



Canadian Institutes
of Health Research

Instituts de recherche
en santé du Canada

Task Force on Career Support: Final Report



Canada

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3.0 EXECUTIVE SUMMARY

Preamble

The past five years have seen remarkable changes in funding for health research in Canada, with an unprecedented increase in government investments in health research through the Canadian Institutes of Health Research (CIHR), and other new funding programs [Canada Foundation for Innovation (CFI), the Canada Research Chairs Program (CRCP), Genome Canada, Indirect Costs Program]. These investments have invigorated the health research enterprise – the ability of universities and research institutes to present an optimistic view of the funding landscape and support for research infrastructure has allowed Canadians to aggressively compete in the international arena for excellent researchers. Canada has emerged on the global ‘radar’ as a top place to begin or continue a career in biomedical and health research.

Our challenge

Our success in building research capacity brings challenges of stability, continuity and sustainability. The infusion of support for research, research infrastructure and training, creates attendant demands on all research funding initiatives, including operating grant and salary support programs. CIHR has a key mandate in this realm, and is the only federal agency that provides operating grant support for health researchers across the full range of health-related research areas. By contrast, salary support for researchers is the responsibility of many participants – including universities, research institutes, federal and provincial peer-reviewed granting agencies (e.g. CIHR, CRCP, FRSQ, AHFMR) and disease-related granting agencies (e.g. NCIC) – and constitutes a rather delicate, complex and poorly understood system that is easily destabilized.

Our context

The Task Force was charged with providing advice to the Governing Council on the role of CIHR in offering career support in the form of salary awards to health researchers. As outlined above, this mandate occurs in the context of budgetary pressure to: 1) maintain and enhance operating grant support in the face of increasing demand due to successful capacity building and; 2) embrace the broad mandate of CIHR to promote interdisciplinary activities across the full spectrum of health research. Historically, the basic suite of CIHR career awards included three levels of awards open to both health professional or Ph.D. scientists -- New Investigators (1-5 years as an independent investigator), Investigators (5-10 years), Senior/Distinguished Investigators (minimum of 10 years). The Investigator and Senior Investigator programs were suspended in July 2003, and a major goal of the Task Force was to examine the impact of this decision and to make recommendations about the future role for CIHR in funding scientists throughout their careers. The Task Force considered a variety of data – including community surveys and letters, input from CIHR Institute Advisory Boards and data on CIHR and other cognate programs – to inform its deliberations and recommendations.

To frame its discussions, the Task Force articulated some guiding principles:

- A vibrant health research enterprise requires both operating grant and salary support programs that ensure our best scientists are supported to do research at internationally competitive levels;
- An option to be explored involves the linkage of salary support for health researchers in Canada to peer-reviewed operating grant funding, analogous to the National Institutes of Health (NIH) model, to ensure protected time to do research;
- Sources of salary support vary significantly by region across the country, highlighting the need for a national strategy to support salaries of qualified health researchers across the country;
- Strategic initiatives in health research (an overarching goal of CIHR), require long-range plans to ensure sustainability of successful projects. A key feature of those plans is access to open operating grant and salary support programs, once the strategic phase is complete;

- Given the complex nature and regional variability of salary support mechanisms across the country, it is important that participants do not act in isolation when changing their investment in health researcher's salaries to ensure stability of the enterprise.

The role of CIHR

The CIHR Act (2000) outlines several goals of CIHR, designed to achieve the objective of excellence in health research and knowledge translation. Among many, one goal (item (j)) is "building the capacity of the Canadian health research community through the development of researchers and the provision of sustained support for scientific careers in health research". This is a laudable goal indeed. The Task Force recognized the importance of sustained and stable support in building a healthy, motivated and internationally competitive research community that will both encourage excellent researchers to continue to view Canada as a superb place to do research and to send the signal to young Canadians that health research careers are valued and supported by the federal government.

Towards this goal, CIHR clearly has a primary role as a provider of operating grants in support of health research ("the fuel"). As a federal funding agency for health research, CIHR is also well positioned to provide national leadership in promoting and maintaining a culture of excellence. Provision of awards that support health research in Canada through recognition of exceptional researchers at various stages of their careers is a key element in sustaining a culture of excellence.

CIHR's career support programs, including the Investigator and Senior Investigator awards, are valued by the research community and viewed as fulfilling an important role for a variety of reasons including:

- CIHR awards are entirely merit-based, and not tied to Institutional Strategic plans. The fact that CIHR awards do not frequently provide a linear 'career' path where the same investigator proceeds 'through the ranks' was regarded as a strength of the system since it allows researchers to enter CIHR's award stream at various stages of their careers
- CIHR awards provide a national competitive salary program in face of significant regional differences
- Investment by CIHR in excellent scientists sends a positive message about support by Canada's federal health research funding agency of health research careers
- CIHR career awards support 'at-risk' populations of researchers who are key to fulfilling CIHR's mandate and are not particularly well-served by other important initiatives such as the CRCP: mid-career researchers (Investigators), clinician investigators and researchers at institutions with large teaching loads.

Recommendations

In light of the unique role for CIHR summarized above, the Task Force specifically recommends the following actions:

- 1) To demonstrate the commitment of CIHR to ensuring the stability and sustainability of health research programs in Canada, the Task Force recommends an immediate reinstatement of the Investigator and Senior Investigator programs for the fall 2005 competition at least at their previous level of funding, while longer-term strategies are explored. Given the need to emphasize sustainability rather than continued capacity building, the Task Force does not recommend further expansion of the New Investigator program or reinstatement of the Senior Fellowships programs.
- 2) To demonstrate national leadership, the Task Force recommends that CIHR spearhead an immediate dialogue with other investors in research career support -- federal and provincial health ministries, provincial agencies (e.g. FRSQ), universities, research institutes and non-government organizations - with the goal of constructing, within 3 years, a national strategy for long-term sustainability of career support for health researchers. A component of this strategy

should include a commitment to consult on major program changes to allow other organizations in the health research 'network' to adjust their funding strategies.

- 3) The Task Force recognized the primary role of CIHR in provision of operating funds for research: the opportunity cost of supporting the salary support programs should not impact the operating grant envelope. Rather, the Task Force recommends, over the next two years, an evaluation of other programs for identification of lower priority investments. The Task Force recognizes that additional investment in CIHR will be required to enable Canadians to maximally benefit from the substantial federal investments in health research that have occurred over the past few years through other mechanisms (CFI, CRCP etc.). In the long term, the Task Force encourages exploration of a model, analogous to the National Institutes of Health, in which salary support for health researchers in Canada is linked to peer-reviewed funding to ensure protected time to do research. The Task Force recognizes that such a model would lead to the realignment of funding priorities by organizations other than the CIHR which currently support salary awards for health researchers.
- 4) To ensure appropriate investment by CIHR in career support in the future, the Task Force recommends the development of a process for evaluating the aims and outcomes of all salary support programs, against the overarching goal of providing stable support for the best researchers. On-going programs should feature clear plans for sustainability and strategic initiatives should have clear plans and timeline for conclusion.
- 5) To ensure appropriate recognition of its investment in the careers of outstanding researchers, CIHR should actively celebrate the considerable achievements of award recipients, and engage universities and institutions in the process ("Branding the CIHR Career Awards"). A long term goal will be to increase the value of the awards, through partnership and other mechanisms, so that they maintain their status among the most prestigious in Canada.

4.0 INTRODUCTION AND BACKGROUND

During discussions of the 2004/05 budget allocations, CIHR's Governing Council (GC) determined that it must clarify CIHR's priorities in order to guide its budget decisions. GC recognized that despite the existence of other federal agencies (Canadian Health Services Research Foundation, NSERC, SSHRC, etc.) no alternative federal funding program fills the need for health research operating funds accessible to the full range of researchers addressing health-related issues - clearly an important role for CIHR. In contrast, GC felt that the introduction the Canada Research Chairs Program (CRCP) in 2000 called into question the continuing need for at least some of CIHR's personnel awards categories.

Like investigator-initiated operating grants, personnel (salary) awards for independent investigators were components of a long-standing program of research support of the Medical Research Council that were incorporated into the funding programs of CIHR. GC determined from the beginning that personnel awards were an important element of CIHR's funding strategy with the full spectrum of personnel awards comprising **research training awards** as well as **salary/career awards** to independent investigators. Despite the initial commitment, given that priorities must be set and given changes in the landscape of research funding, GC found it necessary to revisit the question of an appropriate role for CIHR in the field of **salary/career awards**.

Most recently, the following salary/career awards were available through open (non-strategic/targeted) competition. (see Appendix IIA for further details):

- **New Investigator:** To provide the opportunity for new investigators (less than 5 years from the beginning of their independent research career at the time of application) to develop and demonstrate their independence in initiating and conducting health research.
- **Investigator:** To provide salary support for independent investigators who have made outstanding contributions and have demonstrated leadership in their field. It is intended for health researchers who, early in their career (between 5-10 years as independent investigators at the time of application) have developed a reputation for excellence in research.
- **Senior Investigator:** To contribute to the salary of investigators of exceptional merit (with at least 10 years of experience as an independent investigator at the time of application) who are international leaders in their field.
- **Clinician Scientist (Phase II):** To contribute to the salary of highly qualified and motivated clinicians who have been identified by a Canadian medical or dental school as having strong potential to become clinician-scientists. During phase II of this program salary support is provided to ensure that not less than 30 hours per week will be spent on research.
- **Senior Research Fellowship (Phase II):** To contribute to the salary of outstanding candidates who have been identified by a Canadian institution as having strong potential to become independent investigators during their first two years in an independent research position.

The existence of the Canada Research Chairs program and the low success rates in the most recent Investigator and Senior Investigator competitions (13% and 11%, respectively, in 2002) led GC to decide that CIHR must either invest more money into these programs or suspend them. At its June 2003 meeting, GC determined that it was not possible to invest more funding in career support programs without having a negative impact on other priority programs and agreed to suspend the competitions.

In July of 2003, along with other program changes, CIHR announced the suspension of the Senior Research Fellowships Program, the Investigators program and the Senior/Distinguished Investigators program with the following statement of priorities:

(From the July 2003 Program Changes announcement):

"In arriving at very difficult decisions about the allocation of the probable CIHR grants and awards budget for FY 2004-5, the President, Scientific Directors, and Governing Council agreed on three principles to guide their decisions:

- The first priority is to sustain the open grants competition;
- The second priority is the continued growth of strategic funding to be allocated through CIHR's 13 Institutes;
- The prime areas to target for reductions include those where other federal agencies are now investing significantly, such as career awards through the Canada Research Chairs program, and large equipment, through the Canada Foundation for Innovation."

At the same time, through a small reallocation of funds from the more senior awards programs, CIHR increased the number of New Investigator Awards for the Fall, 2003 competition.

In June 2004, GC reconsidered its suspension of these salary award programs, in light of CIHR's budget prospects for fiscal year 2005-06. In July, CIHR announced the continued suspension of the three salary/career award programs for the fall, 2004 program cycle and announced its intention to establish a national Task Force to provide GC with advice on CIHR's future role in providing salary/career awards to health researchers at all stages of their research careers.

4.1 Mandate of the Task Force (see Appendix I)

CIHR set up the Task Force on Career Support (the Task Force) in August 2004 to provide advice to GC on CIHR's role in providing career awards to health researchers at all stages of their research careers, taking into account:

- requirements for health researchers to sustain the national health research enterprise, and train the next generation of health researchers;
- CIHR's mandate and strategic directions;
- other sources of career support including host institutions, provincial health research agencies and the Canada Research Chairs Program;
- explicit and implicit objectives of existing competitive career award programs, including but not limited to:
 - recognition and rewarding of exceptional research achievement;
 - capacity building in selected areas or disciplines;
 - release time from other significant professional responsibilities, such as clinical, administrative and teaching duties;
 - enabling transition from trainee to independent researcher (career launch);
 - enabling career transition (discipline shifting);
 - attracting and retaining the best health researchers in Canada through creation of clear career pathways;
 - encouraging full participation of both women and men in health research.

The Task Force was required to provide a report to the President by November 5th, 2004 with recommendations on CIHR's future role in the area of career support.

4.2 About the report (purpose, limitations, approach)

4.2.1 Purpose

Through this report, the Task Force aims to provide data and recommendations, based on the information garnered as background to the exercise, to assist the President and Governing Council in defining CIHR's role in providing salary support programs for independent investigators and in allocating a budget to support such programs.

It should be noted that the mandate of the Task Force was specifically limited to the examination of salary support programs for independent researchers. The Task Force did not examine CIHR's programs designed to support researchers during the training phase of their careers (trainee awards).

A detailed analysis of the full spectrum of CIHR's research support programs and budget allocations was not part of the Task Force mandate, except in the specific context of support for salary programs. As a result, the final recommendations of the Task Force do not address specifics of the reallocation of resources from other priority areas that may be required to allow for implementation of the Task Force recommendations within budgetary constraints.

4.2.2 Data Collection and Limitations of the Data

To inform its deliberations and recommendations, the Task Force consulted the health research community. The consultation consisted of questionnaires (see Appendix III) forwarded to applicants to the Investigator and Senior Investigator programs (both successful and unsuccessful applicants were polled), potential applicants (persons currently holding New Investigator awards) and heads of research in institutions with Investigators and Senior Investigators among their faculty. The number of questionnaires distributed and the number of responses received are given in Table 1. The response rates reflect the short time frames for response (1 week from sent date for New Investigators and 2 week for Institutional responses).

Table 1: Sample size and response rates for the various groups consulted

	New Investigator		Investigators and Senior Investigators				Institutional	
			Successful		Unsuccessful			
Completed Questionnaires	73	37%	64	32%	30	15%	19	16%
Non Valid E-mails	18	9%	8	4%	15	8%	13	11%
Sample Size	200		202		198		116	

Given the short time-frame available for consultation and data collection, the potential for development of a fully validated survey instrument was limited. As questionnaires were analyzed, it became apparent that some of the questions were not entirely clear to the target population and were answered in a variety of ways. In addition, small sample sizes and short response times mean that the data collected were not statistically validated. Despite these limitations, the questionnaires provided a quick and reasonably systematic means of consulting the community on its views and did provide the Task Force with some valuable insights.

The Task Force also sought input from the community through a general call for letters, through an invitation for input via a Task Force e-mail address that was posted on CIHR's website, and by circulating contact information for Task Force members to the community through CIHR delegates and other relevant academic leaders. We received 49 letters from across the country (36 – Ontario; 2 – Quebec; 1- Alberta, 2 – Manitoba; 6 – British Columbia; 2 – National organizations) and from a variety of stakeholders (19 clinicians; 20 basic scientists; 5 rehab/public health; 5 administrators).

In preparing this report and in developing its recommendations the Task Force also considered a variety of data relevant to CIHR's role in providing salary support for investigators in Canada including:

- CIHR's Blueprint and Institute Strategic Plans;
- Association of Universities and Colleges of Canada (AUCC) data on faculty demographics;
- Strategic plans and statistics for the Canadian Foundation for Innovation (CFI) and the Canada Research Chairs Program (CRCP);
- Reports from the Clinical Research Initiative of CIHR;
- Input from CIHR Institute Advisory Boards on salary awards;
- Data on success rates and application pressure for CIHR salary award programs; and
- CIHR budget envelopes, competing priorities and "opportunity cost" analyses comparing the cost of salary awards to other possible investments.

Furthermore, the Task Force also sought information on the types, numbers and value of career awards available from other funding agencies, in Canada and abroad. Given the short time allocated for the work of the Task Force, this survey had to be limited in scope. However, the information in Appendix IV provides a reasonable overview of the major types of career awards available in Canada as well as a comparison with the situation in other jurisdictions.

The Task Force considered general statistical information based on Statistics Canada data to assess demographic trends in research and education, funding levels and the impact of other funding programs, such as the Canada Research Chairs Program (CRCP) and the Canada Foundation for Innovation (CFI) on health research. The interpretation of these data presents some difficulties, given the expanded mandate of CIHR in the area of health research and the definitions used by Statistics Canada.

Briefly, the Statistics Canada data are organized under traditional fields and subfields that do not appropriately capture interdisciplinary research and the evolution of disciplines. For example, in the Statistics Canada data, all of psychology is classified under Social Sciences while, in reality, researchers apply to any of the three granting agencies depending on their research interests. Another limitation of the Statistics Canada data for use in the assessment of research programs is that they capture "teaching" faculty. It is not clear whether all universities include research staff (non-tenure stream or status only faculty) from their affiliated institutes and hospitals in these counts. Furthermore, the all-encompassing nature of CIHR's mandate means that it does not fund only research in the basic and clinical health but also research in disciplines covering the whole spectrum of health research from History and Philosophy through to Computing, Physics and Engineering. For this reason, the faculty data were not broken down into fields and subfields for this report.

A third limitation of the Statistics Canada data comes from the delay between data collection and data release. This means that the latest faculty and enrolment¹ data available are those from 2001 and graduation data are from 2000. Similarly, the latest estimates available for Gross Domestic Expenditures in R&D in Health (HealthGERD) are for 2002; therefore, they do not give a full sense of the current impact of the CRCP and CFI. Nevertheless, these data give a sense of the prevailing trends.

4.3 Intended audience

The findings and recommendations of the Task Force are intended first for the President and Governing Council to allow them to reach appropriate decisions regarding priorities and subsequent budgetary allocations. The final report will become public to inform the research community, government officials and the public of the findings.

¹ AUCC has global enrolment estimates for 2003, however, they do not distinguish among levels of graduate programs.

4.4 Development of the report

The Task Force met five times by teleconference and once for a face-to-face meeting. At the first meeting, the Task Force members decided what data would be needed to inform their deliberations and recommendations. Community consultation was a priority for the Task Force members and to fulfill this requirement, they decided that questionnaires would be sent to current and past recipients of New Investigator Awards (a group assumed to be representative of potential applicants to the more senior awards), to successful and unsuccessful applicants to the Investigator and Senior Investigator Awards, and to heads of research in institutions that currently host to Career Awardees. CIHR staff prepared the required questionnaires which were refined at a subsequent meeting of the Task Force. CIHR staff administered the survey and gathered the relevant data as outlined above for discussion by the Task Force members over the course of its five teleconference meetings.

Based on this information and the early discussions, a consultant produced a “straw dog” report for consideration by the Task Force at its face-to-face meeting. It was during this final, face-to-face meeting that the Task Force recommendations were developed. Following the final Task Force meeting, the final report was produced by the Task Force chair, in consultation with Task Force members and in collaboration with CIHR staff.

4.5 Survey and consultation highlights

The questionnaires are available in Appendix III for easy reference. Figure 1 shows that the overwhelming majority of respondents, New Investigators (NI), Investigators and Senior Investigators applicants (Successful and Unsuccessful) viewed the career awards as “important or very important”. This was true for the perceived importance of a career award to a person’s own career (Q.1), the importance for a research career in general (Q.2) and the importance of the Senior Investigator Award to a research career (Q.3). It should be noted, however, that New Investigators and unsuccessful applicants were somewhat less certain about the benefits of the Senior Investigator Award (Q.3).

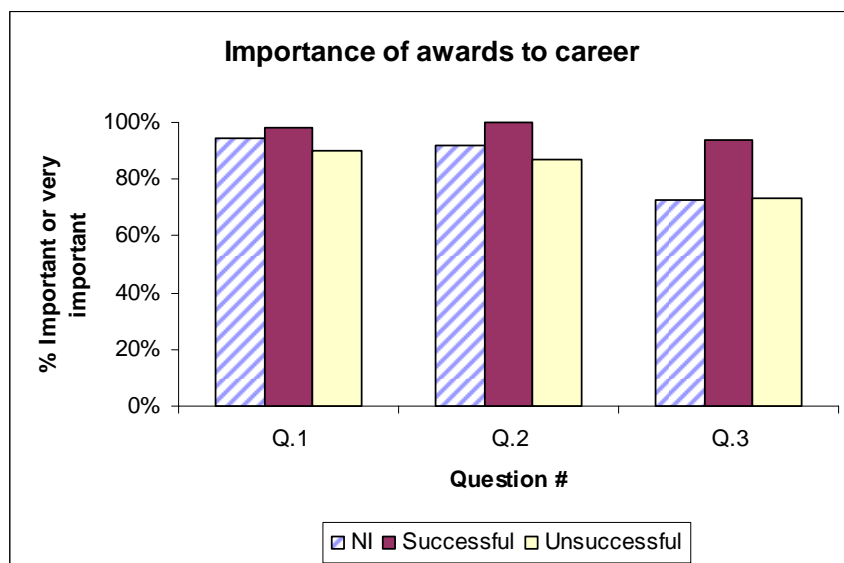


Figure 1

Respondents were asked to rank various factors with respect to their importance in the decision to apply for an award (Q.4). All the factors listed in Question 4 (reputation, time release for research, attracting funds and trainees, job security) were of high importance for all who responded. Salary considerations were viewed as less important. The New Investigators viewed the award as important in securing promotion. The written commentaries provided by a few of the respondents showed that most believed

that the time they could devote to research would be curtailed if they did not hold an award, with a concomitant decrease in research productivity and the ability to supervise trainees.

A number of respondents pointed out that their institutions would not award them tenure unless they held an external award. Such institutional policies should be of concern to the agencies that support career awards.

