interest protocols used by the task force were equivalent to those of all major granting bodies. We looked carefully at what CIHR had done. We looked at other countries and what they had done. This meets all of the same kinds of tests.

There were rigorous declarations. Joanne mentioned that in all of the cases, about 30 people recused themselves when they were found to have a direct conflict or the appearance of one.

With regard to the cases that are on the NRC website, these are the announced projects by the government. There are eight cases of recusal in those projects that have been announced where the advice of the task force was taken by the government and investments were made. It meets the very highest standards.

We spoke about credibility. The task force numbers are incredibly—

**Mr. Brian Masse:** Sorry, I don't want to..., but I'm just running out of time here.

You're saying that this website disclosure is equivalent to when you publish journals and so forth. That's what I've been trying to get to in my questioning here. It sounds to me also that you're only disclosing the ones that have to be, that are from the government, so there are other disclosures that haven't gone public, then. Is that correct?



• (1140)

**Mr. Roger Scott-Douglas:** All that is disclosed is where the advice of the task force has been acted on by the government. Ministers received a full list of all of the declarations for every item of advice.

**Mr. Brian Masse:** So, the public doesn't have any access to those other conflicts.

I only have two minutes left, and I just want to ask this: In the United States, they're webcasting and providing much more robust access to the public. Why aren't we doing that here in our country, especially given the fact that we have, virtually, integrated economies? Where I sit right now, I can get in my car and, if I could cross the border, get a vaccine at a Meijer department store in 10 minutes. We're quite integrated, so why aren't we webcasting?

**The Chair:** Answer very quickly because you're out of time.

**Mr. Roger Scott-Douglas:** We looked at all the other task forces, including Warp Speed. What Canada is doing is largely equivalent to what everybody else is doing. There's a great deal of confidential business information, and that necessitates that meetings be held in confidence, the same as almost every other task force.

**The Chair:** Thank you very much.

Our next round of questions goes to MP Paul-Hus.

[*Translation*]

You have the floor for five minutes.

**Mr. Pierre Paul-Hus (Charlesbourg—Haute-Saint-Charles, CPC):** Thank you, Madam Chair.

Good morning to all the witnesses.

We are trying to establish the chronology of the facts at the moment. We know that, on May 12, a partnership was announced between CanSino Biologics and Dalhousie University where Dr. Langley works.

Dr. Langley, as a professor and a researcher at Dalhousie University, you had to find that CanSino Biologics was a good source for vaccines. However, Mr. Douglas just mentioned that CanSino Biologics was not kept on. So we are having trouble understanding.

Moreover, on May 19, CanSino Biologics withdrew and put an end to the agreement. Your COVID-19 vaccine task force was formed and began to meet on June 16. On August 5, the creation of your task force was announced at the same time as the announcement of an agreement with Pfizer and Moderna. At the moment, there are a number of grey areas in this entire situation. The first is the agreement between CanSino Biologics and Dalhousie University.

Dr. Langley, if you were there and were involved with the agreement, why did Mr. Douglas say that the vaccine was not effective?

[*English*]

**Dr. Joanne Langley:** Thank you for the opportunity to clarify that.

I would separate quite clearly clinical development and research from choosing vaccines to buy for Canada. We do here at the Canadian Center for Vaccinology at Dalhousie a number of very early vaccine studies. Most of those never make it forward to be manufactured or scaled up or used. It's very early clinical research, and that was the relationship with this adenovector virus vaccine platform that CanSino had. We were to do the phase one trial. We were all ready to do that and to enrol people and were just waiting for the arrival of the vaccine.

That's quite different from the task force as a whole, considering it as a potential candidate that might make it through the whole clinical development program to be a safe and effective vaccine.

[*Translation*]

**Mr. Pierre Paul-Hus:** Thank you, Madam. I apologize for interrupting you, but our time is very limited.

I would like to have more clarity on the period from June 16, the date of the first meeting, to August 5, the date when the formation of the group was announced. With the answers I've heard to the questions my colleagues have been asking, it's still not clear whether or not there was a conflict of interest.

Here is my first question. What is the date of the conflict of interest declaration protocol for the COVID-19 vaccine task force? Is it June 16 or August 5?

Dr. Langley, would you like to answer my question?

[*English*]

**Mr. Roger Scott-Douglas:** The conflict of interest protocols went into effect at the very first meeting on June 16. Everybody was bound by them in all of the deliberations between June 16 and the August 5 announcement. They were being adhered to rigorously.

The announcements on August 5 for Pfizer and Moderna do include declarations of interest, but there were no conflicts.

There's an important distinction between when an interest is declared in the way that Joanne described and the relationship that the Canadian Center For Vaccinology has with CanSinoBIO and many others. It's a research centre of international repute, so there are very many companies that deal with it. To work with it is a declaration of an interest.

It's very important, but it's not a conflict in the sense that Joanne personally benefits in any way from the relationship that her institute and university have with the client. That would be well accepted everywhere.

• (1145)

[*Translation*]

**Mr. Pierre Paul-Hus:** Thank you, Mr. Douglas.

This morning, *Le Devoir* published an article saying that Canada is lagging behind in the vaccination race and that Canadians are right to wonder whether decisions on vaccines were taken in the public interest or were influenced by the private sector. Your meetings took 114 hours in total. Were minutes kept? Were the names of the people you met with also documented somewhere?

[English]

**Mr. Roger Scott-Douglas:** Yes, indeed. Everything is documented. All of the minutes of the meetings are kept, and letters are sent to ministers, initially Hajdu and Bains, now Hajdu and Champagne.

There's full transparency of the decisions the government takes. The task force drew an important distinction between providing advice, and actually making a decision on something. The task force only provides advice. It is appropriate for the government to be held to account for its decisions.

[Translation]

**Mr. Pierre Paul-Hus:** Great.

So I would like those documents to be submitted for consultation by the members of the Standing Committee on Industry, Science and Technology.

I can't have much time left.

**The Chair:** I am sorry, your time is up.

[English]

The next round goes to Ms. Jaczek, for five minutes.

