

# Canadian Institutes of Health Research– Institute of Aging: Profile

## Reaching the Age of Majority: The Life Trajectory of the CIHR Institute of Aging

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The Canadian Institutes of Health Research (CIHR) was created in 2001 under the Canadian Institutes of Health Research Act S.C. 2000, c. 6 (Government of Canada, 2000). The creation of CIHR was in follow-up to the Canadian Medical Research Council (MRC) as well as to the National Health Research and Development Program of Health Canada that, up until that point in time, had supported the breadth of health research in Canada. Two important characteristics of CIHR were crucial for the development of research on aging. The first was that CIHR, unlike MRC, was entrusted with the challenge of supporting the whole spectrum of health research, from the basic biomedical perspective to clinical research, research on health services and policies as well as social aspects of health research, not to mention research on ethics and other perspectives (including the science of research). The second characteristic of the nascent CIHR that impacted the community of research on aging was the decision that a small part of the overall CIHR budget would be used to address priority-driven questions or topics (strategic competitions), while the majority of the budget would be invested in grants and awards programs that would be investigator-initiated, as in the time of the MRC (open competition). Since its inception,

CIHR has included 13 institutes that are central to the priority-driven actions. Institutes not only play an important convener role within their communities and among their stakeholders, but they are also expected to listen to the needs, gaps and opportunities in their area and to introduce initiatives --- most of the time involving more than one Institute --- in order to tackle these needs and gaps and to seize upon the opportunities.

The Institute of Aging was introduced at the same time as the other 12 Institutes and it is clear that many challenges were awaiting the new Institute since, at that time, research on aging was still in its early years. This article is about the trajectory of the CIHR Institute of Aging in its first 18 years of existence. Having now reached an age that is either the age of majority or quite close to it, it is important to be able to provide a reflection on the evolution of the priorities over this period, while also taking a peek at some of the priorities that will surely come in the near future.

### The Early Years (2001-2004)

The founding Scientific Director of the Institute of Aging was Dr. Réjean Hébert. A well-known and prolific

geriatrician and researcher, Dr. Hébert was the perfect person to launch the Institute. One of his first actions was, in fact, to harmonize the French and English names of the Institute. In French, the name of the Institute focused on *Aging* (*Institut du vieillissement*) while, in English, the name of the Institute focused on *Healthy Aging*. The *CIHR Institute of Healthy Aging* thus became the *CIHR Institute of Aging* in all versions of its documentation. But above and beyond this important name change, the real work of Dr. Hébert, accompanied by the first Institute Advisory Board<sup>1</sup>, chaired by Prof. Dorothy Pringle, was to identify the gaps, the needs and the opportunities. After a rigorous process came the first Strategic Plan of the CIHR Institute of Aging, which was clearly influenced by Dr. Réjean Hébert's vision of the aging population as an opportunity, instead of a catastrophe, for our society that comes, of course, with its own challenges. Dr. Hébert left CIHR during his first mandate as he was called upon to become the Dean of his Faculty, and then went on to become the first CIHR Scientific Director to sit as a Minister of Health and Social Services in the Québec Government. The main outcomes of Dr. Hébert's years (2001-2004) can be summarized as follows<sup>2</sup>.

- Organizing many workshops and meetings to ensure that the Institute of Aging would become the premier national convener for research on aging, bridging between disciplines and sectors.
- Identifying that one of the main challenges was the lack of adequate capacity in research on aging, which led to specific actions to encourage training and recognize excellence, and to extend funding to "fundable but not funded projects" in the open competitions, using an original "priority announcement" funding tool. These actions allowed many projects on aging that were submitted to CIHR at that time to receive funding for one year in order to re-apply in the future with a stronger application.
- Introducing the concept of New Emerging Teams at CIHR, many of which became national leading teams thereafter.
- Laying the foundation of the partnership with the *Canadian Journal on Aging* in order for it to become the privileged journal of the Canadian community of research on aging.
- Conceptualizing the initial vision of a population-based longitudinal study on aging in Canada that would allow for the identification of the determinants of health and wellness in a life-course perspective. Put forward under Dr. Réjean Hébert, this vision was the foundational concept of the Canadian Longitudinal Study on Aging (CLSA), although the CLSA concept had to wait for the subsequent developmental period of the Institute to be fully actualized.
- Identifying a priority on cognitive impairment in aging and developing a special interest group of all stakeholders, a group that has grown and still meets on a regular basis.
- Prioritizing the promotion of research on aging in all sectors and within the other 12 institutes, while at the same

time addressing some of the perceived barriers in the peer-review system, which culminated in the addition of two peer review committees that were specific to aging.

