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Standing Committee on Science and Research

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• (1700)

[English]

The Chair (Mr. Lloyd Longfield (Guelph, Lib.)): Welcome to meeting number 60 of the Standing Committee on Science and Research.

Today's meeting is taking place in a hybrid format, pursuant to the Standing Orders. Members are attending in person in the room. We are all in the room today. We're not on Zoom, so we can dispense with those comments and get to our study.

Please wait until I recognize you before speaking.

Thank you to all the witnesses for being here and for waiting for us to do our voting duty in the House.

Pursuant to Standing Order 108(3)(i) and the motion adopted by the committee on Tuesday, June 6, 2023, the committee resumes its study on the use of federal government research and development grants, funds and contributions by Canadian universities and research institutes in partnerships with entities connected to the People's Republic of China.

It's my pleasure now to welcome our witnesses today.

From the Natural Sciences and Engineering Research Council, we have Alejandro Adem and Manal Bahubeshi.

From the Canadian Institutes of Health Research, we have Christian Baron, vice-president of research programs.

From the Social Sciences and Humanities Research Council, we have Ted Hewitt back. It's good to see you, Ted. We also have Valérie La Traverse, vice-president of corporate affairs, and Valérie Laflamme, associate vice-president of TIPS.

You'll each have five minutes for your opening remarks. We can get right into that now, starting with NSERC.

Dr. Alejandro Adem (President, Natural Sciences and Engineering Research Council): Good evening, Mr. Chair and members of the committee.

My name is Alejandro Adem. I am the president of the Natural Sciences and Engineering Research Council of Canada, our country's federal funding agency for university and college-based research in the natural sciences and engineering.

Thank you for this opportunity to appear before you today to discuss this critical issue. Protecting the integrity of our research system is critical for our country's continued prosperity, especially

with advances in critical areas like artificial intelligence and quantum technologies.

[Translation]

NSERC takes the issue of safeguarding Canada's research ecosystem very seriously and, like you, we want to ensure that we take the necessary steps to protect our research assets.

We appreciate Minister Champagne's initiative in advancing this important priority, as well as the broad support received from other members of Parliament and policy makers across the Government of Canada.

Research security is a shared responsibility that requires a coordinated approach across all stakeholders. We have been able to move swiftly because of this unified support.

Striking the balance between research that is open and secure requires thoughtful implementation, and we have every indication so far that we are progressing on the right path.

[English]

Along with other partners in the Government of Canada, the granting agencies continue to work with the university community to provide resources, tools and training for researchers and institutions in order to build their knowledge of, and capacity for, research security. These resources are made available through Canada's safeguarding your research web portal.

Since July 2021, NSERC has furthered its commitment to research security by implementing the national security guidelines for research partnerships in NSERC's flagship research partnerships program, the alliance program. Following these guidelines, researchers and institutions seeking to partner with a private sector organization must complete a risk assessment form to identify potential risks and provide an appropriate risk mitigation plan. If the grant is funded, this mitigation plan must be implemented for the duration of the grant.

The information researchers have provided demonstrates that they have developed a strong understanding of the risks associated with their research and with their partners. As a result, the risk to research security for the vast majority of applications—in fact, 96%—has been low and appropriately mitigated. The remaining 4% of applications are those where NSERC required expert advice from Canada's national security departments and agencies to inform our funding decisions. In many cases, the advice received was that the risks were well mitigated. Accordingly, NSERC funded those grants.

NSERC remains steadfast in our efforts to ensure that the research we fund benefits Canada. We do not fund grants where we are advised the research partnership poses an unmitigable risk to national security.

[Translation]

We also recognize and welcome the enhanced policy direction requested in February 2023, regarding our most sensitive technology research areas and affiliations to universities, research institutes, and laboratories connected to military, national defence, or state security entities of foreign state actors that pose a risk to Canada's national security.

At the same time, we must bear in mind that collaboration is an essential part of advancing the aims of the research we fund. This is why, in parallel to our research security commitments, NSERC has continued to foster international initiatives that support an open and connected research ecosystem.

• (1705)

[English]

In the past year alone, we've launched joint initiatives with science funders in the U.S., the U.K. and Australia, as part of the National Science Foundation's global centres, to tackle climate change and clean energy challenges; established a new partnership with the National Research Agency in France; and issued a special international funding opportunity in support of Canada's national quantum strategy.

We have also benefited greatly from the perspectives of these international partners—bilaterally and through multilateral dialogues such as the Five Eyes, the G7 and the Global Research Council—as concerns about research security are shared by funding agencies around the world. Most notably, Canada co-chairs the G7 working group on the security and integrity of the global research ecosystem, SIGRE, which published a set of guiding principles on research security last year. NSERC adheres to these principles.

As a leading supporter of discovery and innovation in this country, NSERC's vision remains focused on supporting our researchers today, so Canadians benefit tomorrow. Along with the important standards we've introduced to address research security risks, we must continue to foster our young talent and give them the means to pursue their research goals in Canada to ensure that our homegrown discoveries and innovations reach Canadians fast and first.

[Translation]

Thank you for inviting my colleague and me to appear here today.

I'll be happy to answer any questions.

[English]

The Chair: Perfect, thank you. That was right on time.

Now we will move to the Canadian Institutes of Health Research, please.

[Translation]

Mr. Christian Baron (Vice-President, Research - Programs, Canadian Institutes of Health Research): Thank you, Mr. Chair.

I would like to begin by thanking the committee for the invitation to appear before you today and for drawing attention to an important topic for the research ecosystem in Canada.