Question 5 provided a list of choices about alternate plans should the applicants be unsuccessful in a competition for a CIHR salary award. The responses to question 5 by the successful Investigators and Senior Investigators were difficult to interpret, since for that group it was somewhat theoretical. However, 45 % responded that, if unsuccessful, they would leave (would have left?) the institution. It is interesting that a majority (70%) of the unsuccessful applicants responded that there was no need for alternate plans should they not receive the award, yet, they proceeded to list a variety of alternate plans, such as reduce time spent on research (70%) and applying for other awards (63%). Only 30% indicated leaving their institution as a choice.

Many respondents listed provincial awards and awards from voluntary organizations as alternatives. However, several pointed out that for them, there were no available alternative salary awards.

More than 70% of respondents selected “grants to support the direct costs of research” (A in Figure 2) as a first priority. Career awards to help young researchers establish their career (C in Figure 2) was selected as a first priority by more than 20% of respondents. Senior career awards (D) was selected less often than training awards and grants (B) and equipment related costs (E) were selected by the smallest number of respondents. These results can only be taken qualitatively, since several respondents selected several “first” priorities, so that the responses for any given category of “priorities” add up to more than 100%. Nevertheless, the results clearly indicate a preference for research grants above all other programs. This is hardly surprising, since salary award programs can only be successful in the context of a vibrant program for supporting research.

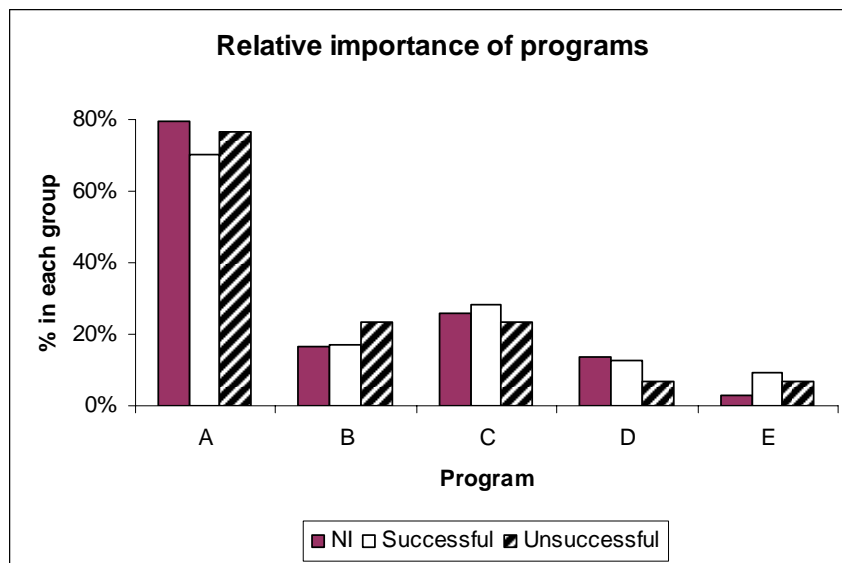


Figure 2

Legend:

A - Grants that fund the direct costs of research projects

B - Training Awards and grants to support the next generation of health researchers

C - Career Awards to help young researchers establish their careers

D - Senior career awards to retain recognize and reward established investigators

E - Grants to support the acquisition and maintenance of equipment, databases and other large research resources

Overall, successful applicants appeared more productive (more publications, more trainees, more grant funds, more invited lectureships) than unsuccessful applicants. To a certain extent, this may seem self-evident, since the peer-review process selects candidates who, at the time of application, had superior records of research achievement. However, continued productivity over several years of holding an award may also be linked to awardees having more time to devote to research.

The Task Force attempted to survey Institutions to get a sense of how important CIHR salary awards were in the context of institutional strategic plans and faculty recruitment initiatives. Unfortunately, we were restricted to a very short time-line for response (2 weeks) and only 16% of institutions polled were able to respond to the questionnaire. We note that the institutional survey included several broad questions, in addition to the simple, multiple choice format of the questionnaires sent to individual researchers. We recognize that institutional complexities meant that some components of the data requested were variably difficult to acquire (e.g., recruitment numbers, salary award holders from sources other than CIHR, etc.), and that some institutions may have been unable to provide a timely response. Nonetheless, the institutional responses to the questionnaire mirror those of the investigators: 95% of respondents indicated that Investigator awards have been “important or very important” to their researchers; 63% viewed the Senior Investigator Awards in the same light; and 95% of respondents reported that CIHR’s salary awards were “important or very important” in retaining researchers at their institution. Finally, as with the individual researchers, institutional representatives clearly recognized the importance of operating grants as a CIHR priority (Figure 3).

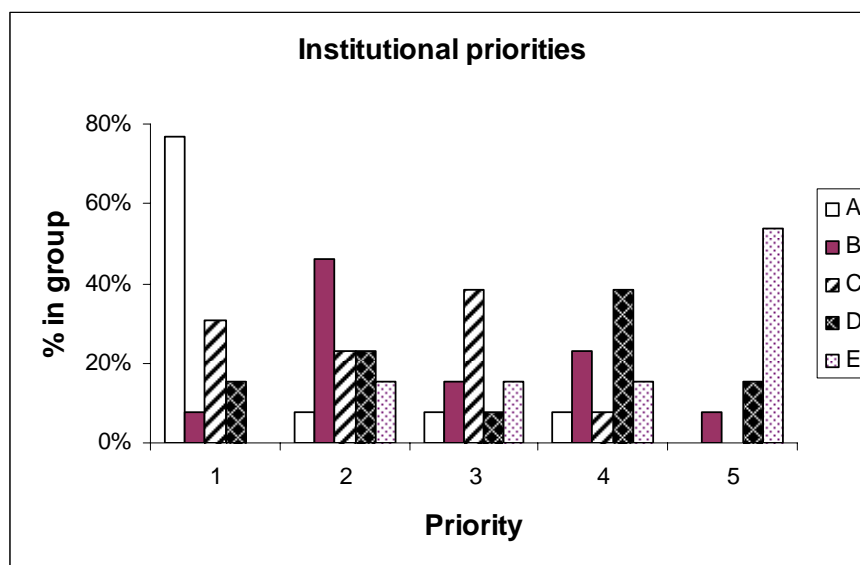


Figure 3

Legend:

1-5: 1 is the highest importance and 5 is the lowest

A - Grants that fund the direct costs of research projects

B - Training Awards and grants to support the next generation of health researchers

C - Career Awards to help young researchers establish their careers

D - Senior career awards to retain, recognize and reward established investigators

E - Grants to support the acquisition and maintenance of equipment, databases and other large research resources

In their written comments, several heads of research stressed the financial burden that the cancellation of the Investigator and Senior Investigator Awards had placed on their institution and expressed the hope that the awards would be reinstated. Other comments highlighted some polarization of the community on the issue of salary awards in relation to other CIHR funding priorities. Two themes included the need to maintain and enhance the operating grant support as a top priority for CIHR and the role for CIHR in providing salary support that transcends Institutional strategic plans and priorities. Some institution heads

suggested a focus for CIHR on “pump-priming” through support of trainees and new investigators, while encouraging institutions to develop their own long-term support mechanisms for senior investigators.

Finally, most respondents (investigators and heads of research institutions) viewed CIHR awards as much more prestigious than the Canada Research Chairs, because they are allocated through a national competition where the application process is investigator-initiated and not tied to institutional allocations or targeted strategic plans.

As noted above, in addition to the surveys, we received letters from 49 community researchers and academic administrators, 74% of which originated in Ontario. Of these, one letter commented on the Canadian Graduate Scholarships, a program that was not part of the Task Force mandate. Of the remaining 48, all but one letter expressed strong support for reinstating the Investigator and Senior Investigator awards. Some relevant themes include:

- a significant impact on clinician scientists, scientists at research institutes and researchers at institutions with significant teaching responsibilities, who may rely on salary awards to buy time for research or support to their careers (some with limited access to the CRCP);
- a disproportionate effect on some provinces that do not have established, broad-spectrum, salary-support programs;
- a general enthusiasm and appreciation of the CRCP that is tempered by the view that the CRCP is not always a realistic alternative funding mechanism, since CRCs are allocated by internal decisions that reflect institutional priorities – as a corollary, many noted that once the CRCs reach ‘steady state’ the ability to access the awards (for junior or senior recruits) will be highly variable and hard to predict;
- a view of CIHR’s senior awards as highly prestigious, a ‘flagship program’ of CIHR and important to our finest scientists who may be most likely to leave for other opportunities;
- the idea that significant investment by CIHR, CFI and the CRCP in building research capacity in Canada can only be properly realized with continued support of ‘research stars’ and careers;
- the importance of a sense of continuity and stability in the Canadian funding landscape, both at the operating grant and salary support level, to ensure a stable research work-force and to encourage new investigators to pursue research careers in Canada – the psychological impact, ‘chilling’ effect and disenfranchisement of key investigators associated with cancelling the program was mentioned in several letters;
- suggestions that to enhance their prestige, the senior awards should include operating support and a higher salary allocation to make them the ‘premier’ awards in Canada;
- the important and rather unique role for CIHR’s awards for the ‘mid-career’ scientist (5-10 years) – due to its structure, the CRCP may not address this cohort.

We note that, in general, the letters did not address opportunity costs of reinstating the programs, although some thoughtful comments about how the programs might be altered to ensure long-term sustainability were provided (see Section 8/9).

5.0 CAREER SUPPORT FOR CANADIAN HEALTH RESEARCHERS

5.1 Sources of salary support

The primary source of salary support for Canadian health researchers is their home institution, whether this is a university, a hospital, a research institute or a combination of these. Clinician-researchers may derive all or part of their income from performing clinical duties. The patterns of remuneration for clinicians vary across provinces and even within provinces depending on specific agreements reached with Ministries of Health, hospitals, universities and research institutes. Researchers (both basic scientists and clinician scientists) in hospital research institutes are often supported partly or wholly from the proceeds of charitable donations to hospital foundations or from endowment funds. However, in some institutions and units, notably research institutes and in clinical departments, researchers are expected to generate most of their salary from external sources, including career awards.

5.2 Sources of competitive salary support in Canada

In Canada, competitive salary support is available from the national granting agencies: currently CIHR offers New Investigator Awards; NSERC, Industrial Research Chairs; and SSHRC, Research Time Stipends. A few provinces offer competitive salary support for health researchers: Québec (Fonds pour la Recherche en Santé du Québec), Alberta (the Alberta Heritage Foundation for Medical Research), and British Columbia (the Michael Smith Foundation for Medical Research²). Ontario, through the Ministry of Health and Long Term Care and the Ontario Mental Health Foundation, offers 50 awards which represent approximately 4% of the 850 awards³ currently supported by provincial organizations in Canada (Table 2). Some members of the Task Force felt this represented grossly inadequate support considering that Ontario represents more than 30% of the Canadian population.

As well, various voluntary charitable agencies support more than 100 career awards in the areas of their specific interest (Table 3). This number varies somewhat depending on available budgets. Some international awards such as the Fullbright Fellowships, the Howard Hughes International Research Scholarship and the Humboldt Fellowships are also available to Canadian researchers.

² MSFHR may or may not be renewed and the Distinguished Scholars have been eliminated therefore the sustainability of the provincial support in B.C. is unclear.

³ Total provincial awards at 850 includes a number of awards that are modest top-ups and do not represent 'full' salary awards.

Table 2: Principal sources of career award support in Canadian provinces

Agency	Type of awards	Duration (years)	Renewable	Current Award #
Alberta Heritage Foundation for Medical Research (AHFMR)	Population Health	3	Yes	~ 200
	Clinical Investigator	3	Yes	
	Scholar	5	No	
	Senior Scholar	5	No	
	Scientist	5	No	
Fonds de recherche en santé du Québec (FRSQ)	Chercheurs-boursiers	4	Yes x 3	320
	Chercheurs-boursiers cliniciens	4	Yes x 3	110
	Chercheurs nationaux	5	No	50
The Michael Smith Foundation for Health Research (MSFHR) (since 2001)	Scholar	5	No	86
	Senior Scholar	5	No	21
	Distinguished Scholar (discontinued)		Yes	13
Ontario Ministry of Health and Long Term Care (OMHLTC)	Health Research Personnel Development Program - Career Scientists Awards	5	Yes	33
Ontario Mental Health Foundation (OMHF) (2003-04 only)	Senior Research Fellowships	3	Yes x 3	5
	Intermediate Research Fellowships	3	Yes x 1	5
	New Investigator Fellowships	3	No	7

Table 3: Career awards available from Canadian voluntary organizations and international sources

Agency	Type of awards	Duration (years)	Renewable	Current Award #
Arthritis Society in partnership with CIHR and CRC	New Investigator	5	No	13
	Investigator	5	No	5
Canadian Diabetes Association (CDA)	Scholarship	5	No	5
Canadian Cystic Fibrosis Foundation	Scholarships	1-3	Yes	1
	Senior Scientist	1		
Kidney Foundation of Canada	Biomedical Scholarship	2		2-3
National Cancer Institute of Canada (NCIC)	Research Scientist	6	No	~ 36
National Neurofibromatosis Foundation	Young Investigator Awards	2	Yes	6
Heart and Stroke Foundation (HSF)	Senior Personnel Award	5	Yes	30

The creation of the Canada Research Chairs Program (CRCP) in 2000 will have added 700 Chairs to support health researchers when the program reaches maturity. As of the November of 2004, 437 of the “CIHR” Chairs had been filled.

The data in Table 4 suggests that institutions have been slower to fill “CIHR” chairs than those allocated based on NSERC or SSHRC research funding.

Table 4: Distribution of Canada Research Chairs at maturity¹ and as of November 2004

Agency	At maturity			November 2004		
	# of Chairs	% of total	Total invested/ year ² (in m\$)	# filled ³	% filled	Invested / year ² (in m\$)
CIHR	700	35	\$105	437	62	\$65.5
NSERC	900	45	\$135	605	67	\$90.8
SSHRC	400	20	\$ 60	306	77	\$45.9

¹ These calculations assume that the 2000 chairs are allocated by granting agency according to the formula. In fact, a small number of Chairs (less than 10%) reserved for small institutions were not allocated according to the 45/35/20% formula.

² These numbers are based on the assumption that there are equal numbers of Tier 1 and 2 Chairs.

³ Filled – candidate has been identified at the Institution level and has been approved through the CRC review process

Appendix IV provides additional details on these various salary support programs.

The Task Force had insufficient time to perform a rigorous comparison of the Canadian salary support landscape vis a vis international programs. However, in the USA, in addition to the sources notes above, many researchers receive all or part of their salary from grants and contracts. Canadian researchers do not currently enjoy the flexibility of directly tying salary support to time spent on research supported through research grants. Likewise, it is clear that access to alternatives sources of salary support vary by region (for example, Ontario investment in salary support programs is exceedingly small on a per capita basis relative to other provinces). The only significant national initiatives accessible to all Canadian researchers are the institutionally administered Canada Research Chairs (local access is determined by Institutional priorities) and CIHR’s salary awards.

5.3 CIHR’s current and past portfolio of career support programs

A summary of CIHR’s salary support programs was provided in Section 4.0 of this report and a summary of the complete range of CIHR salary support programs, both open and strategic, is provided in Appendix IIA.

Since 1998, first MRC and then CIHR supported the five career awards programs described in the introduction: New Investigators, Investigators, Senior/Distinguished Investigators, Clinician Scientist Phase II and Senior Research Fellowship Phase II. Following the Fall 2002 competition, the Investigator, Senior/Distinguished Investigator were suspended and the Senior Fellowship program was closed to new applicants.

In addition to these open program competitions, CIHR also supports a number of career awards in strategic areas. The numbers vary but are small. The individual programs are described in detail in Appendix IIA.

To gain some perspective, the Task Force reviewed historical data on the number of CIHR awards allocated, the application pressure to programs and the success rates in competitions for CIHR's portfolio of career support programs (Figures 4, 5, 6 – additional information on number of awards for each individual salary support program is included in Appendix IIB).

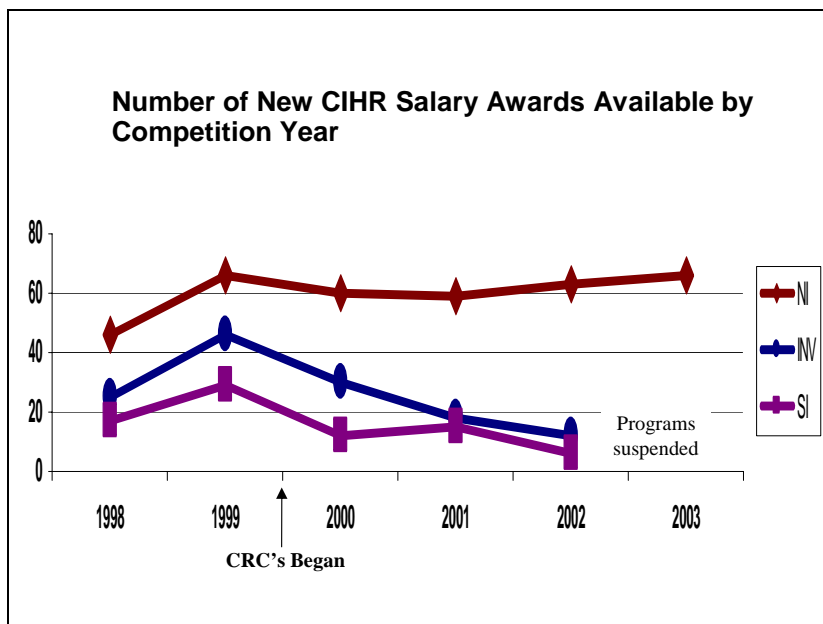


Figure 4

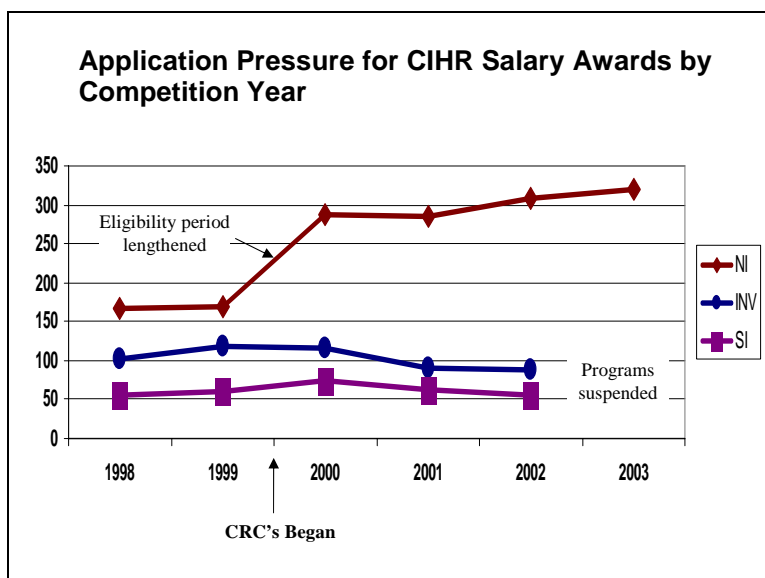


Figure 5

The data demonstrate the decisions of Governing Council over the past several years in favour of maintaining support for New Investigators. With the exception of a slight increase in 2003, the number of New Investigator awards available each year has remained relatively stable since 1999. During the same period, the number of Investigator and Senior Investigator awards declined each year up until the decision was made to suspend the program.

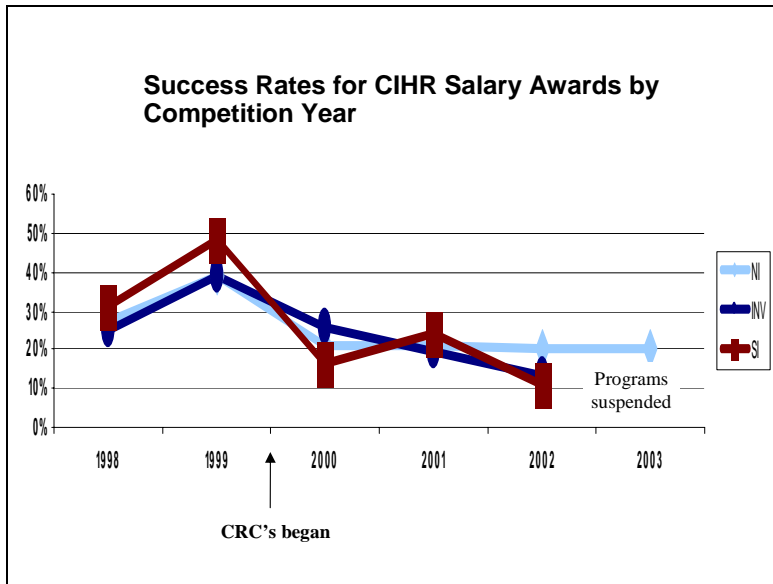


Figure 6

The Task Force also reviewed CIHR's budget allocations in support of salary awards programs over the past five years in real dollars (Figure 7) and as a percentage of CIHR's grants and award expenditures (Figure 8). In fiscal year 2003-4, 5.4% of CIHR's grants and awards expenditures were devoted to salary awards through open competition (additional salary support derives from Institute-sponsored programs and partnership programs).