- Taking actions to facilitate and support knowledge dissemination towards the users of the CIHR funded research in order to optimize prevention and intervention programs for all aging Canadians.

### The Young Years (2004-2011)

Prof. Anne Martin-Matthews from the University of British Columbia became the second Scientific Director of the CIHR Institute of Aging in 2004, for a full two-term mandate. Her complementary vision as a social scientist was crucial in shaping what was becoming a world-inspiring Institute of Aging. With the support of the Institute's Advisory Board, which was chaired successively by Prof. Dorothy Pringle (Toronto), Dr. Howard Bergman (McGill) and finally Prof. Jane Rylett (Western), the period under the leadership of Prof. Martin-Matthews allowed for the creation of a truly original, open and collaborative research community on aging. It also allowed for the creation of the communities' connection with all types of users, from the general public to clinicians and policy makers. After having completed her full eight-year mandate as Scientific Director, Prof. Anne Martin-Matthews returned to social research on aging until she recently came back to CIHR for 18 months (from May 2017 to October 2018) in order to play an important transition role as the Acting Vice-President, Research, Knowledge Translation and Ethics. The main accomplishments of the CIHR Institute of Aging during its young years (2004-2011) under the leadership of Prof. Martin-Matthews were captured in a document appropriately entitled "*The Future is Aging*" (CIHR, 2007) and can be summarized as follows.

- The Canadian research community on aging was reinforced and consolidated during this period. In particular, the flagship capacity building initiative for research on aging was introduced in 2007 – the Summer Program on Aging (SPA). Inspired by both an Ontario-based initiative in the 1980s and 1990s (the Ontario Sociological Colloquium) and a Québec-based initiative that brought together researchers from Montreal, Sherbrooke and Québec City, Prof. Martin-Matthews inaugurated the first CIHR SPA, which was held in British Columbia in June 2007. Since then, the SPA has provided more than 400 trainees and young researchers with supplemental interdisciplinary training in aging, while creating a new pan-Canadian community of young and future researchers who are connected and ready to seize collaborative and international funding opportunities.
- The young years also saw the funding of the first cross-cutting multidisciplinary teams in research on aging. In particular, a number of teams in the area of mobility and aging were supported in response to the needs and gaps inspired by the Institute's successful National Seniors Research Workshops.

- Without doubt, the highlight of Prof. Martin-Matthews' years at the helm of the Institute was the implementation and operationalization of the Canadian Longitudinal Study on Aging (Martin-Matthews & Mealing, 2009). With the commitment and enthusiasm of the community, led by Prof. Parminder Raina (McMaster), Prof. Christina Wolfson (McGill) and Prof. Susan Kirkland (Dalhousie), the idea of a national platform became a reality. This accomplishment was not an easy one and much had to happen within CIHR, outside CIHR and with partners in order for it to become a reality. Research funding agencies are not naturally engineered to support long-term initiatives such as the CLSA, so precedents had to be set, partners had to be convinced and, finally, funding had to be identified. All of this was accomplished by Prof. Martin-Matthews and her team, and it will benefit the research community on aging for many years to come.
- The period of Prof. Martin-Matthews' leadership also allowed for the continued development of the Institute's role as a convener in the field of research on aging, with the goal to support initiatives for knowledge translation and to open the doors for new alliances and partnerships. One of these new partnerships paved the way, for the first time, for the Institute to join an international initiative (New Dynamics of Aging, UK), which evolved towards the first European Union collaborative effort on aging, the ERA-AGE European Consortium.

### The Teen Years (2011-2018)

The teen years of the Institute of Aging coincide with another full eight-year mandate of a Scientific Director. Prof. Yves Joanette, with experience as the Director of Research for the *Institut universitaire de gériatrie de Montréal*, and as the President and CEO of the *Fonds de la recherche en santé du Québec*, faced the challenges of the teen years of the Institute by building upon the richness of his predecessors' contributions and by seizing national and international opportunities. With the guidance of the Institute Advisory Board, chaired successively by Prof. Jane Rylett (Western) and Dr. Gary Naglie (Toronto) --- in the initial and reconstituted formats --- the teen years of the Institute of Aging were the years of opening up to the other institutes and to the world. Before engaging into specific actions, the Institute, supported by its Advisory Board, launched into a national consultation process that was based on both a web questionnaire and a series of cross-Canada town hall meetings that was known as the *Speaking of Aging* Tour. Both of these consultation methods were extremely well supported, not only by researchers and students (knowledge providers) but also by knowledge users, such as the public, clinicians, community associations and policy makers. The outcome of the consultations was crucial in helping to shape the 2013-2018 Strategic Plan (CIHR, 2013) and inspired the focus and prioritization of the Institute's actions for this period, which can be summarized as follows:

- Support for capacity building was pursued through the Summer Program on Aging. The perpetuity of this ongoing initiative is now better ensured through partnerships with the host institutions. As well, the participation of international trainees in the training program has been facilitated and implemented.
- Active support of the CLSA facilitated the transition to the second phase of funding and allowed the CLSA to complete its 50,000+ cohort while also making the first data available to the research community. In order to enhance the awareness of the newly available data, two funding opportunities for "CIHR Catalyst Grants: Analysis of CLSA Data" were launched in 2016 and 2018, which has contributed to the fact that more than 100 studies are now using CLSA data. The 2018 publication of the first "CLSA Report on Health and Aging in Canada" certainly represents the most recent highlight, crowning more than 15 years of effort since the idea was first brought forward in discussions in the early years of the Institute of Aging.
- The introduction of strategic funding to support research on neurodegenerative diseases in aging, in order to favor collaborative research with shared research platforms, synergized the Canadian research community in this area within a consortium and led to the birth of the Canadian Consortium on Neurodegeneration in Aging (CCNA, n.d.). The CCNA also benefits from extra resources that are contributed by partners, of which the Alzheimer Society of Canada was the first. Partners, of course, also bring forward the perspectives of the end users to inspire the research efforts. With its balanced efforts on prevention, treatment and care, the CCNA is now fully deployed and represents an inspiring model for many other countries.
- A series of new initiatives were launched, mostly with other CIHR Institutes, on topics that emerged from the national consultation process, including the initiatives on Late Life Issues (Joanette, Gutman, McElhaney, Upshur, & Muscedere, 2014); on Healthy and Productive Work, in partnership with SSHRC (CIHR, 2015; Tannenbaum, Voss, El-Gabalawy, & Joanette, 2016); and on the Impact on Health of Inactivity, in partnership with the Canadian Space Agency (CIHR, 2018). The Institute also made sure that aging was a part of the eHealth Innovations Initiative (CIHR, 2017) as well as the recently launched initiative on Transitions in Care.
- The establishment of international positioning for Canadian researchers was facilitated by the membership of Canada, with CIHR as its representative, on a Joint Programming Initiative (JPI) in the area of neurodegenerative diseases (JPND, n.d.). Canada was the first non-European country to join the initiative, and then went on to become a member of two other JPIs, one in the area of the impact of demographic changes (JPI-MYBL, n.d.) and the other on technology and aging (AAL JP, n.d.).
- Collaborations were established with the Networks of Centres of Excellence in the area of aging, notably AGE-WELL (AGE-WELL NCE., n.d.) and the Canadian Frailty Network (CFN NCE, n.d.).
- The Institute's role as convener within the Canadian community of research on aging was accelerated at the international level, as best exemplified by the coordination of "Canadian Pavilions" at major international meetings, such

as IAGG, IFA, GSA and AAIC. By uniting all Canadian exhibitors at the meetings under one common Canadian banner, Canada is showcased and the opportunities for Canadian researchers to connect and network are increased.

### The Young Adult Years

As the CIHR Institute of Aging is now reaching the age of majority, it will have to build on the strengths developed since its inception and consolidate the most important aspects, all while making sure that unmet --- or new --- needs and gaps are addressed and that opportunities are seized. The new Scientific Director of the Institute will begin his or her mandate in 2019 and will be supported and advised by the Institute Advisory Board, which includes individuals who represent a breadth of expertise and stakeholder groups<sup>3</sup>.

There will be unique opportunities for research on aging in the coming years, one of which is the declaration by the World Health Organization of a decade of healthy ageing (2020-2030) (World Health Organization, 2017), in the spirit of the report on Healthy Ageing that was published in 2015 (World Health Organization, 2015). One of the important threads throughout this report is the notion of the diversity of individuals, of physical and social environments, and of aging trajectories. This diversity will have an impact on the factors that will be important for each person to empower him or herself towards healthy functional aging, as well as for the recognition of the enhanced range of health challenges that are linked with aging.

