

## Summary of the brief

presented to the:

## Advisory Panel for the Review of Federal Support for Fundamental Science

By:

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For:

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In June 2016, the Honourable Kirsty Duncan, Minister of Science, launched an independent review of federal funding for fundamental science. The review will assess the mechanics of programs currently in place to support science and scientists in Canada. An advisory committee will conduct extensive consultations across Canada in various fields of research and solicit the advice of concerned stakeholders.

The SPPRUL-CSQ is a university union that represents more than 800 research professionals (RPs). Our main focus is to address the obstacles that prevent students, postdoctoral fellows and research personnel from achieving their career goals in universities.

With this brief, the SPPRUL-CSQ hopes to obtain recognition for the contribution and role research professionals play in the advancement of knowledge and fundamental science in Canadian universities. With this in mind, we provide recommendations and a new approach to the way federal funding bodies (CIHR, NSERC and SSHRC) are subsidized, and which we believe will lead to a modern evolution in high-tech research in universities to address the research challenges of future decades.

In Québec, RPs are employed by universities or research centres affiliated with universities. Their salary depends mainly on research subsidies (research grants or funding), which are under the responsibility of principal investigators in these institutions. We estimate nearly 4000 research professionals in Québec.

Thanks to their experience and presence in laboratories and in the field, they support the work of research professors in many ways. They provide follow up of successive projects and promote the long-term development of professors, teams or research centres' lines of research. They also act as a bridge for the research projects of students who come and go once they have obtained their diplomas.

Contrary to Québec, other Canadian provinces have no data on research professionals in universities. In Canadian universities, besides Québec where the term RP is recognized, research professionals are referred to in other terms that tend to minimize their contributions to research, such as research associate, research coordinator, research analyst, research officer, research specialist, research assistant, etc. There are nearly 20,000 research professionals (non-students) directly employed by Canadian universities.

Research professionals make a decisive contribution to research and the education of students in all universities across Québec and Canada. In Canada's three main scientific research sectors, the work of RPs consists of various activities related to conducting research. According to data collected from a Québec-wide study in 2013, RPs in Québec universities are extremely versatile in different activities related directly to the production and transfer of knowledge: writing grant proposals, research papers and scientific articles.

In Canada, the first data collected from a sample of research associates in three big research universities outside Québec (Toronto, Simon-Fraser and McMaster) indicates that the contribution and research activities of research associates are no different than their counterparts in Québec

universities. Writing articles, gathering data, mentoring students, and writing research papers make up more than two thirds of the research activities mentioned by respondents in these universities.

Furthermore, research professionals in Québec and the rest of Canada make up a flexible, highly educated, and abundant source of manpower as a result of the lack of faculty jobs. They evolve in a much more complex and hierarchical university domain where productivity in research is the ultimate indicator. Paradoxically, their status remains precarious as they go unrecognized within and outside universities. They have no job security, they cannot request funding, they don't have access to promotions, and they are far from the centres of power and decision-making. In other words, they do not benefit from the same opportunities and advantages as other employment groups to advance their university careers.

In Québec, university research depends on various sources of funding, both private and public. The main source of funds remains research grants from federal and provincial funding bodies, such as the NSERC, SSHRC, CIHR, and the Fonds de recherche du Québec (FRQ).

The Canadian Institutes of Health Research (CIHR), the Natural Sciences and Engineering Research Council of Canada (NSERC), and the Social Sciences and Humanities Research Council (SSHRC) are the three federal funding agencies that support research, research training and innovation in Canadian post-secondary institutions. Their mission is to provide financial support to students, faculties and institutions. Moreover, within the three funding agencies' strategic orientations, there is no mention anywhere of support for non-student research professionals in universities.

There are currently two significant constraints built into the funding programs of the three organizations that interfere with support for research careers in science and employment of non-student research professionals in Canadian universities. The first constraint lies in the mandate of federal funding bodies that support exclusively post-graduate students, post-doctoral interns and research professions in the institutions.

The second constraint is related to the administrative limitations of the organizations' mandates and how recipients can make use of the funds they receive. In fact, although the SSHRC and NSERC funding programs, including the Canada Research Chairs, authorize salary expenses for non-student research professionals (under "other"), they limit their hiring to very specific coordination tasks (administration, liaison, coordination and supervision of students) that must be strongly justified in the request for funding.

In other words, the funds available for salaries are almost exclusively meant for students and post-doctoral interns. This represents a significant financial constraint for researchers, because without qualified and experienced personnel, it is not unusual that they use other available funds to pay the salary of a research professional for projects funded by the federal government. For example, RP positions are transformed into post-doctoral intern positions to be able to hire the desired person.

We propose a new approach based on team recognition where every player (research professor, research professional, student) is recognized for their contribution to the research project. These important changes need to be made in light of the current reality of post-graduate studies and the organization of subsidized research at university. To do so, the funding programs of funding agencies must allow for the salaries of actual research professionals.

When we consider the essential contributions PRs make to developing knowledge and fundamental research, we wonder why this category of employment remains so invisible, misunderstood, and too often, underfunded. We believe that the mission of federal funding agencies must, more than ever, include support for careers in scientific research in Canadian universities and promote the hiring of highly qualified research professionals in these institutions.

At a time when graduate students and post-doctoral interns have little chance of obtaining positions as university professors, we believe the time is right to extend the three funding bodies' mandate to subsidize careers in scientific research in Canadian universities. It would also be important to mention the social, human and financial investment that higher education and postdoctoral studies represent. After several years dedicated to the field of research, it seems normal to want to pursue a university career. It is quite surprising to find that there is such a collective lack of responsibility in the face of despairing young adults who are unable to find work that matches their qualifications and their interest in scientific research.

## **Recommendations (SPPRUL-CSQ)**

- Broaden the mission of federal funding agencies to include support for research professionals
  in order to preserve more productive research and offer quality careers to Canada's scientific
  youth.
- Rebalance investments made in human resources, infrastructures and equipment.
- Make sure that amounts intended for research professionals are used accordingly.
- Increase duration of grants (minimum 5 years).
- Ensure participation of research professionals in federal research advisory committees.
- Stabilize productive teams.
- Recommend the use of a single term for research professionals in order to clarify their situation and status in Canadian universities and for grant applications.
- Clarify the possibility of hiring research professionals in grant applications (e.g. clarify the rules, include RPs in grant request forms).
- Limit contracts for post-doctoral interns who are hired as salaried research professionals on research projects that are not part of their training or are not related to their field of research.
- Offer grant programs that allow researchers to specifically pay the salary of research professionals.
- Allow RPs with experience in their field to make grant requests for research projects as coapplicants and receive a salary from the grant for which they present a request, notably from SSHRC and NSERC grant programs.
- To be eligible to present a grant request, Canadian universities would need to recognize the status of PRs in their institutions.

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