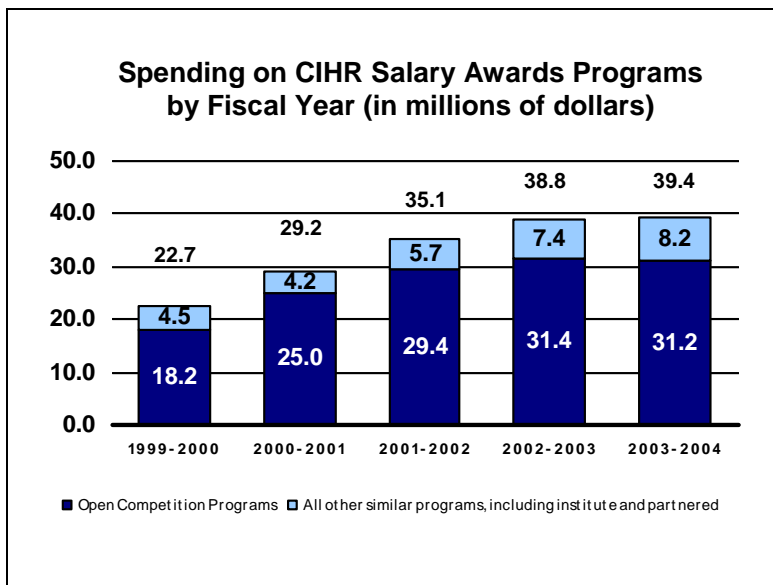


Figure 7

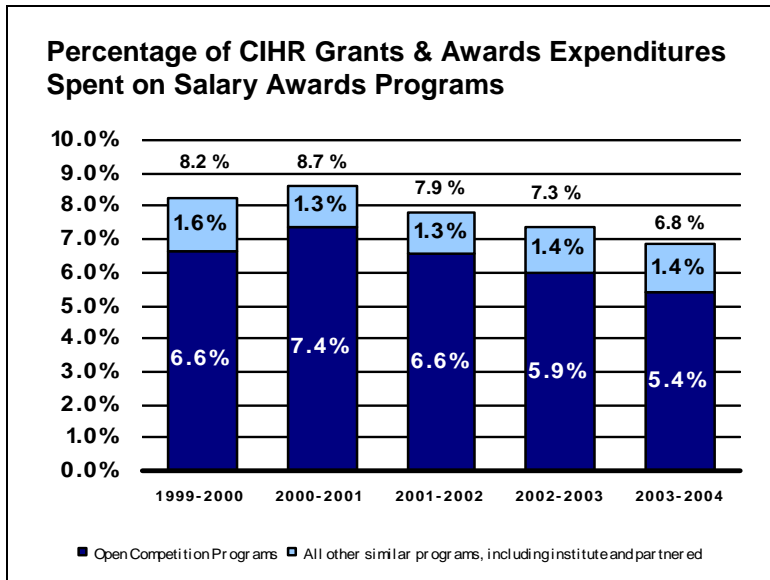


Figure 8

With respect to Fiscal Year 2004-5 proposed budget allocations, 5.7% of CIHR's budget is allocated to support of open competition salary award programs (Figure 9).

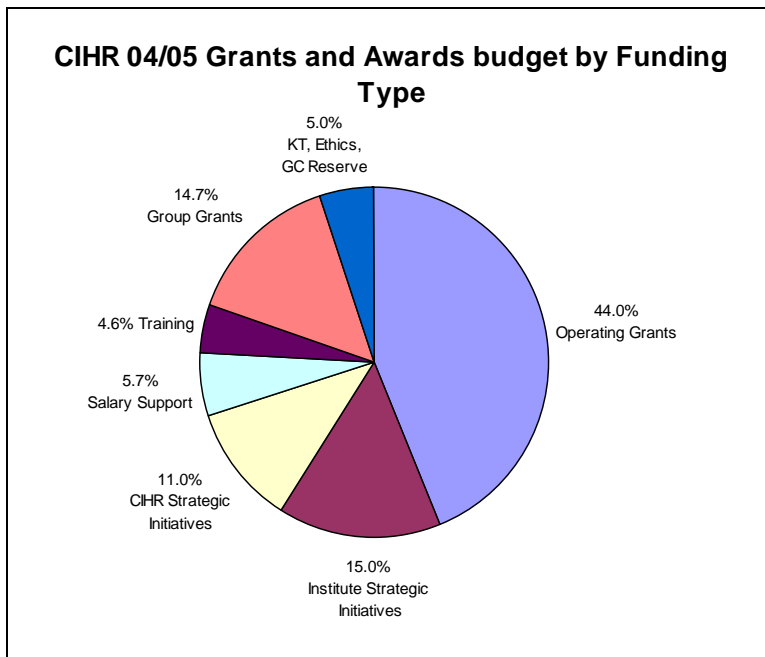


Figure 9

Figure 10 demonstrates that as of fiscal year 2003-4, CIHR funded 418 New Investigators, 163 Investigators and 81 Senior/Distinguished Investigators. In the most recent competitions (Fall 2003 for New Investigators and Fall 2002 for Investigators and Senior Investigators), CIHR open competition salary award programs funded 66 New Investigators (success rate 21%), 11 Investigators (success rate 13%) and 6 Senior Investigators (success rate 11%). As of fiscal year 2003-4, the number of CIHR awards (662) outnumbered the number of the Canada Research Chairs (351), although an additional 349 CRCs remained to be allocated. The continued application pressure in the senior competitions, despite a very low recent success rate (Figure 6), suggests that the system is not near saturation for salary support for excellent senior investigators.

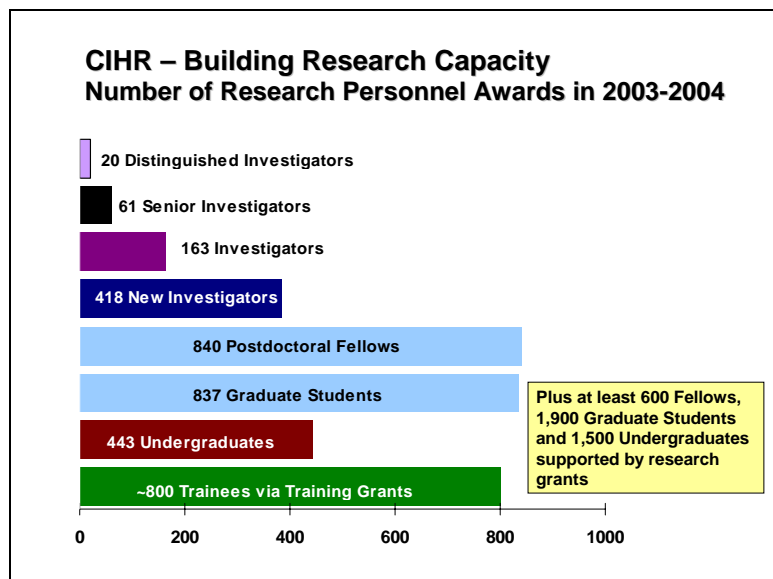


Figure 10

5.4 Analysis - Purposes served by competitive salary support programs (national and international)

Career support programs serve various purposes. Many are meant to attract and retain excellent researchers. This is the case for the CRCP, and various programs of the same type in Australia, the European Union, New Zealand (restricted to NZ nationals) and Japan. In addition, a program modeled after the CRCP, the Federal Research Chairs is being planned in the USA. The FRSQ Chercheur-boursier programs, AHFMR and Michael Smith Awards provincial awards are also designed to attract and retain excellent researchers.

Several programs have the specific aim of recognizing and supporting young researchers, the NSF CAREER program and the Ontario Ministry of Health and Long Term Care programs (which are focused on clinical researchers) are in that category.

There are also several programs focused mainly on recognizing excellence. This is the case for the Humboldt Fellowships, the Howard Hughes International Awards, the Presidential Early Career Awards for Scientists and Engineers (PCASE) in the USA, the Fullbright Fellowships, and the Killam Fellowships among others.

5.5 Analysis - Purposes served by CIHR's current salary support programs

The current suite of CIHR Career Awards⁴ fulfills several of the purposes described above. These awards are normally held by investigators with full-time academic appointments in faculties of Canadian universities or affiliated institutions.

The New Investigator Award supports investigators early in their career who have shown promise in attaining competence as an independent investigator and assists them in establishing their research program. This award may also be used as a recruitment tool. It is considered to be one of the most prestigious awards for investigators in the early part of their career by the investigators themselves and by institutions.

The Investigator and Senior Investigator Awards recognize outstanding research performance at later steps in the career. The Investigator Award coincides more or less with the Associate Professor level in academic institutions and aligns with a cohort of researchers that is perceived as not being served well by the CRCP. The Senior Investigator award corresponds more or less with the full professor level in academic institutions.

As noted previously these awards are perceived as being the most prestigious in the country in light of the national selection process used. Although the awards are sometimes viewed as supporting career progression (i.e. a career path), the "pyramid" structure of the programs illustrated in Figure 10 means that few individuals will proceed from one stage of the program to the next (e.g. from new Investigator to Investigator; from Investigator to Senior Investigator – in the entire history of the programs only 8 investigators (~1%) have made the entire journey through the ranks from New Investigator to Senior Investigator). The fact that CIHR awards do not frequently provide a linear "career" path where the same investigator proceeds through the ranks can be regarded as a strength of the system since it allows researchers to enter CIHR awards stream at various stages of their careers.

The institutional view of CIHR career award programs may be slightly different than that of individuals with respect to their value in supporting career progression. Input received from departments and units (in particular, some research institutes and clinical departments) reveals that researchers at all career stages have been consistently supported by CIHR/MRC awards over many years, allowing for unit/institution-level research planning and strategic hiring. For example, in one large Department of Medicine, faculty members received on average, 3 senior (Investigator or Senior Investigator) awards per year from 1998-2002, with an average of 8-10 senior awards held in the unit in any given year. In the unit, about 6 CIHR salary awards expire each year, and on average, 3 "move up" to the next level of seniority. Although this progression is most often *not* tied to an individual, it has become a significant component of the salary support planning at the unit/institutional level.

⁴ The Senior Research Fellowships Phase 2 and the Clinician Scientist Phase 2 are not included here, since the Task Force work was largely focused on the investigator awards.

6.0 REQUIREMENTS FOR HEALTH RESEARCHERS: NEEDS ANALYSIS

6.1 Strategic and scientific trends

In the past several years, the Government of Canada has made significant investments in health research, including the creation of CIHR, but also through other programs, such as the Canada Research Chairs and the Canada Foundation for Innovation, which contribute considerable resources to support health researchers and research infrastructure. This is in accordance with the fact that health care is the first priority of the Canadian population. These investments have also created a refreshingly optimistic view of the funding landscape in Canada and have allowed Canadian institutions to compete on the international scene for the very best researchers.

Given these investments, and to ensure that the momentum continues, it is important for the health research community to demonstrate the connections between health research and excellence in the provision of health care services and in stimulating economic growth. Likewise, policy- and decision-makers need to know how health research leads to innovation, contributes to the knowledge-based economy, and creates highly skilled, value-added jobs for Canadians.

Through its policies and programs, CIHR is playing a leadership role in ensuring that not only is basic knowledge created through health research, but that this basic knowledge is translated into action to improve the health of Canadians. To this end, CIHR and its 13 Institutes are supporting research initiatives to strengthen the four CIHR themes of health research (biomedical, clinical, health system and services, population and public health) and to promote trans-disciplinary research.

6.2 Canadian health research landscape (levels of \$ investment, infrastructure development, etc.)

The Task Force documented the current growth trends with respect to levels of investment in health research in Canada over the past several years as one factor that may impact the need/desirability of CIHR support for career awards. The trend is one of impressive growth, with investment coming through a variety of mechanisms and sources.

Statistics Canada⁵ estimates of gross domestic expenditure on research and development in the health field (Health GERD) between 1992 and 2002 are illustrated in Figure 11. They show that total Health GERD increased 2.7 fold in that period, while that performed by the higher education (HE) sector (including hospitals) increased 2.2 fold.

⁵ L. Chapman: *Estimates of Total Expenditures on Research and Development in the Health Field in Canada, 1988 to 2003*. Statistics Canada Catalogue no. 88F0006XIE - No. 014

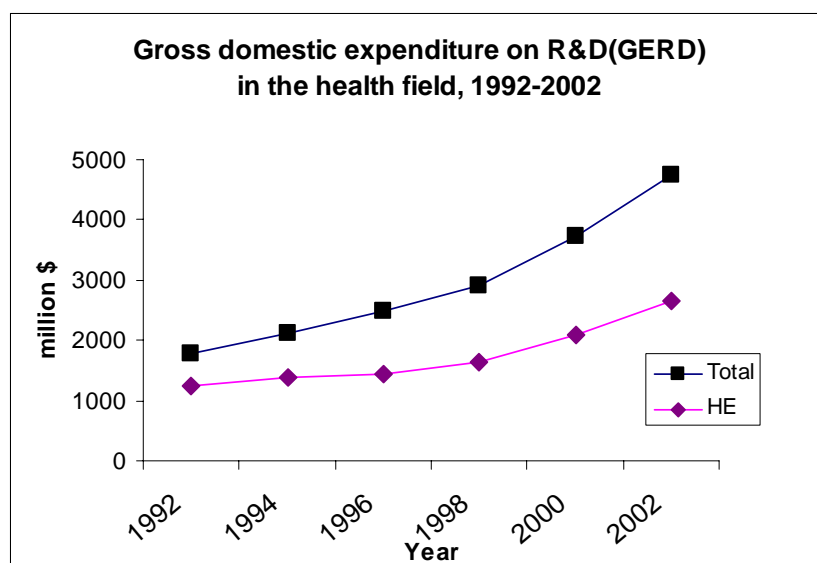


Figure 11

Table 5: Estimates of gross domestic expenditures on R&D in the health field (Health GERD), 2002 by funding and performing sectors

Funding sector	Performing sector					Total
	Federal government	Provincial gov'ts	Business enterprise	Higher education	Private non-profit	
	in millions of dollars					
Federal government	160	0	11	615	3	789
Provincial governments	0	42	6	233	14	295
Business enterprise	0	0	1,206	257	7	1,470
Higher education	0	0	0	1,168	0	1,168
Private non-profit	0	0	0	339	15	354
Foreign	0	0	634	37	1	672
Total	160	42	1,857	2,649	40	4,748

Table 5 gives a breakdown of Health GERD by funding and performing sectors for 2002. While the higher education sector remains the major performer, the share of Health GERD performed by the business enterprise sector has increased 4.6 fold since 1992.

For comparison, the total gross domestic expenditures on R&D for 2002⁶ are given in Table 6. This shows that almost 36% of research expenditures of higher education (1168/3276) in 2002 was for health related research and development.

⁶ J. Thompson: Estimates of Canadian research and development expenditures (GERD), Canada, 1992-2003, and by province, 1992-2001. Statistics Canada Catalogue no. 88F0006XIE -- No. 003

Table 6: Estimates of gross domestic expenditures on R&D (GERD), 2002⁷

Funding sector	Performing sector						Total
	Federal gov't	Provincial gov'ts	Provincial res. orgs	Business enterprise	Higher education	Private non-profit	
	in millions of dollars						
Federal government	2162	0	1	328	1,745	4	4,240
Provincial governments	6	296	14	53	783	17	1,169
Provincial res. orgs	0		0	0	0	0	0
Business enterprise	56	0	10	9,093	664	8	9,831
Higher education	0	0	0	0	3,276	0	3,276
Private non-profit	0	0	0	0	560	24	584
Foreign	0	0	1	2,511	92	0	2,604
Total	2,224	296	26	11,985	7,120	53	21,704

The contribution of the Canada Foundation for Innovation (CFI) to the infrastructure of health research has been considerable. The data in Table 7 demonstrate that more than 40% of the CFI investments to date have been in direct support of research infrastructure in the health field.

Table 7: Canada Foundation for Innovation Infrastructure Investments by Area¹

	# of Projects		\$\$ Amount	
	#	%	m\$	%
Engineering	798	22.2	\$522	21.7
Environment	353	9.9	\$160	6.7
Health	1395	39	\$1,031	42.8
Science	1037	28.9	\$694	28.8
Grand Total	3583	100	\$2,407	100

¹ These numbers represent CFI decisions, not actual expenditures.

Table 8 estimates the number and total value of competitive career awards available to Canadian researchers from the principal sources.

Table 8: Number of Career Awards currently available to health researchers in Canada in 2004 and expenditures in m\$

	CIHR ¹	CRCP ²	Provincial ³	Voluntary ³	Total
Number	662	437 to date	850	100	1855
Total value	\$45	\$65.5	\$75	\$5	\$181

¹ Includes open and strategic awards in fiscal year 2003-2004

² Assumes an equal number of Tier 1 and Tier 2 Chairs

³ Estimates based on information in Appendix IV and websites of individual agencies – heavily weighted to Quebec, Alberta and British Columbia

⁷ The 2003 estimates are available also; the 2002 estimates are given here for comparison with the Health GERD.

Health research in Canada is funded through multiple sources. As further investments are made, a balanced approach is clearly needed to create a healthy and sustainable environment, through appropriate funding of operating costs, infrastructure, investigator salaries and training awards.

6.3 Demographic trends

6.3.1 Faculty

In a 2001 document, AUCC estimated that Canadian Universities' hiring needs will be between 2,500 and 3,000 new faculty a year until 2006,⁸ and that by 2010, more than 30,000 Faculty will need to have been hired or replaced (see Figure 12).⁹

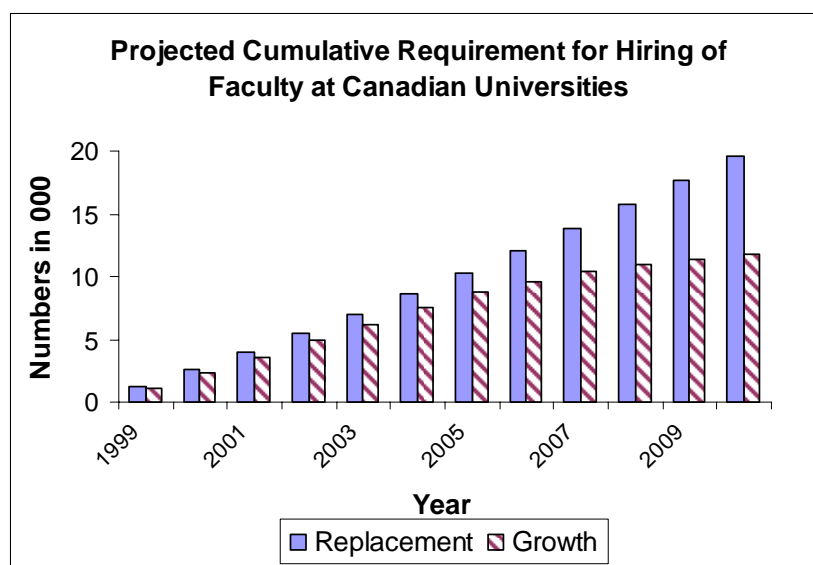


Figure 12

Although this study did not address the need for health researchers specifically, it is expected that the needs in health education and research will continue to grow, since the demand for health professionals is increasing. Likewise, the expanded mandate of CIHR for the spectrum of health research, compared to the focus of MRC on biomedical research, means that expansion and development are required in several areas.

By contrast to the needs described above, the faculty complement at Canadian universities was less in 2001 than in 1991, as shown in Figure 13. However, after a slump in the mid 1990s, the number of recruits at the assistant professor level started to increase in 2000. This small increase was far below the AUCC estimates and the total faculty complement was still lower in 2001 (approx. 33,300) than in 1991 (approx. 35,100) and too small to address replacements, let alone growth. The addition of 2000 Canada Research Chairs when the program reaches maturity will contribute to the recruitment and retention of faculty.

⁸ L. Elliot: *Revitalizing universities through faculty renewal*. AUCC Research File, March 2001

⁹ AUCC: *Improving the quality of life and economic prosperity of Canadians: The crucial contribution of Canada's universities* Brief submitted to the House of Commons Standing Committee on Finance, August 2001.

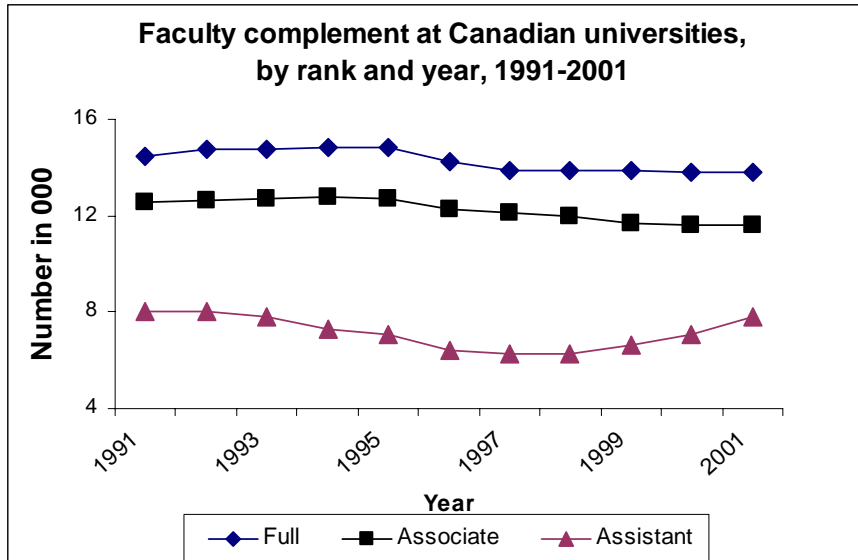


Figure 13

6.3.2 Students

While the faculty complement remained static, university full-time enrolments increased markedly between 1996 and 2001. There was an even greater surge between 2001 and 2003¹⁰ for both graduate and undergraduate enrolments (Figure 14). Part-time enrolments at the graduate level after staying constant in the 1990s started to increase again in 2001. There are no data on part-time enrolments disaggregated into undergraduate and graduate students for 2003.

