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# Standing Committee on Science and Research

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Chair: Mr. Lloyd Longfield





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• (1100)

[English]

**The Chair (Mr. Lloyd Longfield (Guelph, Lib.)):** Welcome to meeting number 50 of the Standing Committee on Science and Research.

Today's meeting is taking place in a hybrid format, pursuant to the House order of June 23, 2022. Members are attending in person in the room and we have a member who is remote today.

I'll also make a few comments for the benefit of the witnesses and the members. We will hopefully have a witness joining us virtually, but we're having a bit of a technical issue.

For the people participating remotely, please choose your audio on the bottom of your screen: English, French or floor. Also, for video conference, please mute your mike. Activate it only when you're speaking, and address the comments through me.

Although this room is equipped with a powerful audio system, we have had some feedback events. Please be extremely careful, because this can be harmful for our translators, and for us as well. If there is a feedback event, remove your earphone immediately. Try to keep feedback to a minimum by keeping your audio devices away from the microphone. The most common cause of sound feedback is from our devices, so make sure they are muted and well away from your microphone. If your neighbour's microphone is turned on, watch out for that as well.

In order to prevent incidents and to safeguard the hearing health of our interpreters, I invite participants to ensure that they speak into the microphone in which their headset is plugged in, and to avoid manipulating earbuds by placing them on the table, away from your microphone, when they're not in use.

In accordance with the committee's routine motion concerning connection tests for witnesses, I am informing the committee that... I was going to say that all witnesses have completed their checks, but we will do a check mid-meeting and then bring in our witness once that check has been completed.

To get the meeting started, pursuant to Standing Order 108(3)(i) and the motion adopted by the committee on Tuesday, February 14, 2023, the committee is commencing its study on the Government of Canada's graduate scholarship and post-doctoral fellowship programs.

It's my pleasure to welcome, as an individual, Chantel Millar.

You'll have five minutes for your comments, and I'll give you a signal when you're getting close to the end.

I'll turn the floor over to you, Ms. Millar. Thank you for joining us.

**Ms. Chantel Millar (As an Individual):** Hello, everyone, and thank you for the invitation to speak today as a graduate student on our topic. As mentioned, my name is Chantel Millar, and I am currently a Ph.D. student at McMaster University.

My journey as a grad student began in 2018 after I finished my undergrad in mechanical engineering. I decided I was not quite ready to leave academia, and I was fortunate enough to join a top-tier research group that is focused on community energy sharing to highlight reducing greenhouse gas emissions. After finishing my master's, I decided to stick with the program and continue on with my Ph.D., solely because I believe in my research topic, and I believe that my research will have a positive influence on future generations.

Studying at this level has surpassed any of my expectations as to how in depth and thorough research can be, and is. For many graduate students and post-doctoral fellows, our time at our universities has greatly increased our individual understanding of specialized topics, our contributions to research fields and our preparedness to enter industry after our time in school.

Also, for many graduate students, the only thing that has not increased during this time has been our funding. As I know it has been stated before, in previous meetings, graduate award values for Canada's tri-agencies have not increased in the last two decades. From my perspective, this lack of increase has not been seen in any other sector in Canada, yet research and innovation have been labelled as driving forces to keep Canada at the forefront of industry. With the increased cost of housing, food, gas and just living, the value of these once highly competitive scholarships and fellowships has greatly diminished.

When considering the pursuit of graduate studies or a post-doctoral fellowship, this funding amount can be a make-it or break-it point for individuals. Individuals need to have the financial freedom, or at the very least financial support, in order to consider graduate studies. This does not create an inclusive environment, as prospective students who do not have the financial means or alternative support may not be financially able to attend grad school.

Our scholarships are our main source of income during our studies, with grants and employment, such as teaching assistantships, supplementing this value. From my personal experience, as someone who has sought out additional employment, oftentimes it can be difficult to find an additional job that is accommodating to our study schedule. For individuals who have been fortunate enough to be awarded additional scholarships, there can be a capped number of hours per week of part-time work permitted.

Graduate students and post-doctoral fellows want to study and progress in their research. As graduate students, our research is our full-time job, and we treat it as such, so there is no reason we should need to seek additional employment to make ends meet.

That being said, I need to address the added stress due to finances. From my experience, and when talking with my cohort of grad students, our research tends to occupy our minds at all times, and it can be very stressful. That is not to say that this stress is a bad thing, as we have chosen to pursue a graduate degree, and sometimes, feeling stress is just an indication of how deeply we care for our research.

However, when individuals have added stress because they worry about their housing situations, about how to support their families and children, or about the rising cost of food, that is when the threshold of good stress is surpassed. The added mental strain and missed opportunities due to finances are not advantageous for any individual. Missed opportunities can be as small as not being able to attend a social gathering because of the associated cost, or as big as not being able to invest in putting down roots and purchasing a home, or even not being able to afford to rent a home that is not a shared accommodation with multiple other individuals. All of these are things that hinder the quality of life as a grad student.

To conclude, I just want to thank you all again for inviting me here as a witness, as well as for calling on other graduate students and post-doctoral fellows, to hear directly from those who are affected by this funding. It is my hope that what I have shared today will help strengthen the argument and will encourage an increase in the funding amounts for graduate scholarships and post-doctoral fellowships in the future.

Thank you.

• (1105)

**The Chair:** Thank you for your testimony.

We are just about ready to connect. I think we were almost connected to our second presenter, and I'm just going to get a signal to see if we will suspend to have her give us her testimony before we start our questioning.

We're just about there, so we'll suspend for a few minutes and will get her connected and sound-checked. We'll be back in just a couple of minutes, but don't leave the room. Thanks.

• (1105)

(Pause)

• (1115)

**The Chair:** Unfortunately, the technical troubles continue in the background. We'll go through the first round, and, as we did last

time, maybe we can suspend at the end of the first round of questions if we're able to get Padmapriya Muralidharan on the line.

For the first questions, for six minutes, we've had time to prepare our questions, and we go first to Corey Tochor, please.

**Mr. Corey Tochor (Saskatoon—University, CPC):** Thank you, Chair.

Thank you, Chantel, for your testimony today and your presentation earlier. I too am quite concerned about students' mental health and the stress they're under with all the pressures.

Could you elaborate on how the cost of living crunch and inflation have affected your ability to study? Have you heard of other students having trouble with the cost of living?

**Ms. Chantel Millar:** Yes.

Mental health-wise, on the cost of living, for me personally, when I did not have a significant other to depend on for finances, it was a little more of a struggle to make sure that my budgeting for the month or a semester was very well done. I'd think, "Okay, this amount is going to rent and this is going to food, and how much is left over for things I can do that I enjoy, that will help make me happy?" Those were things like going out with friends, or even simple things like a subscription to music or anything like that, anything that would direct my attention away from studying—when we're not studying, like in the evenings—and to things that would positively affect our mental health.

**Mr. Corey Tochor:** It's much different from how it was when I was going to university, for some of the pressures. They're similar, but different. They're much more...and we've heard of students having to rely on food banks, or of some, unfortunately, who are living in homeless shelters.

I believe you're at McMaster, right? Have you heard stories like that on campus?

**Ms. Chantel Millar:** I have heard stories of students needing to reach out and go to food banks in order to get food.

For me, personally, one thing I did in my master's was that I would purchase a large sandwich at lunch and split it—eat half of it for lunch and half of it for dinner—in order to save on food costs for that day. I know that's a small example, but I've definitely seen my friends and fellow students purchasing reduced produce items that are a little less high in quality but will save them money.

**Mr. Corey Tochor:** It isn't good for one's health or mental health, not having nutritious food, which is a concern.

You've talked about hearing from government that technology and innovation are so important for our future, but then you hear that some of the supports haven't increased in decades—there are lots of words but very little action on this.

I'm just switching the line of questioning a little to your studies, because you spoke about the geothermal energy you're working on, and I believe that this is a technology that is a game-changer. If we can perfect it for Canada, with our cold climate, it could be a game-changer.

Do you think there's a role for the federal government to encourage more people to follow into studies like yours? We know that financially the government is not helping, but are there promotional ways for us to encourage more students to follow in your footsteps?

**Ms. Chantel Millar:** Yes, and I think just bringing awareness to green technologies.... I personally find that there can be a lot of stigma behind, for example, nuclear energy—that it may be bad for us—but in reality, it's actually very green and very efficient for our energy sector. Just bringing awareness to the younger generations, maybe, of what technologies are available out there for our energy sector, as well as how these future students can access a career path in academia, would be useful.

**Mr. Corey Tochor:** Yes, and it's encouraging that finally the government is not scared to say the word “nuclear” and that there's support, somewhat, in the last budget for the nuclear sector. That is encouraging because of the importance of nuclear energy to our efforts to leave a better environment for the next generation. I commend you on your studies.

On the percentage of international students within your year, do you know roughly what that percentage would be?

• (1120)

**Ms. Chantel Millar:** I don't know an exact number. I would assume it's around 40%, but it could be less than that at this point.

**Mr. Corey Tochor:** Do they compete on some of the scholarships or bursaries that might be out there?

**Ms. Chantel Millar:** Depending on the additional scholarships, sometimes you have to be a permanent resident or a citizen here in Canada in order to apply. In terms of funding from our school or our direct supervisor, that's split, I assume, equally with international and domestic students.

**Mr. Corey Tochor:** Briefly, with regard to how things have been going over the last number of years, we know that costs are up.

It sounds like you've been a student for a number of years. Think back from your first year to this year. What are the major categories that are costing you more? Is it tuition? Is it living? What has happened to your rent, for instance?

**Ms. Chantel Millar:** In 2018, when I started my grad school studies, I was paying rent. It was around \$600 a month. Now I have a partner, whom I'm financially dependent on. Without my partner to support and pay my rent or pay our mortgage, anything like that, my rent would be significantly higher now compared to 2018.

**Mr. Corey Tochor:** I've heard that it's doubled.

**Ms. Chantel Millar:** I assume it would be within that range.

**Mr. Corey Tochor:** Thank you again for the work that you're doing and the research. It's very much appreciated.

**The Chair:** Thank you, Mr. Tochor.

Now we'll turn it over to Lena Metlege Diab, for six minutes, please.