At CIHR, we recognize the importance of academic freedom, openness and international research collaboration in making the ground-breaking discoveries that improve lives. That is why we are working on promoting those values. We all know that health threats we face are increasingly global in nature, and that the health and well-being of Canadians is intertwined and dependent on the well-being of people everywhere.

[English]

To tackle complex health challenges, we must continue working with colleagues around the world to leverage our shared knowledge and resources so that we can find solutions for all.

To advance this global research agenda, CIHR currently has 40 international initiatives supported by agreements with countries around the world. For example, this includes the European Union's joint program on neurodegenerative disease research, which is the largest global research initiative aimed at tackling the challenge of neurodegenerative diseases. It is aimed at finding causes and developing cures and better ways of care.

As part of the work that your committee is currently conducting, CIHR has two active partnerships with the People's Republic of China. They are managed through the National Natural Science Foundation of China, or the NSFC, whose mandate is to support basic research and free exploration, identify and foster scientific talents, and promote progress in science and technology.

The first agreement represents a five-year, \$12.2-million investment, of which \$6.4 million is provided by the NSFC to the Global Alliance for Chronic Diseases' call for research on mental health. Through this particular initiative, seven research teams have been funded over a period of five years. As an example, this includes a team led by Dr. Brian Mishara at l'Université du Québec à Montréal, who developed a project on a World Health Organization intervention program for people who have experienced suicide attempts, in parallel projects in Ningxia, China, and among the Inuit community in Nunavut, Canada. This study is only one example of how international research can help us to understand how interventions work in different contexts.

The second partnership is to support the healthy life trajectories Canada-China team, in collaboration with the NSFC and the World Health Organization, to address the increasing rates of obesity, particularly among youth. This partnership was renewed in 2022 with a \$2.5-million investment from China and matching funding from CIHR. This international approach enables the sharing of expertise, the comparative analysis of interventions, the harmonization of data and the assessment of biological mechanisms in different populations, all of which contribute to delivering greater impact in comparison to single-country projects.

While these global health initiatives have great potential to improve health, the globalization of research has also made us more vulnerable to threats from entities of concern. This is why, given the shared responsibility of creating a vigilant while open and collaborative ecosystem, we have been working closely with our federal partners, national security agencies, academic institutions and researchers to protect Canada's research investment.

In addition to the critical tri-agency work that my colleagues have described, CIHR has implemented a new requirement as part of its strategic funding opportunities for applicants to describe the role of all applicant partners and how they will be involved and contribute to research-related activities. As part of this process, risk and/or conflict of interest should also be explained, if applicable.

• (1710)

[Translation]

CIHR's strategic plan sets out ambitious goals to be achieved by 2031 to ensure that Canadian health research is recognized internationally as inclusive, collaborative, transparent, culturally sensitive and focused on tangible benefits.

In alignment with this commitment, CIHR is working to enhance national and international collaboration to address global challenges and facilitate the pooling of expertise and sharing of infrastructure.

In closing, let me remind you that research security is a shared responsibility between the federal government and academic institutions. The stakes are high, and we must continue to work together to strike a balance between openness and security to protect our country's research.

Thank you for your time. I look forward to taking your questions.

[English]

The Chair: Thank you very much.

Finally, on this panel, we will go over to Mr. Hewitt from SSHRC for five minutes.

[Translation]

Dr. Ted Hewitt (President, Social Sciences and Humanities Research Council): Thank you, Mr. Chair.

I'm very happy to be here with my colleagues Valérie La Traverse and Valérie Laflamme.

[English]

I'm sure all of us in the room agree that science and research have become more important than ever in the current environment as economic, environmental and social challenges have become as serious as they are complex.

Expanding knowledge across all disciplines is foundational to innovation and to finding solutions that will enhance health, combat climate change, and drive economic and social prosperity.

[Translation]

The Social Sciences and Humanities Research Council, SSHRC, plays a key role in Canada's research ecosystem, as the federal agency that supports research and talent in the humanities and social sciences, and as the agency that administers a number of prestigious national programs—such as the Canada research chairs program and the new frontiers in research fund—on behalf of the three federal research funding agencies.

[English]

SSHRC recognizes the crucial need to protect Canadian research from risks such as theft, foreign interference or the unwanted transfer of knowledge. We have been collaborating with government partners and consulting with the research community to develop and implement the national security guidelines for research partnerships.

Following the February 2023 statement by the Minister of Innovation, Science and Industry, the Minister of Public Safety, and the Minister of Health, we are also contributing to the development of a new interdepartmental policy on sensitive technology research and affiliations of concern.

[Translation]

To help the research community meet these requirements, in 2022, we began providing \$125 million over five years to Canadian institutions through the research support fund to help them enhance their research security capacities. We also engage with the Government of Canada-Universities Working Group and other federal government partners to provide the research community with tools, resources and information sessions.

Given growing geopolitical tensions and rivalries, it is imperative that Canadian researchers have the necessary tools and knowledge to safeguard their work.

[*English*]

However, it's also important to point out that international collaborations, including those with researchers and institutions based in China, remain vital to Canada's research enterprise and provide a basis for science diplomacy. Researchers need to work together across disciplines, sectors and borders to understand and respond to global challenges, whether they involve a global pandemic or the climate crisis, and it's crucial to maintain open channels of communication between scientific communities in times of crisis and to promote collaborations in other areas of mutual interest.

[*Translation*]

For instance, SSHRC is currently funding a research partnership among scientists from Canada, China, Costa Rica, the United States, Ghana, France and other countries aimed at feeding the future human population in a just and equitable way, while also achieving biodiversity conservation and climate change mitigation goals.