**Ms. Helena Jaczek (Markham—Stouffville, Lib.):** Thank you, Madam Chair.

Thank you to all three of our witnesses, specifically, Dr. Langley and Mr. Lievonen for your many hours of volunteer work. All Canadians should be most grateful for your expertise.

My first question is for Mr. Lievonen. I first met you when you were president of Sanofi Pasteur and had the opportunity to visit your manufacturing facility on Steeles in Toronto. In fact, I think I first visited when it was Connaught.

Could you explain for the committee exactly what goes into building a biomanufacturing facility? There seems to be some sort of idea that you snap your fingers, you put up a building, and you're ready to go.

Could you explain the complexity in putting together such a biomanufacturing facility?

**Mr. Mark Lievonen:** I was with Connaught and Sanofi Pasteur for 33 years. I retired from that organization in December 2016, having served the last 17 years as president. The campus that you're referring to is over 50 acres at Dufferin and Steeles. It has over a million square feet of space. It is still alive and well, manufacturing diphtheria, pertussis, tetanus and polio vaccines in combination for Canada and the world.

Typically speaking, it would take four to five years to put a building there, to qualify it and to begin production. That would be the same for manufacturing processes. We are talking about traditional vaccine manufacturing processes, so there were no mRNA

vaccines manufactured there. They are the typical inactivated and protein-based vaccines.

It would typically take four to five years to get something up and running to be able to produce product there.

**Ms. Helena Jaczek:** Does that relate to the security, biosecurity—some of the features of the building that are required?

**Mr. Mark Lievonen:** Yes. Over the years, the quality assurance, the desire to assure vaccine quality as opposed to the testing, has risen dramatically. There are all sorts of efforts around not just getting regulatory approval for the vaccines but also for the site itself, for all the compliance procedures. There are more people involved now in testing and making sure the vaccines have quality assurance and compliance than there are in actually making the bulk product.

**Ms. Helena Jaczek:** To follow up on my colleague Mr. Erskine-Smith's comments related to the U.K., apparently they were able to be ahead of the game and put their manufacturing facility in action within the last year. I have heard some evidence that in fact they started a little sooner, even pre-pandemic. There was a feeling within the U.K. that there was a need for such a facility. Are you aware of the timelines related to the facility in the U.K.?

● (1150)

**Mr. Mark Lievonen:** My understanding is that they had considered making some investments before the pandemic. This is something they had thought about and had plans in place for and designs under way for. They were able to hit the ground floor running, so to speak, in making those investments. They were fortunate that they had some domestic candidates available and ready to go. They were able to move it along quite quickly, which is remarkable when you think that it was not even a year ago when we were really first starting to deal with this and they were first starting to think about it.

They had a number of advantages that went their way. The timing was very fortuitous and they're benefiting from that.

**Ms. Helena Jaczek:** Thank you.

Dr. Langley, I want to pursue the issue of some of the Canadian or domestic vaccine candidates you assessed. We heard on Tuesday from Providence, as you may well know. They certainly expressed considerable dissatisfaction and disappointment in the type of grant they received through the National Research Council.

Could you just go through some of the thinking that went on, the kind of data that you required at each step of the way, in terms of assessing domestic vaccines, and perhaps particularly Providence itself?

**Dr. Joanne Langley:** Providence would have been considered along with all the domestic candidates. A very systematic and similar process was considered for each one. They submitted an application, so we had the application to look at. We had interviews where they came before the committee and made presentations. There was an opportunity for every task force member to ask them questions. In some instances, we actually did video walkthroughs of offices and had follow-up meetings where things were unclear, just to give every domestic proponent a chance to fully present their case.

I think that would describe our process. Some were ready to—

**The Chair:** My apologies. Unfortunately, your time is up. Maybe you'll be able to answer that in a subsequent round.

**Dr. Joanne Langley:** Okay. I'm so sorry.

**The Chair:** No problem.

[*Translation*]

Mr. Simard, the floor is yours for two and a half minutes.

**Mr. Mario Simard (Jonquière, BQ):** Thank you very much, Madam Chair.

Dr. Langley, I'm sure you are familiar with what is called “the English model”, the partnership formed with AstraZeneca and Oxford.

Did your group study the possibility of creating a Canadian partnership that could have used your expertise, together with Medicago's and Mr. Kobinger's? McMaster University is quite advanced as well.

Did your group study the possibility of creating a Canadian partnership?

[*English*]

**Dr. Joanne Langley:** I think you're asking whether in my work at the Canadian Center for Vaccinology we had discussions with AstraZeneca. We are certainly very aware of the group at Oxford and collaborate with them, but they were not looking for a partnership with us to do studies—

[*Translation*]

**Mr. Mario Simard:** I'm sorry for interrupting you, but I am wondering whether the vaccine task force studied the possibility of establishing the same kind of partnership in Canada with our researchers here?

[*English*]

**Dr. Joanne Langley:** Yes, for every single candidate we considered part of the rubric was the possibility to partner with Canadian scientists, or businesses or government scientists, to make it a value option for Canadians. Every vaccine was considered under that lens.

[*Translation*]

**Mr. Mario Simard:** If I understand correctly, nothing ever came of it. There was no funding from the federal government to establish a wholly Canadian task force to produce a vaccine.

[*English*]

**Mr. Roger Scott-Douglas:** Maybe I could answer briefly.

Madam Chair, the honourable member mentioned Medicago. There was direct support, in the order of about \$173 million, I think, provided by the Government of Canada to support Medicago.

As Joanne indicated, at every opportunity pairing up international candidates with Canadian science or Canadian biomanufacturing capability was assessed. The problem, as Mark explained, is that in order to produce billions of doses, which is what the big companies were trying to do, they needed a very well-established, major available facility, and that was not found in Canada.

• (1155)

[*Translation*]

**Mr. Mario Simard:** Thank you, Mr. Douglas.

I will end with a very quick question—

**The Chair:** I am sorry, Mr. Simard, your time is up. You have gone over your allotted time, but perhaps you can continue in the next round.