**Ms. Lena Metlege Diab (Halifax West, Lib.):** Thank you, Mr. Chair, and thank you very much, Chantel, for coming this morning.

I want to commence by saying congratulations. For a master's, a Ph.D. in mechanical engineering, I know a lot of sweat and tears and hard work have gone into that, so congratulations.

If I have time, I might ask you to tell us a bit more in terms of what you did.

We have heard about and we appreciate the fact that funding has to change and has to increase for both the graduate scholarships and the post-doc fellowships. We've heard a lot from the research community that this is definitely needed.

In your opinion, would we be looking at graduate scholarships? In what ways could increased funding from the federal government help? Do you have any recommendations based on your experience, either personally or from what others around you have said?

**Ms. Chantel Millar:** Do you mean in terms of funding amounts or...?

**Ms. Lena Metlege Diab:** Not specifically amounts, but sources—graduates, fellowships, bursaries. I know there are different methods. Some come directly from universities; some come from professors and supervisors and some come from the NSERC.

**Ms. Chantel Millar:** I would say just in general that increasing the funding would be very helpful.

One example of how funding could be increased is through providing funding to the universities for TAs. It's a way that we still could work for the funding. It's providing the universities with additional help for undergraduate classes as a TA, but then we are still getting that supplementary funding to help us with our lives and well-being.

**Ms. Lena Metlege Diab:** We heard some testimony from different witnesses—because we've done this a number of times—who talked about the balance. I don't think anybody realizes that there's a shift between the number of scholarships or fellowships out there. It's whether we should be concentrating on giving funding to more students or fewer students...or increasing funding for the students who are there.

Do you have any opinion on that?

**Ms. Chantel Millar:** In terms of using the same amount and splitting it to cover more students, I personally like the idea of having the same number with the higher value of scholarships, because it makes these scholarships very competitive. I see the advantage of taking that same value and splitting it across multiple individuals, but then that small amount being awarded to those individuals is still very small when added to our current financing.

The biggest thing I would stress is to look at 2003, when these scholarships were created, how that compares to the cost of living now and what value that would have to be now to be comparable.

• (1125)

**Ms. Lena Metlege Diab:** Yes, and I believe the government is undertaking to look into that, along with other reports that we have seen and that have come before us, including the Bouchard report and so on.

You talked about research and innovation, particularly in your sector. From what you've seen as a student or from others, is there a way to tap into businesses or corporate...have you seen that happening in your milieu? Are there other sources of funding for students, and are there other people who are doing this fantastic research, in your field or in other fields?

**Ms. Chantel Millar:** Partnership between research groups and industry is very useful. The industry partners can then provide their time as a way to talk with grad students. That's sort of intellectual funding.

Other options are sometimes that industry partners can fund grad students to attend school and help pay for their cost of school and cost of living. This can be while a student is still an employee, or when they are taking a break from being an employee and then moving on to grad school.

**Ms. Lena Metlege Diab:** Speak to us a little about your journey and what you've done in your research.

**Ms. Chantel Millar:** On my journey, I study borehole thermal energy storage. What I focus on is taking excess heat from things like air conditioners or buildings—such as an ice rink in the summer—that require a lot of cooling demand. These things are actually exhausting a lot of thermal energy into the atmosphere. My job as a grad student is to study how we can store that heat in the ground, in the soil. Then, in a few months, later in the winter, when we have a high heating demand, we can pull that heat out and use it to supplement or help match the heating demand that we have in the winter.

**The Chair:** That's great. Thank you. You did very well, in about 30 seconds, to describe something very complex. I appreciate that.

Thank you for the questions.

It's over to you, Monsieur Blanchette-Joncas, for six minutes.

[*Translation*]

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

Thank you for being with us today, Ms. Millar.

I listened very closely to your remarks. You raised certain issues that I myself personally experienced when I was a student, namely stress, the financial burden that comes with higher education, especially post-graduate studies, and the whole issue of mental health, of course, which I'd like to focus on.

According to a study by the Quebec Student Union, 58% of the university student population experiences a high level of psychological distress, which is caused by various factors, the main one being financial stress.

The Quebec Student Union also commissioned a Leger poll that was conducted during the pandemic. This poll found that 81% of university students experience a high level of psychological distress.

I was hoping you could expand on that. What effect did financial stress have on your mental health during your studies?

[*English*]

**Ms. Chantel Millar:** Thank you. Yes, you've done great research in your question.

From my personal experience, as I mentioned in my statement, we do have stress as grad students. That's okay. We signed up for the study and for grad studies, but when it's added stress from things like housing or the cost of food, that's when it has a negative impact on our lives.

For me personally, I know there are mental health resources available at our schools. We can be connected with counsellors if we feel like the level of stress is overwhelming. However, I want to point out that sometimes those counselling sessions are only held virtually or on the phone. They're not as personal as it would be if you were able to attend a counselling session in person. You just get matched by a system of supply and demand, basically. You don't get a personal connection with your counsellor, which also can be beneficial when you require counselling. Things like needing to put your own funding towards counselling can be difficult when you don't have adequate funding from your scholarships.

• (1130)

[*Translation*]

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

The federal government claims to be investing significant amounts to deal with mental health issues, but I think you'll agree with me that its refusal to increase funding to graduate scholarship programs is creating mental health issues.

As a student who's experienced financial strain during your studies, how do you explain the logic in that?

[*English*]

**Ms. Chantel Millar:** Could you repeat the question? I'm sorry.

[*Translation*]

**Mr. Maxime Blanchette-Joncas:** The government invests money to help people grappling with mental health issues. However, the fact that the financial support provided to graduate students hasn't been substantially increased creates mental health issues.

I'm hoping to get your point of view as someone who's experienced that. Does that seem logical to you? Government inaction is creating mental health issues, so then it needs to respond by investing money to help people with grappling with mental health issues.

[English]

**Ms. Chantel Millar:** Yes. If I understood correctly, it is kind of a catch-22 situation, in which the lack of funding for us as grad students is one reason we need more mental health funding. Then the government has to help supplement it there. I would say increasing funding in the future could potentially have the impact of decreasing the need for mental health supports.

[Translation]

**Mr. Maxime Blanchette-Joncas:** I obviously agree with you. It's better to be proactive and prevent mental health issues because they can have long-lasting effects on students. These students can even live with these effects for the rest of their lives.

Ms. Millar, in 2003, the minimum wage in Quebec was \$7.30. On May 1, 2023, it was doubled to \$15.25. In that same period, as you well know, graduate scholarships didn't increase by a single penny. In order to catch up to the inflation that's occurred since 2003, the value of these scholarships would have to be raised by 48%. Furthermore, the average price of groceries was \$100 in 2003, and today, it's \$148. We're asking students today to get by with the same amount they were given in 2003.

In your opinion, how can they be expected to pay for tuition, rent, clothing, transportation, not to mention leisure activities, which are essential, after all, in order to have a social life and a good quality of life?

[English]

**Ms. Chantel Millar:** Yes. The funding amounts have not increased since 2003, and because of this, I don't think it's possible without additional funding—whether that is from parents, from a partner or from taking out loans—to have a decent quality of life as a grad student. I find that the funding needs to be increased for these students in order to have....

I'm sorry—am I done?

• (1135)

**The Chair:** I think that was the thought we were looking for. We're good with that.

We'll go next, for six minutes, to Richard Cannings, and then we will suspend for a very brief time. You can see that our next witness is online. We have her technical issues sorted. We'll get to her testimony, and then we'll have a round of questioning and a second round of questioning after that.

Mr. Cannings, it's over to you for six minutes.

**Mr. Richard Cannings (South Okanagan—West Kootenay, NDP):** Thank you, Chair, and thank you for being here, Ms. Millar.

We were talking here broadly in this study about the situation of graduate student scholarships and fellowships having remained the same for the last 20 years, and how ridiculous that is on many levels. What is often forgotten as well is that the overall government investments in universities—government funding for universities at

both the federal and provincial levels—have declined and/or remained stagnant, depending on which set of years you're looking at, for the past 30 years. The overall investment we're making in student studies and our future—our future for innovation and the kinds of things you're doing—has declined.

Of course, when you decrease funding for universities, they have to find that money somewhere, and they get it from students. That's why tuition has gone up so much. When I was a student, tuition was something like \$400 a year. I want to ask you what your tuition is right now, to put that in perspective.

**Ms. Chantel Millar:** My tuition is around \$7,000 a year. For a Ph.D. or a master's, that tuition can be up to around \$11,000 a year.

**Mr. Richard Cannings:** The Ph.D. scholarships are given out to people who qualify as the best and the brightest. We're giving them \$21,000 a year for everything, and I think a lot of people think, "Wow, that will be hard to live on." It's hard to live on \$30,000 a year from a job, but when you take \$7,000 or \$11,000 off that, you're looking at \$10,000 and how impossible that is.

I just want to let you comment on that and on how you and others cope.

**Ms. Chantel Millar:** It is a small amount of money to live off.

For me personally, I was living in Hamilton and paying rent during my master's, but I did have to move back in with my parents in order to save some money. Instead of paying rent to a landlord, I got to stay at my parents' house for free. That takes a little bit of independence away from grad students, which can affect your mental health, but I'm fortunate enough to have great parents, and I loved living with them.

Those who don't have the ability to move in with a significant other or to share accommodation or live with parents or guardians may still be forced to spend that money and go into debt while in grad school.

**Mr. Richard Cannings:** You mentioned how we're essentially filtering out students who can't do that. They end up taking a year or two out—if they do eventually go back to studies—just to make enough money to get through those years, so we're filtering out the students who can't manage that.

Education is supposed to be the great equalizer, yet we are depriving students from low-income backgrounds that ability.

**Ms. Chantel Millar:** Yes, and we could be missing out on extraordinary individuals who perhaps can't afford to attend grad school, so they need to go into industry in order to make money. Canada could be missing out on opportunities to have those individuals as grad students.

**Mr. Richard Cannings:** We've heard that these scholarships and fellowships help maybe only a third of the students out there. The rest are being funded by their supervisors through other grant programs. I'm just wondering if you have any idea of how much those students are receiving on an annual basis.