The challenges facing Canada and the world today are frequently interconnected problems. They require that we cooperate on shared priorities while remaining vigilant about potential risks and steadfast in our efforts to protect the integrity of our research system.

• (1715)

[*English*]

This reality reinforces that the Government of Canada, the granting agencies, the Canada Foundation for Innovation and the research community at large must all work together on this shared responsibility. Indeed, the Canadian research community comprises a vast range of experts on national security issues, science and innovation policy and international relations. This expertise could contribute to the Government of Canada's research security efforts.

[*Translation*]

It is also our shared responsibility to ensure that security measures do not lead to discrimination against, or the profiling of, any member of the community—including on the basis of nationality.

The granting agencies, the Canada Foundation for Innovation and their federal partners will continue to work with the research community to implement research security measures. But my colleagues and I believe that it's important that we continue to take an evidence-based approach and look at the broader implications.

[*English*]

As stated in a House of Commons unanimous motion in May 2021, we must affirm our “commitment to science, research and evidence-informed decision-making”. In doing so, I'm confident that we can better protect Canada's research ecosystem from security risks while continuing to foster international collaboration on areas of mutual interest.

Thank you.

The Chair: Thank you.

Each panel from our research tri-council is right on time—precision, we love it.

Speaking of precision, we have six minutes for Mr. Lobb.

Mr. Ben Lobb (Huron—Bruce, CPC): Thanks very much, Mr. Chair.

Welcome to our guests.

My first question is for Mr. Hewitt.

I promise that I won't ask you about the Dolly Parton lyrics.

Dr. Ted Hewitt: I knew you were going to do that.

Voices: Oh, oh!

Mr. Ben Lobb: I always have to remind you about that, but I promise I won't ask you about that today.

I just want to clarify something you said in your speech. I want to make sure that I have the numbers right, because I was writing it down. Was that \$125 million for security research?

Dr. Ted Hewitt: Yes. It was provided to SSHRC on behalf of the agencies to provide institutions with the funds they need to develop their own security measures locally.

Mr. Ben Lobb: Did that \$125 million go directly to your department?

Dr. Ted Hewitt: It went through our department—through mechanisms we've established that are run by Madame Laflamme, who can give you more detail about that—and was distributed and is being distributed to institutions for the purpose—

Mr. Ben Lobb: That's to the universities.

Dr. Ted Hewitt: Yes, absolutely.

Mr. Ben Lobb: They took that money and they built a portal. Is that what they did?

Dr. Ted Hewitt: They do a lot of different things.

In fact, they propose to us the kinds of things they need to do locally to meet security requirements, and then we fund them on that basis. That can vary, as you can imagine, between institutions, depending on where they're at or how far along they are in their own security measures.

Mr. Ben Lobb: With this \$125 million, do you work in conjunction with CSIS, the RCMP or other intelligence agencies? Is that a requirement for the funding to go to the universities or is it given to the universities and then they decide what to do?

Dr. Ted Hewitt: I'd ask Valérie to speak to that if she's able to, but the point is that the money is provided to institutions based on their needs and on their understanding of what they need to do to enhance their own security measures. It's provided on that basis. I don't believe there's any screening that occurs through security agencies at this point. It's to help them build infrastructure in terms of what they need.

Mr. Ben Lobb: That's fair enough.

That does raise an interesting question, probably for another meeting. No offence to any of the universities, but they were a little naive to this anyway, so it may be hard for them to establish what they need or don't need.

Thank you for that information. That is appreciated.

Mr. Baron, in your statement, I thought you mentioned actively or proactively working with security agencies. Did you say that in your statement or did I catch that wrong?

Mr. Christian Baron: Thank you for the question, Mr. Chair.

Certainly, CIHR, together with our colleagues from the other councils, has worked over the last few months to establish parameters and procedures for the new security posture. This was a very interactive procedure, where the three councils worked together with the national security agencies, including CSIS. It was a very collaborative, interactive process in trying to find the best solution that would protect Canadian research investments.

Mr. Ben Lobb: Based on what we heard here, the three agencies that are here today worked with the security agencies, but then the money went to the universities. Then, at that point, it's kind of hands-off, and we let the universities figure out what they need. Is there a potential for a disconnect if that's what we're doing?

• (1720)

Mr. Christian Baron: The procedure is as follows. In addition to the work that was done jointly with the three councils, there was also a committee established with the universities. It was aimed at establishing and discussing the needs of universities. Based on all of these considerations, including conversations at the top secret level with university officials, the guidelines were established and funds were allocated to universities.

Mr. Ben Lobb: Okay.

I still have time.

Mr. Adem and Ms. Bahubeshi, there's a question I have for you folks.

I appreciate everybody's presentations today.

The universities fill out a form. The applicants fill it out. Is it your portal or their portal?

Dr. Alejandro Adem: With the research security guidelines, there's a—

Mr. Ben Lobb: They read the guidelines, and then they fill out an application for the study they'd like to do.

Dr. Alejandro Adem: There's a risk assessment form they have to fill out for these grants, which are subject to that framework.

I want to add that research security centres are being established across the country, in which there is input from the security agencies. Those are being funded, so the universities are not on their own. They're giving them advice on how to do that.

Mr. Ben Lobb: Okay.

So, it would be the professor or the researcher who would fill out this form, based on the information they would have, and then you would approve the project.

Dr. Alejandro Adem: They have to explain how they're going to mitigate the risks from the partnership. So far, this applies only to partnerships with private entities. These are projects for which we have to put the researchers in touch with not-for-profits and companies.