[*English*]

Our next round of questions goes to MP Masse.

You have the floor for two and a half minutes.

**Mr. Brian Masse:** Thanks very much.

I want to follow up because I still think the task force's transparency is important. I'm trying to get my head around why the United States can publish its conclusions, its agenda, be on a webcast, and we can't have any of that here, or a partial of that. Please explain why the U.S. can do this and we can't. You noted the disclosure of corporate secrets, but what's the difference between the U.S. dealing with this, and their transparency, versus our current model?

**Mr. Roger Scott-Douglas:** I'm afraid, Madam Chair, I can't speak fully to what the Americans are doing, and how they can do it. What I can say is that in virtually every case when we interviewed a biomanufacturing company, a vaccine company, it was necessary for the members of the task force to sign non-disclosure agreements. That was what the companies required. They did the same for the U.K. task force, I know as a matter of fact, and the Australian, the New Zealand task force, as we spoke to all of these, entered into the same kind of confidentiality. Everybody is playing by those rules, that I can say.

**Mr. Brian Masse:** Okay. Do you even publish your agenda and conclusions, though, after meetings, or any minutes?

**Mr. Roger Scott-Douglas:** No, we do not.

**Mr. Brian Masse:** Why?

**Mr. Roger Scott-Douglas:** All of that advice and detail is provided by the task force to the Minister of Innovation, Science and Industry and the Minister of Health.

**Mr. Brian Masse:** This is where I think the problem is for the public. There's an immense amount of public money, and for the decision-making about what they're going to do in their body, not even a base agenda or some conclusions are provided for them to see what's even being talked about. Sending it to the minister isn't sufficient for us, as members of Parliament, either because all we can do is do an access to information request later on and probably get a redacted document that looks all black.

Is there not any space for the task force to open up some type of connection to the Canadians who you're working so hard to try to keep safe?

**Mr. Roger Scott-Douglas:** I think that—

**Mr. William Amos (Pontiac, Lib.):** I have a point of order, Madam Chair.

**The Chair:** Yes, MP Amos.

**Mr. William Amos:** Thank you.

The member opposite is asking a question about the relationship of advice being provided to a minister of the Crown. These are scientific experts, they're not experts in Canadian democratic process or government decision-making, and I think—

**Mr. Brian Masse:** But they're intelligent human beings—

**Mr. William Amos:** Of course. No one brings that into question.

**The Chair:** MP Masse, I'm trying—

**Mr. Brian Masse:** —and there's a point in asking them.

**The Chair:** MP Masse, I am trying to hear the point of order. Please, one moment.

MP Amos, please continue. What is the point of order?

**Mr. William Amos:** The point of order, Madam Chair, is the member is asking a question that the witness is ill-suited to answer because it speaks to the rules around advice to ministers of the Crown, which the member opposite knows full well is protected under cabinet confidentiality.

**The Chair:** Understood. The witness can decide whether or not he can answer that, very briefly. I'll ask him to quickly respond because we are out of time.

**Mr. Roger Scott-Douglas:** Madam Chair, I think it is right that the minister of the Crown would answer that question.

I would point out that transparency is very important. Task force members have met with the media and given extensive interviews 135 times, which is quite an extraordinary thing for volunteer people to do.

**The Chair:** Thank you very much.

Our next round of questions goes to MP Dreeshen. You have the floor for five minutes.

**Mr. Earl Dreeshen (Red Deer—Mountain View, CPC):** Thank you very much, Madam Chair.

Thank you to our witnesses for being here today.

We are talking about cabinet confidentiality and so on. I just want to take you back to a point here in this committee when the minister testified that the Liberal government's decision to partner

with the Chinese was based on recommendations from the vaccine task force. Of course, that was done earlier. June 23 is when I first heard that you had said that you started your committee up. There's some confusion there.

I have heard some description of the time frame, which is great. I guess my first question is whether you were made aware that the government knew that their agreement with the Chinese was doomed to failure just a few weeks after it was signed, based on the things that we've heard throughout the media.

• (1200)

**Mr. Roger Scott-Douglas:** Maybe I could answer, Madam Chair.

CanSino did come before the committee to make representation in the context of support for clinical trials and for advance purchase agreement. This happened later than what NRC's relationship with CanSino was. In the early indications, you will remember that CanSino was among the very leading companies at that point. It was one of the very few that was entering phase three clinical trials, which put it almost at the top of the pack. That was subsequently proven to be problematic. The government then received advice to no longer support the CanSino.

**Mr. Earl Dreeshen:** I think that becomes the point because it seemed as though we put all our eggs in that particular basket, which may not be fair. However, there was this great time lag between when they realized it wasn't going to work and we started to talk to other groups.

I know that a lot of that discussion would have been going on anyway, but that's really the major frustration. Of course, when people look at a three- to four-month time lag, you start to say that this is where our economy then is suffering because we haven't been able to get to that.

I want to talk, too, about the secrecy side of it and the extent of contracts and things that we've signed. There doesn't seem to be a problem with every one of these companies and other countries. You have indicated that there are some that treat these non-disclosure agreements in the same way that we do.

The reason I ask that question is that right now we've got provinces that are saying they can't wait. They need to find how they can start ramping up their own production and their own roll-out plans. How can the provinces really put an effective plan in place when they aren't getting information from the federal government and such through your organization?

**Mr. Roger Scott-Douglas:** Madam Chair, the question, although terribly important, really has no bearing on the vaccine task force. The vaccine task force—Joanne and Mark—did meet with the federal and provincial ministers of health. Joanne and Mark have also met with the deputy ministers of health. They've been fully transparent about the work of the task force. For those two bodies, that relationship is there, but the vaccine task force has no relationship with the vaccine rollout.

**Mr. Earl Dreeshen:** Thank you.

Could you answer this question then? We are talking about the licensing in Canada, and that becomes the holdup that we have right now. We have the EU. They know what they're doing. We have the U.S. We have other countries around the world. It always seems as though there's a roadblock for us to be able to make those kinds of decisions.