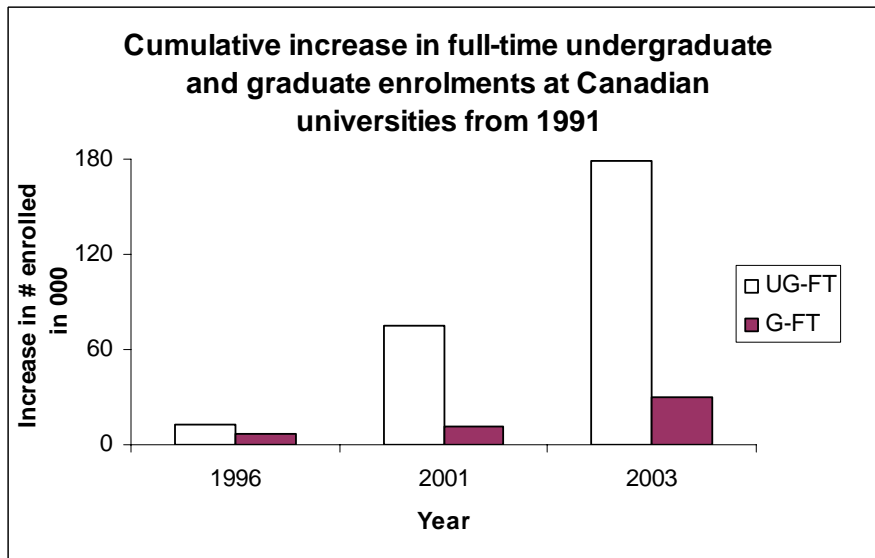


Figure 14

During the period from 1991 to 2001, the overall increase in graduate enrolments was due mostly to steady increases at the master's level. By contrast, PhD enrolments did not change between 1996 and 2001, the latest date for which data are available (Figure 15).

¹⁰ Data for 2003 are still preliminary

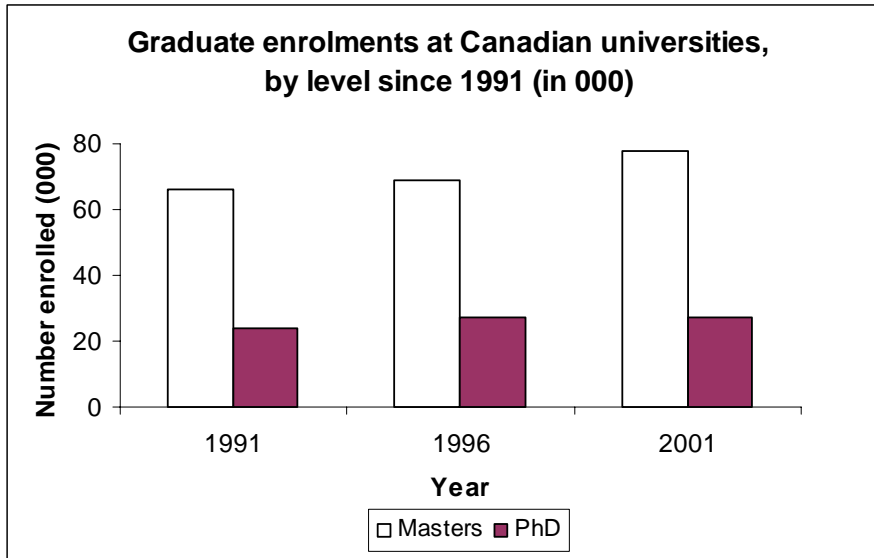


Figure 15

The full-time graduate enrolment data for 2003, which show a large increase, do not distinguish between master’s and doctoral levels. However, in 2001, 50% of the increase was attributable to master’s enrolments in business programs, which generally do not lead to doctoral studies. This means that, in 2003, enrolments at the doctoral levels are unlikely to have increased markedly above the 2001 levels.

Similar trends were seen when graduation data were analysed. The number of doctoral degrees awarded remained constant at just under 4,000 per year, between 1996 and 2000.

The data in Figure 16 show that the number of doctoral degrees awarded in the Science and Engineering (S&E) and Health (HP) fields decreased between 1996 and 2000, while the numbers increased in the Humanities and Social Sciences (HSS).¹¹

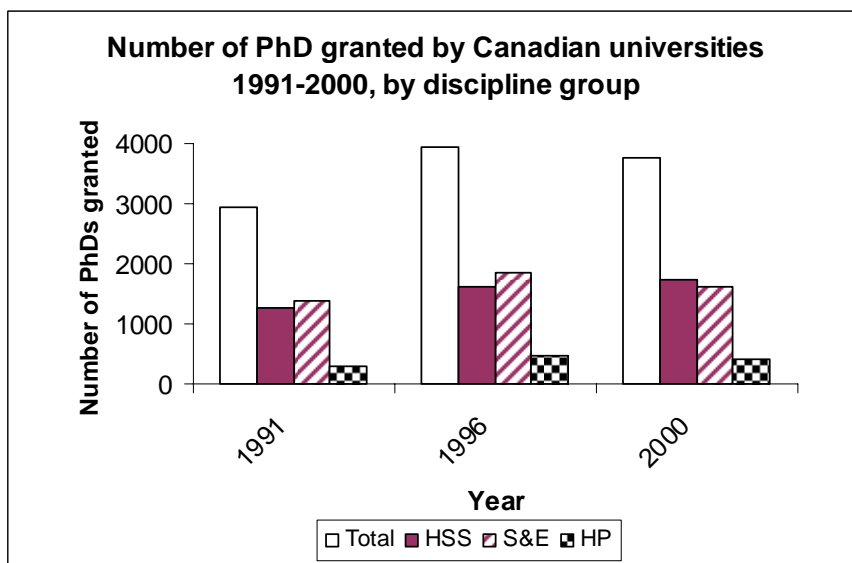


Figure 16

¹¹ The Statistic Canada discipline groupings is problematic, especially for the Health field

The production of PhDs in Canada is lower than that in several comparative nations (Figure 17). This means not only that we are not only underperforming in the production of PhDs compared with international standards, but that we may not be producing a sufficient number of PhDs to ensure faculty renewal and growth.

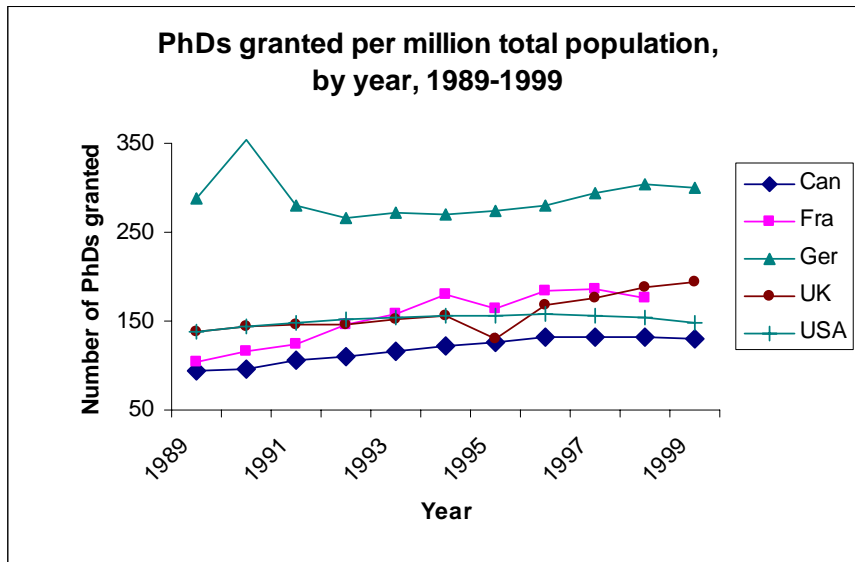


Figure 17

6.3.3 Gender

In the past, there has been concern expressed about the possibility of systematic, gender bias in the awarding of salary awards. This has been a particular concern with respect to the Canada Research Chairs Program. It has been suggested that the open competition system for CIHR awards programs has been more supportive of women in comparison to the institutional allocation of CRCs. For this reason, the Task Force examined the trends with respect to gender distribution of salary awards.

The trends in the gender distribution of university faculty are illustrated in Figure 18. The percentage of female faculty at the assistant professor level has remained stable around 41% since the mid 1990s, while the proportion at the higher ranks (associate and full professors) continued to increase due to progress through the ranks of a larger number of women.

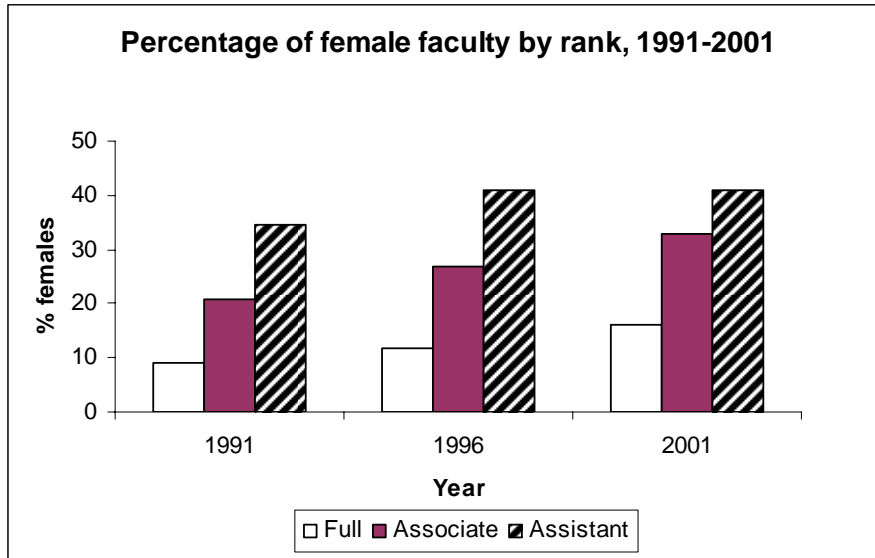


Figure 18

Female enrolments in doctoral programs have increased steadily since 1980 and female doctoral candidates have received their degrees in proportion to their enrolment.

The data in Figure 19 show a steady increase in the percentage of females enrolled and graduating with PhD degrees. Given that the average time-to-attrition¹² is of the order of 10 years, the white bars represent the percentage of female enrolments from 1980. The dark bars represent graduations from 1990 onwards, which correspond to enrolments in the previous 10 years.¹³

While female enrolments in doctoral program are approaching 50%, at the undergraduate and master's levels, there are now more female than male students.

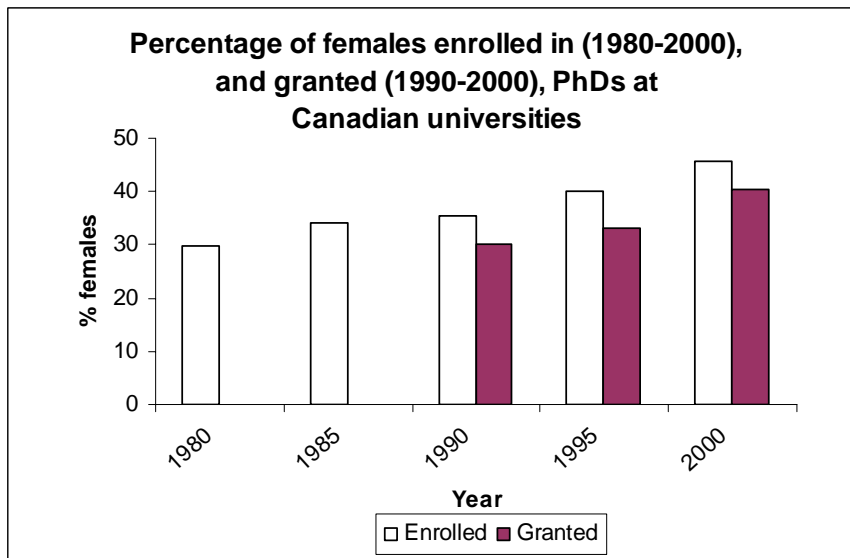


Figure 19

¹² (Either by obtaining degree or by withdrawal).

¹³ 2000 is the latest year for which graduation data are available.

The CRCP has been concerned that an insufficient number of women have been nominated for and consequently awarded Chairs.

The data¹⁴ for Figure 20 show that overall, 16 % of faculty at the full professor level are women and that 14% of the Tier 1 Chairs have been awarded to women. By contrast, while 41% of assistant professors are female, only 24% of Tier 2 Chairs have been awarded to women.

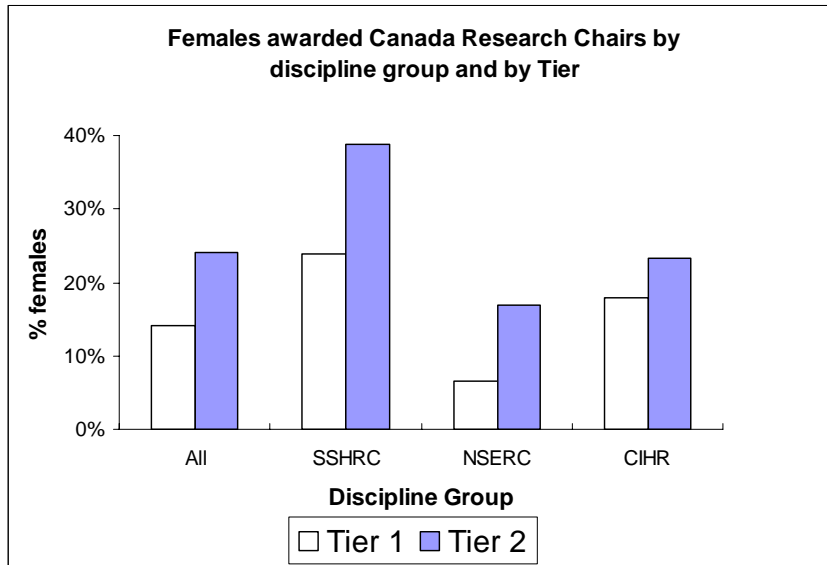


Figure 20

In the CIHR area,¹⁵ 20% of full professors are women and 18% of Tier 1 Chairs have been awarded to women. While nearly 50% of assistant professors in that group are women, only 23% of Tier 2 Chairs have been awarded to women.

Figure 21 shows the % distribution of CIHR Career Awards to women in 2003-04, compared to the % of female faculty members by rank in the “Health” field. Given the terms of reference of the awards, they do not correspond exactly with the academic ranks. For example, a holder of a New Investigator Award is likely to have reached the associate professor level before the end of tenure of the award.

As for the Canada Research Chairs, however, the discrepancy between the % of women in the academic ranks and the number of CRCs is greatest at the New Investigator / assistant professor group.

¹⁴ The latest available faculty data are from 2001-2002, the Chair data are from Spring 2004.

¹⁵ Subject to the caveats in section 4.2.2 about faculty in the Statistics Canada “Health” Field.

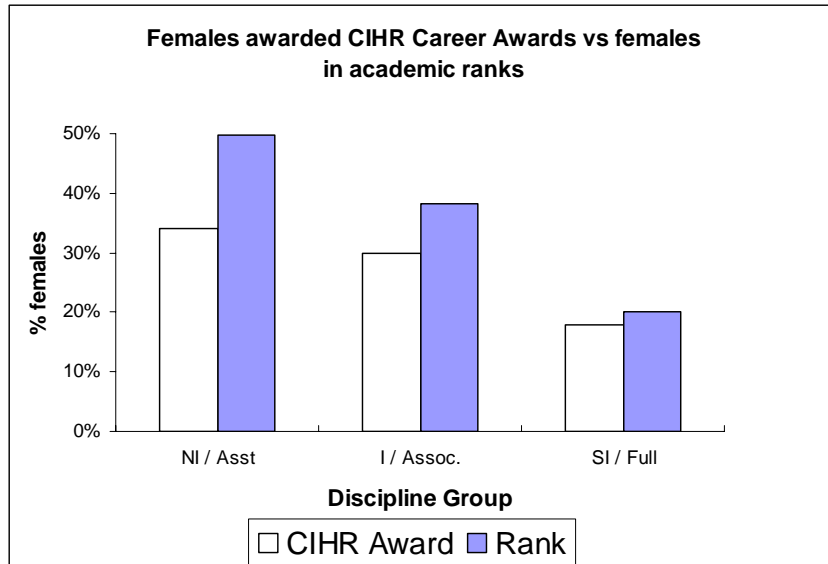


Figure 21

6.4 Clinical Research

As is the case in other jurisdictions, notably the USA and the UK, Canada has had difficulty attracting and, particularly, retaining clinical researchers. The support of clinician scientists is a key goal of CIHR, and our failure to adequately support and retain clinician researchers may delay the translation of advances in health research, particularly biomedical research, into treatments.

To find answers to this challenge, CIHR created the initiative in clinical research, which began with a national discussion and consultation and which culminated in a discussion paper "The Clinician Scientist: Yesterday, Today and Tomorrow". From this, it emerged that the Clinical Research Initiative had to embrace not only the support of clinician-scientists, but also the clinical research system itself. CIHR convened a Working Group on Clinical Research in spring 2002, which in turn convened the Multi-Stakeholder (MUST) Taskforce on Clinical Research.

These activities culminated in creation of the Clinical Research Initiative which is currently working towards the establishment of appropriately funded, stable career paths for health professionals who wish to pursue clinical research. The goal is to establish a suite of awards that will support clinician-scientists during their training and throughout their careers. These new and modified awards will be designed to be inclusive of all health professions. The CRI is also working with partner organizations to ensure complementarity of programs between CIHR and other health research funding agencies.¹⁶

Through the Initiative, CIHR is taking a leadership and coordination role in building the case for strengthening clinical research in Canada, working with stakeholders and partners, and leading by example by examining its own funding programs and plans to modify them so that they are better adapted to the needs of clinical research and clinician-researchers.

Currently, approximately one third of CIHR salary awards go to clinicians.

¹⁶ <http://www.cihr-irsc.gc.ca/e/25082.html>

7.0 CIHR MANDATE AND STRATEGIC DIRECTION (CONTEXT)

7.1 CIHR Mandate

CIHR is Canada's premier health research agency. Its mandate is:

"To excel, according to internationally accepted standards of scientific excellence, in the creation of new knowledge and its translation into improved health for Canadians, more effective health services and products and a strengthened Canadian health care system."¹⁷

CIHR takes a problem-based and multidisciplinary approach to the health challenges facing Canadians. Its multi-faceted approach encompasses research in four areas: biomedical, clinical, health systems and services, and population and public health.

To deliver its mandate, CIHR expends its budget (\$662 million budget for 2004-2005) to fund research conducted by over 8,500 researchers in universities, teaching hospitals, and research institutes across Canada and to train the next generation.

7.2 CIHR Strategic Directions

The CIHR Strategic Plan, *Blueprint 2007*, focuses on five key areas for 2003-2008:

- Strengthen Canada's health research community;
- Address emerging health challenges and develop national platforms and initiatives;
- Develop and support a balanced research agenda that includes research on disease mechanisms, disease prevention and cure, and health promotion;
- Harness research to improve the health status of vulnerable populations; and
- Support health innovations that contribute to a more productive health system and prosperous economy.

To turn *Blueprint* into action, CIHR developed an integrated planning framework in the fall of 2003.¹⁸ The framework is designed as a first step in an incremental approach to improve alignment between organizational priorities and resources. There are five strategic outcome areas:

- **Outstanding Research:** Advance health knowledge, by funding excellent and ethical research, across disciplines, sectors, and geography with both open and strategic grant programs.
- **Outstanding Researchers in Innovative Environments:** Develop and sustain Canada's health researchers in vibrant, innovative and stable research environments.
- **Transforming Research into Action:** Catalyze health innovation in order to strengthen the health system and contribute to the growth of Canada's economy.
- **Effective Partnerships and Public Engagement:** Engage with the public through meaningful dialogue and establish effective partnerships with key stakeholders.
- **Organizational Excellence:** Achieve our mandate through excellence in staff, service delivery, systems, and management.

¹⁷ Bill C-13, April 13, 2000

¹⁸ Canadian Institutes of Health Research DRAFT Consolidated Operational Plan 2004-2005

Under the second rubric: *Outstanding researchers in innovative environments*, CIHR's goals as stated in its priorities for 2004-2005 are to:

- Build health researcher capacity across the full spectrum of health research in a vibrant, innovative and stable research environment. Proposed actions include:
 - Increase the supply of health researchers in areas identified by institutes through support of both early and mid-career training opportunities;
 - Increase the number of outstanding new investigators and retain established investigators, with special attention to increasing participation of women and aboriginal people in health research;
 - Provide programs to attract and repatriate outstanding health researchers to Canada from abroad; and
 - Complement and build on current research capacity building initiatives and programs established by relevant stakeholders (CRCP).
- Develop and support capacity-building research initiatives and programs across all pillars and Institutes, as well as build and support the research infrastructures in priority areas (teams, groups, centres). Proposed actions include the establishment of sustainable support mechanisms for clinician researchers.