• (1140)

**Ms. Chantel Millar:** I'm not sure of exact numbers. Your funding can come from your supervisor or your department at your school. Those numbers, I would assume, would be under \$10,000.

**Mr. Richard Cannings:** What we've been hearing from some witnesses is that these scholarship and fellowship funding amounts kind of set the levels for others, whether it's the university or the investigator who is paying their grad students as well.

We had a question about whether we should be funding as many students as possible or giving a smaller number the amount they need to live a proper life. Couldn't we do both? We had the Bouchard report, which said we should increase both the number of these scholarships and the amounts. We should increase the number of grants to investigators. Can't we do both, and shouldn't we be doing as much as possible?

**Ms. Chantel Millar:** I think doing as much as possible and funding both would be the best option.

**Mr. Richard Cannings:** Thank you.

**The Chair:** That's great. Thank you.

We'll suspend for a very brief sound check, and then we'll get into Ms. Muralidharan's presentation.

• (1140)

(Pause)

• (1140)

**The Chair:** Thank you for the sound check.

We'll start with a presentation from the Canadian Association of Postdoctoral Scholars.

Ms. Muralidharan, post-doctoral fellow, you have five minutes. Go ahead, please.

**Dr. Padmapriya Muralidharan (Postdoctoral Fellow, Canadian Association of Postdoctoral Scholars):** Thank you, Chair, and thank you to the members of the committee for the invitation.

I respectfully acknowledge that I'm speaking from the unceded territories of the Semiahmoo, Katzie, Kwikwetlem, Kwantlen, Qayqayt and Tsawwassen nations.

I'm a post-doctoral researcher at Simon Fraser University in Burnaby, and I'm the chair of the Canadian Association of Postdoctoral Scholars—CAPS or ACSP.

CAPS-ACSP is a non-profit professional association that advocates on behalf of Canadian post-doctoral scholars for a wide range of career paths. The mandate of CAPS-ACSP is to improve the lives, training and work experience of all Canadian post-docs. CAPS strongly believes in the value of advocacy work for Canadian post-docs, and we believe that a strong profession requires an effective regulator as well as an active professional association.

Who are post-docs? I am a post-doc, so who am I? I completed my Ph.D., my doctoral studies, in Australia. I went ahead for my first post-doctoral research in the U.S., and then I moved on to Canada.

We are individuals who continue to stay in the academic field to enhance our skill set following our doctoral degree. We are mostly very highly qualified, and there are about 10,000 of us across Canada. We are working in about 60 institutions, as confirmed in one of the reports by CAPS in 2018.

Based on our recent national post-doctoral survey in 2020, we had responses from over 1,000 post-docs, the majority of whom were current post-docs at that point in time. The rest of them were former post-docs. The survey showed that a majority of the respondents, about 88.5% of them, were post-docs who worked in institutions in Canada, whereas the remaining ones worked abroad. We had a high number of respondents: about 35% from Ontario, followed by Alberta, B.C. and Quebec.

There are some interesting findings or numbers that we could point out from our survey. We found that a majority of the post-doc respondents belonged to the field of life sciences. The second-highest field was engineering, and last were the humanities. As we heard in some of the earlier conversations, the major source of funding for a majority of the post-docs was a supervisor's grant—about 50% of them—followed by the NSERC fellowships at around 10%, CIHR or SSHRC fellowships at less than 5%, and Mitacs fellowships of about 5% to 8%.

Most of our post-docs are an average of 33 years old. About 62% are married, and there are almost equal numbers of male and female post-docs in the field. The median hours of work for us are about 45 hours, and the median salary for the majority is \$51,000 or so. About 25% of post-docs earn less than \$45K.

Currently, the tri-council fellowships are valued at \$40,000, plus a \$5,000 research allowance for three years. The value of the awards should be increased by 48% to address inflation, since we have not had any changes for the past 20 years. Hopefully, the new projected value would be \$60,000.

Why do we need support?



The current funding is unsustainable. Post-docs and grad students are key players in the research teams in all the research labs and the universities. We are a great support for Canadian research and innovation, but the amount of funding and the numbers of fellowships are not enough to support our careers. This is why we need increased support from the federal government. This does not just mean increased funding. It would also mean increased value for the funds and also an increase in the numbers for funding or fellowships offered to post-docs.

A lot of post-docs find it difficult to carry on their normal life, as the current salaries affect their lifestyles. There's a lot of brain drain happening, because many post-docs have left Canada. They could not afford to live or work here. If we want future Canadian research to be internationally competitive, we need to pay them enough to match the other G7 countries. There should be more investments made in academia and in industrial partnerships.

• (1145)

There is another key item recently being commonly talked about: Post-docs do not have enough health benefits, especially when they get an external award, throughout most of the major Canadian universities. That is something—

**The Chair:** I'm sorry. I have to cut you off there. We are on a very tight schedule.

**Dr. Padmapriya Muralidharan:** Sure.

**The Chair:** We're actually going to have to trim the question time to four minutes, four minutes, two minutes and two minutes in order to arrive on time.

Thank you for your testimony. Maybe the rest of it can be worked into the question round.

We will start with Mr. Lobb for four minutes, please.

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

Chantel, welcome to the committee. As part of your job, do you receive benefits, such as health benefits and so forth, under the McMaster University benefit program?

**Ms. Chantel Millar:** I do.

**Mr. Ben Lobb:** That's good. In the department, do you get a chance to meet with the administration that takes care of the graduate study program, or is it basically computer interaction?

**Ms. Chantel Millar:** I know some of the administrative staff. I know where their room is in the engineering building for the mechanical engineering department.

**Mr. Ben Lobb:** When you find out that you're going to be receiving a financial grant for your research, is there a process where you're involved, or is it just basically, "Here's your cash. Go do your study"?

**Ms. Chantel Millar:** An email is sent out just to give an overview of the dates and the amounts that will be sent to us.

**Mr. Ben Lobb:** I would think that the area you described would be an area of interest to many large corporations and even small venture capital corporations—TC Energy, Enbridge and list goes on and on for Canadian companies. I'm wondering if they have regular meetings with folks like you to say, "Hey, we'd love to help fund

some of your research so that you'll come and work for us when you're done your graduate studies and we'll pay you a big salary." Do you know if that ever happens?

**Ms. Chantel Millar:** For my particular research group, there are industry partners on the project. In terms of funding amounts, that would go to the research group itself rather than to the grad students. It would go to the research group, and then our supervisor would kind of allocate those funds to the actual laboratory for equipment, or to grad students for funding. I know there are examples where these companies will pay a grad student, or pay one of their employees to then enter grad school, so they do get funding from that company as well as from grad studies.

• (1150)

**Mr. Ben Lobb:** I have one thing just to sum up. I think we've heard this enough by now, and certainly you've made a good description: There are too many gatekeepers at these universities. If Fortis wants to pay you \$40,000 a year plus the university grant to get you to \$60,000 or \$70,000, you should just get it directly. There doesn't need to be a supervisor and a gatekeeper skimming 50% off just to tell you that you can do your research.

**Ms. Chantel Millar:** Yes. I think streamlining some of the funding would be useful.

**Mr. Ben Lobb:** I think so.

Thank you.

**The Chair:** If you're finished, Mr. Lobb, that's a good break point. Thank you for being succinct in your questioning.

It's over to Mr. Collins for four minutes, please.

**Mr. Chad Collins (Hamilton East—Stoney Creek, Lib.):** Thank you, Mr. Chairman, and thank you to the witnesses for their attendance this morning.

I'll start with you, Ms. Muralidharan. We have had the Support Our Science group in front of us here a couple of times. I think they had two representatives. They gave very specific recommendations related to increasing the value of graduate scholarships by 50% and indexing them to inflation, increasing the number of grad scholarships by 50%, and increasing post-doctoral fellowships by 100%. They gave very specific recommendations.

Along the same lines and themes that they presented, you talked about the need for increased support. Do you have specific recommendations on what those numbers should look like and what that level of support should look like in relation to government support?

**Dr. Padmapriya Muralidharan:** Sure. At the moment, federal funding or fellowships are valued at just \$40,000. That's very little for a post-doc like me who's living in an expensive city like Vancouver. We cannot live on just \$45,000. It should start with a base value of at least \$60,000. That's the recommendation, and hopefully it's topped up more.

**Mr. Chad Collins:** In terms of the number of those recipients, have you given thought to that in terms of the level of support in that regard?

**Dr. Padmapriya Muralidharan:** Yes. We definitely want it to be much higher. I can give you the number. We are indexing or we are trying to say that we need at least 150 more new awards per category. That would help a lot of post-docs.

**Mr. Chad Collins:** Thanks very much.

Mr. Chair, I will switch gears and ask Chantel a question.

Chantel, you've raised a number of issues as they relate to affordability and inflation and the impact these have on those who are continuing their education and research in our country. One of the areas is housing. You're studying in Hamilton. I know McMaster is building a new facility in downtown Hamilton for \$100 million. I think it's a 30-storey building that will provide residences for 600 postgraduate students.

It's about supports like that. There are common themes here. You've given recommendations in terms of increasing the levels of support for graduate students, the value of the scholarships and the number of scholarships. We just heard that previous answer from the other witness. Those are very common themes.

One thing I've tried to ask witnesses through the study is, are there other areas where the government can provide support? Housing is one of those areas. I'll point again to McMaster's investment downtown. Are there other areas where we can provide support to ease the burden of the costs everyone has provided to the committee, in order to ensure your studies and the research you do have an easier path to go down...knowing there are other supports beyond the scholarships, fellowships and grant values that have been referenced and have been a common theme at the committee?

I have about 30 seconds left.

**Ms. Chantel Millar:** Specifically, for grad student housing, making the housing competitive at market value is not good enough. I think it should be competitive at the value at which students are getting paid, because, even if it's good in terms of the market, students still can't afford something that expensive.

**Mr. Chad Collins:** It's a level of subsidy that would assist students and separate those rents from market rents. It could be 80% or 60%. You're saying there needs to be a subsidy with that housing support.

• (1155)

**Ms. Chantel Millar:** Yes. Just make it affordable.

**Mr. Chad Collins:** Thank you.

**The Chair:** Thank you.

I have two minutes for Mr. Blanchette-Joncas.