Mr. Ben Lobb: If you identified PRC military universities, colleges, known organizations or entities, would that immediately eliminate that project from being approved, or would it still be possible for one to squeak in?

Dr. Alejandro Adem: For anything that obviously cannot be mitigated, we refer to the security agencies, because they are the experts.

Mr. Ben Lobb: How many have been referred so far?

Dr. Alejandro Adem: I think 60 or so have been referred.

Mr. Ben Lobb: Have any been rejected?

Dr. Alejandro Adem: Yes. Over 30 of them have been rejected.

Mr. Ben Lobb: Okay. Thank you.

The Chair: That's perfect—we got to the end of that. That's terrific.

Now we go over to Dr. Jaczek for six minutes.

Go ahead, please.

Hon. Helena Jaczek (Markham—Stouffville, Lib.): Thank you so much, Chair.

Thank you to all the witnesses for their testimony.

I'm going to follow up a little bit on where Mr. Lobb was going. First of all, is every application for an alliance grant subject to a risk assessment form?

Dr. Alejandro Adem: Those would be the ones that are in partnership with private companies—

Hon. Helena Jaczek: Yes, but of those—

Dr. Alejandro Adem: All of those have to fill out the risk assessment form.

Hon. Helena Jaczek: Okay.

Of those, you have now told us that some 30 were actually rejected. There was a preliminary review. I think you said originally that 96% were approved and then 4% were sent, and of that 4%, 30 were rejected.

How many did that 4% represent?

Dr. Alejandro Adem: It was roughly half. I think the number was 34 out of 62.

Hon. Helena Jaczek: There was consultation with CSIS, with the cybersecurity—

Dr. Alejandro Adem: I want to be clear. They're the ones who gave us that advice. We are not experts in security. We are an agency for funding science. That relationship and the input we get from the security agencies are very important to us. They give us their recommendations about the risk level.

Hon. Helena Jaczek: We understand that when applications are made, this is the process.

Is there any retrospective look at existing grants that have been given? Are you reviewing those in any way or is this only for new applications?

Dr. Alejandro Adem: We have not been asked to do so. We follow the direction of the Government of Canada.

Hon. Helena Jaczek: Do you think it would be useful to look retrospectively?

Dr. Alejandro Adem: I think the panorama in the world has changed over the past few years. I don't know if it would necessarily be helpful.

We want everything to be secure. From the moment this framework was established, we have wanted complete security. We really believe it's very important to protect Canadian science and Canadian engineers. We should invest our time and our efforts in stopping whatever bad things might happen.

• (1725)

Hon. Helena Jaczek: Dr. Adem, from NSERC's perspective, have you involved any provincial government agencies in your consultations regarding these guidelines? Were they originally part of the working group?

Dr. Alejandro Adem: There's the university working group. I think ISED is the one that organizes them. We are in touch with the provincial agencies, such as the FRQ in Quebec. They contacted us wanting to know what was being developed. We are also in touch with Alberta Innovates and others. We have agreements with these provinces to fund these industry collaborations. I think it's very important to share best practices across the whole ecosystem.

Hon. Helena Jaczek: As I understand it, these guidelines were established in 2021. As you have just alluded to, you obviously want to look at best practices. Is there a date by which these guidelines—the application risk assessments—are going to be reviewed based on the experience that you have gathered in the last two years, or are you looking toward a specific date to review these risk assessments in the future?

Dr. Alejandro Adem: Let me invite my colleague.

Ms. Manal Bahubeshi (Vice-President, Research Partnerships, Natural Sciences and Engineering Research Council): Thank you for that question.

There has been review, including of the risk assessment form. There have been changes made to that, taking into account feedback we received from the community, in order to help simplify the process and make it clear what elements of information are needed.

There is an ongoing calibration effort happening. I expect it will continue to happen.

Hon. Helena Jaczek: That review would then be communicated, obviously, with the federal government for potential change.

Ms. Manal Bahubeshi: The new risk assessment form, for example, was made public a few months ago. It was communicated, made publicly available and shared with the research community, as well.

Hon. Helena Jaczek: Thank you.

Dr. Hewitt, the whole issue of social sciences and humanities research, I imagine, is a little more complicated than the sort we've heard about with respect to military operations, or to anything that could be connected to a security issue.

Could you elaborate a little from the social sciences and humanities research point of view? What might you be looking for that could potentially be a risk to Canadian security?

Dr. Ted Hewitt: I would probably start by saying that we would follow the guidelines that we were given and that we agreed to. We would implement that.

A lot of things, as you would guess, within the social sciences and humanities would not come close to some of the screening being suggested, in terms of organizations that would cause concern, particularly in the private sector. However, all our projects and applications—as with all the agencies—originate with Canadian researchers. They are always the primary applicants. They go through rigorous peer-review committees and external reviews. That's number one. If there are flags, they may be identified in the peer-review process. Whether or not we could do anything about it at that point is interesting, because there may not be any mechanism to act.

I would say that, at the other end of the scale, researchers conduct research to publish. Once the work is finished, they're writing articles and publishing them in journals that are also peer-reviewed. If there was something to cause some concern among peer reviewers, it would be exposed in the peer-review process. That would ultimately, potentially, result in the rejection of an article.

It's an interesting question. I think this is going to come up more and more.

The Chair: It's a good series of questions.

[*Translation*]

Mr. Blanchette-Joncas, go ahead for six minutes.

Mr. Maxime Blanchette-Joncas (Rimouski-Neigette—Témiscouata—Les Basques, BQ): Thank you, Mr. Chair.