The individual Institute objectives and priorities for the same period include objectives specific to each Institute. However, the CIHR Blueprint specifies that Institute-specific priorities also include "the development, attraction and retention of the best possible health researchers for Canada". Consistent with this directive, building capacity in the area of research of the Institutes is high among their priorities.

8.0 ANALYSIS OF ISSUES, GAPS AND NEEDS

8.1 General Issues related to CIHR Mandate and Strategic Plan

In analyzing the gaps and needs in the career support area, the Task Force considered a variety of data (Sections 4.2) including CIHR's Blueprint which identified five key strategic directions to guide the activities of CIHR Institutes. Of particular relevance to the Task Force deliberations, is the priority to 'strengthen Canada's health research communities'. The Task Force members enthusiastically endorse the principle that progress in health research requires outstanding scientists, supported through internationally competitive mechanisms, who create a virtuous cycle that attracts more outstanding colleagues and trainees and catalyses the creation of world-class research environments. The challenge, of course, is to achieve the correct balance of open and strategic research support, support for trainees, principle investigators and clinicians, and support for interdisciplinary, strategic and investigator-initiated research programs. Given the current funding envelope for CIHR, this challenge is immense – nonetheless, it is hard to imagine how a federal funding program could achieve its goal of strengthening research communities with no funding program to support researchers beyond the first five years of their academic life.

CIHR also outlines strategic outcomes, in pursuit of its aims: those relevant to the Task Force deliberations are summarized in Section 7.2 and reflect the goal of supporting researchers and developing stable research environments. The importance of supporting scientists through CIHR beyond their first few years is acknowledged through suggested actions which include: 1) the support of early and mid-career scientists in collaboration with Institutes; 2) the recruitment and retention of outstanding investigators; 3) the provision of programs to attract and repatriate outstanding health researchers to Canada from abroad. All three groups would presumably include more established investigators who would not be eligible for New Investigator awards.

CIHR has also taken steps to enhance clinical research capability in Canada, through inclusive, multidisciplinary programs and the establishment of the Clinical Research Initiative (CRI), which stems from a proposal by CIHR to enhance clinical research capability in Canada (see Section 6.4). Although specific programs designed to provide relief time for research for clinicians are being implemented through small pilot programs, many clinical departments rely on major external salary awards, such as the New Investigator and Investigator stream, to enable excellent clinician scientists to develop internationally competitive research programs. Of particular relevance for the Task Force was the explicit recommendation by the CRI that a logical sequence of awards be available to support clinician scientists at various career levels, including support beyond the first 5 years of faculty appointment to allow clinicians to become established career scientists. Clinician Scientist Phase 2 awards are a valuable program that deserves continued support and provides salary support specifically geared towards practicing clinicians – the number of awards is small, and clinician scientists clearly benefit from the open salary programs (for the past 3 years, 33-36% of new awards went to clinicians). Decreased investment in mid-career awards would seem to run counter to the recommendations of the CRI and the important goal of CIHR to enhance clinical research capability and knowledge translation.

8.2 Some Principles

In discussing the issues and gaps in salary support for health researchers, the Task Force identified some guiding principles:

- A vibrant health research enterprise requires both operating grant and salary support programs that ensure our best scientists are supported to do research at internationally competitive levels.
- An option to be explored involves the linkage of salary support for health researchers in Canada to peer-reviewed operating grant funding, analogous to the National Institutes of Health (NIH) model, to ensure protected time to do research. In Canada, an NIH-type model for salary support must be structured with the unique aspects of Canada's universal health care system in mind.

- Sources of salary support vary hugely by region across the country, highlighting the need for a national strategy to provide stable salary support to qualified health researchers across the country.
- Strategic initiatives in health research (an overarching goal of CIHR), require plans to ensure sustainability of successful projects, through operating grant and salary support, once the strategic phase is complete.
- Given the complex nature and regional variability of salary support mechanisms across the country, it is important that participants do not act in isolation when changing their investment in health researcher's salaries to ensure stability of the enterprise.

8.3 Specific Needs and Gaps

The Task Force discussed a range of issues related to career support for health researchers in the context of the CIHR mandate and the general principles summarized above (8.2). The Task Force discussion is summarized below to set the scene for the specific recommendations (Section 9).

1) **Need for a stable system and national strategy of career support for health researchers in Canada.**

The current system of salary support is complex and easily destabilized and involves many participants, including CIHR, provinces, institutions and non-government organizations (NGOs) (e.g. Tables 2 to 4). The community response to cancellation of the Investigator and Senior Investigator programs, which was encapsulated in surveys and letters (Section 4.5), and from Institute Advisory Board discussions, highlights the importance of CIHR awards in the national career support system. The prestige and value of CIHR awards has continued in the context of significant new national initiatives such as the CRCP and presumably reflects the remarkable success of capacity building efforts for the past few years, which place increasing demands on the system.

Major issues in the development of a stable system of career support include the highly variable investment in the salaries of health researchers by region (Table 2). In particular, the Task Force noted the current investments of Quebec (FRSQ), Alberta (AHFMR) and British Columbia (MSFMR) in career support, with remarkably little investment by Ontario and other regions. The Task Force also noted that the provinces have responsibilities for education and therefore pay salaries of university professors who teach. Federal agencies have no such responsibilities but do have authority to support research in all provinces, and can place emphasis on sustainability of programs that support researchers across Canada. The lack of a national strategy for sustained salary support for health researchers identifies a major gap that will need to be addressed through discussions involving many players, including CIHR.

2) **Need for a federal system that recognizes and supports outstanding researchers at various stages of their careers.**

As described in the 'principles' above, the Task Force recognized that a vigorous health research system requires operating grant and salary support that ensure our best scientists are supported to do research at internationally competitive levels. In this context, we acknowledged the strength of the U.S. model in which salary support for researchers is linked to operating grant funding to ensure protected time to do the funded research project. In our opportunity cost analysis, however, we did not view the "NIH model" as a realistic option given current financial realities. For example, if we assume an average CIHR grant of \$106 000 (the 2003-2004 average) and add 20% for salary support, an investment of \$71 400 000 would be required (a "cost" of approximately 674 operating grants at the current level). We note that a 20% investment in salary support through operating grants does not compare with the U.S. system, where support in the range of 30-60% appears to be the norm.

The Task Force also spent some time discussing and seeking input on the CRCP, since the existence of the program contributed to the decision of the GC to discontinue some of CIHR's salary support programs. Although the CRCP is clearly valued and has boosted research capacity in Canada, it is not viewed as a substitute for CIHR awards for a number of reasons: 1) they are allocated according to institutional strategic plans to meritorious candidates, while CIHR awards are awarded to individuals on the basis of research accomplishments; 2) entry into the CRCP system may not be highly accessible once Chairs are filled and will presumably depend on turnover of existing Chairs.

Our analysis and discussion also identified an emerging gap in career support that is not well addressed at the national level by the CRCP – the mid-career researcher. CIHR has maintained and enhanced its New Investigator program – in the next few years when these awards expire, the scientists will not be eligible for Tier I Canada Research Chairs (if they are in fact available) and they are unlikely to be picked up under the Tier II CRC program at this stage. The mid-career investigator (after 5 years) represents a major investment in building capacity, and is at a highly vulnerable career stage; the cessation of the junior awards often occurs around the time of tenure and promotion decisions. Input from the Institute Advisory Boards to the Task Force included specific comment on the issue of mid-career support and suggested that multiple early career support mechanisms in the absence of funding opportunities at later stages may place 'developed' researchers and their institutions in a difficult position.

CIHR career support programs are entirely merit-based and accessible to all qualified researchers, a feature that is highly valued and allows mid-career researchers formerly supported by one type of award (say, provincial) to access the CIHR system at a later stage. Overall, discussion of these issues highlighted the continued need for an open and accessible system that supports our best health researchers. CIHR is viewed as having a unique role in providing federal career support that transcends institutional strategic plans and priorities.

3) Need for consultation on major program changes that affect career support for health researchers.

Given the complexity of salary support mechanisms (see 1 above), program changes in one arena (e.g. cancellation of Investigator and Senior Investigator awards) can have significant effects that belie the relatively small financial envelope. CIHR career awards do not provide a linear 'career path' for most researchers -- this reflects the open, merit-based aspect of the system, a strength of the programs. Nonetheless, individual units and institutions structure long-term strategic plans around the availability of salary awards, which are often used to attract and retain the best researchers who are most vulnerable to external recruitment. Institutions (and individuals) need time to incorporate program changes in the career award area into their strategic plans. In this context, the Task Force interviewed relevant administrators at four medical schools in Ontario and Alberta, in addition to seeking input by survey (Section 4.5). The institutional representatives emphasized that over 60% of researchers are typically paid in 'soft funds' at any time, including institutional (endowment) and salary support programs. Major changes in the salary support landscape would require large fund-raising campaigns or other strategic shifts, which require time to implement.

4) Need for shift from capacity building to sustainability.

The Task Force recognized that the past five years have seen remarkable changes in funding for health research in Canada, with an unprecedented increase in government investments in health research through the Canadian Institutes of Health Research (CIHR), and other new funding programs [Canadian Foundation for Innovation (CFI), the Canada Research Chairs Program (CRCP), Genome Canada, Indirect Costs Program]. These investments have transformed the health research enterprise in Canada – our documentation of the current growth trends in the health field clearly shows impressive growth (Section 6). From the human resource perspective, the ability of universities and research institutes to present an optimistic view of the funding landscape and support for research infrastructure has allowed Canadians to aggressively compete in the international arena for the very best researchers.

Our analysis of demographic trends and faculty complement suggest that we need to maintain our investment in trainees, and investigators at early stages of their careers. However, our success in building research capacity brings clear challenges of stability, continuity and sustainability. The infusion of support for research, research infrastructure and training creates attendant demands on all research funding initiatives, including operating grant and salary support programs. In the salary award area, one manifestation of the sustainability issue was the declining success rate for Investigator and Senior Investigator applications in the face of relatively constant application pressure. Although low success rates are a concern, they reflect inadequate program resources and do not represent a valid argument for discontinuing programs. Rather, they identify a gap in funding that needs to be addressed.

5) Need to promote the careers of women in health research.

The Task Force analysed data on the number of women scientists at various career stages (Assistant Professor, Full Professor, etc,) and that hold a CIHR salary award or CRC. The data shows no major difference between the senior CIHR salary award programs and the CRCs in women award holders, and shows that women are proportionately represented in the awardee pool. However, although ~50% of Assistant Professors are women, they represent only 23% of Tier II CRCs. In the 2003-2004 fiscal year, 34% of CIHR New Investigator award holders were women. These data identify a need for a national strategy to promote the careers of female scientists, particularly at the junior level.

9.0 CIHR'S FUTURE ROLE IN THE AREA OF CAREER SUPPORT

9.1 Role for CIHR

The CIHR Act (2000) outlines several goals of CIHR, designed to achieve the objective of excellence in health research and knowledge translation. Among many, one goal (item (j)) is *“building the capacity of the Canadian health research community through the development of researchers and the provision of **sustained** support for scientific careers in health research”*. As discussed above, the Task Force recognized the importance of sustained and stable support in building a healthy, motivated and internationally competitive research community that will both encourage excellent researchers to continue to view Canada as a superb place to do research and send the signal to young Canadians that health research careers are valued and supported by the federal government.

Towards this goal, CIHR clearly has a primary role as a provider of operating grants in support of health research (“the fuel”). As a federal funding agency for health research, CIHR is also well positioned to provide national leadership in promoting and maintaining a culture of excellence. Provision of awards that support health research in Canada through recognition of exceptional researchers at various stages of their careers is a key element in sustaining a culture of excellence.

CIHR's career support programs, including the Investigator and Senior Investigator awards, are valued by the research community and viewed as fulfilling an important role for a variety of reasons including:

- CIHR awards are entirely merit-based, and not tied to Institutional Strategic plans. The fact that CIHR awards do not frequently provide a linear ‘career’ path where the same investigator proceeds ‘through the ranks’ was regarded as a strength of the system since it allows researchers to enter the CIHR award stream at various stages of their careers;
- CIHR awards provide a national competitive salary program in face of significant regional differences. The Task Force recognizes that the benefits of a national salary program are less marked in regions where more robust, stable provincial salary support exists;
- Investment by CIHR in excellent scientists sends a positive message about the support by Canada's federal health research funding agency of health research careers;
- CIHR career awards support ‘at-risk’ populations of researchers who are key to fulfilling CIHR's mandate and are not particularly well-served by other important initiatives such as the CRCP: mid-career researchers (Investigators), clinician scientists and scientists at institutions with large teaching loads.

In summary, the Task Force sees three major roles for CIHR in career support for health researchers:

- 1) As the national leader in promoting programs of sustained support for health researchers through the provision of operating grants and salary awards. Salary support for scientists is fundamental to the mission of CIHR. The development of a stable and responsive system of salary support will require the development of a long-term strategy that involves coordination with other funding partners.
- 2) To promote a culture of excellence through provision of salary support that transcends regional, institutional and disciplinary boundaries.
- 3) To provide an accessible, open and merit-based system for identifying and supporting outstanding researchers at various career stages. This type of program is fundamental to the mission of CIHR and is at the foundation of a vibrant, successful research enterprise.

9.2 Resource Requirements and Peer Review

The Task Force recognized that the decision to suspend the Investigator and Senior Investigator awards was made under considerable financial pressure to maintain funding in other key priority areas. The Task Force mandate did not include a detailed analysis of the full spectrum of CIHR's research support programs and budget allocations, except in the specific context of salary awards. Nonetheless, the Task Force undertook some 'opportunity cost' analysis. For example, the cost of reinstating the Investigator and Senior Investigator programs at former budget levels (\$84 000 per award including benefits) and success rates (11 awards/year for Investigators; 6 for Senior Investigators) would cost \$1, 428 000 per annum. The Task Force agreed that the cost of reinstating salary support programs should not impact the operating grant envelope. Implementation of a re-expanded salary support program would therefore require an evaluation of other programs for identification of lower priority investments.

The Task Force also considered other scenarios – for example, more awards at a reduced level of funding or 'buy-out' awards for clinician researchers. Small-scale experimentation with some of these models is occurring at the Institute level. In addition to the main suite of CIHR salary support programs, Institutes have developed alternative funding 'tools' to support careers. Examples include a Mid-Career Award (Institute of Aging, 80K, 1 year) and New Emerging Teams Grants (salary support forms one component of these grants). As programs have only been in place for a short time, Institutes are monitoring their success and perceived value to researchers. Outcomes are not yet clear, and the Task Force supports the general strategy of pilot programs with rigorous outcome analysis in the exploration of new models of career support.

The Task Force also discussed the obvious stress that low success rates place on the peer review system. This situation is particularly acute for the Investigator and Senior Investigator panels where reviewers are faced with the reality of knowing that many superb applicants will not be successful in the competition. However, low success rates reflect a financial deficit and are not viewed as a viable justification for discontinuing programs. The solution to low-success rates will be to increase funding for the programs, which will require planning and reprioritization. The peer review system is fundamental to the success and prestige of CIHR awards.

9.3 Recommendations

In light of the role for CIHR summarized above, the Task Force specifically recommends the following actions:

- 1) To demonstrate the commitment of CIHR to ensuring the stability and sustainability of health research programs in Canada, the Task Force recommends an immediate reinstatement of the Investigator and Senior Investigator programs for the fall 2005 competition at least at their previous level of funding, while longer-term strategies are explored. This recommendation is made with the recognition that there is no 'quick fix'; restoration of the programs will allow time to build long-term plans and avoid crises in some institutions. Given the need to emphasize sustainability rather than continued capacity building, the Task Force does not recommend further expansion of the New Investigator program or reinstatement of the Senior Fellowships programs.
- 2) To demonstrate national leadership, the Task Force recommends that CIHR spearhead an immediate dialogue with other investors in research career support – federal and provincial health ministries, provincial agencies (e.g. FRSQ), universities, research institutes and non-government organizations - with the goal of constructing, within 3 years, a national strategy for long-term sustainability of career support for health researchers. A component of this strategy should include a commitment to consult on major program changes to allow other organizations in the health research 'network' to adjust their funding strategies.

- 3) The Task Force recognized the primary role of CIHR in provision of operating funds for research: the opportunity cost of supporting the salary support programs should not impact the operating grant envelope. Rather, the Task Force recommends, over the next two years, an evaluation of other programs for identification of lower priority investments. The Task Force recognizes that additional investment in CIHR will be required to enable Canadians to maximally benefit from the substantial federal investments in health research that have occurred over the past few years through other mechanisms (CFI, CRCP etc.). In the long term, the Task Force encourages exploration of a model, analogous to the National Institutes of Health, in which salary support for health researchers in Canada is linked to peer-reviewed funding to ensure protected time to do research. If such a model is developed, it must not negatively impact the current level of funding of CIHR operating grants. The Task Force recognizes that such a model would lead to the realignment of funding priorities by organizations other than CIHR which currently support salary awards for health researchers. The potential impact of such realignments would need careful evaluation.
- 4) To ensure appropriate investment by CIHR in career support in the future, the Task Force recommends the development of a process for evaluating the aims and outcomes of all salary support programs, against the overarching goal of providing stable support for the best researchers. On-going programs should feature clear plans for sustainability and strategic initiatives should have clear plans and timeline for conclusion.
- 5) To ensure appropriate recognition of its investment in the careers of outstanding researchers, CIHR should actively celebrate the considerable achievements of award recipients, and engage universities and institutions in the process ("Branding the CIHR Career Awards"). A long term goal will be to increase the value of the awards, through partnership and other mechanisms, so that they maintain their status among the most prestigious in Canada.

APPENDIX I – TASK FORCE TERMS OF REFERENCE

Mandate

To provide advice to CIHR's Governing Council on CIHR's role in providing career awards to health researchers at all stages of their research careers, taking into account:

- requirements for health researchers to sustain the national health research enterprise, and train the next generation of health researchers;
- CIHR's mandate and strategic directions;
- other sources of career support including host institutions, provincial health research agencies and the Canada Research Chairs program (The strengths and weaknesses of different programs and their impact on health research will be considered.);
- explicit and implicit objectives of existing competitive career award programs, including but not limited to:
 - recognition and rewarding of exceptional research achievement;
 - capacity building in selected areas or disciplines;
 - release time from other significant professional responsibilities, such as clinical, administrative and teaching duties;
 - enabling transition from trainee to independent researcher (career launch);
 - enabling career transition (discipline shifting);
 - attracting and retaining the best health researchers in Canada through creation of clear career pathways
 - encouraging full participation of both women and men in health research

The Task Force is to provide a report to the President by November 5th, 2004 with recommendations on CIHR's future role in the area of career support.

Authority

The CIHR Task Force on Career Support is established by CIHR's Governing Council.

Reporting

The CIHR Task Force on Career Support will report to the Governing Council through the President. The final report of the Task Force will be made public.

Terms

Members will serve on the Task Force until early November 2004.

Meetings

Meetings will be convened by teleconference or face-to-face as required.

Responsibilities of Chair

- Call meetings and set agenda in consultation with members and staff
- Ensure that Minutes are taken and reviewed
- Moderate discussion at meetings, inviting participation from all members
- Help lead the Task Force to consensus decisions; call for votes when necessary
- Communicate on behalf of the Task Force to the President

Responsibilities of Staff

- Develop a package of background documents and data and provide this to the Task Force members in advance of their first meeting
- Inform Task Force of staff, budget and other resources available
- Provide administrative support to the Task Force: organizing meetings, drafting agenda and agenda materials, distributing documents
- Respond to the Task Force needs for data, information or analysis, as feasible within the time and budget available
- Provide secretariat services to the Task Force in its preparation of the Minutes and Report

APPENDIX IIA – SUMMARY OF CIHR SALARY SUPPORT PROGRAMS

CIHR Salary Awards Programs - Open Competitions

Program	Description	Eligibility	Term	Funding/Allowable Costs
New Investigator	<ul style="list-style-type: none"> This program is intended to provide the opportunity for new investigators to develop and demonstrate their independence in initiating and conducting health research. Awardees are expected to devote at least 75% of their time to research. 	<ul style="list-style-type: none"> Candidates must hold a health professional degree, or a PhD degree (or the equivalent), must have shown promise of attaining competence as an independent investigator, and must not be registered for a higher degree during the tenure of the award. The candidate will have spent less than 5 years (60 months) as an independent investigator at the time of application. 	5 Years	Salary - \$50,000 per annum + fringe benefits Research Allowance - a research allowance of up to \$50,000 per annum is available to those New Investigator Award recipients who do not hold operating funds.
Investigator	<ul style="list-style-type: none"> This program provides salary support for independent investigators who have made outstanding contributions and have demonstrated leadership in their field. It is intended for health researchers who, early in their career, have developed a reputation for excellence in research. Awardees are expected to devote at least 75% of their time to research. 	<ul style="list-style-type: none"> A candidate must hold either a health professional degree, or a PhD degree (or the equivalent). The candidate will have at least five but not more than ten years of experience as an independent investigator in an institution position or its equivalent at the time of application. 	5 Years	Salary - \$70,000 per annum + fringe benefits
Senior Investigator	<ul style="list-style-type: none"> This program is designed to contribute to the salary of investigators of exceptional merit who are international leaders in their field. Awardees are expected to devote at least 75% of their time to research. 	<ul style="list-style-type: none"> The candidate must hold a health professional degree, or a PhD degree. The candidate will have a minimum of ten years of experience as an independent investigator at the time of application. 	5 Years	Salary - \$70,000 per annum + fringe benefits
Distinguished Investigator	<ul style="list-style-type: none"> The peer review committees which adjudicate the Senior Investigators competition may recommend to the CIHR Governing Council that certain very highly rated candidates receive the accolade of "Distinguished Investigator." This award may be enhanced through linkages with other funding agencies. These linkages will be posted on the CIHR website when the information is available. 			
Clinician Scientist (Phase II)	<ul style="list-style-type: none"> The Clinician Scientist Award is offered to highly qualified and motivated clinicians who have been identified by a Canadian medical or dental school as having strong potential to become clinician-scientists. The program has two phases: Phase 1 provides stipends for up to six years of support. Phase 2 provides a contribution to the salary of the recipient for up to six years. Applications for Phase 2 awards are restricted to holders of Phase 1 awards. During Phase 2, when CIHR provides a contribution to the recipient's salary, both the candidate and the institution must make a commitment that not less than 30 hours per week will be spent on research. 	<ul style="list-style-type: none"> At the time of application, a candidate must hold a health professional degree in medicine or dentistry and have completed at least two years of post graduate clinical training. For those with a medical degree, the specialty clinical training must be in an area accredited with or without certification by the Royal College of Physicians and Surgeons of Canada or the College of Family Physicians of Canada. 	Up to 6 Years.	Salary - \$50,000 per annum + fringe benefits Research Allowance - \$40,000 per annum for the first three years of the award.