[Translation]

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

I'd like to greet the witness that just joined us, Ms. Muralidharan, to whom my question is directed.

At the committee's previous meeting, Marc Johnson from the Support Our Science movement said that 38% of freshly minted Ph.D.s were leaving for other countries, mainly the United States. We also know that the federal government provides 6,000 scholarships for a student population of 240,000. After doing some quick math, we can see that only 2.5% of students will manage to get a scholarship. I'd also remind everyone that scholarships haven't been indexed in 20 years, so since 2003.

Ms. Muralidharan, my question to you has to do with the Bouchard report, the one prepared by the advisory panel that was put together at the government's request. Specifically, the report suggested there was a possibility of increasing graduate scholarships. One of the report's recommendations was to "significantly increase funding for students and postdoctoral fellows to an internationally competitive level."

I'd like to hear your thoughts on this recommendation. In your opinion, what constitutes an internationally competitive level for graduate scholarships and, naturally, funding for post-doctoral fellows?

[English]

**The Chair:** I think that was directed to Ms. Muralidharan.

**Dr. Padmapriya Muralidharan:** Can someone please translate it?

**The Chair:** We have a translation problem.

Could we get that in writing to you, and then you can respond?

**Dr. Padmapriya Muralidharan:** Sure, yes. That's okay.

[Translation]

**Mr. Maxime Blanchette-Joncas:** Mr. Chair, could you check whether the witness is using the right channel to hear the interpretation?

[English]

**The Chair:** Do you mean whether she selected it on her Zoom?

There's a globe on the bottom of your screen. With that globe, you should be able to choose "English" audio.

**Dr. Padmapriya Muralidharan:** That's perfect. I did that.

**The Chair:** Could you repeat your question, Mr. Blanchette-Joncas?

[Translation]

**Mr. Maxime Blanchette-Joncas:** Mr. Chair, is it possible to make up for my time?

[English]

**The Chair:** You have about 20 seconds.

[Translation]

**Mr. Maxime Blanchette-Joncas:** Between you and me, Mr. Chair, I lost all my speaking time due to an interpretation problem.

[English]

**The Chair:** I was watching the clock as you were talking, Mr. Blanchette-Joncas.

[Translation]

**Mr. Maxime Blanchette-Joncas:** Mr. Chair, you're giving me 20 seconds to make up for the two and a half minutes I had. The witness was unable to hear my question because of technical problems with the interpretation.

[English]

**The Chair:** Could you repeat your question to the witness, please?

[Translation]

**Mr. Maxime Blanchette-Joncas:** Mr. Chair, I'm not certain you're understanding my question. Is it possible to get my time back?

[English]

**The Chair:** Sure. Go ahead.

[Translation]

**Mr. Maxime Blanchette-Joncas:** Thank you very much, Mr. Chair.

Here's the question I wanted to ask Ms. Muralidharan.

Last March, the Advisory Panel on the Federal Research Support System released the report that it had made available to the government as early as December 2022, known as the Bouchard report. The report made the following recommendation, saying, "the panel also urges the government to significantly increase funding for students and postdoctoral fellows to an internationally competitive level."

What do you think of this recommendation? In your opinion, what constitutes an internationally competitive level for graduate scholarships and funding for post-doctoral fellows?

[English]

**Dr. Padmapriya Muralidharan:** Yes, we need to increase the value and the number of fellowships that are provided for the post-doctoral scholars. We are aiming that there should be an increase to at least about 60,000. That is where it should start off, as the base value, and definitely there's a lot of room for it to be improved.

We definitely request about 150 new awards, because we have issues. For example, post-docs getting this external funding actually get considered by the majority of the Canadian universities as not employees of their university. That causes a lot of problems.

This is another thing to be thought of when we have new fellowships being set up. We definitely need to budget in for benefits for the post-docs.

• (1200)

**The Chair:** Thank you for your testimony.

Mr. Cannings is next, for two minutes, please.

**Mr. Richard Cannings:** I would like to welcome Dr. Muralidharan.

I would like to direct my question to you on the whole question around post-docs. I think you painted an interesting picture of the situation that post-docs are in.

If you talked to a high school graduate and said, "You're a really smart student. You've got the world ahead of you. You should go and get your bachelor's degree, your master's and your Ph.D., and get into academics, get into some great jobs in industry and help Canada with innovation. By the time you're 33 years old, when most young people are starting families, you'll be working 45 hours a week for a \$40,000-a-year salary," I don't know how many people would say "Wow, yes, I should do that."

You talked about how you have gone from country to country and ended up in Canada. You chose Canada. How does Canada look to other post-docs around the world, when we have funding for these programs at such a low level?

**Dr. Padmapriya Muralidharan:** I can definitely answer that question based on my personal experience as well, because I did my Ph.D. or grad school in Australia. The system there is very clear. You have a table for your salary of whatever education you have, and your salary is always matched to the current inflation level every year.

I wanted to get a lot of experience, and that's why I moved to different countries. I wanted to come to Canada to improve my research skill set.

When post-docs outside of Canada look to Canada for their post-doctoral career, I feel at the moment there is a bit of sad news for them. When they see such a low pay scale for fellowships provided by the universities or by the federal funding agencies, it really disappoints them, because either they think that—

**The Chair:** I'm sorry, but we have gone over the time. I was wanting to get as much in as we could. Thank you for that.

Thank you to the witnesses for joining us. Thank you to Chantel Millar and Priya Muralidharan for your testimonies and participation in relation to this study on the Government of Canada's graduate scholarship and post-doctoral fellowship programs. If there is any information that you'd like to submit, please do so in writing and get that to the clerk.

We will be suspending. For the members who are online, please stay online so that we can start getting ready for our second round.

We have four witnesses in the next panel, two of whom who will be online. We will get them teed up quickly and we'll come back soon.

Thank you.

• (1200)

(Pause)

• (1200)

**The Chair:** Welcome back. We have a busy 55 minutes ahead of us.

Pursuant to Standing Order 108(3)(i) and the motion adopted by the committee on Tuesday, February 14, 2023, the committee resumes its study of the Government of Canada's graduate scholarship and post-doctoral fellowship programs.

It's now my pleasure to welcome Saman Sadeghi, associate professor of chemistry and chemical biology, who is appearing via video conference as an individual. We have John Hepburn, chief executive officer of Mitacs, also here virtually. In the room, so far, we have Dr. Hranilovic, from McMaster University, vice-provost and dean of graduate studies.

I think we'll start off with Mr. Sadeghi, as an individual.

The floor is yours, if you want to go off mute. You have five minutes.

**Dr. Saman Sadeghi (Associate Professor, Chemistry and Chemical Biology, As an Individual):** Thank you for the opportunity. I appreciate the opportunity to address the committee.

I'm an associate professor in the department of chemistry and chemical biology at McMaster University, and I also hold an adjunct faculty membership at UCLA in the U.S.

About 20 years ago, while doing my Ph.D. at U of T, I was one of the recipients of the NSERC PGS D scholarship, which, at the time, actually made a big difference in my standard of living. I think by now you've heard from multiple sources that, despite significant increases in the cost of living across cities in Canada, the monetary value of scholarships like the NSERC PGS D really hasn't changed since I received the scholarship 20 years ago.

Going beyond scholarships, increasing minimum graduate stipends is essential to ensure that lower-income students can afford the current cost of living. This is particularly true in bigger cities. It enables students to pursue advanced education. Each institution should adjust graduate and post-doc stipends based on the local living-wage salary. A much-needed, across-the-board increase in minimum stipends will foster equal opportunities and diversity in academia. Federal support for stipends that are in line with a living-wage salary and better child care reimbursement will help our universities stay competitive with leading research institutions in the U.S. and industry, in order to retain talent in Canada. To provide a specific example, the graduate program I participate in at UCLA has a \$40,000 U.S. stipend for 2023, and it is proposed that this be increased to about \$42,500 in 2024.

Removing financial barriers is also important to make graduate school accessible to a broader range of students, promoting inclusivity and preventing graduate education from being limited to just those students with greater financial means.

• (1210)

**The Chair:** Thank you.

Have you finished?

**Dr. Saman Sadeghi:** I'll stop there, yes.

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

Now, we have joining us Dr. David Novog from McMaster University. He's a professor in the department of engineering physics.

Welcome to the committee. You have five minutes.

**Dr. David Novog (Professor, Department of Engineering Physics, McMaster University, As an Individual):** Thank you very much. Good afternoon.

I apologize for arriving late. My flight was delayed.

It's my pleasure to address this distinguished committee and provide my personal insights on the issue of graduate student scholarship and post-doctoral fellow funding.

I obtained my Ph.D. in a non-standard route, where the bulk of my work was complete. I spent a year in Japan towards the end and another year at Ontario Hydro. Before moving to McMaster, I worked in a series of utilities in the nuclear industry.

I've been a professor in engineering for 17 years, specializing in nuclear energy and safety. During this period I've graduated or supervised a total of 23 Ph.D. students, 32 master's students and nine post-doctoral fellows. It's not the number of which I am proud; it's the large impact these students have in industry, in research and beyond. It's the joy of my career.

I strive to ensure that my current students have the same access to mobility funding and advanced training that I had years ago. I would like to discuss some of those specific challenges today.

Firstly, a typical engineering graduate student receives funding that is a mix of university or provincial funding, teaching assistant income and scholarships provided by the supervising faculty. Supplemental student-specific funding may be awarded from federal agencies, such as NSERC, or the private sector. In my experience, some students have had access to funds in excess of \$55,000 per year at the Ph.D. level, or as little as \$20,000 to \$25,000. This low-end salary corresponds to an excellent student living below the poverty line, and this is true in many jurisdictions.

While some diversity of funding is expected, and exceptional talent should be rewarded, this level of discrepancy needs further examination. A system that had the flexibility to expand the number of students accessing funding in this lower-income category would do a lot towards maintaining graduate scholarship in Canada.

Second, there's also a need to address the diversity of students at this level. Not all have the privileges and opportunities I encountered in my studies. There is a need to ensure proper support for those with partners, children, dependents or cohabiting family members, and also to ensure funding for those who have challenges related to their mobility or learning. Additional funding supplements for students in these categories should be considered.