One example of this diversity are the new aging populations and individuals who will be met with new challenges. For example, it is now possible for individuals who are living with HIV to expect to survive and advance in age; however, this fantastic win in terms of modern medicine also comes with potential challenges, such as a higher prevalence of neurodegenerative diseases causing dementia among those individuals (Canadian Aids Society, n.d.). Research will be needed in order to understand the reason for the higher prevalence rates and to better counteract the mechanisms or stimulate the brain's resilience and cognitive reserve. Other significant advances in medicine also create new challenges, one of which is the reversal from low to high of the survival rate in many types of cancer. It is now recognized that cancer survivors may face additional health challenges later in life (Puts et al., 2017). Research will again be needed in order to better understand the mechanisms underlying the long-term impacts of cancer therapy and to better counteract them. All of these new aging trajectories will bring challenges that will require more knowledge and its dissemination.

On the other hand, the opportunity to attain older age will also create new opportunities. According to Statistics Canada (Statistics Canada, 2011), the number of

centenarians in Canada may increase tenfold over the next 50 years and most of them will be women. These oldest old Canadians will need specific attention, both in terms of the factors required for them to maintain optimal health and wellness, and of the management, treatment and care of their multiple chronic conditions. Social isolation and mobility will represent additional facets of the challenge.

Another area for which further knowledge and evidence will be required is in relation to the implementation and practice of the Canadian Medical Aid in Dying legislation (Bill C-14) that received royal assent on June 17, 2016 (Government of Canada, 2016). Although the legislation is currently planned for individuals with a predictable end-of-life under painful conditions, there will be increased pressure from the public to have recourse to the legal cadre offered by the legislation for individuals who are living with multiple chronic health conditions but for whom the predictability of end-of-life is much more difficult. An interdisciplinary research effort involving clinicians, ethicists, health service providers, policy makers, lawyers and the public will be required to address these questions. The implementation of such knowledge in different aspects of Canadian society will require significant effort as well.

Still another area that needs to be better understood is the link with the environment, which will require research on the effects of long-term exposure to hostile environments and on the ways to use the environment (i.e., homes, cities) in order to support better health and wellness throughout the trajectory of aging. For example, age-friendly urban environments that favor mobility and social contact will be of importance in combatting social isolation, a newly recognized driver for physical and mental health challenges in old age.

The specificity of Canadian society will have to be profoundly intertwined with all of these efforts. In this context, it will be important to be inspired by the role and reverence received by elders in traditional indigenous societies. At the same time, the specific health and wellness challenges that are faced by indigenous people in their aging trajectory will need to be better understood and addressed --- by researchers from their communities. To do so, an immense effort of capacity building in indigenous health research that is done by indigenous researchers will be required. Fortunately, the CIHR Institute of Indigenous Peoples' Health, along with all of the other Institutes, are already engaged in actions in this direction.

### The Life Trajectory of the CIHR Institute of Aging

The CIHR Institute of Aging has evolved tremendously since its creation in 2001. Initially focused on

capacity building in research on aging, as well as on the promotion of research on aging and the way to ensure that it is adequately peer-reviewed, the Institute has gone on to deploy major national platforms on the determinants of health and wellness in aging, and on the challenges to health and wellness in the later stages of life.

Nearly all of the current actions of the Institute are carried out with the collaboration of the other Institutes, which is an approach that will not change over the coming years and will continue to contribute towards delivering on CIHR's overall goals.

Demographic changes and the aging of the population are realities for all countries, whether high-, middle- or low-income. Consequently, the next phases of the life trajectory of the Institute of Aging will need to mobilize the research community nationally and to connect it globally, making use of international collaborations with comparable countries and of exchange with low- and middle-income countries, in order to achieve a truly global health approach.

From one period to the next, the Institute of Aging will progress in the trajectory of its life, hopefully one day reaching a point of full integration with all research efforts meant to sustain health and wellness in human beings.

## Notes

- <sup>1</sup> The members of the inaugural Advisory Board of the Institute of Aging included Neena Chappell, Pierre Durand, Marg Eisner, Geoffrey Fernie, Betty Havens, Yves Joannette, Sheila Laidlaw, Sonia Lupien, Anne Martin-Matthews, Graydon Meneilly, Louise Plouffe, Karl T. Riabowol, Kenneth Rockwood and Donald Stuss.
- <sup>2</sup> The authors take full responsibility for the choices made as to what they consider to be the most important and impactful contributions, while recognizing that this is a dangerous exercise since it does not allow for the inclusion of all actions and accomplishments.
- <sup>3</sup> The current members of the CIHR Institute of Aging Advisory Board are Gary Naglie (Chair), Sylvie Belleville, Julie Bernier, Nicole Buckley, Heather Campbell-Enns, Habib Chaudhury, Susan Kirkland, Alex Mihailidis, Manuel Montero-Odasso, Paula Rochon, Weihong Song, Gail Turner, Lori E. Weeks and David Westaway.

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