Is there any thought about whether the vaccine task force would start taking a look at those agreements and approvals that are taken outside of Canada and make it a priority, so we can speed up some of these applications?

**Dr. Joanne Langley:** Mark, do you want to handle that?

**Mr. Mark Lievonen:** Sure.

If we're talking about the approvals of the licences for products that are licensed in different places around the world, one of the things Joanne talked about and that has been paramount to everything we've done is that science should rule the day. While great progress has been made in compressing regulatory approval timelines from 10-plus years to four to five years to 12 to 18 months, none of the steps have been skipped. They've been done in parallel. Science rules the day means that when Health Canada approves these products, that's when they should be approved. They are going through their own governance process, and we support that science rules the day and that Health Canada has a mechanism for deciding when and when not to approve products.

• (1205)

**Mr. Earl Dreeshen:** I see my time is up.

Thank you.

**The Chair:** Our next round of questions goes to MP Jowhari. You have the floor for five minutes.

**Mr. Majid Jowhari (Richmond Hill, Lib.):** Thank you, Madam Chair.

Thank you to all of the witnesses. Thank you for your volunteerism, your expertise, passion and the commitment that you have to make sure that you provide the best advice to the government to keep us safe.

I'm going to split my time between Madam Langley and Mr. Lievonen. Let me start with Mr. Lievonen.

Can you, based on your experience, give us an understanding of, from a manufacturing process as well as a biomanufacturing set-up, the difference between the mRNA and the traditional vaccine, and whether any of our domestic candidates were suitable to be able to ramp up an mRNA model in a very short time?

**Mr. Mark Lievonen:** The mRNA technology is new. It's been around for 10 years in terms of the science, but there's never, until now, been a product commercialized using RNA technology, so this is a great breakthrough. As a world, I think we're very fortunate that the RNA technology was there and we could take advantage of that. It's been able to come on stream very quickly, much more quickly than the traditional vaccines. You'll see that some of the other groups of the seven APAs we recommended are further along; protein subunit vaccines, for example, which are Novavax and Sanofi-GSK, are taking longer, and would take a longer time to get up and running—

**Mr. Majid Jowhari:** I apologize for interrupting. What needed to change in Connaught for us to be able to start manufacturing an mRNA-based solution, from a manufacturing and ISO standard, let's say?

**Mr. Mark Lievonen:** Right now, Connaught/Sanofi Pasteur does not have RNA technology in place for their manufacturing, so they would have to gear that up and start to build a facility that could do that manufacturing.

To your earlier point, there are other candidate vaccines in Canada that are working with RNA technology, and they're at an earlier stage.

**Mr. Majid Jowhari:** Uniqueness about the manufacturing process is what makes those domestic candidates suitable for mRNA manufacturing.

**Mr. Mark Lievonen:** Well, it's different bulk manufacturing equipment. It's a different way of utilizing it, so it's a different manufacturing technique for the bulk product.

**Mr. Majid Jowhari:** Could they co-exist in the same facility as the traditional vaccine manufacturing?

**Mr. Mark Lievonen:** You could put RNA technology into an existing manufacturing site. It would likely be a new building, new equipment, renovating a new room. It would be different equipment.

**Mr. Majid Jowhari:** You've highlighted the timeline for that. I thank you for that.

I'm going to move to Madam Langley. I'm going to follow up on the response that I was hoping to get from the question of my colleague, MP Helena Jaczek. Can you tell us what criteria the task force used to be able to shortlist the 300 vaccine candidates to seven? How did you decide on the diversity of it? You now have two minutes to respond to that.

**Dr. Joanne Langley:** All right.

Ultimately, we came up with three platforms. There are about five or six that are out there being explored: the adenovirus vector, the protein, the virus-like particle and the mRNA.

What we did was look at each stage that you would consider in clinical development. So, in testing in animals, was an immune response elicited? Did the animals survive? Were they protected when you challenged them? Then you look at the purity of the product, then the ability to manufacture. How close were they to testing in humans? You have to be able to test in humans to be able to see if it even produces an immune response in humans.

Then they go through phase one, two, three testing, ramping up to this phase three trial. This is the first time in history.... For the Moderna vaccine, the phase three trials started in July; that was absolutely marvellous. They were so far ahead of any other candidate, with the mRNA and their ability to ramp up that. That gave them evidence so that we could say they would likely be a successful candidate.

Then there's all the manufacturing expertise, which Mark has spoken of.

**Mr. Majid Jowhari:** Thank you.

With 30 seconds to go, I'm going to get down to the bottom line. Did our task force produce any recommendations that are not consistent with those of task forces in other countries?

• (1210)

**Dr. Joanne Langley:** That's a very interesting question, because they are very similar across countries. We chose these similar platforms and they are the successful ones. It's absolutely amazing that there are at least six vaccines now that are safe and effective in humans. The Canadian ones are among the leaders, so that's just wonderful.

**Mr. Majid Jowhari:** Thank you.

**The Chair:** Thank you so much. That finishes our second round. We will start our third round. I'm going to try my best to see if we can get everyone in, but I know time is pressing.

Our first round of questions goes to MP Poilievre. You have the floor for five minutes.

**Hon. Pierre Poilievre (Carleton, CPC):** Thank you.

In the finance committee, we don't use Zoom. We use pigeons to send messages back and forth. I'm just adapting to all of the technology here at industry.

My question is about the rate of vaccination in Canada. There are various measurements to determine the per capita rate of vaccination in comparable countries, but all of them show that there are at least 30 and perhaps as many as 50 countries that have vaccinated at much higher per capita rates than we have here in Canada. To what do you attribute this failure?

**Dr. Joanne Langley:** The rollout is not within the remit of the task force. I could answer as an individual but not in my capacity as a member of the task force.

**Hon. Pierre Poilievre:** Sure, go ahead and answer as an individual.

**Dr. Joanne Langley:** Okay.

I have been involved in vaccine work for two decades now. We have this unique situation in Canada, where we're 13 little countries. Any vaccine that's authorized federally has to be rolled out according to each province and territory. Many countries in the world have national vaccine programs—the U.K., Australia and the U.S.—where the model is that the federal government procures vaccines and then every member of that country has access to them.