Finally, in building upon these previous topics, in many scientific and engineering disciplines we are experiencing an issue in attracting top talent to stay for these advanced degrees. While I receive many applications per week, not all are qualified, and most are not from Canadian universities. Total stipends and an attractive labour market limit the applications we get from Canadian students to very few.

Certainly a more sustainable and equitable scholarship program that is accessible by a larger cohort would have some impact there. However, one unique aspect I'd like to address is perhaps consideration of an international exchange program beyond what is currently available. For example, my program receives many more international research exchange students at the graduate level from France than we send there. This is simply because there's established and easily accessible federal and local funding in France for students in advanced degrees to have mobility elsewhere in the world. Such a system would attract students with global research interests and would provide additional incentive for them to attend graduate studies.

In conclusion, our goal should be to build an accessible and flexible funding system that can accommodate the diversity in student backgrounds, the increased value of international mobility and the increased economic pressures from tuition and cost of living.

Thank you very much for the invitation to speak. Again, I apologize for my lateness today.

**The Chair:** You had a bit of stress getting here, but we're glad you were able to make it. Thank you.

Now we'll move to John Hepburn, the CEO of Mitacs.

You have five minutes, please.

**Dr. John Hepburn (Chief Executive Officer, Mitacs):** Thank you for the opportunity to address this important topic. My remarks are going to take us in a slightly different direction, but they are consistent with those of the two previous witnesses and others.

I am John Hepburn. I'm the CEO of Mitacs. We're a large, national not-for-profit, supported by the federal government, all 10 provinces and industry.

Our mission is to strengthen innovation in Canada, both social and industrial. We do this through talent.

In the past, I was a university professor of chemistry and physics at both the University of Waterloo and the University of British Columbia for more than three decades. I was a dean of science and a vice-president at UBC, so I'm very aware of the pressures on graduate students and research in Canada.

In my current role, we work with universities and colleges across Canada and internationally—we have international programs—as everything we do revolves around students and post-docs. Briefly put, we foster and support partnerships between post-secondary institutions and industry, social enterprises, municipalities and hospitals.

Partnerships are generally applied research projects, where the research is carried out by students and post-doctoral fellows who divide their time between the university and the non-academic part-

ner. The research project is part of the student's academic research work—a thesis, in the case of most of the graduate students—but it's defined by the non-academic partner's needs, as they pay half the cost. That's the industry support we get. Students and post-docs are paid, of course. Our rate of pay is typically much higher than a typical tri-council scholarship, but below the industrial rate.

We report our activities in terms of four-month units of work, which we call internships or *stages*, and a student can do several of these in a row—obviously, for a Ph.D. student, that's necessary. It depends on the project. Last year, we funded 21,500 of these internships, benefiting about 7,000 students, so we're large.

We have very close relationships with our non-academic, typically industrial clients, and we hear constantly that appropriately trained talent is in short supply, especially in emerging fields such as quantum technology. This arises from a few challenges. In highly sought-after fields, such as computer science or many engineering fields, the incentive to do graduate work is limited. Why work for less than minimum wage for five years to get a Ph.D. when you can earn a great salary right after your undergraduate degree?

If you do the hard work of getting a master's or doctoral degree, demand for Ph.D.s in Canada is low because of our, frankly, woeful industrial innovation. We have one of the worst records in the OECD.

Of course, innovative American firms recognize the value of Canadian talent, and are very willing to pay much higher salaries than Canadian firms. The end result is that while Canada has a very high participation rate in post-secondary education and a pretty good participation rate in universities, our production of doctoral degrees is well below that of other rich countries, especially in high-demand fields.

While some of these issues are not being investigated in this meeting, it is worth noting that if Canada cannot improve innovation, be it industrial or in health care, our future prosperity is in peril. As I understand it, you are investigating the impact of inadequate funding of graduate students and post-doctoral fellows. This is a critical issue, but it is only part of a larger problem in Canada, as I have already mentioned.

In most fields, graduate students and post-docs are the driving force of the research enterprise. When I was an academic scientist, I supervised many students and post-docs, and the bulk of my research output—virtually all of it—was due to their hard work. It is hard work. It's more than full time. If the best students can do their work at an American university—we've already heard this—and get a stipend that is much higher than what they will get in Canada, why would they stay in Canada? Once they go south of the border, they may not come back.

In most engineering fields, especially electrical and computer engineering, often the majority of Ph.D. students are international students. Sometimes they are the vast majority. That is not a bad thing, but it reflects on the attractiveness of graduate work for Canadian students and permanent residents who have other choices. If this supply of foreign graduate students were to dry up, we'd be in even worse shape than we are in now.

Of course, the very best foreign students, such as Indian Institutes of Technology graduates, never come to Canada. That's largely because of our low stipends.

Finally, I must address the quality of graduate education. While universities in Canada provide excellent research training for graduate students and post-docs, there is a need to do a better job of incorporating non-academic training into their studies, given that the majority of graduates at the Ph.D. level will find jobs outside of academia. It is not the job of universities to provide this professional training, as they do not have the expertise to provide it. Stronger participation with non-academic partners is needed, as they can help provide students with a decent wage while they study.

The students from such a training partnership will gain the excellent research training that universities provide, and provide right now, plus the professional training best provided outside the universities.

• (1215)

This is absolutely not to imply that better government support of graduate students is not necessary, but the support can be provided through many channels: improved scholarships, increased research funding—which is critical for most students—and better support for partnership training.

Thank you.

**The Chair:** Thank you, Dr. Hepburn, for your testimony.

Now we go over to Dr. Hranilovic from McMaster University, for five minutes.

Go ahead, please.

**Dr. Steve Hranilovic (Vice-Provost and Dean of Graduate Studies, McMaster University):** Thank you, Chair.

I appreciate being given the opportunity, on behalf of McMaster University, to present today and to offer the broader institutional perspective of the university.

I'm very pleased to be joined by some of my faculty colleagues here today and especially by a grad student, whom you heard in the last panel, Chantel Millar. They have all brought their unique and individual perspectives to the discussion.

Graduate student funding is a challenge for McMaster and its students, along with universities across the higher educational sector. At the outset I'd like to underscore that McMaster shares the views of the organizations that have presented to you already, particularly the Canadian Association for Graduate Studies, whose president made important points about additional funding being needed for federal research granting agencies and for increases to graduate student and post-doctoral scholarships.

I'd especially like to underscore the importance of the government's advisory panel on the federal research support system and how disappointing it is that its key recommendations have not been acted on to date. We remain hopeful.

In terms of how the current environment is impacting McMaster and how we as an institution are managing these challenges, the response is multi-layered, and I will provide a brief introduction and welcome further questions the committee may have.

In February of this year, McMaster struck a task force specific to graduate funding, which is presently hosting campus-wide consultations on the impact of the current funding environment and ways in which the institution can help manage those challenges. Thus far, those consultations have yielded some key themes, including financial hardship—which is no surprise given today's inflationary environment—challenges with availability of information, additional barriers faced particularly by international students, and challenges raised to provincially imposed Ph.D. timelines.

On the point of the province and its requirements, it also bears mentioning that McMaster, as an Ontario-based university, is having to manage the unique landscape of how our provincial government is administering its post-secondary system, which is adding to the already substantial challenge of federal funding.

For example, and as the committee no doubt has heard before, tuition rates in Ontario were rolled back by 10% in 2019 and have been frozen since. When that is coupled with the freezing of our provincial operating grants since 2016 and federal grants for master's and Ph.D. students not having increased since 2003, one starts to see a very depressing picture for the state of post-secondary funding in Canada.

On this it bears highlighting that there has for some time been a disconnect between government priorities and the fiscal realities faced by institutions. For example, in terms of global competitiveness, Ontario universities' offers are insufficient to attract top talent. Top U.S. schools will often waive tuition for excellent graduate students, while European universities can typically charge no tuition at all. Adding to this that our national economic strategy relies so heavily on new Canadians to fuel continued growth, one can appreciate the mismatch.

From the consultations McMaster has had with its community to date, it is clear that some actions can be taken at an institutional level to help manage the current state of affairs.

First, we can remove limitations for students who want and need more on-campus employment. We can increase awareness of emergency bursary funds and help ensure that our communications, for example in our letters of offer, help students better understand what funding options and resources are available. We can also look to specific faculties to close the timing gaps to better meet provincial requirements.

I want to emphasize that these measures are stopgap measures at best and are frankly ways in which our institution is only managing a situation that is having a profoundly negative impact on post-secondary research across Canada.

I'll pause now and would welcome the opportunity to answer any questions from the committee on any points we've raised or any other points of interest.

Thank you.

• (1220)

**The Chair:** Thank you very much. McMaster certainly has been well represented in this study.

Looking at the time and because we've had some suspensions in the first round, we'll go through two rounds: four of six minutes and then five, five, two and a half and two and a half, and that will take us up to about 1:10, just to let the committee know that's the plan.

First of all we'll go over to Mr. Tochor for six minutes.

Go ahead, please.

**Mr. Corey Tochor:** Thank you, Chair.

I'm going to carry on with McMaster, and I'd like to thank both of you guys for being here.

Steve, you talked about the inflationary crisis we're in right now. Regardless of the funding you're receiving, what we've heard from many institutions is that inflation in many different ways has impacted your ability to provide high-quality education.

Can you unpack some of the ways in which inflation has challenged you in your college?

**Dr. Steve Hranilovic:** Thank you.

I want to set the stage. My context is Ontario universities. Ontario universities are facing unique pressures. There is one institution in Ontario that has gone bankrupt, and others are facing structural deficits. I'm happy to say that McMaster is not one of those universities. We have a balanced budget.

We are not immune, as an institution, to inflation. However, our graduate students are particularly susceptible to inflation, given the precarious nature of housing and the financial support that they have.

You heard from Chantel and some of our students, who are fortunate to have local safety nets or local structures for support in Canada and can rely on them.

I also want to reference that we have international students. The students who travel from other parts of Canada do not have local safety nets and are drastically impacted by the level of funding that we, as an institution, can support while maintaining financial stewardship to ensure we are a sustainable institution.