I acknowledge the witnesses who have joined us today.

I'll begin by asking Mr. Adem some questions.

Mr. Adem, thank you for being here today.

I think it's important to put things in perspective. In July 2021, the federal government asked NSERC to implement a risk assessment form. Then, in March 2023, it expanded this form to include a thorough review of the integrated biomedical research fund and biosciences research infrastructure fund competition.

What explains the expansion of the risk assessment form?

Dr. Alejandro Adem: Of course, biomedical sciences and biotechnology are very sensitive technology areas. The government has funded new strategic programs. The Tri-agency Institutional Programs Secretariat, represented here by our colleague, administers these programs. It is important to have safeguards in this area. This is a priority for Canada.

• (1730)

Mr. Maxime Blanchette-Joncas: Can you confirm that the risk assessment form is considered in the same way in the three granting agencies?

Dr. Alejandro Adem: Discussions are under way to improve the program. That was announced in February of this year, and we're waiting for the details. There is a lot of interest in dual-use technologies and universities known as the seven sons of national defence or certain military institutions potentially involved.

Mr. Maxime Blanchette-Joncas: If I understand what you are saying, the risk assessment form is currently not being used consistently by the three granting agencies. Is that correct?

Dr. Alejandro Adem: At the moment, we have an alliance with the companies and with the Tri-agency Institutional Programs Secretariat for biotechnology and biomedical sciences programs.

Mr. Maxime Blanchette-Joncas: So the assessment is done in the same way at the Social Sciences and Humanities Research Council and the Canadian Institutes of Health Research.

Dr. Alejandro Adem: Yes, that is the case for these tri-agency programs.

Mr. Maxime Blanchette-Joncas: Okay. Thank you very much.

Mr. Adem, in your presentation, you said that there was cooperation and that you were headed in the right direction. The federal government said in February 2023 that it was going to publish a list of universities deemed to be high risk.

Do you know when that list will be published? As of today, October 25, 2023, we are still waiting. You may be the best person to tell us when that list will be ready.

Dr. Alejandro Adem: We look forward to that list.

Mr. Maxime Blanchette-Joncas: We want to help you. What is missing to make that list? You talked about consultation and the Five Eyes. Other countries have lists. Some of our international allies also want to counter the Chinese threat.

I'm trying to understand today how the government could say it was going to do something without knowing when it was going to do it.

Dr. Alejandro Adem: I hope it will do it soon.

Mr. Maxime Blanchette-Joncas: Okay. Let's remain patient and vigilant.

Mr. Adem, I would like you to tell me about Chinese interference. Our committee is trying to find recommendations to solve the problem and will produce a report on that.

Have you noted a tendency in your granting agency over the past 20 years to refuse to fund Chinese institutions or Chinese researchers directly or indirectly, or to establish partnerships because it was considered risky for the national security of research?

Dr. Alejandro Adem: We do the risk assessment on a project-by-project basis, regardless of the country. We listen to what the security agencies are saying. We are completely neutral and want to do what is best for Canada, based on what the government and the security agencies tell us.

Mr. Maxime Blanchette-Joncas: Okay. Thank you very much.

We're trying to clarify things a little bit. Allow me to quote people who have spoken publicly, including representatives of the U15 group, an association of the 15 leading universities in Canada. There is some vagueness. Even researcher David Robinson, executive director of the Canadian Association of University Teachers, said that he did not know why his association had been rejected. He tried to obtain information, but he was told that there was not necessarily an explanation for that response. Let me give you some concrete examples. Of the 48 proposals submitted to NSERC by the U15 group, 34 were rejected without further responses.

I know that new measures, tool kits and assessment forms are being put in place, but what can you tell us about those refusals and, above all, the lack of explanations?

In recent years, researchers have been told to create partnerships and build alliances everywhere because science is universal. Today, however, they do not have clear instructions on how to go about it.

Dr. Alejandro Adem: It's an educational process on both sides. There are things to understand and learn from both sides. We want to put in place a kind of safe harbour to conduct research in Canada. This is something new for the ecosystem. It exists elsewhere, for example in the United States. I myself received a grant from the National Security Agency. This process is known, but we want to educate the research communities. It's not perfect, but I think we're in a fortunate environment in Canada. We're trying to do what's best for our country.

• (1735)

Mr. Maxime Blanchette-Joncas: Thank you.

[English]

The Chair: Thank you very much.

We'll now go to Mr. Cannings for six minutes to wind us up on this set.

Mr. Richard Cannings (South Okanagan—West Kootenay, NDP): Thank you, all, for being here once again before the committee. We have another new, interesting topic.

I just want to try to get some of the things clear here about the risk assessment, and perhaps any of you can answer. It's my understanding that the people who have to fill out this risk assessment form are people who are applying for a grant and have a collaboration.... Is it just collaborations with the private sector?

Dr. Alejandro Adem: At this point, yes, it is.

Mr. Richard Cannings: So, if I'm applying for a grant in collaboration with another foreign institution, is that something that would trigger this assessment?

Dr. Alejandro Adem: Right now, it's only the alliance program, and these are collaborations between academics and industry. Those are the ones right now, but we expect an expansion of that soon, of course.

Mr. Richard Cannings: Would the expansion expand into other, non-private sector institutions?

Dr. Alejandro Adem: What has been mentioned is the dual-use technologies and the malevolent entities that they're going to want to work with.

Mr. Richard Cannings: So, it's more expanded into different topics of research, such as if you were doing any research on certain sensitive topics.