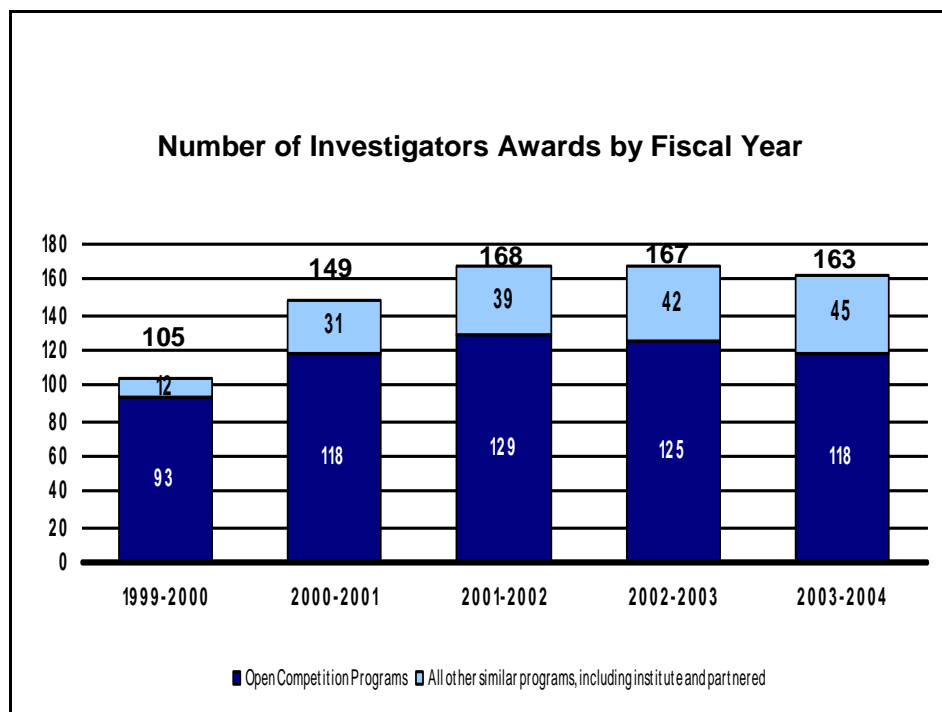
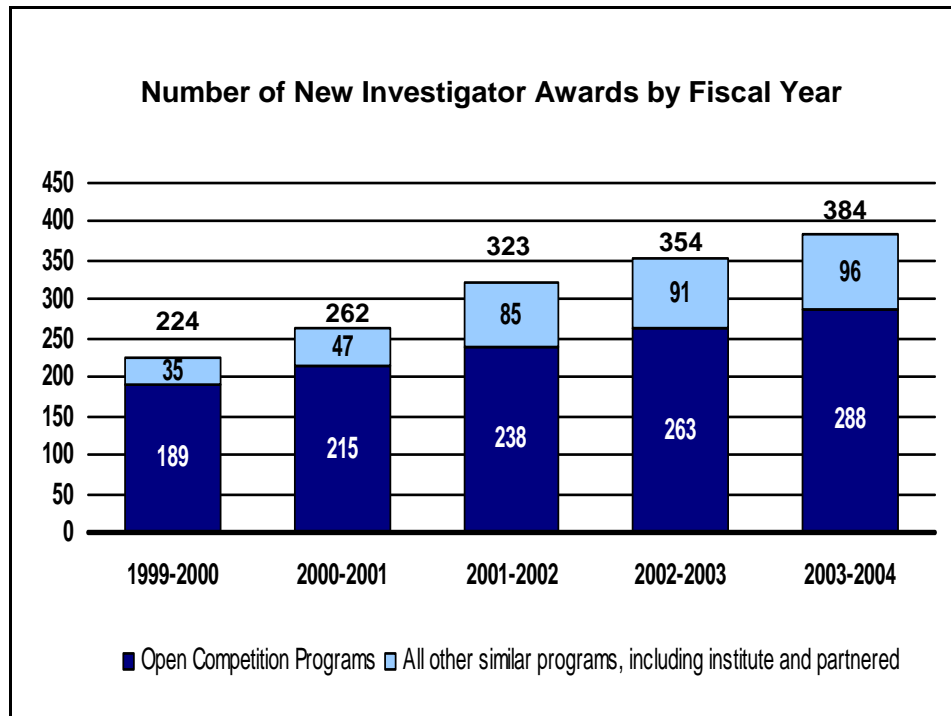
Senior Research Fellowship (Phase II)	<ul style="list-style-type: none"> • Senior Research Fellowships are offered to outstanding candidates who have been identified by a Canadian institution as having strong potential to become an independent investigator. • The program has two phases: Phase 1 (Training) provides a stipend for up to two years of support and a research allowance. Phase 2 (Salary) provides a contribution to the salary of the recipient for two years plus a research allowance and fringe benefits. • Applicants for Phase 2 are restricted to holders of Phase 1 awards. 	<ul style="list-style-type: none"> • Candidates must have either a health professional degree or a PhD degree (or equivalent). • At the time of application, candidates with a PhD degree (or equivalent) must have completed at least two years, and no more than five years, of post-PhD research training. • Candidates with a health professional degree (e.g., medicine, dentistry, nursing) must hold licensure in Canada or be enrolled in a program leading to certification in Canada at the time of applying for the award. If they do not meet the above criteria, applicants must hold an educational licence in order to take up the award. • At the time of application, candidates must have completed at least two years of research training since obtaining the health professional degree. Candidates may propose a program of research leading to a Master's or PhD degree; however, registration in a graduate program is not a requirement. A health professional who holds a PhD must have completed no more than five years of post-PhD research training at the time of application. 	2 Years	<p>Salary - \$50,000 per annum + fringe benefits</p> <p>Research Allowance - \$40,000 per annum for the first three years of the award.</p>
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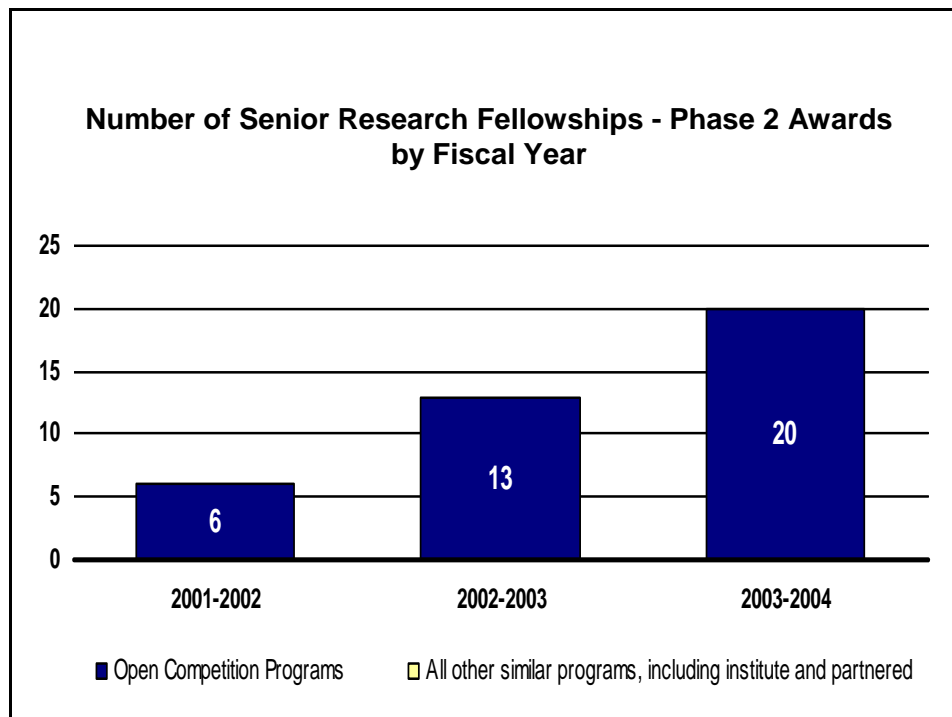
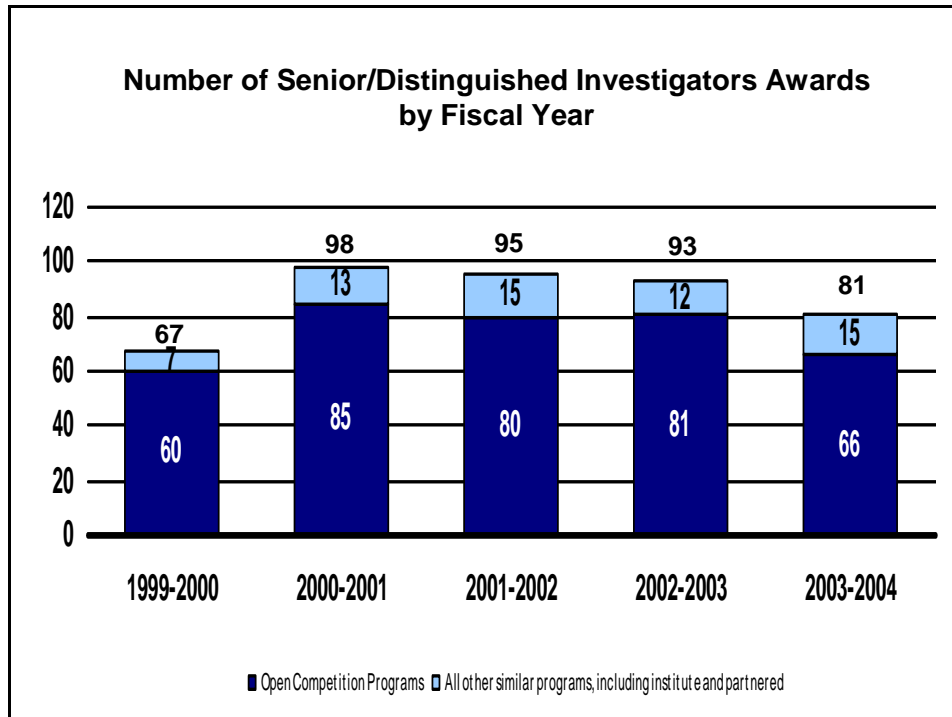
CIHR Salary Awards Programs - Strategic Competitions

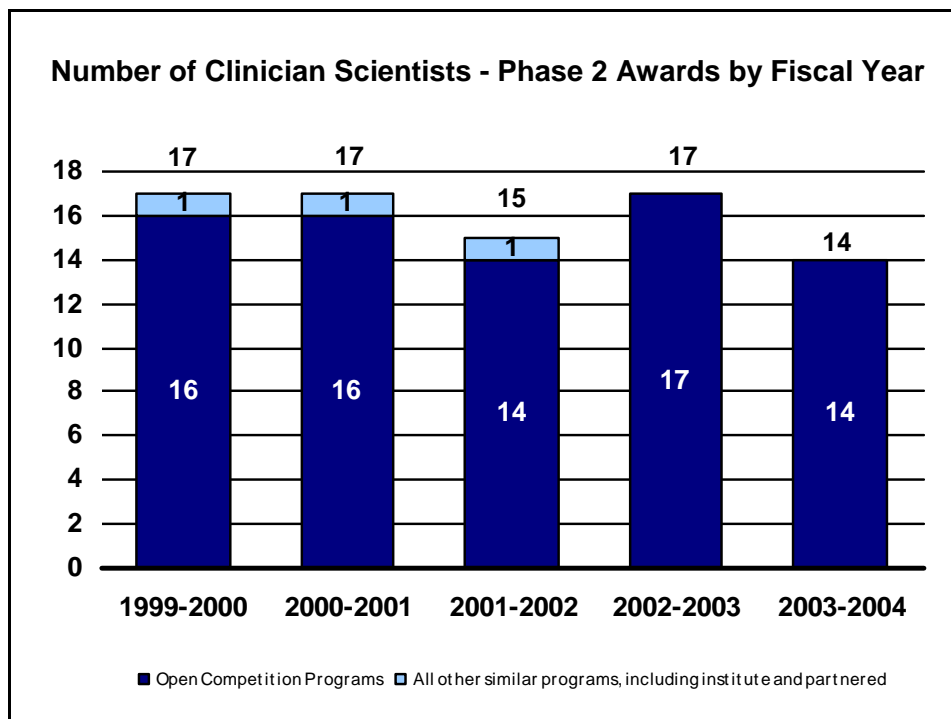
Program Type	Description	Eligibility	Term	Funding / Allowable Costs
Aboriginal Capacity and Developmental Research Environments (ACADRE)	The purpose of this initiative is to develop a network of supportive research environments across Canada that will facilitate the development of Aboriginal capacity in health research.	Independent Researchers may apply as Principal Applicants through this initiative.	Up to six years.	Funds awarded through this initiative are "grant" funds, but may be used to support a number of independent Investigators. Investigators may be paid salaries at the following CIHR levels: <ul style="list-style-type: none"> Investigator (Ph.D. or health professional with more than 5 years but not more than 10 years independent research experience): \$70,000, plus fringe benefits New Investigator (Ph.D. or health professional with less than 5 years independent research experience): \$50,000, plus fringe benefits. *(Note: ACADRE grant holders may not draw a salary from ACADRE grant funds).
Career Transition Award	In general, the purpose of this strategic initiative is to support career transition of investigators who are planning to undertake rigorous training in identified areas of need outside of their primary research training and expertise (and with in areas identified by the lead / sponsoring Institute on each RFA). Career Transition Awards usually support 75-100% release time from teaching, clinical and administrative responsibilities.	Varies from RFA to RFA.	Varies from RFA to RFA.	Usually a contribution to salary at CIHR salary levels and a small research allowance (amounts vary from RFA to RFA).
Mid-Career Award	In general, the purpose of this strategic initiative is 1) to provide support for researchers to allow them protected time to devote to research in targeted, high priority areas in relevant (identified by the lead / sponsoring Institute in each RFA) fields or 2) to support career reorientation of researchers who are planning to enter targeted, high priority areas of research in relevant fields.	Usually open to "established" investigators (definition of "established" may change from RFA to RFA, but eligibility is often similar to that of the Investigator Award).	Varies from RFA to RFA (usually 1- 2 years but can be up to 5 years total)	Usually a contribution to salary at CIHR salary levels and a small research allowance (amounts vary from RFA to RFA).
New Emerging Teams (NET)	In general, the purpose of this initiative is to 1) build capacity; 2) build and support new research teams and 3) give researchers a building block for applying for research funding in future years.	Independent Researchers may apply as Principal Applicants through this initiative.	Varies from RFA to RFA (usually up to 5 years).	Funds awarded through this initiative are "grant" funds, but may be used to support a number new Investigators. New Investigators funded through a NET grant may receive a salary at the CIHR level (\$50,000, plus fringe benefits), and may not simultaneously hold another salary award of any kind.
Release Time Grants	These grants have been designed to reduce the burden of teaching, administrative and clinical responsibilities that impede excellent investigators from focusing their expertise, experience and training on achievement of their health research objectives. The first launch of this tool will be in an upcoming RFA aimed at Clinician-Investigators. Through it Clinician-Investigators will be enabled to integrate a commitment to health research into their professional pursuits through allocation of three months of release time.	Will vary from RFA to RFA.	Will vary from RFA to RFA.	Salary funds will be used to "buy-out" an investigators time so that they may dedicate the time to health research.

APPENDIX IIB – STATISTICS ON CIHR SALARY SUPPORT PROGRAMS

The following figures indicate the distinct number of awards that received a payment in each fiscal year.







APPENDIX III – SURVEY QUESTIONNAIRES AND RESPONSES

Survey of Heads of Research – Institutions that receive funding from CIHR Investigator and Senior Investigator Awards Programs

At its June 2003 meeting, CIHR's Governing Council suspended CIHR's Investigator and Senior Investigator programs. This decision was made in consideration of what the appropriate niche would be for CIHR in the world of salary awards, given the context of the overall CIHR budget and other federal initiatives such as the Canada Research Chairs (CRC) program.

As you may know, these programs provided salary support for independent investigators who had made outstanding contributions and had demonstrated leadership in their field. They were intended for health researchers who have developed a reputation for excellence in research. To be eligible a candidate needed to hold either a health professional degree, or a PhD degree (or the equivalent). For the Investigator Program the candidate had to have at least five but not more than ten years of experience as an independent investigator in an institution position or its equivalent. The Senior Investigator Program was designed to contribute to the salary of investigators of exceptional merit who are international leaders in their field. The candidate needed to have a minimum of ten years of experience as an independent investigator.

CIHR's Governing Council reconsidered its suspension of the salary awards programs at its June 2004 meeting, in light of CIHR's budget prospects for fiscal year 2005-06 and in response to wide expressions of support for CIHR's Career Awards. Council decided to establish a National Task Force on Career Support with a mandate to undertake a comprehensive analysis of CIHR's suite of salary support programs, relative to the overall Canadian salary awards landscape, and make recommendations on CIHR's future role in this area. The Task Force includes outstanding health researchers from across the country. For more information on the mandate and members of the Task Force, please visit the CIHR website at <http://www.cihr-irsc.gc.ca/e/24487.html>

A critical input to the deliberations of the Task Force is information from Institutions that had relied on the Investigator and Senior Investigator programs to seek their views on the importance and impact of these CIHR awards (or lack of award) on the careers of mid-career and senior investigators. Your responses will be held confidential and only aggregated data will be shared.

I encourage you to make your voice heard by returning your answers to the questions below by e-mail no later than Friday, October 15, 2004. Please send your responses to TG-GT@cihr-irsc.gc.ca.

On behalf of the Task Force, let me thank you in advance for providing your input.

Dr. Brenda Andrews, Chair of CIHR Task Force on Career Support, and
Director, The Terrence Donnelly Centre for Cellular and Biomolecular Research
University of Toronto

	Very important	Important	Somewhat important
1. How important do you believe the Investigator CIHR Awards have been to the careers of your researchers?			
2. How important do you believe the Senior Investigator CIHR Awards have been to the careers of your researchers?			

	Very Important	Important	Not Important	Not applicable
3. How important are the following as potential benefits of the CIHR Award to your institution?				
• Ability to develop or maintain a research program				
• Release time – more time for research				
• Enabling researchers to attract other funds				
• Providing time for researchers to establish a research program or team				
• Enabling researchers to attract more/better trainees				
• Financial – ability to raise salaries				
• Ability to retain researchers in your institution				
• Ability to Promote				
• Recognition				

Other, please describe:

4. The success rates for CIHR Awards competitions have been below 20%. What typically happens to researchers from your institution who are unsuccessful in the competitions? For each of the responses below estimate the percentage of researchers for whom the response applies. (For example perhaps in 50 % of all cases, nothing specific happens, and for the remaining 50% the researcher re-applies to CIHR the following year.)

- ____ % Nothing specific happens
- ____ % Researcher re-applies to CIHR the following year
- ____ % Researcher leaves the institution
- ____ % Institution covers salary costs
- ____ % Reduced time spent on supervision / mentoring
- ____ % Reduced time spent on research

____% Researcher applies for other awards for salary support (please describe)

____% Other (please describe)

5. CIHR needs to understand the relative importance of CIHR Awards compared to other types of CIHR funding in support of research. There is an opportunity cost: for example if CIHR invests in senior career awards, it will have less to invest in other forms of support for health research.

Please rate the importance of types of CIHR funding for maintaining an excellent program of health research in your institution. (Number 1 to 5; where 1 is the highest importance and 5 is the lowest importance):

- Grants that fund the direct costs of research projects
- Training awards and grants to support the next generation of health researchers
- Career awards to help young researchers establish their careers
- Senior career awards to retain, recognize and reward established investigators
- Grants to support the acquisition and maintenance of equipment, databases and other large research resources]

6. Please provide a list of the health researchers in your institution holding major salary awards (other than CIHR Awards) from charitable or provincial organizations and indicate whether any previously held an MRC, NHRDP¹⁹ or CIHR salary award.