**Hon. Pierre Poilievre:** Right.

Just to be clear, the provincial role is just in the delivery and administration of the vaccine, not in the procurement. Is this right?

**Dr. Joanne Langley:** Well, in a non-pandemic scenario, they also procure and make decisions about procurement—

**Hon. Pierre Poilievre:** Let's just get right to it. In a pandemic scenario, all they do is administer and deliver, correct?

**Dr. Joanne Langley:** That is what I understand to be the case, now.

**Hon. Pierre Poilievre:** I just want to nail it down, then. That's not the delay. The provinces are administering what they have. The delay is in the procurement. To try and pass the buck to the provinces is not accurate. Right now the delay is in procuring the vaccines. That's a federal issue.

We should not use federalism to pass the buck. The federal government is uniquely and exclusively responsible for this and it has not done it. Why is it that at least 30 and maybe as many as 50 countries have been able to deliver vaccines in a way that the federal government has not, here in Canada?

**Mr. Roger Scott-Douglas:** I might just mention that the issue is not so much procurement. The procurement started with advance procurement agreements as early as August 5. There was then the requirement that went right up through the fall.

We were extremely successful, as Joanne and Mark have indicated—

**Hon. Pierre Poilievre:** Mr. Scott-Douglas, my question is about the outcome. Right now there are 30 countries, maybe 50, ahead of us, depending on how you measure it. Why are they doing it and we aren't? Why?

**Mr. Roger Scott-Douglas:** The procurement is not the issue.

The second step, as Joanne indicated, is the authorization. Those countries need to authorize those. Health Canada has authorized two. They're seriously considering two more and perhaps imminently passing judgment on those. All of those have been wisely chosen by the task force in advance and the government has accepted that advice.

**Hon. Pierre Poilievre:** Why is it that at least 30 and as many as 50 countries have higher per capita vaccination rates than Canada? Why?

**Mr. Roger Scott-Douglas:** Many of these other countries had in-country capacity to produce the vaccines, and these countries authorized those vaccines earlier on. The combination of those two things allowed them to get out front. They also didn't meet the unforeseen delays in the delivery of the vaccine once it had been procured and authorized.

• (1215)

**Hon. Pierre Poilievre:** Even though they would have the same logistical obstacles that we have here in Canada.

**Mr. Roger Scott-Douglas:** European countries and the U.K. don't have those barriers.

**Hon. Pierre Poilievre:** Why?

**Mr. Roger Scott-Douglas:** The manufacturing takes place.... For instance, AstraZeneca takes place in the U.K., and the U.K. authorized AstraZeneca prior to us. They received data from the firm, from the clinical trials, prior to Health Canada—

**Hon. Pierre Poilievre:** Exactly. So they authorized before we did. That's a performance issue on the part of their government versus our government.

Then, you have other countries that are importing vaccines that have significant advances in vaccination rates on us. It's not just the fact that we don't have domestic production—a failure of this government in and of itself—but it is the fact that we have not been able to purchase and deliver those vaccines.

**The Chair:** That's your time, MP Poilievre. My apologies for stopping you, but you're out of time.

Our next round of questions goes to MP Lambropoulos.

You have the floor for five minutes.

**Ms. Emmanuella Lambropoulos (Saint-Laurent, Lib.):** Thank you, Madam Chair.

Thank you to all of our witnesses for being with us today and for [*Technical difficulty—Editor*] Canadians get vaccinated as quickly and as safely as possible. We appreciate all the work that you've done, and we appreciate your being here today.

My questions are more about what we've been hearing.

I feel personally very confident in what the government has been saying, which is that we'll get Canadians vaccinated by September and that we'll do so safely and efficiently. I have full confidence in our ministers who are involved in this and in the vaccine task force.

However, as we've heard many times on the news, and from the opposition on several occasions, they believe that the timeline won't be met. This instills fear in Canadians. They fear for their own safety and that of their loved ones. They fear for the businesses that remain closed and their livelihoods.

I'd like to hear from you—the people I believe have some kind of authority in telling Canadians the truth about this matter—when you believe Canadians will be vaccinated. Can you also give us an explanation as to why you believe that the government took the right decisions in going ahead in the way they did with regard to vaccines?

**Mr. Mark Lievonen:** I could maybe comment on a couple things, based on my experience in the vaccine industry.

The vaccines are coming. We've seen them. The delivery schedules and what's been happening this week versus delay until next week...I don't think anybody in the industry ever thought they would see that on the national news like it's happening with the pandemic, which is understandable.

We provided advice to the government. We have not implemented the procurement agreements, so again, I won't speak from knowledge of these particular agreements; I will speak from traditional industry knowledge.

Supply agreements usually are done on a quarterly basis. One would commit to reasonable commercial efforts to supply vaccines over a period of time by quarters, which seems to be what's being reported in the media. There are delays in the traditional supply of vaccines that have happened all the time over the years. Vaccines are very difficult to make. They are very difficult to supply. Therefore, to have delays occur from time to time, to have slippages of a week or so...while it creates a significant impact during a pandemic, it's quite routine in the normal vaccine business. It's understandable.

One would expect that the companies will be able to—and they've reported that they would—meet the commitments that they've made, and they are committing to supplying sufficient vaccines so that there will be enough available for all Canadians to be vaccinated by the end of September. That's what the companies are reporting, based on what they know. That's what the government is reporting.

One would hope and expect that we'll see an increase in our vaccine supply on a weekly basis, starting very shortly, again as has been reported by the companies and the media.

**Ms. Emmanuella Lambropoulos:** While you've played an integral role in helping the government come up with the plan and making these decisions, can you comment on how efficiently they are doing this and why other options might have not been as efficient?

I know you mentioned several times that international candidates, as well as domestic candidates, were being evaluated at the same time. Can you just give us a bit more as to why it was important to go with the most promising vaccines first and maybe focus on domestic production a little later on in the game?