Dr. Alejandro Adem: We understand that if they're doing research on these topics and collaborating with those entities, that would be a no go.

Mr. Richard Cannings: Okay.

Not all researchers in universities access funds through the tri-council. I assume there are many who access other funds. Do you have any idea what percentage of researchers get grants from NSERC, SSHRC or CIHR versus getting grants or funding from other institutions or entities?

Dr. Alejandro Adem: There's an intersection. I would think it's maybe 70% or 80% of researchers, at least in the natural sciences and engineering. In the humanities, at SSHRC, it's probably quite high, but a bit lower. At CIHR, I know it's bit lower, too.

However, for what we're doing, there are other sources of funding, like Mitacs and other entities.

Mr. Richard Cannings: I'm trying to get an idea of the research funding ecosystem and what portion of it we're talking about here today.

There are researchers who either aren't successful when they apply for grants through the tri-council, or they don't bother. They get funding directly from the private sector.

Dr. Alejandro Adem: Of course, we can only do what our agencies do, but what is true is that the tri-council sets the tone and the standards. On things like plagiarism, open access, etc., we set the tone for the whole community. It's very important that we have clarity in what we do. I think it has an impact beyond what we directly fund.

Mr. Richard Cannings: For instance, on the money that is being directed at universities to increase their security, I assume that part

of that would be going to looking at things beyond the tri-council researchers.

Dr. Alejandro Adem: Absolutely. Yes.

Mr. Richard Cannings: Okay.

You talked about the researchers who had to mitigate the risks somehow. I guess that was the 4%. They had to show how they were going to—

Dr. Alejandro Adem: That was the 4% who were referred to the security agencies.

Mr. Richard Cannings: However, 96%—

Dr. Alejandro Adem: Everyone has to give a plan for mitigating the risk, and then we have to see whether it's acceptably mitigated.

Mr. Richard Cannings: Okay.

What was the percentage that was not at risk at all?

Dr. Alejandro Adem: There were 96% that were fine, but they showed how they would mitigate the risk—around 2,000 proposals.

• (1740)

Mr. Richard Cannings: The 4% were the ones that didn't show—

Dr. Alejandro Adem: That's right. They were referred to the experts.

Mr. Richard Cannings: They were referred to CSIS and CSE.

Dr. Alejandro Adem: Yes, that's because we can only use public information, things that are available on the web. You can learn a lot about entities just by looking things up. It's surprising.

Mr. Richard Cannings: Okay.

I'm trying to see how broad this risk assessment is. When researchers bring in grad students to work with them, is that part of the risk assessment? What happens if they get the funding and then they hire research assistants or students who may be a risk? Is there some follow-up?

Dr. Alejandro Adem: I think my colleague might want to comment.

Ms. Manal Bahubeshi: With respect to the national security guidelines for research partnerships, those have been focused on ensuring that the researcher knows the area of research they're in. Where there are sensitive dual-use technologies, etc., that becomes an area of greater consideration—as well as their partners. That has been the focus of the national security guidelines for research partnerships.

With respect to forward-going policies, we await a pronouncement on the scope, specifically, but that's been the focus to date.

Mr. Richard Cannings: Thank you.

The Chair: Thank you.

We're getting some great information.

It's over to Mr. Soroka for five minutes.

Mr. Gerald Soroka (Yellowhead, CPC): Thank you, Mr. Chair.

Thank you to the witnesses.

I'll start off with Mr. Adem.

Has NSERC ever been advised by the Canadian security agencies to terminate or reconsider a research grant involving entities of the People's Republic of China? If so, what has the Liberal government done?

Dr. Alejandro Adem: We have been advised not to fund certain projects of that kind, but we've not gone retrospectively.

Mr. Gerald Soroka: Okay.

I'll go to Mr. Baron, then.

Has your organization had to terminate or reconsider any health research projects involving PRC entities due to concerns raised by Canadian security agencies? How did the government respond to this?

Mr. Christian Baron: Thank you for the question.

This has not happened until now. When we looked at the grants CIHR funded.... We fund 10 grants. In the case of these 10 grants, one person affiliated with these grants has an affiliation with an institution in China, but none of these institutions are actually conducting research in a sensitive technology area.

Mr. Gerald Soroka: I'll go to Mr. Hewitt, then.

How does the Liberal government ensure that your organization-funded research projects involving entities connected to the PRC are in line with Canada's foreign policy objectives, especially considering the sensitive nature of social sciences and humanities research?

Dr. Ted Hewitt: Clearly, at this point, we are working together to develop the guidelines that will be applied to our areas as they would be applied to any other area.

Right now, the screening is restricted to the alliance program, using the tools that have been developed. That may be expanded with the publication of lists or institutions, and we will follow those.

To our knowledge, I can't tell you that we are funding organizations and entities that would pose a risk to Canada, or at least as have been identified through the peer-review process or subsequently. It's less likely to occur, as I was saying, in the social sciences and humanities, given the very nature of the research, but it's not impossible; I grant you that.

Mr. Gerald Soroka: I think, Mr. Adem, you mentioned that the government said they were going to bring out new criteria starting in February. You haven't yet seen what they've brought forward or what kind of recommendations there are. Was that initiated more by government or by your organizations?

Dr. Alejandro Adem: We're part of government. We're in the ISSED portfolio, so I do want to acknowledge that Minister Cham-

pagne has been out front on this issue. He cares a lot about research security.

We're awaiting further instructions to implement these expanded guidelines.

Mr. Gerald Soroka: This is for any of the witnesses, any of the organizations.