7. How many new health researchers have you recruited in the past five years who received salary support from MRC, NHRDP or CIHR? How many who received support from CRC (Canada Research Chairs)? How many were recruited with salary awards from other research funding sources?

8. Summarize your view of the immediate effect of canceling the CIHR Investigator and Senior Investigator salary awards programs on the research goals and performance of your institution. Were there consequences for your 5 or 10 year strategic and HR plans?

9. Outline your views on the strengths and weaknesses of the CIHR Investigator and Senior Investigator Salary Awards versus Canada Research Chairs.

Thank you for providing your information to the CIHR Task Force on Career Support. The Task Force will publish its report on the CIHR website in the winter of 2004-05.

¹⁹ MRC is the Medical Research Council which was the predecessor to the Canadian Institutes of Health Research (CIHR). NHRDP is the National Health Research and Development Program that was taken over by CIHR in 2000.

Survey Responses from Heads of Research

Survey of Heads of Research	Very Important		Important		Somewhat Important		Blank	
	Count	%	Count	%	Count	%	Count	%
1. How important did you believe the Investigator CIHR Awards have been to your researchers?	13	68.4%	5	26.3%	1	5.3%	0	0.0%
2. How important do you believe the Senior Investigator CIHR Awards have been to the careers of your researchers?	9	47.4%	3	15.8%	6	31.6%	1	5.3%

	Very Important		Important		Not Important		Not Applicable		Blank	
	Count	%	Count	%	Count	%	Count	%	Count	%
3. How important were the following as potential benefits of the CIHR Award to your institution?	2	10.5%	1	5.3%	0	0.0%	0	0.0%	16	84.2%
Ability to develop or maintain a research program	10	52.6%	8	42.1%	1	5.3%	0	0.0%	0	0.0%
Release time - more time for research	5	26.3%	10	52.6%	4	21.1%	0	0.0%	0	0.0%
Enabling researchers to attract other funds	7	36.8%	9	47.4%	3	15.8%	0	0.0%	0	0.0%
Provide time to establish research program and/or team	8	42.1%	7	36.8%	4	21.1%	0	0.0%	0	0.0%
Enabling researchers to attract more/better trainees	6	31.6%	7	36.8%	6	31.6%	0	0.0%	0	0.0%
Financial - ability to raise salaries	7	36.8%	6	31.6%	5	26.3%	1	5.3%	0	0.0%
Ability to retain researchers in your institution	13	68.4%	5	26.3%	1	5.3%	0	0.0%	0	0.0%
Ability to promote	8	42.1%	7	36.8%	4	21.1%	0	0.0%	0	0.0%
Recognition	10	52.6%	7	36.8%	1	5.3%	0	0.0%	1	5.3%

Other, please describe	Text Submitted		No Text Submitted	
	Count	%	Count	%
	5	26.3%	14	73.7%

	0%-20%		21%-40%		41%-60%		61%-80%		81%-100%		Blank	
	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%
4. The success rates for CIHR Awards competitions have been below 20%. What typically happens to researchers from your institution who are unsuccessful in the competitions? For each of the responses below estimate the percentage of researchers for whom the response applies. (For example perhaps in 50 % of all cases, nothing specific happens, and for the remaining 50% the researcher re-applies to CIHR the following year.)	1	5.3%	3	15.8%	1	5.3%	0	0.0%	1	5.3%	13	68.4%
% Nothing Specific Happens	2	10.5%	1	5.3%	4	21.1%	2	10.5%	5	26.3%	5	26.3%
% Researcher re-applies to CIHR the following year	10	52.6%	1	5.3%	1	5.3%	0	0.0%	0	0.0%	7	36.8%
% Researcher leaves the institution	1	5.3%	2	10.5%	4	21.1%	1	5.3%	5	26.3%	6	31.6%
% Institution covers salary costs	6	31.6%	1	5.3%	0	0.0%	0	0.0%	2	10.5%	10	52.6%
% Reduced time spent on supervision / mentoring	3	15.8%	4	21.1%	1	5.3%	1	5.3%	2	10.5%	8	42.1%
% Reduced time spent on research	3	15.8%	3	15.8%	1	5.3%	2	10.5%	5	26.3%	5	26.3%
Other	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	5.3%	18	94.7%

	Text Submitted		No Text Submitted	
	Count	%	Count	%
Text to describe how time spent on research is reduced	14	73.7%	5	26.3%
(please describe) - text submitted	5	26.3%	14	73.7%

5. CIHR needs to understand the relative importance of CIHR Investigator and Senior Investigator Awards compared to other types of CIHR funding in support of research. There is an opportunity cost: for example if CIHR invests in senior career awards, it will have less to invest in other forms of support for health research

	1		2		3		4		5		Blank	
	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%
Grants that fund the direct costs of research projects	16	84.2%	1	5.3%	1	5.3%	1	5.3%	0	0.0%	0	0.0%
Training awards and grants to support the next generation of health researchers	2	10.5%	9	47.4%	4	21.1%	3	15.8%	1	5.3%	0	0.0%
Career awards to help young researchers establish their careers	6	31.6%	4	21.1%	6	31.6%	3	15.8%	0	0.0%	0	0.0%
Senior career awards to retain, recognize and reward established investigators	2	10.5%	4	21.1%	1	5.3%	7	36.8%	5	26.3%	0	0.0%
Grants to support the acquisition and maintenance of equipment, databases and other large research resources]	1	5.3%	2	10.5%	4	21.1%	4	21.1%	8	42.1%	0	0.0%

6. Please provide a list of the health researchers in your institution holding major salary awards (other than CIHR Awards) from charitable or provincial organizations and indicate whether any previously held an MRC, NHRDP or CIHR salary award.

	Text Submitted		No Text Submitted	
	Count	%	Count	%
Other, please describe	16	84.2%	3	15.8%

7. How many new health researchers have you recruited in the past five years who received salary support from MRC, NHRDP or CIHR? How many who received support from CRC (Canada Research Chairs)? How many were recruited with salary awards from other research funding sources?

	Text Submitted		No Text Submitted	
	Count	%	Count	%
Other, please describe	17	89.5%	2	10.5%

8. Summarize your view of the immediate effect of cancelling the CIHR Investigator and Senior Investigator salary awards programs on the research goals and performance of your institution. Were there consequences for your 5 or 10 year strategic and HR plans?

	Text Submitted		No Text Submitted	
	Count	%	Count	%
Other, please describe	18	94.7%	1	5.3%

9. Outline your views on the strengths and weaknesses of the CIHR Investigator and Senior Investigator Salary Awards versus Canada Research Chairs.

	Text Submitted		No Text Submitted	
	Count	%	Count	%
Other, please describe	18	94.7%	1	5.3%

Survey of Potential Applicants (Recipients of the New Investigator Awards) to the CIHR Investigators and Senior Investigators Programs

At its June 2003 meeting, CIHR's Governing Council suspended CIHR's Investigator and Senior Investigator programs. This decision was made in consideration of what the appropriate niche would be for CIHR in the world of salary awards, given the context of the overall CIHR budget and other federal initiatives such as the Canada Research Chairs (CRC) program.

As you may know, these programs provided salary support for independent investigators who had made outstanding contributions and had demonstrated leadership in their field. They were intended for health researchers who have developed a reputation for excellence in research. To be eligible a candidate needed to hold either a health professional degree, or a PhD degree (or the equivalent). For the Investigator Program the candidate had to have at least five but not more than ten years of experience as an independent investigator in an institution position or its equivalent. The Senior Investigator Program was designed to contribute to the salary of investigators of exceptional merit who are international leaders in their field. The candidate needed to have a minimum of ten years of experience as an independent investigator.

CIHR's Governing Council reconsidered its suspension of the salary awards programs at its June 2004 meeting, in light of CIHR's budget prospects for fiscal year 2005-06 and in response to wide expressions of support for CIHR's Career Awards. Council decided to establish a National Task Force on Career Support with a mandate to undertake a comprehensive analysis of CIHR's suite of salary support programs, relative to the overall Canadian salary awards landscape, and make recommendations on CIHR's future role in this area. The Task Force includes outstanding health researchers from across the country. For more information on the mandate and members of the Task Force, please visit the CIHR website at <http://www.cihr-irsc.gc.ca/e/24487.html>

A critical input to the deliberations of the Task Force is information from researchers who might have expected to be able to apply to the Investigator and Senior Investigator programs. We seek your views on whether the cancellation of these programs has had an impact on your career plans. Your responses will be held confidential and only aggregated data will be shared.

I encourage you to make your voice heard by returning your answers to the questions below by e-mail no later than Friday, October 8, 2004. Please send your responses to TG-GT@cihr-irsc.gc.ca.

On behalf of the Task Force, let me thank you in advance for providing your input.

Dr. Brenda Andrews, Chair of CIHR Task Force on Career Support, and
Director, The Terrence Donnelly Centre for Cellular and Biomolecular Research
University of Toronto.

If you feel that you would not have applied for either the CIHR Investigator Salary Award or the CIHR Senior Investigator Award – this is also important information. We would appreciate it if you would describe below why these Awards were not of importance and the rest of this survey would not be required.

If you were considering applying for either a CIHR Investigator or CIHR Senior Investigator Award, please respond to the questions below.

As a potential applicant to the CIHR Investigator Program or the Senior Investigator Program:	Very important	Important	Somewhat important	Not important
1. How important did you believe the CIHR Award would be to your career?				
2. In general, how important are CIHR Investigator Awards to research careers?				
3. In general, how important are CIHR Senior Investigator Awards to research careers?				

	Very Important	Important	Not Important	Not applicable
4. How important might the following factors be for you in applying for the CIHR Award (please rate all of the following)				
• Recognition – improving “marketability” and reputation				
• Release time – more time for research				
• Improve prospects for attracting other research funding				
• Improve ability to attract more/better trainees				
• Provide time to establish research program and/or team				
• Financial security– maintain or increase salary level				
• Job security – ability to stay in your institution or move to a preferred institution				
• Improve prospects of promotion				
Other, please describe:				

5. The success rates for CIHR Investigator Awards and Senior Investigator Awards competitions have been below 20%. What would be your plans if you were to be unsuccessful in the competition? (Check all that apply)

- No need for alternate plan
- Re-apply to CIHR the following year
- Leave my institution
- Reduce time spent on supervision / mentoring
- Reduce time spent on research
- Apply for other awards or obtain other sources of salary support (please describe)

Increase time in other activities to gain recognition or promotion (please describe)

Other (please describe)

6. CIHR needs to understand the relative importance of CIHR Investigator and Senior Investigator Awards compared to other types of CIHR funding in support of research. There is an opportunity cost: for example if CIHR invests in senior career awards, it will have less to invest in other forms of support for health research

Please rate the importance of types of CIHR funding for maintaining an excellent program of health research in your institution. (Number 1 to 5; where 1 is the highest importance and 5 is the lowest importance)

- Grants that fund the direct costs of research projects
- Training awards and grants to support the next generation of health researchers
- Career awards to help young researchers establish their careers
- Senior career awards to retain, recognize and reward established investigators
- Grants to support the acquisition and maintenance of equipment, databases and other large research resources

7. If applicable, describe the impact of CIHR's cancellation of the Investigator and Senior Investigator Programs in 2003 for you personally

8. To help us measure the relationship (not necessarily cause) between receipt of CIHR Awards and several research outcomes, please complete the following table.

2003-04 academic year
Number of peer reviewed articles published (in print or submitted)
Number of post-docs supervised
Number of graduate students supervised
Number of invited lectures or presentations
Your position title
Value of grant funds held

Is your research primarily:

- Biomedical
- Clinical
- Population and public health
- Health systems, services and policy

Thank you for providing your information to the CIHR Task Force on Career Support. The Task Force will publish its report on the CIHR website in the winter of 2004-05.

Survey Responses from Potential Applicants (Recipients of the New Investigator Awards)

New Investigator	Text Submitted		No Text Submitted	
	Count	%	Count	%
If you feel that you would not have applied for either the CIHR Investigator Salary Award or the CIHR Senior Investigator Award - this is also important information. We would appreciate it if you would describe below why these awards were not of importance and the rest of this survey would not be required.	6	8.2%	67	91.8%

	Very Important		Important		Somewhat Important		Not Important		Blank	
	Count	%	Count	%	Count	%	Count	%	Count	%
1. How important did you believe the CIHR Award would be to your career?	56	76.7%	13	17.8%	0	0.0%	0	0.0%	4	5.5%
2. In general, how important are CIHR Investigator Awards to research careers?	60	82.2%	7	9.6%	2	2.7%	0	0.0%	4	5.5%
3. In general, how important are CIHR Senior Investigator Awards to research careers?	37	50.7%	16	21.9%	12	16.4%	3	4.1%	5	6.8%

	Very Important		Important		Not Important		Not Applicable		Blank	
	Count	%	Count	%	Count	%	Count	%	Count	%
4. How important were the following factors for you in applying for the CIHR Award (Please rate all of the following)	1	1.4%	0	0.0%	0	0.0%	0	0.0%	72	98.6%
Recognition - improving "marketability and reputation"	36	49.3%	25	34.2%	10	13.7%	0	0.0%	2	2.7%
Release time - more time for research	45	61.6%	14	19.2%	7	9.6%	5	6.8%	2	2.7%
Improve prospects for attracting other research funding	36	49.3%	30	41.1%	5	6.8%	0	0.0%	2	2.7%
Improve prospects for attracting more/better trainees	29	39.7%	30	41.1%	10	13.7%	2	2.7%	2	2.7%
Provide time to establish research program and/or team	47	64.4%	18	24.7%	4	5.5%	2	2.7%	2	2.7%
Financial security - maintain or increase salary level	29	39.7%	22	30.1%	19	26.0%	0	0.0%	3	4.1%
Job security - ability to stay in your institution or move to a preferred institution	39	53.4%	16	21.9%	14	19.2%	0	0.0%	4	5.5%
Improve prospects of promotion	39	53.4%	23	31.5%	7	9.6%	0	0.0%	4	5.5%

Other, please describe	Text Submitted		No Text Submitted	
	Count	%	Count	%
	13	17.8%	60	82.2%

	Checked		Blank	
	Count	%	Count	%
5. The success rates for CIHR Investigator Awards and Senior Investigator Awards competitions have been below 20%. What were your plans if you were to be unsuccessful in the competition? (Check all that apply)	9	12.3%	64	87.7%
No need for alternate plan	62	84.9%	11	15.1%
Re-apply to CIHR the following year	11	15.1%	62	84.9%
Leave my institution	20	27.4%	53	72.6%
Reduce time spent on research	33	45.2%	40	54.8%
Apply for other awards or obtain other sources of salary support	49	67.1%	24	32.9%
(please describe) - text submitted	44	60.3%	29	39.7%
Increase time in other activities to gain recognition or promotion	15	20.5%	58	79.5%
(please describe) - text submitted	12	16.4%	61	83.6%
Other	9	12.3%	64	87.7%
(please describe) - text submitted	8	11.0%	65	89.0%

6. CIHR needs to understand the relative importance of CIHR Investigator and Senior Investigator Awards compared to other types of CIHR funding in support of research. There is an opportunity cost: for example if CIHR invests in senior career awards, it will have less to invest in other forms of support for health research

	1		2		3		4		5		Blank	
	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%
Grants that fund the direct costs of research projects	58	79.5%	7	9.6%	1	1.4%	3	4.1%	1	1.4%	3	4.1%
Training awards and grants to support the next generation of health researchers	12	16.4%	26	35.6%	16	21.9%	14	19.2%	2	2.7%	3	4.1%
Career awards to help young researchers establish their careers	19	26.0%	23	31.5%	21	28.8%	6	8.2%	1	1.4%	3	4.1%
Senior career awards to retain, recognize and reward established investigators	10	13.7%	8	11.0%	16	21.9%	14	19.2%	22	30.1%	3	4.1%
Grants to support the acquisition and maintenance of equipment, databases and other large research resources]	2	2.7%	10	13.7%	13	17.8%	15	20.5%	30	41.1%	3	4.1%

7. If applicable, describe the impact of CIHR's cancellation of the Investigator and Senior Investigator Programs in 2003 for you personally

	Text Submitted		No Text Submitted	
	Count	%	Count	%
Other, please describe	41	56.2%	32	43.8%

8. To help us measure the relationship (not necessarily cause) between receipt of CIHR Awards and several research outcomes, please complete the following

	0-10		11-20		> 20		Blank	
	Count	%	Count	%	Count	%	Count	%
Number of peer reviewed articles published (in print or submitted)	41	56.2%	17	23.3%	8	11.0%	7	9.6%

	0		1-2		3-4		> 4		Blank	
	Count	%	Count	%	Count	%	Count	%	Count	%
Number of post-docs supervised	35	47.9%	26	35.6%	4	5.5%	1	1.4%	8	11.0%

	0		1-3		4-6		> 6		Blank	
	Count	%	Count	%	Count	%	Count	%	Count	%
Number of graduate students supervised	4	5.5%	29	39.7%	25	34.2%	8	11.0%	7	9.6%

	0-10		11-20		> 20		Blank	
	Count	%	Count	%	Count	%	Count	%
Number of invited lectures or presentations	51	69.9%	9	12.3%	5	6.8%	8	11.0%

	Text Submitted		No Text Submitted	
	Count	%	Count	%
Your position title	65	89.0%	8	11.0%

	Less than or equal to \$500,000		Between \$500,001 and \$1,000,000 (inclusively)		Between \$1,000,001 and \$2,000,000 (inclusively)		Greater than \$2,000,001		Blank	
	Count	%	Count	%	Count	%	Count	%	Count	%
Value of grant funds held	36	49.3%	13	17.8%	8	11.0%	9	12.3%	7	9.6%

Is your research primarily:	Checked		Blank	
	Count	%	Count	%
biomedical	38	52.1%	35	47.9%
clinical	14	19.2%	59	80.8%
population and public health	17	23.3%	56	76.7%
health systems, services and policy	14	19.2%	59	80.8%

Survey of Applicants to CIHR Investigator and Senior Investigator Programs

(Note: This survey was used to poll two different groups of applicants, successful and unsuccessful.)

At its June 2003 meeting, CIHR's Governing Council suspended CIHR's Investigator and Senior Investigator programs. This decision was made in consideration of what the appropriate niche would be for CIHR in the world of salary awards, given the context of the overall CIHR budget and other federal initiatives such as the Canada Research Chairs (CRC) program.

As you may know, these programs provided salary support for independent investigators who had made outstanding contributions and had demonstrated leadership in their field. They were intended for health researchers who have developed a reputation for excellence in research. To be eligible a candidate needed to hold either a health professional degree, or a PhD degree (or the equivalent). For the Investigator Program the candidate had to have at least five but not more than ten years of experience as an independent investigator in an institution position or its equivalent. The Senior Investigator Program was designed to contribute to the salary of investigators of exceptional merit who are international leaders in their field. The candidate needed to have a minimum of ten years of experience as an independent investigator.

CIHR's Governing Council reconsidered its suspension of the salary awards programs at its June 2004 meeting, in light of CIHR's budget prospects for fiscal year 2005-06 and in response to wide expressions of support for CIHR's Career Awards. Council decided to establish a National Task Force on Career Support with a mandate to undertake a comprehensive analysis of CIHR's suite of salary support programs, relative to the overall Canadian salary awards landscape, and make recommendations on CIHR's future role in this area. The Task Force includes outstanding health researchers from across the country. For more information on the mandate and members of the Task Force, please visit the CIHR website at <http://www.cihr-irsc.gc.ca/e/24487.html>

A critical input to the deliberations of the Task Force is information from applicants to the Investigator and Senior Investigator programs to seek their views on the importance and impact of these CIHR awards (or lack of award) on the careers of mid-career and senior investigators. Your responses will be held confidential and only aggregated data will be shared.

I encourage you to make your voice heard by returning your answers to the questions below by e-mail no later than Friday, October 8, 2004. Please send your responses to TG-GT@cihr-irsc.gc.ca.

On behalf of the Task Force, let me thank you in advance for providing your input.

Dr. Brenda Andrews, Chair of CIHR Task Force on Career Support, and
Director, The Terrence Donnelly Centre for Cellular and Biomolecular Research
University of Toronto

As an applicant to the CIHR Investigator Program or the Senior Investigator Program:	Very important	Important	Somewhat important
1. How important did you believe the CIHR Award would be to your career?			
2. In general, how important are CIHR Investigator Awards to research careers?			
3. In general, how important are CIHR Senior Investigator Awards to research careers?			