● (1220)

**Mr. Mark Lievonen:** If you take a step back in time to June, July and August when we were getting going, it's a bit of a mind-boggling task that we were given to recommend....

Our mandate was to provide advice to secure safe and efficacious vaccines for Canadians as soon as possible.

At that time, there were no vaccines licensed or developed; they were under way for being developed. There were international candidates and domestic candidates and we had to assess, review and meet with companies and come up with recommendations about what vaccines might be available in the future. When we provided advice to the government, the seven candidate vaccines that we recommended across three platforms weren't even approved yet. There was a risk in buying, securing and entering into agreements for products that weren't even licensed yet.

The government took our advice; they reacted to it and moved to quickly secure advance purchase agreements.

**The Chair:** Thank you.

[*Translation*]

We now move to the next speaker.

Mr. Lemire, the floor is yours for two and a half minutes.

**Mr. Sébastien Lemire:** Thank you, Madam Chair.

We know that the minutes of those meetings are not public. The process is somewhat obscure and, at first sight, quite arbitrary.

What criteria did the task force use to downgrade, or at least not select, companies from here as opposed to companies from elsewhere?

[English]

**Dr. Joanne Langley:** The criteria are the scientific and technical merit, which are standard for each case. I don't want to take the member's time, but they're the aspects that I mentioned, the subcategories of safety, efficacy, animal data, good manufacturing practice, and so on.

[Translation]

**Mr. Sébastien Lemire:** In terms of the financial aspect, meaning the money that taxpayers have to pay, was that considered in your recommendations? Are they based solely on the science?

[English]

**Dr. Joanne Langley:** Technical merit, the ability of the teams to bring their projects through to completion, was considered. The actual due diligence on each proponent was done by ISED.

Roger, would that be correct?

**Mr. Roger Scott-Douglas:** Yes. It's a combination of scientific and technical advice being provided by the vaccine task force and then appropriate and thorough due diligence on financial management aspects of the firms that was carried out further by ISED, explaining in some cases the delay between advice to proceed and the announcement of it having happened. When millions of dollars are being spent, careful and thorough financial advice and due diligence needs to be done.

[Translation]

**Mr. Sébastien Lemire:** Are you satisfied with the way in which the government implemented all your recommendations? Are there factors that the government did not consider? How do you assess the government's work?

Furthermore, what do you think about the way in which the expenditures and investments in this process have evolved?

[English]

**Dr. Joanne Langley:** I would say it is very much an iterative process. As we get new information, we will re-evaluate our advice and are continuing to do so. New knowledge is becoming available from all these aspects continuously and we will consider it and the merits of it as time goes on.

[Translation]

**Mr. Sébastien Lemire:** Did you make recommendations that the government did not implement?

[English]

**Dr. Joanne Langley:** On the scientific advice with regard to procurements, the advice has been taken in a very timely manner. That's what I would say.

Mark, would you have anything to add to that?

**The Chair:** Be very quick. You're out of time.

**Mr. Mark Lievonon:** I would add only that the advice we give is confidential, so what the government has done or not done with that advice is up to them. I would leave it at that.

**The Chair:** Thank you very much.

[Translation]

**Mr. Sébastien Lemire:** But it's also about the public, after all.

[English]

**The Chair:** Mr. Lemire, that is your time.

Our next round of questions goes to MP Masse.

You have the floor for two and a half minutes.

**Mr. Brian Masse:** Thank you, Madam Chair.

I don't want my questions to be interpreted as a lack of appreciation for the volunteering and the work that the task force is doing. They do, however, centre around the transparency aspect because the conflict of interest potential is a landmine field that is huge and vast, and you're making decisions and giving advice.

The previous answer to the question exchange shows the vulnerability we have. We can't even get commentary as to when advice wasn't taken.

When you actually do send something to the minister, do you actually get an official response about that? Is there a document produced that goes back to the task force, explaining why the government did or did not take action?

• (1225)

**Dr. Joanne Langley:** We provide advice to ministers, but we don't get a document back.

Roger, do you want to explain the process?

**Mr. Roger Scott-Douglas:** The advice goes to the ministers from the task force co-chairs. There's not a formal letter back or direct acknowledgement of that advice by ministers. There have been a great number of announcements on the advice given and the decisions taken by the government to fund proposals recommended.

I think, Madam Chair, that it is very important to draw the distinction between decision-making and advice-giving. The task force makes no decisions. It simply provides advice to ministers; they make all the decisions.

**Mr. Brian Masse:** Without saying a particular one, have there been decisions made that partially took your advice?

**Mr. Roger Scott-Douglas:** Madam Chair, these questions would be better answered directly by the minister, but I think I can say, generally speaking, that both the advice given and the action taken by the government have been extremely... The task force has worked flat out. Advice has been given very quickly. Due diligence is done as quickly as possible, and the government has acted on the recommendations of the task force with alacrity.



**Mr. Brian Masse:** Here's the problem, though, for us—and I think for the general public—as we continue to go down this road without the vaccination. There still is just a lack of clarity in terms of public accountability.

I thank you for your volunteerism. It's not a criticism of you or your actions or the time you are spending; it's about the process.

**The Chair:** Thank you very much, MP Masse.

We're going to finish this round, and I want to thank the witnesses for staying a little longer so that we can finish this round.

The next round of questions goes to MP Epp.

You have the floor for five minutes.

**Mr. Dave Epp (Chatham-Kent—Leamington, CPC):** Thank you, Madam Chair.

Being new to this committee and subbing in, I've listened and done a bit of work, but I will admit that I am new to this file. Maybe my questions have been covered, so please bear with me.

I'm going to go back to a response that Mr. Scott-Douglas gave to our colleague, Mr. Lemire.

With the CanSino relationship predating this task force, I understood you to say that this task force did not recommend that. However, when I look at the briefing notes that I've received from the Library of Parliament, I see that the Honourable Minister of Health stated that the decision to go with CanSino was guided by the advice of the task force experts. Can you clarify that for me? It seems to be conflicting information that's in front of me.