Did you identify anything that you really needed to address because you found something glaring that could be a potential security risk to universities?

Dr. Alejandro Adem: Early on, when I started in this position, we definitely indicated that there were potential issues that we were aware of. We knew there were folks working on that in the government. I was, in fact, quite pleased when the new policy was announced, quite pleased with its development, because I think it's very necessary.

● (1745)

Mr. Gerald Soroka: You haven't seen any of the recommendations coming from that policy yet.

Dr. Alejandro Adem: We're waiting impatiently.

Mr. Gerald Soroka: Do you have a time frame? Did the government give you a time frame? We're talking about February; we're almost at a year already.

Dr. Alejandro Adem: What was it they say in *Star Trek*? It's days and not years.

Mr. Gerald Soroka: Okay, that sounds good.

Did you feel there were any glaring things, possibly, that could be missed and that the government needed to look at? There could be loopholes or something that the PRC could work around to still do research that could help with military operations in their country.

Dr. Alejandro Adem: I have mentioned that we will always be tested. Let's not be naive. One of the issues here was that the whole ecosystem was extremely naive. I think our government and the folks who work there are really doing an excellent job of trying to mitigate the risk and to make it foolproof, but it is never perfect.

We talk to our colleagues—we have a very close relationship with NSF in the United States—and try to understand what loopholes they potentially see. It is something that has to be constantly tweaked and improved as we see what the results are.

Mr. Gerald Soroka: I think, Mr. Hewitt, you brought that up. You said if a university goes through all the funding criteria and all the security checks and it does get money, there has never been an issue where something was found that could be a security risk so that funding could be pulled.

Please, give a brief comment, or reply later.

Dr. Ted Hewitt: It's just funding for very foundational equipment, software and so forth, to maintain security, so it operates at a very basic level to get universities to a place where they can utilize that software or that equipment to screen better. That's as far as we go in that funding.

The Chair: Thank you.

Thank you for the questions.

We have Mr. Turnbull for five minutes, please.

Mr. Ryan Turnbull (Whitby, Lib.): Thanks, Chair.

Thanks to all the witnesses for being here today on this important topic. It's great to hear your testimony.

I'll follow up on a few other lines of questioning I thought were fruitful.

Just to clarify, as an estimate, what percentage of funding of all Canadian research does the tri-council actually provide? In the whole market of research across universities and colleges—because I know you fund applied research at colleges as well—what percentage do you provide?

Maybe the three of you could give an estimate.

Dr. Ted Hewitt: I can take a crack at it by memory. The three councils are just over \$3 billion in a system that's probably close to \$30 billion. If you include industry.... It may be more. I apologize. I haven't looked at the latest data, which would see funding from government, in government labs, through industry for their own research, and from industry to institutions. It's a portion—

Mr. Ryan Turnbull: So you're about 10% of the global market.

Dr. Ted Hewitt: I'm guessing, but I would call it an intelligent guess.

Mr. Ryan Turnbull: That's what I'm asking for. If you want to follow up with some details, that would be fine. We'd appreciate it.

Dr. Ted Hewitt: Absolutely.

Mr. Ryan Turnbull: If you're 10% of the market, the other 90% of the market, in terms of research that's going on, is either privately funded.... It's not within federal jurisdiction, because it's not under the tri-council.

Dr. Ted Hewitt: Some of it would be—in government science, in labs, and in facilities like the National Research Council and so forth. It would—

Mr. Ryan Turnbull: I'm sorry to cut you off. I don't mean to be rude, but I want to get down to where I'm going here.

Whose jurisdiction is that other 90%?

Dr. Ted Hewitt: Of the 90%, a good portion would be industry funding for their own research and also research that is done in institutions. Provinces fund research as well. That would account for a portion. Universities also fund their own research with their own resources.

It's quite varied, actually, if you break it down. Statistics Canada has the latest numbers on those, but we're happy to source those and send them to the committee.

Mr. Ryan Turnbull: Thank you. I would appreciate that, Mr. Hewitt.

It's interesting that if we think about research security and taking a holistic approach, your share or portion of the research is actually quite small in comparison to the whole universe of research that's being funded in Canada. I'll just leave it at that. That's my statement or basically what I'm taking from your testimony.

I want to get back to another comment here. I think my colleague Ms. Jacek asked some really good questions, mostly to NSERC.

Mr. Baron, you mentioned that about 4% of applications that came in essentially had security risks that were unmitigable, or at least were in question. Those had to go to the national security agencies. You said that 50% of that 4% were rejected, roughly 30 applications.

I'm sorry. I think that was Mr. Adem. I was getting confused there.

I'll ask the rest of you. How many have you had to refer to the national security agencies for review, and how many of those have been rejected?

Mr. Baron, maybe I could ask you.

● (1750)

Mr. Christian Baron: Thank you for the question.

At CIHR, this process is not in place yet. Probably based on the nature of the research done by CIHR, NSERC took the lead position here. Based on the discussions we've had with our tri-council partners, which were initiated by ISED together with the national security agencies, we are preparing steps that will be perfectly synchronized with the agencies.

We can't predict the outcomes, but based on the nature of the research, we can have some guesses. In the end, we will have to see what comes in and follow the new guidelines.

Mr. Ryan Turnbull: Just to follow up on that, you profiled mental health, obesity and neurodegenerative diseases. Those all seem like research partnerships that—for me, at least—don't present huge concerns from a national security perspective. I kind of think they might be fruitful areas. Maybe I'm wrong, but those are good examples.

Are there examples of ones where you would have concerns?