The pressures that our students face are not unique. You have certainly heard about them here. They centre around housing, as many constituencies across our nation face. They centre around precarity of work. Graduate students are not employed at the university; they are students at our institutions, but they often need to work. The issue of balancing research, which they're passionate about—which is the reason they've come, to earn that credential—with the need to work, inside the university and outside of the university, to sustain themselves, is a pressure they're facing now more than ever because of inflation and our economic situation.

• (1225)

**Mr. Corey Tochor:** On the housing side, nationally, rents and mortgage payments have doubled. For McMaster and that region, has it more than doubled?

**Dr. Steve Hranilovic:** Hamilton is not immune to the housing price increase. I can tell you that McMaster has been proactive. We've been lucky to have started construction of a graduate student residence near our campus. It's a 644-bed residence. That's not to say that it is inexpensive. It is below market rates, but market rates have increased as well.

The lack of housing that is affordable and high quality...I want to emphasize that as well. Some of our graduate students are living in precarious housing situations, and that is not ideal. We work, as an institution, to ensure that emergency bursaries and supports are available. However, the need certainly outstrips the supply.

**Mr. Corey Tochor:** Thank you very much for that.

Moving online to Mr. Hepburn, I understand that you have facilities in Ottawa, Montreal, Toronto and Vancouver. Are there any plans to have a regional hub in the Prairies, by chance?

**Dr. John Hepburn:** Of course, we're all working remotely, so offices have become irrelevant. We have people from coast to coast. We have business development advisers—110 of them—from St. John's to Victoria. We have about 25 people who work from Alberta, either Calgary or Edmonton. We don't have formal offices there. We're saving taxpayers' dollars by not paying rent. A lot of our advisers and people work out of university offices that are given to us.

We have a presence across the country. The offices are just the ones we pay rent for.

**Mr. Corey Tochor:** Thank you.

Staying online, I'm going to butcher the professor's last name, and correct me when you have the floor, but is it Sa-dee-kia?

You talked about the standard of living of students and how it has been negatively impacted. Have you seen a change in the standard of living in the last eight years with your students?

**Dr. Saman Sadeghi:** Absolutely. I appreciate the effort in the pronunciation.

I've been back in Canada for about the last three years or so. I was in California for about 10 years before coming back, and I'm glad to be back home.

It has changed. I have been in touch with students over the past few years, and significantly, I would say, it has changed. As has been pointed out by all of the witnesses here, inflation and the cost of living have more than doubled over the last 10 years, while graduate scholarships and stipends haven't.

We are supported by Mitacs. I want to acknowledge and appreciate that this makes a huge difference in the standard of living for our students. It's a hugely attractive factor for bringing students into our universities and retaining talent in Canada. That's appreciated. Programs like that are important.

I also want to emphasize that we don't necessarily need to compete with industrial salaries. They're inevitably going to be higher all the time. Graduate students and post-docs are trainees, at the end of the day. They're passionate about their research. They're sacrificing their time and ability to make more money in industry to pursue their further education.

What we do need to do, though, is to provide a minimum stipend, so they don't fall below the poverty line, which is, unfortunately, somewhat the case for many of our trainees at the moment.

• (1230)

**Mr. Corey Tochor:** Thank you very much.

I have one last question for David, and I'll ask for a written response.

Thank you again for being at the committee. Thank you for the testimony on the SMRs.

Of the students you outlined, Ph.D.s and master's students, could you return to the committee in written form how many of those students are working in their field in Canada? I'm assuming that they'd be mostly in nuclear.

**Dr. David Novog:** All but three are working in the nuclear field in Canada, and those three are actually in artificial intelligence and got much higher-paying jobs working for banks.

**Some hon. members:** Oh, oh!

**The Chair:** Thank you for getting the question answered quickly. If there is further detail, you can provide it in writing.

Now we'll go to Valerie Bradford from the Liberals for six minutes.

**Ms. Valerie Bradford (Kitchener South—Hespeler, Lib.):** Thank you, Mr. Chair, and thank you to all of our witnesses for joining us and providing their expert testimony today in this very important study.

On June 6, we had the benefit of having testimony from Dr. Mona Nemer, the chief science adviser. I would like to build a bit on her testimony and get your input.

I'm going to try to struggle with your name, Dr....Steve? Okay.

I want to look at the area of diversity and inclusion, because that comes up quite often in the various studies we do. How would low stipends for graduate students and post-doctoral fellows impact equity, diversity and inclusion within the research community?

**Dr. Steve Hranilovic:** I think it's an important one to address. It links to Chantel Millar's appearance earlier. Those students who have a significant safety net will benefit, and we want to ensure that graduate studies remain universal, merit based and dependent on the quality of the applicant.

I also want to pivot a bit. We've talked a lot about science and engineering, and though I am an engineer myself by training, I want to pivot to the humanities, social sciences, business and the other faculties that we have institutionally. They too do not benefit as much from industrial support, industrial research grants, to enable students to enter.

Again, that is a significant impediment to meeting our EDI objectives and the indigenization of our curricula. These are all objectives that we face; however, sufficient supports need to be made broadly for all graduate students. The STEM fields certainly would benefit from that, and their application can be clear in their linked industries; however, there are links to improving Canadian society and tackling large problems from the humanities and from other disciplines across our institution.

**Ms. Valerie Bradford:** [*Inaudible—Editor*] humanities are increasingly even more disadvantaged. I don't believe Mitacs has any involvement with the humanities. Is that right?

**Dr. John Hepburn:** Yes, we do.

**Ms. Valerie Bradford:** Okay.

**Dr. John Hepburn:** About 20% of our projects are social science or humanities based, with social science or humanities students.

**Ms. Valerie Bradford:** That's great.

Perhaps it's because of my manufacturing background and my familiarity with Mitacs that I realized....

Are there groups getting back to you that are disproportionately affected by low scholarship and fellowship amounts? Do you mean the humanities are, or...?

**Dr. Steve Hranilovic:** Certainly, the complexion of funding varies across the university. As I mentioned, we have created a series of stopgaps in order to ensure students can be funded. In the humanities, those funding sources are not nearly as heavily based on research funding. In fact, they're almost not based on research funding at all. They're based on local supplies and funds that we can provide.



We have bursaries and other supports for identified groups. However, international students remain a key constituency that are not supported. They cannot apply for tri-council funding. They suffer from recent visa-processing difficulties, which have thrown them into limbo from arriving into Canada. They are unable to obtain housing because they cannot obtain a credit check in Canada, and so the burden falls disproportionately on us as an institution to support these international students, who often stay in Canada, as my colleague has said. Eventually, many choose to take a path towards citizenship and contribute to our society for a great many years to come. I think that's a key constituent that we should support.

**Ms. Valerie Bradford:** We encourage them and attract them, hoping they will stay, so that's an important point.

What factors should be considered when determining the value of scholarships and fellowships for graduate students and post-doctoral students?

You can both answer this if you like.

**Dr. David Novog:** It's important to have a balanced approach that takes equity and inclusivity into it.

I can give a personal story that will help shed light...and it hurts me a bit to say it.

One of my post-doctoral researchers told me, one week before they were giving birth, that they were going to have a child, because the culture they came from was such that it was not something to be celebrated or to bring forward. Through my own experiences, taking parental leave for every single one of my children, and there are three of them.... It's about trying to culturally shift people, so they realize there are opportunities in Canada both to have a balanced life and to get a higher degree.

That part would help a lot with attracting those people to Canada. It would even attract Canadians to stay within the system if they realized that all the benefits they would receive while working and going through parenthood or other life changes are available to them as students, as well.

• (1235)

**Ms. Valerie Bradford:** That's excellent testimony. Thank you for personalizing that.

Are there tri-council standards or university guidelines to inform supervisors' and principal investigators' decisions regarding compensation of graduate students and post-doctoral fellows on their research teams?

**The Chair:** You have about 30 seconds.

**Dr. Steve Hranilovic:** Yes, there are institutional minimums.

We have a minimum for Ph.D. support. We have equalized tuition, so international students pay the same tuition as domestic students at the Ph.D. level, recognizing that McMaster is a research-intensive institution. However, funds need to come from somewhere. International master's students then, of course, will often pay disproportionately higher tuition, as a result.

Those are the types of trade-offs that we, as an institution, are making in our severely constrained fiscal environment in order to

ensure we meet our research mandate while supporting our graduate students.

**The Chair:** Thank you.

We'll now go to Mr. Blanchette-Joncas for six minutes.

I'll remind those of you who are online to select the language of your choice using the globe. If you need English, you can choose the English translation.

[*Translation*]

**Mr. Maxime Blanchette-Joncas:** Thank you very much, Mr. Chair.

I welcome the witnesses who are joining us in this second hour of the meeting.

My first questions will be for Dr. Hepburn.

In your speech, you mentioned that Canada was losing ground in terms of innovation. As you know, without research, there can be no innovation. Without students, there's no research, and thus no innovation. As you also know, Canada is the only G7 country to have lost researchers since 2016.

I'd appreciate it if you could share your experience with that, namely the obvious fact that Canada is falling behind on the Global Innovation Index because there are fewer researchers and less research. The most recent data available to me seems to point to Canada lagging behind in the global race for innovation. We went from 8th place on the Global Innovation Index in 2011 to 18th place in 2017.

What can you tell us about that?

**Dr. John Hepburn:** I can answer you in French, but you'll have to forgive me if I mix some English in with the French. Just like every researcher, I speak Frenglish.

We do indeed have a big problem in Canada. Actually, we have several. Among them, I've already mentioned the dearth of post-graduate students, especially at the doctoral level. It's mainly an industrial problem. There are no jobs for real researchers in Canada. It's a problem with

[*English*]

BERD, or business expenditures on research and development.

[*Translation*]

The fact is that without industrial and social innovation in health and social enterprises, there won't be any demand for researchers or research fellows, which means we won't participate in progress. If we don't participate in progress at the research level, we won't succeed on the innovation and industrial fronts, and we will lose productivity and opportunities on the social side of things.

I hope I understood your question.

**Mr. Maxime Blanchette-Joncas:** That's right, Dr. Hepburn. At least that gives us some indications.

I understand that you're saying that we obviously need to encourage investment, in the private sector in particular. I'd like to know what the government can do, in your opinion, to increase innovation.