**Mr. Roger Scott-Douglas:** Perhaps the distinction is the following: The relationship that the National Research Council struck with CanSino Biologics was to support clinical trial work and then potentially to produce, under emergency pandemic conditions, vaccines that might be made available if those clinical trials proved to be successful. The vaccine task force was not part of those discussions because they predate the existence of the task force.

However, subsequently, CanSino was look for funding for clinical trials, and it was also a candidate among many international candidates because, at that point, it was among world leaders for advance purchase agreements. In that case, initially, the minister is quite right; there were recommendations given by the task force to support CanSino.

Subsequently, though, it became clear that the performance of CanSino was not what was initially expected, and the relationship and the delivery of the seed for production in Canada changed, and the task force changed its advice.

**Mr. Dave Epp:** Thank you.

I'll go to another earlier response at this meeting, Ms. Langley. You mentioned that the outcomes, the deliberations and the process that this task force went under were very similar to other task forces around the world. Yet Canada lags behind: So where's the difference? If the outcomes, the process and the recommendations coming from this task force mirror the outcomes and task forces in other countries and other settings, why do we as Canadians seem to be lagging behind—or are we not lagging behind?

• (1230)

**Dr. Joanne Langley:** As Mark said, the procurements are in place. The timelines are really quarterly rather than day by day. I know that the media cycle is every 24 hours, but I as a citizen and as a physician am very assured that vaccines will be coming within the quarterly requirements that the government has made with the vaccine providers.

I think we all have to help Canadians understand that: They are coming. you are going to get your vaccine; and in the meantime, just do your best to not get infected and to keep your family safe.

**Mr. Dave Epp:** Am I hearing correctly, then, that other countries that perhaps are ahead of us in the short term negotiated monthly delivery routines, or weekly? We don't know, because we don't have access to the contracts. Is that what you're saying, that Canada negotiated quarterly returns and the manufacturers are back-loading this, whereas other countries negotiated contracts that provided for a sooner delivery point within that quarterly time frame?

**Dr. Joanne Langley:** The details of the procurement arrangements are not known to me, but in general, I think they are on these quarterly timelines. There are other factors at play, such as whether you have already domestic biomanufacturing on your soil, or a local candidate could be manufactured quickly using your own technology.

**Mr. Dave Epp:** But are there not countries that don't have manufacturing capabilities on their own soil, or access to vaccine similar to the Canadian situation we find ourselves in, that are also ahead of us on that list of 30 or 50, depending on how you measure the countries? I keep coming back to that because that's what I hear when I go back to my riding.

**Dr. Joanne Langley:** Some of those vaccines... For example, the Russian vaccine, the Gamaleya institute vaccine, is not a vaccine that is in our portfolio. It became authorized, as it were, very early, without any publicly available data for any scientists to evaluate. Those countries would also be included in these metrics that we're seeing in the press.

**Mr. Dave Epp:** Thank you.

This is for any of you. I know we'll be pushing for a review of this whole process post-pandemic. Hindsight is 20/20, and I would be the first to admit that, but at this stage, this far in, would you have any response to what perhaps a post-review would uncover?

**The Chair:** MP Epp, you are out of time.

If the witnesses can quickly, within 10 to 15 seconds, answer that, then we'll go to the last round.

**Dr. Joanne Langley:** Thank you.

I would just quickly say that I think it's become very clear that the earth is one country. We have to think about preparedness for emerging infectious diseases as a planet. Our countries are very much interdependent. I very much applaud the ability to build domestic biomanufacturing. I think that is necessary. We learned that, I think, during this pandemic. But we also have to account for the fact that we have to work together with other countries.

Mark?

**The Chair:** Unfortunately, we really need to get to the next round.

MP Amos.

**Mr. William Amos:** Thank you, Madam Chair.

To our witnesses, thank you. You are, and your committee members are, all heroes, in my view. I think Canadians owe you an enormous debt of gratitude. I mean, I've had the opportunity to discuss on many occasions with our chief science adviser the nature of the work you are doing, she in her ex officio capacity on your task force. It is simply tremendous. I find it most regrettable how certain politicians and certain members of the media are choosing to politicize this for what I think are very short-term gains when you are really helping us look at the short-, medium- and long-term needs of our country around vaccines.

I want to get on the record the issue around any budgetary parameters. Were you in any way limited in your mandate in terms of looking at vaccines within the constraints of particular financial aspects, or was it just "best advice, money is no object"?

• (1235)

**Mr. Mark Lievonen:** We provided our advice based on the best advice available.

While some of the companies would talk about the financial considerations during presentations, that was not taken into consideration when we provided our advice.

**Mr. William Amos:** Thank you for that.

The member of Carleton earlier commented that his view was that the lack of domestic production was a domestic failure. What is your view with respect to the current state of domestic production? Could anything more have been done to create a circumstance, once we had known there was a global pandemic, to have moved faster to generate domestic production?

**Mr. Mark Lievonen:** I think in the short run the decisions that were taken made sense. There clearly is an issue to be addressed going forward, and that is under way. Through recommendations of the joint biomanufacturing subcommittee to the government, some announcements have been made, as you know, for Canadian domestic production capability. I expect more under way and more to come, but I don't think anything could have been done in terms of supplying vaccines between now and the end of September. There is not a domestic solution that could have sped that up.

**Mr. William Amos:** That's a very important statement. I do hope our members opposite and the media take note of that.

Do any of our other expert witnesses have further comments on that point?

**Dr. Joanne Langley:** I would just be in agreement. We had on our committee experts in this area who are aware of the global situation and the time it takes to actually get a plant running a new vaccine and to do the tech transfer, and that was our conclusion.

**Mr. William Amos:** Thank you.

On the issue of CanSino, there is a false narrative being pedalled that Canada somehow put all its eggs in the CanSino basket. What is your opinion on that kind of narrative?

**Mr. Mark Lievonen:** Joanne and, I believe, Roger spoke to that earlier, so I will just add my comments as well.

While CanSino was very much part of what was talked about, it was kind of early on and later on. Any discussions we had were done in parallel. All the other vaccine candidates that we looked at were considered at the same time. None of the decisions around CanSino impacted the timing of any other decisions. It wasn't waiting for one to get to the other.