Mr. Christian Baron: There are some areas in biomedical technology, such as the use of genomics technology and the use of computer technology in medicine, that could lead to concerns. These are actually discussions we've had between the councils and with our colleagues at ISED, but also with our university partners. It has resulted in the guidelines that are about to come out, as Dr. Adem indicated.

Mr. Ryan Turnbull: Would those be considered sensitive research areas, then, in future guidelines? Is that the intention?

Mr. Christian Baron: There are areas in health research that will be on this list, all of which will be announced at a later date.

Mr. Ryan Turnbull: Okay. Great.

I'm out of time.

The Chair: You are out of time.

[*Translation*]

Mr. Blanchette-Joncas, the floor is yours for two and a half minutes.

Mr. Maxime Blanchette-Joncas: Thank you, Mr. Chair.

I'll go back to you, Mr. Adem.

We were told that NSERC grant applications have undergone a lengthy additional national security review, that only 4% of the 1,000 applications had been analyzed, and that most of them had been rejected.

How do you explain that?

Dr. Alejandro Adem: I believe that the researchers made plans to mitigate security problems and that was enough. As for the 4%, for some of the applications, we could not determine whether it was enough to ensure the security of the research. We then turned those files over to our colleagues in the security agencies.

Mr. Maxime Blanchette-Joncas: Okay, but I'm trying to understand. You will agree with me that 4% is not a lot. How is it that only 4% of about 1,000 applications were analyzed, when they were already deemed to require further review?

Dr. Alejandro Adem: We think our preliminary review is sufficiently thorough.

I will ask my colleague to give you a more detailed answer.

Ms. Manal Bahubeshi: Thank you for the question. I will answer in English, if I may.

Mr. Maxime Blanchette-Joncas: Could you send us an answer in writing? As time is running out, I'll move on to my next question. Thank you.

Mr. Chair, I'm going to ask for the cooperation of the three granting agencies that are here today to help us with this important study.

Could the three granting agencies provide the committee with the funding applications that have been rejected because of partnerships deemed risky with entities or individuals from China over the past 20 years?

Could they also provide the committee with the funding applications that were accepted despite partnerships with entities or indi-

viduals from China, as well as the risk analysis process that was used to conclude that there was no risk to Canada over the past 20 years?

Dr. Alejandro Adem: Yes, we'd be happy to.

Mr. Maxime Blanchette-Joncas: I understand that this is exhaustive work for your organizations, but you will understand that, if we want to be able to produce a good report, we will definitely need data. I can tell you that, at this point in our study, while I appreciate your testimony today, we are still missing data.

• (1755)

Dr. Alejandro Adem: Yes.

[*English*]

The Chair: Thank you. I'll be interested to see how that comes through.

Now we go to Mr. Cannings for two and a half minutes, please.

Mr. Richard Cannings: Thank you.

I'm just going to try to quickly finish here by trying to get an overall sense.

We've heard testimony here before of researchers and students receiving funding from foreign entities, particularly from China, which has left them vulnerable to various forms of—I don't know if you would call it blackmail—being forced into agreements to give up data or to work in concert with these foreign entities.

I'm guessing, listening to this, that it would be easier for that nefarious entity to work with researchers who didn't get funding from the tri-council, or they would be offering much more as inducement for this.

I'm just wondering if you would agree with that. If I were acting in this manner, would I look for researchers outside the tri-council universe?

Dr. Alejandro Adem: We're focused pretty much on university-based researchers and their students. I think you have to develop best practices that apply to a whole ecosystem regardless of where the money comes from.

There are conflict of interest forms. I am a professor at UBC and we fill out these conflict of interest forms. There could be more information obtained, and guidance and mentoring. Those situations arise, absolutely, but it's something that I think the whole system has to work together on. We're just a piece of it.

I do want to say that there is research and then there is research. We fund the most exciting research—the cutting edge. That's the target.

Mr. Richard Cannings: Just to finish, I'm assuming that you all work, obviously, very closely with universities in all this and they are doing similar things.

Ms. Manal Bahubeshi: If I may, I'll address a little bit of that.

We've been working not just with universities, but also with our colleagues across government on things like the safeguarding your research portal.

We're very aware of the questions you've raised and that we fund only a portion of all the research that happens in Canada. The work we're doing is principally focused on raising awareness across the science ecosystem. Universities have been increasingly engaged in that effort and are increasingly resourcing within, including using things like the research support fund that Dr. Hewitt referred to earlier.

There is an awareness and a desire, I think, to work collectively to shore up the ecosystem beyond granting agency funding.

Mr. Richard Cannings: Thank you.

The Chair: Dr. Hewitt, do you have a brief comment?

Dr. Ted Hewitt: It's just to say that the funding we provide, the way we provide it and the regulations that we implement provide the baseline for all research in many important ways. We have some great examples in the case of the secretariat and panels for research ethics and research integrity, which were developed by the

tri-council and are applied evenly by the three councils across the university sector for research that's funded federally or by anybody else.

There are ways to get to that point with the collaboration and co-operation of universities, which are actually quite happy to have that as background for their own work.

The Chair: Thank you for setting the standard, not only in research, but for the governance of research. Your testimony today was terrific; the questions were terrific as well.

Thank you for contributing to this report. We know we can always rely on you and you always come through. If there is anything else that comes up, please do submit it in writing to our clerk.

Hon. David Lametti (LaSalle—Émard—Verdun, Lib.): [*Technical difficulty—Editor*]. It set up the founding structures for the CIHR. It's important we note that.

The Chair: We will suspend for a minute while we go in camera.

[*Proceedings continue in camera*]

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