• (1240)

**Dr. John Hepburn:** We're working closely with the Government of Quebec, which has an innovation strategy. Canada ought to adopt a similar strategy, because it doesn't really have one. It has several programs to promote innovation, but there's no coordination between those programs. That's the first thing.

The second thing is that we absolutely need programs to support true industrial innovation. For example, there's the Industrial Research Assistance Program and the new Canada innovation corporation. That's a possibility. Whatever the case may be, we absolutely need a university research support program. We need to make maximum efforts to support collaboration between businesses and universities.

**Mr. Maxime Blanchette-Joncas:** Thank you, Dr. Hepburn.

Let's return to the subject of today's meeting, namely the indexation and increase of graduate scholarship programs. As you know, these scholarships haven't been indexed since 2003, so for 20 years now.

Mr. Johnson, chair of the board of the Support Our Science movement, testified before the committee at its last meeting. According to a study he shared with us, 38% of Ph.D.s in Canada leave the country, mainly to go to the United States.

I know you've already stated that there aren't any jobs in industry for Ph.D.s. Beyond that, what are the reasons for them to be leaving the country? What can the government do to ensure that these graduates stay in Canada?

**Dr. John Hepburn:** There are certain things we're doing to keep Ph.D. students in Canada. For example, our data suggests that those who have done Mitacs internships are 60% more likely to remain in Canada. So we absolutely need ways to connect Ph.D. students to the opportunities that exist in Canada. Otherwise, the temptation to cross our southern border will be too great, since salaries and industrial innovation are much greater in the States.

[English]

**The Chair:** Thank you.

Now, Mr. Cannings, you have six minutes.

**Mr. Richard Cannings:** Thank you.

I'll start with Dr. Hranilovic. You talked about the overall ecosystem the universities are in right now. It's a difficult one financially for everyone, it seems. You also mentioned tuition. When I worked at UBC, I would travel to research stations in far-flung places, and they always seemed to be full of students from Europe who were on their summer break. Because they didn't need to pay tuition, they didn't need to work between semesters and they were there volunteering.

Today we're talking about the situation in which we aren't providing enough support for graduate students. I think people forget—and I keep trying to remind everyone—that on top of every-

thing else they have to pay for—food, housing and everything—they have to pay tuition.

Now they're faced with a \$20,000 stipend or something like that, and they have to pay \$10,000 in tuition. I'm just wondering what your thoughts are on why Canada hasn't gone the route of Europe and reduced tuition. In fact, over the last 30 years we've reduced overall federal and provincial support for post-secondary education, which has forced universities to increase tuition.

I know it's a big question, but where would you sit on that in terms of the best strategy for us to maintain students and encourage them to stay here in Canada?

• (1245)

**Dr. Steve Hranilovic:** Thank you very much.

To be clear, from an Ontario context we have not increased tuitions. We have frozen tuitions for a period of time.

I think it's important to start from the reason for doing graduate studies. Yes, these individuals are graduate students. I think Chantel was very, very balanced in her comments. She chose to do graduate studies to gain a durable credential for the rest of her life, a world-class credential. We have to recognize from the outset that graduate students are the engines of research in our educational institutions. They're the engines of innovation. Without post-doctoral fellows, without graduate students, research is not going to happen. There will be no research. There will be no leaders of innovation and research in Canada in the future.

Number one, it's essential that we support graduate students while understanding that they are students. This is not a full-time job. They need to be supported so that they can sustain themselves. It is a full-time course of study. The institution needs to be sustainable at the same time. The balance we have, again, given the limited block funding we have from the province to support only our domestic students.... For clarity, our international students are not supported at all by the province, although they make up the bulk of students in the faculty of engineering, for example. Overall, we have about 27% international students at the institution.

We need to balance those priorities institutionally. We need to charge tuition in order to be sustainable, keep the lights on and keep the institution functioning. We also often give back more than that to our graduate students in terms of stipends and supports for field research and their living expenses, in order to meet the research mandate that we have as an institution.

**Mr. Richard Cannings:** Thank you.

Dr. Hepburn, you commented in similar ways about the situation. We had the Bouchard report that the government commissioned, which recommended increasing the number of graduate students, scholarships and fellowships and increasing the number of tri-council grants to researchers.

I'm wondering where you sit with that. Do you agree with the Bouchard commission? How do you think the government should act on that?

**Dr. John Hepburn:** I do agree with the Bouchard commission in many ways. It's important to recognize, as was just said, that in some fields, particularly high-demand technical fields, the majority of graduate students, especially at the Ph.D. level, are in fact international students who don't qualify for tri-council scholarships. Even for the Canadian students, though, the majority are paid out of research grants, so obviously, increasing tri-council scholarships....

I mean, it's absurd to me that a highly qualified master's student good enough to get a scholarship gets paid less than minimum wage, but you have to remember that for the majority of graduate students and post-doctoral fellows, they're paid out of research grants. You address only part of the problem by increasing these scholarships. We underperform in Ph.D. production. If we don't create jobs for Ph.D.s in Canada and increase the number of Ph.D.s, then we're going to continue falling behind in innovation.

**Mr. Richard Cannings:** Do you think there's also the risk, which we've heard is true in some situations, that these graduate scholarships and fellowships from the federal government are setting the bar for investigators and departments who are topping up or paying students through other means?

**Dr. John Hepburn:** Oh, absolutely. You have to increase graduate student support across the board.

We started up an international program of bringing students to Canada quite a long time ago. The initial target was Indian Institutes of Technology students, hoping to keep them in Canada as graduate students. Well, they were getting offers from Stanford and even state universities in the United States that were double and triple what they could get in Canada. They never came to Canada for graduate work. They could get into top American universities. That's a challenge, even on the international side.

**The Chair:** Thank you.

Mr. Soroka, you have five minutes, please.

**Mr. Gerald Soroka (Yellowhead, CPC):** Thank you, Mr. Chair, and thank you to the witnesses for coming today.

I'll start off with you, Dr. Novog. You mentioned that there's a program from France whereby students come over and get educated here. Do they all go back, or do some of them stay here? How does that program work?

• (1250)

**Dr. David Novog:** A majority of them go back. The French government or their local governments provide the funding for their living expenses to come here and collaborate on research with students. Most then go back. We have kept a couple over my 15 years here, but it's a rare occurrence.

**Mr. Gerald Soroka:** Okay.

Dr. Hranilovic, you mentioned you are also doing housing there for students. Was there federal funding for this program or not? How much was there?

**Dr. Steve Hranilovic:** We're building the first graduate student residence on campus. It's just off campus. It's in downtown Hamilton. It's a 644-bed facility. It is built under a P3 partnership. There is no provincial or federal support for that construction, as it stands. It is a mechanism by which we, as an institution, will satisfy our obligation to our students by providing them with high-quality housing.

I can also say that we are embarking on other residence programs at the undergraduate level, though it's not the mandate of this committee. It's not just to offer competitive advantage by enabling all first-year incoming undergraduate students to have a place to live on campus. It's also an issue of quality of life and quality of study that we, as an institution, take seriously.

**Mr. Gerald Soroka:** Implementing that program takes one more pressure from them—they know they at least have a place to stay. I know it's not free, either. There is a charge to that.

Do you feel this also impacts their studies to some degree, when they're either having to borrow money and be under pressure that way, or having a job outside school?

**Dr. Steve Hranilovic:** It depends on the context. If you're a domestic student from out of province and you don't have a local safety net, yes, you are eligible for some NSERC or other tri-council grants. It takes pressure off them. In order to have a residence space.... They're sure that it's high-quality housing, that it's available to them and that it's not going to increase for the duration of their lease.

For international students, I think it's even more important, because we are not requiring a credit check. We are allowing them to have access to this high-quality housing without going through something a typical landlord would do, given that they have a unique relationship with us, as students.

**Mr. Gerald Soroka:** Okay. Thank you.

Dr. Hepburn, you're saying you're bringing in international students, and it's a program that is working not too badly.

What is our retention rate, though, for these students staying in Canada versus going back to their countries?

**Dr. John Hepburn:** We have two international programs.

One is for researcher mobility, where there is no expectation. This is to support international research collaborations at the graduate and post-doctorate levels.

However, we have a large program for bringing students to Canada before their senior year. The goal there is to retain them in Canada as Ph.D. students. The retention rate for those is about 20%, which.... Whether or not that is several hundred students who otherwise would not come to Canada, I can't say, but the retention rate is about 20% for having those students registered as graduate students in Canada.

**Mr. Gerald Soroka:** Therefore, it's actually quite low when you're trying to build a country that has great innovation and technology ahead of it. It doesn't seem as if we're getting the supports we need to retain these students.

**Dr. John Hepburn:** Yes, I think that's right.

This is a competitive program. We bring about 2,000 students to Canada. We have about 2,000 in the country now. By the way, about a hundred of them are Ukrainian students. We have an agreement with the Ukrainian government to bring students to Canada.

Obviously, those students from around the world are very highly qualified. They can get offers of graduate admission in top American universities, where the stipends are higher.

**Mr. Gerald Soroka:** That's something we definitely need to work on.

Do you feel the government has a good plan in place, or is it just flying by the seat of its pants when dealing with research students?

**Dr. John Hepburn:** I'll be careful in my answer. I'm heavily supported by government.

My understanding is that the Bouchard report will have an impact. It will hopefully have an impact on graduate student support. It's not up to me to try to figure out why there was no increased graduate student support in the most recent budget. There needs to be. That's very clear.

**Mr. Gerald Soroka:** Okay.

Would Dr. Novog or Dr. Hranilovic wish to answer that question?

Do you feel the government has a good plan in place? What areas do you think it could improve upon?

**The Chair:** You have about five seconds.

**Mr. Gerald Soroka:** I'll have to get that one in writing.

**The Chair:** Yes, maybe we can go in writing on that.

Thank you, Mr. Soroka.

Now, it's over to Mr. Sousa for five minutes.

• (12:55)

**Mr. Charles Sousa (Mississauga—Lakeshore, Lib.):** Thank you, Mr. Chair, and thank you, all, for participating in today's discussion.