At least from the time the vaccine task force was put in place, we looked at all those things from the beginning when we met. We looked at all the potential candidates, domestic candidates and international candidates, starting at that time, and again, as we said, we looked at them in parallel, not sequentially.

**Mr. William Amos:** With respect to certain Canadian companies that have perhaps not been selected, should Canadians have expected and is it normal and appropriate for certain companies to have been chosen by the government to receive funding and for certain companies to have not received funding, or lesser funding? In your opinion, is that normal and appropriate?

**Mr. Mark Lievonen:** We had a process to review the strategic investment fund proposals that looked at all companies equally. We've talked about the criteria we used to assess those proposals. We provided advice to the government, and some funding announcements have been made under strategic investment fund proposals.

There is also other funding. In some cases, we thought the proposals were not at a stage for SIF funding but would benefit from other funding. There has also been a series of funding made by the NRC IRAP and the next generation fund. A number of Canadian companies have received funding from the government to advance their candidate vaccines and their programs, which are at an earlier stage.

**Mr. William Amos:** Thank you to all three of you.

**The Chair:** That ends our third round of questions. I thank the witnesses for staying a little over time to answer all the questions of our members. On behalf of the INDU committee, I thank the three of you for the work you're doing and will continue to do for us here in Canada. Please extend our thanks to the other members of the task force. We really appreciate your time.

With that, I will let the witnesses depart and I will turn it over to the clerk, because we have an election of a vice-chair to deal with.

Thank you so much.

• (1240)

[Translation]

**Mr. Sébastien Lemire:** Thank you for being here.

[English]

**The Clerk of the Committee (Mr. Michael MacPherson):** Thank you.

We have an election of first vice-chair. Pursuant to Standing Order 106(2), the first vice-chair must be a member of the official opposition.

I am now prepared to receive motions for the first vice-chair.

**The Chair:** MP Dreeshen.

**Mr. Earl Dreeshen:** Thank you, Madam Chair.

Clerk, I'd be honoured to nominate Mr. Poilievre as vice-chair.

**The Clerk:** It has been moved by Earl Dreeshen that Pierre Poilievre be elected as first vice-chair of the committee. Are there any further motions?

Seeing none, it has been moved by Earl Dreeshen that Pierre Poilievre be elected as first vice-chair of the committee, pursuant to the House order of Wednesday, September 23, 2020.

I will now proceed to a recorded division unless we have unanimous consent.

It looks pretty unanimous to me.

(Motion agreed to)

**The Clerk:** I declare the motion carried and Pierre Poilievre duly elected as first vice-chair of the committee.

**Hon. Pierre Poilievre:** Thank you very much, everyone.

**The Chair:** Thank you.

I see some hands up.

Is it a point of order, Mr. Lemire?

[Translation]

**Mr. Sébastien Lemire:** I just want to make sure that, as vice-chair, he will reply when we send him an email. Before we ratify the nomination, I felt it was important to be sure of that.

**The Chair:** He probably doesn't want to give us his personal email address, given that this is a public meeting. We could ask him for it after the meeting.

[English]

Congratulations, MP Poilievre. We're happy to have you on board.

With that, I wanted to give an update to the committee on what we're working on because I know we have a lot of new members.

Next week we have meetings, obviously, on Tuesday and Thursday. We had a few witnesses from the affordability and accessibility study who had not responded and/or were not available when we were doing the four meetings earlier this year. We reached out to them to see if there was any interest for them to be able to come for one hour.

Next Tuesday, we will finalize the affordability and accessibility study. We will have with us, from Québecor, Pierre Karl Péladeau; from Vidéotron, Jean-François Pruneau; and from Southwestern Integrated Fibre Technology, Barry Field. They will come for an hour. We will be able to finalize that study then.

Afterwards, we will go in camera for some business, to discuss, obviously, giving instructions to the analysts with respect to that study and other business that we need to take care of.

On Thursday we are continuing the domestic manufacture of vaccines, with Dr. Mona Nemer, the chief science adviser to the Prime Minister. We have Medicago, and we have some other witness groups we're waiting to hear back from. I wanted to give the committee an idea of what we're looking at.

Next week, on Tuesday when we are meeting for in camera business, I'd like for us to decide on the additional study that will come after the manufacturing of vaccines so that we can give instructions to the clerk for witnesses and to line things up.

You should have received the motions, but we'll recirculate the study motions that were already approved. That way, we can be ready to have those conversations next week and decide as a committee what we'd like to focus on right after this study is completed.

Are there any questions regarding that?

[Translation]

Go ahead, Mr. Lemire.

**Mr. Sébastien Lemire:** Thank you, Madam Chair.

Would it be possible to get those things by email? I'm quite visual.

I did not get the name of the third person who will be at next Thursday's meeting on manufacturing vaccines.

Are you expecting us to suggest witnesses? Since the Medicago company will be appearing, is it possible for us to suggest witnesses?

The same question goes for Tuesday's meeting. I understand that it will be only one hour long. If we invite another witness, we may well run out of time and have to limit our rounds.

I just want to know whether there are any expectations in that regard.

**The Chair:** We have not set a deadline for proposing the names of witnesses to be invited for our study on the manufacturers.

If you wish to invite witnesses, please contact the clerk directly as soon as possible. It is difficult to fit everyone into the schedule when we find out at the last minute. If you want to suggest other witnesses, please tell Mr. MacPherson.

We will send you the details of the meetings, as well as the motions about the studies that we have already approved. Next Tuesday, we will be in a position to decide what we will be doing in the next round.

• (1245)

**Mr. Sébastien Lemire:** Thank you very much.

**The Chair:** No problem.

[*English*]

Are there any other questions or comments?

Seeing none, I will now therefore adjourn this meeting, and I will see you all on Tuesday.

[*Translation*]

My thanks to the interpreters and the IT technicians.

[*English*]

To our clerk and our analysts, thank you again for everything you're doing. We really appreciate it.

Thank you.

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