It's a complex issue. I think it's understood that the government is a strong supporter of and contributor to the industry, academically,

venture-wise and innovation-wise—even in the nuclear industry. I recall that the previous government did away with support for atomic energy, which is a big part of our nuclear industry. It ended up falling behind as a result of the lack of support provided. It is essential for us to support Canadian innovation today in order to continue the work of Dr. Novog and others.

The complexity of the situation is also one of partnership. I appreciate some of the discussions we're all having.

Dr. Hepburn, you talk a lot about the private sector.

Dr. Novog, tell me this: Are you being supported by the private sector?

**Dr. David Novog:** Yes. I want to take the opportunity to thank NSERC and the CFI.

I've had a long career in academia, and I'd say I've been very well supported from the research side. I partner quite often with utilities in Ontario and federal government agencies like AECL, and I get funding support from NRCAN and other places. I have a wealthy and diverse set of funding. I think it helps my students to gain employment through those contacts and through those networks.

The problem is there's a group of students who are at the very top and will get the funding of \$50,000, \$60,000, \$70,000 or whatever they pull in, but there's a group of funding—I don't mean to use the term loosely—that is the have-nots and doesn't have those top-name scholarships. Sometimes those are the people who will evolve and grow to be the superstars. Those are the people I think we need to support. We need to look at how we can move them above the poverty line so that they can focus on their studies and their leadership potential.

**Mr. Charles Sousa:** We don't want anybody under the poverty line. We want to be able to support, where possible, by a collection of means. We have affordable housing supports and other things we're doing to provide some of that.

As students—I and others—we all struggled when we were starting off. Young people today, as they were previously.... It's not necessarily easy, but the potential is so much greater after they take on the tremendous work you provide for them, essentially.

My Ph.D. nephew had a tough time, but he became an associate professor. He did what was necessary. He's now bought a house. He's doing very well. He's expanded his wealth of opportunity while still staying in the academic world, by partnering a lot with business.

We haven't heard much from Dr. Sadeghi. You mentioned in your testimony that you went to UCLA. You did some work there and you benefited from some Canadian support. In that time that you went to UCLA, you were able to expand yourself.

What are the tuition and the costs of going to UCLA versus going to McMaster University?

**Dr. Saman Sadeghi:** I was there as a post-doc and a faculty member, not as a student.

The tuition is significantly higher, especially for international students in the U.S. Much like here in Canada, it's mostly equalized through stipends provided to students.

**Mr. Charles Sousa:** I appreciate that. I think it's important to note there is some equalization and there are some supports in order to compete internationally. Canada has to do its best.

I think, Dr. Hepburn, you talked about the talent supply and the need to nurture that talent supply by enabling those great brains and students being nurtured in Canada to remain in Canada.

Can you tell me how much of that is being lost? Is there a brain drain going on?

**Dr. John Hepburn:** There is a brain drain going on in terms of the very best students, especially in high-demand fields. They will go where the very best jobs are. The very best jobs, currently, are south of the border, in terms of pay, in terms of opportunity and in terms of the level of excitement—

**Mr. Charles Sousa:** Is there a net influx of brains coming to Canada that offsets it?

**Dr. John Hepburn:** There is a net influx, but as I said, our overall production of Ph.D.s, which is the very top level of talent, is below that of other OECD countries.

**Mr. Charles Sousa:** You mentioned that was because the private sector is not hiring enough Ph.D.s or taking advantage of that partnership.

**Dr. John Hepburn:** Absolutely. The reason IIT students go to Stanford is that they know they're guaranteed a good job at high pay in the Bay Area after they graduate.

Stanford is a great university. They go there because of that. They go there because of the opportunities post-graduation.

• (1300)

**The Chair:** Thank you.

[*Translation*]

Mr. Blanchette-Joncas, you have six minutes, or rather, two and a half minutes.

**Mr. Maxime Blanchette-Joncas:** I would happily take six minutes, Mr. Chair.

I'll be using my precious speaking time to introduce a notice of motion. It's important, Mr. Chair. Just to give my colleagues some context, I'll remind them that I managed to get a motion passed by this very committee inviting the Minister of Innovation, Science and Industry to testify before us. We all did that on March 30. The clerk sent—

[*English*]

**The Chair:** Actually, I have to interrupt you. We haven't had our 48-hour notice for the notice of motion, and we're not in committee business.

That's something you can provide in writing, and then we can have our notice and pick it up—

**Mr. Corey Tochor:** On a point of order, can we do it unanimously, though? Maybe the clerk can....

**The Chair:** If it's the will of the committee around the table to accept a notice of motion....

Okay. It looks like the committee is good with that.

**Mr. Francis Drouin (Glengarry—Prescott—Russell, Lib.):** It's a notice of motion, not a motion.

**The Chair:** It's just a notice. I apologize. Thank you.

We'll go back to you.

[*Translation*]

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

I thank my colleague. Indeed, as I mentioned at the top, I'm giving a notice of motion, not introducing a motion. I haven't asked for unanimous consent to do so.

I'll pick up my story where I left off, because it's a fairly long one. It all started on March 30, when I requested in this very committee, with the support of my committee colleagues, that we invite the Minister of Innovation, Science and Industry to appear to talk to us about the recent budget, which was also tabled last March, as you all know. On the same day, the clerk sent off possible dates on which the minister could appear, and the minister's staff replied that he couldn't make it on those dates. The clerk then suggested other dates, working around the minister's schedule. I understand that the minister's a busy man, but it's been two and half months now since the initial request to appear was sent off, and we're still waiting. The clerk hasn't received a response to our initial invitation for the minister to appear to talk about budget 2023, tabled on March 28.

At this rate, we'll have to send the minister an invitation today to come talk to us about budget 2025. This situation speaks volumes about the minister's interest in the committee's work and, more broadly, the importance he attaches to the issues related to Canada's and Quebec's student population and scientific community.

The Bouchard report, commissioned by the government, sounded the alarm about the urgent need to invest now in science and research funding. The student population and academic community have repeatedly asked, in this committee and elsewhere, for an increase in scholarships, which haven't seen an increase in 20 years.

It isn't complicated: Every single indicator is in the red. The experts and researchers are saying that Canada is at a breaking point in the sciences, at a time when all our competitors are working twice as hard to face current challenges, such as pandemics, climate change and the energy transition. And yet the government chose to invest zero dollars in the sciences in its recent budget.

To add insult to injury, the minister isn't willing to take an hour out of his schedule to come in front of this committee to answer to his parliamentary colleagues and inform them as well as the entire scientific community of his vision for science in Canada.

And so I'm giving notice of motion today to once again invite the minister to testify before the committee, in the hopes that, this time, his office will at least bother to give us an answer. The motion is as follows:

That, pursuant to Standing Order 108(3)(i), the committee reiterate its invitation to the Minister of Innovation, Science and Industry to testify about the 2023-2024 budget, after its initial invitation extended on March 30, 2023, and that it ask the minister to come testify before the committee as soon as possible and for one hour.

[*English*]

**The Chair:** Thank you.

Mr. Cannings, you have two and a half minutes, please.

**Mr. Richard Cannings:** Thank you.

I'm going to turn to Dr. Novog.

I'm intrigued by this concept of international exchange. I really love to promote that idea in general. I know how it works at the undergraduate level. My son was going to UBC. There, you can choose from among 80 different institutions around the world for your third year.

I'm interested to hear how it works at the postgraduate level, where you have situations that are a little more complicated, with labs and fieldwork and all that kind of stuff.

**Dr. David Novog:** Yes, it's more complicated at the grad level. My experience is that it works best when there are good partnerships in place already. With the research collaborators that I have in place in France, Italy, Germany and the Czech Republic, those are the places where we usually form agreements first and then work with the university administration to set up formal exchange programs. There are now several that students can choose from when they start, but it's certainly not as wide-ranging as an undergraduate kind of exchange program.

• (1305)

**Mr. Richard Cannings:** It's instigated from the investigator side.

**Dr. David Novog:** Yes.

**Mr. Richard Cannings:** You have collaborators around the world that you know your students would benefit from working—

**Dr. David Novog:** Yes, from their training programs and from their education. Likewise, we have facilities at McMaster—like the reactor— and people can come; they might not have a reactor on campus. We leverage that to give them an experience, and our students get an experience.

What's different is that I endeavour to collect extra research funding to give a stipend for my students to go. There's no formal program that would really promote that and allow students to participate who might not have access to the same research funding I do.

**Mr. Richard Cannings:** That was my other question. Who pays for the actual...?

**Dr. David Novog:** Right now, it's really, I would say, ad hoc. In some cases, there are some travel grants from the university that are available on a limited basis. There are some from the Society of Professional Engineers. The student would have to work within the envelope to try to find funding if their supervisor is not able to fully fund them.

We have an unspoken agreement with grad students if they make the decision to pursue a Ph.D. but they could have got a job. I'm not willing—nor should we try—to pay them, as others have said, an industry wage at that level, but what I try to do in their Ph.D. is ensure that they don't have to take on additional loans and debt burden to be able to complete their Ph.D., because they had an opportunity to leave, didn't they? The unspoken commitment is that if they stay, I will endeavour to put a funding package in place, and travel—covering all those things—so that they leave their Ph.D. program no further in debt than when they started.

**The Chair:** That's super. Thank you very much.

Thank you, Dr. Novog, Dr. Saman Sadeghi, Dr. John Hepburn and Dr. Steve Hranilovic, for being here today and for your testimony. That's going to help with our study.

I also want to comment that last summer I was at the Bruce nuclear facility. I saw the partnership with the Saugeen Ojibway Nation on the isotopes program and the work you're doing with the reactors. Those are tremendous partnerships that are going on, so thank you for your contributions there.

If you have anything else you'd like to submit in writing, please send it in.

Our next meeting is going to be on Tuesday, June 20, 2023, to commence our study on the use of federal government research and development grants, funds and contributions by Canadian universities and research institutions in partnerships with entities connected to the People's Republic of China and the long-term impacts. We need a shorter title on that.

We will also have the study to examine the long-term impacts of pay gaps experienced by different genders and equity-seeking groups among faculty at Canadian universities.

We have some witnesses lined up for next Tuesday, and hopefully we'll be able to continue next Thursday as well on those two studies.

Is it the will of the committee for us to adjourn?

**Some hon. members:** Agreed.

**The Chair:** That's great. Thank you.









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