	Very Important	Important	Not Important	Not applicable
4. How important were the following factors for you in applying for the CIHR Award (please rate all of the following)				
• Recognition – improving “marketability” and reputation				
• Release time – more time for research				
• Improve prospects for attracting other research funding				
• Improve ability to attract more/better trainees				
• Provide time to establish research program and/or team				
• Financial security– maintain or increase salary level				
• Job security – ability to stay in your institution or move to a preferred institution				
• Improve prospects of promotion				
Other, please describe:				

5. The success rates for CIHR Investigator Awards and Senior Investigator Awards competitions have been below 20%. What were your plans if you were to be unsuccessful in the competition? (Check all that apply)

- No need for alternate plan
- Re-apply to CIHR the following year
- Leave my institution
- Reduce time spent on supervision / mentoring
- Reduce time spent on research
- Apply for other awards or obtain other sources of salary support (please describe)

Increase time in other activities to gain recognition or promotion (please describe)

Other (please describe)

	Significant Impact	Minor Impact	Not applicable
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6. If applicable, what was the actual impact of receiving the CIHR Investigator or Senior Investigator Award? (please rate all of the following)

- Recognition – improving “marketability” and reputation
- Increased Time spent on research
- Able to establish research program and/or team
- Success in obtaining other funding for research
- Increased number of/better students supervised
- Financial – increase to salary
- Job security – ability to stay in your institution
- Ability to move to preferred institution
- Promotion

Other, please describe:

7. CIHR needs to understand the relative importance of CIHR Investigator and Senior Investigator Awards compared to other types of CIHR funding in support of research. There is an opportunity cost: for example if CIHR invests in senior career awards, it will have less to invest in other forms of support for health research

Please rate the importance of types of CIHR funding for maintaining an excellent program of health research in your institution. (Number 1 to 5; where 1 is the highest importance and 5 is the lowest importance)

- Grants that fund the direct costs of research projects
- Training awards and grants to support the next generation of health researchers
- Career awards to help young researchers establish their careers
- Senior career awards to retain, recognize and reward established investigators
- Grants to support the acquisition and maintenance of equipment, databases and other large research resources]

8. If applicable, describe the impact of CIHR’s cancellation of the Investigator and Senior Investigator Programs in 2003 for you personally

9. To help us measure the relationship (not necessarily cause) between receipt of CIHR Awards and several research outcomes, please complete the following table.

2003-04 academic year
Number of peer reviewed articles published (in print or submitted)
Number of post-docs supervised
Number of graduate students supervised
Number of invited lectures or presentations
Your position title
Value of grant funds held

Are you:

- A recipient of an Investigator Award
- A recipient of a Senior Investigator Award
- Not funded

Is your research primarily:

- Biomedical
- Clinical
- Population and public health
- Health systems, services and policy

Thank you for providing your information to the CIHR Task Force on Career Support. The Task Force will publish its report on the CIHR website in the winter of 2004-05.

Survey Responses from Successful Applicants to CIHR Investigator and Senior Investigator Programs

Successful	Very Important		Important		Somewhat Important		Blank	
	Count	%	Count	%	Count	%	Count	%
1. How important did you believe the CIHR Award would be to your career?	61	95.3%	2	3.1%	1	1.6%	0	0.0%
2. In general, how important are CIHR Investigator Awards to research careers?	62	96.9%	2	3.1%	0	0.0%	0	0.0%
3. In general, how important are CIHR Senior Investigator Awards to research careers?	48	75.0%	12	18.8%	3	4.7%	1	1.6%

	Very Important		Important		Not Important		Not Applicable		Blank	
	Count	%	Count	%	Count	%	Count	%	Count	%
4. How important were the following factors for you in applying for the CIHR Award (Please rate all of the following)	0	0.0%	0	0.0%	0	0.0%	0	0.0%	64	100.0%
Recognition - improving "marketability and reputation"	42	65.6%	12	18.8%	10	15.6%	0	0.0%	0	0.0%
Release time - more time for research	42	65.6%	8	12.5%	10	15.6%	3	4.7%	1	1.6%
Improve prospects for attracting other research funding	28	43.8%	22	34.4%	13	20.3%	0	0.0%	1	1.6%
Improve prospects for attracting more/better trainees	14	21.9%	30	46.9%	19	29.7%	0	0.0%	1	1.6%
Provide time to establish research program and/or team	42	65.6%	13	20.3%	6	9.4%	2	3.1%	1	1.6%
Financial security - maintain or increase salary level	26	40.6%	20	31.3%	11	17.2%	6	9.4%	1	1.6%
Job security - ability to stay in your institution or move to a preferred institution	25	39.1%	13	20.3%	20	31.3%	5	7.8%	1	1.6%
Improve prospects of promotion	22	34.4%	23	35.9%	14	21.9%	4	6.3%	1	1.6%

Other, please describe	Text Submitted		No Text Submitted	
	Count	%	Count	%
	14	21.9%	50	78.1%

	Checked		Blank	
	Count	%	Count	%
5. The success rates for CIHR Investigator Awards and Senior Investigator Awards competitions have been below 20%. What were your plans if you were to be unsuccessful in the competition? (Check all that apply)	13	20.3%	51	79.7%
No need for alternate plan	42	65.6%	22	34.4%
Re-apply to CIHR the following year	2	3.1%	62	96.9%
Leave my institution	16	25.0%	48	75.0%
Reduce time spent on research	31	48.4%	33	51.6%
Apply for other awards or obtain other sources of salary support	30	46.9%	34	53.1%
(please describe) - text submitted	27	42.2%	37	57.8%
Increase time in other activities to gain recognition or promotion	10	15.6%	54	84.4%
(please describe) - text submitted	9	14.1%	55	85.9%
Other	8	12.5%	56	87.5%
(please describe) - text submitted	8	12.5%	56	87.5%

	Significant Impact		Minor Impact		Not applicable		Blank	
	Count	%	Count	%	Count	%	Count	%
6. If applicable, what was the <i>actual impact</i> of receiving the CIHR Investigator or Senior Investigator Award? (please rate all of the following)	8	12.5%	0	0.0%	0	0.0%	56	87.5%
Recognition – improving “marketability” and reputation	51	79.7%	12	18.8%	0	0.0%	1	1.6%
Increased Time spent on research	42	65.6%	17	26.6%	3	4.7%	2	3.1%
Able to establish research program and/or team	42	65.6%	16	25.0%	5	7.8%	1	1.6%
Success in obtaining other funding for research	34	53.1%	28	43.8%	1	1.6%	1	1.6%
Increased number of/better students supervised	18	28.1%	41	64.1%	3	4.7%	2	3.1%
Financial – increase to salary	26	40.6%	24	37.5%	14	21.9%	0	0.0%
Job security – ability to stay in your institution	20	31.3%	22	34.4%	22	34.4%	0	0.0%
Ability to move to preferred institution	13	20.3%	14	21.9%	34	53.1%	3	4.7%
Promotion	33	51.6%	17	26.6%	13	20.3%	1	1.6%

	Text Submitted		No Text Submitted	
	Count	%	Count	%
Other, please describe	6	9.4%	58	90.6%

7. CIHR needs to understand the relative importance of CIHR Investigator and Senior Investigator Awards compared to other types of CIHR funding in support of research. There is an opportunity cost: for example if CIHR invests in senior career awards, it will have less to invest in other forms of support for health research

	1		2		3		4		5		Blank	
	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%
Grants that fund the direct costs of research projects	45	70.3%	6	9.4%	4	6.3%	2	3.1%	5	7.8%	2	3.1%
Training awards and grants to support the next generation of health researchers	11	17.2%	16	25.0%	15	23.4%	13	20.3%	8	12.5%	1	1.6%
Career awards to help young researchers establish their careers	18	28.1%	25	39.1%	13	20.3%	5	7.8%	2	3.1%	1	1.6%
Senior career awards to retain, recognize and reward established investigators	8	12.5%	19	29.7%	18	28.1%	13	20.3%	5	7.8%	1	1.6%
Grants to support the acquisition and maintenance of equipment, databases and other large research resources]	6	9.4%	8	12.5%	10	15.6%	11	17.2%	27	42.2%	2	3.1%

8. If applicable, describe the impact of CIHR's cancellation of the Investigator and Senior Investigator Programs in 2003 for you personally

	Text Submitted		No Text Submitted	
	Count	%	Count	%
Other, please describe	43	67.2%	21	32.8%

9. To help us measure the relationship (not necessarily cause) between receipt of CIHR Awards and several research outcomes, please complete the following

	0-10		11-20		> 20		Blank	
	Count	%	Count	%	Count	%	Count	%
Number of peer reviewed articles published (in print or submitted)	23	35.9%	28	43.8%	11	17.2%	2	3.1%

	0		1-2		3-4		> 4		Blank	
	Count	%	Count	%	Count	%	Count	%	Count	%
Number of post-docs supervised	12	18.8%	25	39.1%	20	31.3%	6	9.4%	1	1.6%

	0		1-3		4-6		> 6		Blank	
	Count	%	Count	%	Count	%	Count	%	Count	%
Number of graduate students supervised	4	6.3%	10	15.6%	35	54.7%	14	21.9%	1	1.6%

	0-10		11-20		> 20		Blank	
	Count	%	Count	%	Count	%	Count	%
Number of invited lectures or presentations	33	51.6%	14	21.9%	14	21.9%	3	4.7%

	Text Submitted		No Text Submitted	
	Count	%	Count	%
Your position title	63	98.4%	1	1.6%

	Less than or equal to \$500,000		Between \$500,001 and \$1,000,000 (inclusively)		Between \$1,000,001 and \$2,000,000 (inclusively)		Greater than \$2,000,001		Blank	
	Count	%	Count	%	Count	%	Count	%	Count	%
Value of grant funds held	30	46.9%	11	17.2%	11	17.2%	11	17.2%	1	1.6%

Are you:	Checked		Blank	
	Count	%	Count	%
a recipient of an Investigator Award	48	75.0%	16	25.0%
a recipient of a Senior Investigator Award	17	26.6%	47	73.4%
not funded	0	0.0%	64	100.0%

Is your research primarily:	Checked		Blank	
	Count	%	Count	%
biomedical	29	45.3%	35	54.7%
clinical	9	14.1%	55	85.9%
population and public health	22	34.4%	42	65.6%
health systems, services and policy	6	9.4%	58	90.6%

Survey Responses from Unsuccessful Applicants to CIHR Investigator and Senior Investigator Programs

Unsuccessful	Very Important		Important		Somewhat Important		Blank	
	Count	%	Count	%	Count	%	Count	%
1. How important did you believe the CIHR Award would be to your career?	24	80.0%	3	10.0%	3	10.0%	0	0.0%
2. In general, how important are CIHR Investigator Awards to research careers?	23	76.7%	3	10.0%	4	13.3%	0	0.0%
3. In general, how important are CIHR Senior Investigator Awards to research careers?	16	53.3%	6	20.0%	8	26.7%	0	0.0%

	Very Important		Important		Not Important		Not Applicable		Blank	
	Count	%	Count	%	Count	%	Count	%	Count	%
4. How important were the following factors for you in applying for the CIHR Award (Please rate all of the following)	0	0.0%	0	0.0%	0	0.0%	1	3.3%	29	96.7%
Recognition - improving "marketability and reputation"	17	56.7%	9	30.0%	4	13.3%	0	0.0%	0	0.0%
Release time - more time for research	15	50.0%	6	20.0%	4	13.3%	5	16.7%	0	0.0%
Improve prospects for attracting other research funding	19	63.3%	7	23.3%	4	13.3%	0	0.0%	0	0.0%
Improve prospects for attracting more/better trainees	10	33.3%	13	43.3%	7	23.3%	0	0.0%	0	0.0%
Provide time to establish research program and/or team	17	56.7%	4	13.3%	7	23.3%	2	6.7%	0	0.0%
Financial security - maintain or increase salary level	14	46.7%	5	16.7%	7	23.3%	3	10.0%	1	3.3%
Job security - ability to stay in your institution or move to a preferred institution	17	56.7%	4	13.3%	8	26.7%	1	3.3%	0	0.0%
Improve prospects of promotion	16	53.3%	7	23.3%	5	16.7%	2	6.7%	0	0.0%

	Text Submitted		No Text Submitted	
	Count	%	Count	%
Other, please describe	9	30.0%	21	70.0%

	Checked		Blank	
	Count	%	Count	%
5. The success rates for CIHR Investigator Awards and Senior Investigator Awards competitions have been below 20%. What were your plans if you were to be unsuccessful in the competition? (Check all that apply)	3	10.0%	27	90.0%
No need for alternate plan	21	70.0%	9	30.0%
Re-apply to CIHR the following year	3	10.0%	27	90.0%
Leave my institution	6	20.0%	24	80.0%
Reduce time spent on research	9	30.0%	21	70.0%
Apply for other awards or obtain other sources of salary support	21	70.0%	9	30.0%
(please describe) - text submitted	19	63.3%	11	36.7%
Increase time in other activities to gain recognition or promotion	3	10.0%	27	90.0%
(please describe) - text submitted	3	10.0%	27	90.0%
Other	5	16.7%	25	83.3%
(please describe) - text submitted	5	16.7%	25	83.3%

	Significant Impact		Minor Impact		Not applicable		Blank	
	Count	%	Count	%	Count	%	Count	%
6. If applicable, what was the <i>actual impact</i> of receiving the CIHR Investigator or Senior Investigator Award? (please rate all of the following)	1	3.3%	0	0.0%	5	16.7%	24	80.0%
Recognition – improving "marketability" and reputation	9	30.0%	3	10.0%	4	13.3%	14	46.7%
Increased Time spent on research	7	23.3%	4	13.3%	5	16.7%	14	46.7%
Able to establish research program and/or team	5	16.7%	7	23.3%	4	13.3%	14	46.7%
Success in obtaining other funding for research	7	23.3%	4	13.3%	4	13.3%	15	50.0%
Increased number of/better students supervised	7	23.3%	5	16.7%	4	13.3%	14	46.7%
Financial – increase to salary	4	13.3%	6	20.0%	6	20.0%	14	46.7%
Job security – ability to stay in your institution	8	26.7%	3	10.0%	5	16.7%	14	46.7%
Ability to move to preferred institution	3	10.0%	6	20.0%	6	20.0%	15	50.0%
Promotion	8	26.7%	3	10.0%	4	13.3%	15	50.0%

	Text Submitted		No Text Submitted	
	Count	%	Count	%
Other, please describe	2	6.7%	28	93.3%

7. CIHR needs to understand the relative importance of CIHR Investigator and Senior Investigator Awards compared to other types of CIHR funding in support of research. There is an opportunity cost: for example if CIHR invests in senior career awards, it will have less to invest in other forms of support for health research

	1		2		3		4		5		Blank	
	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%
Grants that fund the direct costs of research projects	23	76.7%	2	6.7%	2	6.7%	0	0.0%	1	3.3%	2	6.7%
Training awards and grants to support the next generation of health researchers	7	23.3%	10	33.3%	4	13.3%	6	20.0%	1	3.3%	2	6.7%
Career awards to help young researchers establish their careers	7	23.3%	6	20.0%	6	20.0%	8	26.7%	1	3.3%	2	6.7%
Senior career awards to retain, recognize and reward established investigators	2	6.7%	7	23.3%	7	23.3%	4	13.3%	8	26.7%	2	6.7%
Grants to support the acquisition and maintenance of equipment, databases and other large research resources]	2	6.7%	5	16.7%	8	26.7%	4	13.3%	9	30.0%	2	6.7%

8. If applicable, describe the impact of CIHR's cancellation of the Investigator and Senior Investigator Programs in 2003 for you personally

	Text Submitted		No Text Submitted	
	Count	%	Count	%
Other, please describe	15	50.0%	15	50.0%

9. To help us measure the relationship (not necessarily cause) between receipt of CIHR Awards and several research outcomes, please complete the following

	0-10		11-20		> 20		Blank	
	Count	%	Count	%	Count	%	Count	%
Number of peer reviewed articles published (in print or submitted)	16	53.3%	11	36.7%	2	6.7%	1	3.3%

	0		1-2		3-4		> 4		Blank	
	Count	%	Count	%	Count	%	Count	%	Count	%
Number of post-docs supervised	10	33.3%	14	46.7%	3	10.0%	2	6.7%	1	3.3%

	0		1-3		4-6		> 6		Blank	
	Count	%	Count	%	Count	%	Count	%	Count	%
Number of graduate students supervised	1	3.3%	11	36.7%	13	43.3%	4	13.3%	1	3.3%

	0-10		11-20		> 20		Blank	
	Count	%	Count	%	Count	%	Count	%
Number of invited lectures or presentations	24	80.0%	4	13.3%	1	3.3%	1	3.3%

	Text Submitted		No Text Submitted	
	Count	%	Count	%
Your position title	29	96.7%	1	3.3%

	Less than or equal to \$500,000		Between \$500,001 and \$1,000,000 (inclusively)		Between \$1,000,001 and \$2,000,000 (inclusively)		Greater than \$2,000,001		Blank	
	Count	%	Count	%	Count	%	Count	%	Count	%
Value of grant funds held	20	66.7%	3	10.0%	2	6.7%	2	6.7%	3	10.0%

Are you:	Checked		Blank	
	Count	%	Count	%
a recipient of an Investigator Award	2	6.7%	28	93.3%
a recipient of a Senior Investigator Award	0	0.0%	30	100.0%
not funded	27	90.0%	3	10.0%

Is your research primarily:	Checked		Blank	
	Count	%	Count	%
biomedical	16	53.3%	14	46.7%
clinical	8	26.7%	22	73.3%
population and public health	6	20.0%	24	80.0%
health systems, services and policy	4	13.3%	26	86.7%

APPENDIX IV – SUMMARY OF SALARY SUPPORT PROGRAMS BY COUNTRY

Country/ Program Name	Number of Awards	Level of Funding	Number of Years Funding	Eligible Disciplines	Intended Recipient	Description
Canada – Provincial Programs						
Ministry of Health, ON Career Scientists Awards	9 out of 16 for FY 04/05 (33 committed)	\$50,000 per annum plus benefits	5 years (renewable)	To retain and recruit young clinical researchers in ON	Candidates who hold an established faculty position supported from the regular operating funds of the university, institute or hospital, are eligible to apply.	The overall goal of the program is to support and develop health services research personnel for Ontario. Assists junior researchers to build their careers in Ontario. Health services research examines the management, organization, and effectiveness of health services to inform decision-making in policy, planning and delivery of health services.
<i>Fonds de recherche en santé du Québec (FRSQ)</i> , Research Fellows – Junior levels 1 & 2 (RFJ1-2), Senior-level Research Fellows (RFS), Clinical Research Fellows – Junior levels 1 & 2 (CRFJ1-2), Senior-level Clinical Research Fellows (CRFS), FRSQ National Researchers (NR), Research Professors (RP)	FY 04/05, RF: 90 (320 in progress) CRF: 29 (110 in progress) NR: 9 (50 in progress)	RF: \$30,005 to \$68,053 CRF: \$18,003 to \$40,832 NR: amount equivalent to 75% of university salary (excluding employee benefits), RP: \$40,000 at senior research level for approximately 50% of salary, plus 19.18% of benefits	RF and CRF: 4 years NR: 5 years non-renewable NR: 50% of salary and employee benefits, for 3 5-year periods following the Senior-level fellowship (15 years); the university should provide matching funds.	Hiring and retaining researchers in Québec in basic, clinical, epidemiological, evaluative, organizational and social research in the health field.	RF and CRF: 2 years in research, must be an active clinician in good standing with license to practice. NR: has been a FRSQ RF or CRF or holder of a research fellowship recognized by FRSQ for no longer than 13 years. RP: has a university affiliation and is funded by FRSQ fellowships or equivalent, FRSQ-recognized fellowships. This researcher pursues his/her research career in a health institution's research centre.	RF: facilitates recruitment of qualified researchers working in health, as a career opportunity, to help these researchers contribute, through their work, to maintaining and improving the health and quality of life of Québécois, from perspectives including biology, psychological adaptation to physical and natural settings, lifestyle or the health services provided for the Québec population. CRF: fosters the development of clinical research in Québec, particularly in health establishments linked to FRSQ research centres, and promotes the development of collaborations between clinical research and basic, applied, evaluative, and epidemiological research. NR: This prestigious program celebrates the excellence of a limited number of experienced researchers selected via competitions among researchers from RF programs, i.e., following the FRSQ Senior level or its RF equivalent: This program, in partnership with universities, aims to provide career opportunities to research fellows who are both experienced and well-established in FRSQ centres in health-care institutions and to contribute to their university integration. The program aims to maintain each research professor's double affiliation, at both health centre and university. It also provides a stable framework within which researchers may be trained in these centres, and aims to maintain researcher accountability through periodic presentations of their research programs.
AB Heritage AHFMR -Pop Health (PH) -Clinical (CI) -Scholars (S) -Senior Scholars (SS) -Scientists	In 2004, 39 awarded = \$22M (6 PH, 5 C, 10 S, 8 SS, 10 scientists) In 2003, 43 awarded In 2002, 30 awarded	For FY 04/05 budgeted amounts: Scientist - \$8,100,000 Senior Scholar - \$6,800,000 Scholar - \$9,200,000 Population Health Investigator - \$2,900,000 Clinical Investigator - \$2,500,000	Pop Health 3 years; renewable once Clinical Investigator 3 years; renewable once Scholar 5 years; non-renewable Senior Scholar 5 years; non-renewable Scientist 5 years; non-renewable	To retain and recruit in AB independent investigators doing health related research	All must have MD or PhD and be eligible to hold a FT appointment. PH for new investigators CI has clinical specialty recognition, participates in clinical teaching and patient care. S recently completed their postdoctoral research training, and are currently seeking their first faculty-level appointments. SS excellent track	Alberta Heritage Foundation for Medical Research (AHFMR) supports qualified researchers who work as independent investigators in research relevant to health. These researchers are recruited to Alberta in cooperation with provincial universities, hospitals, or other non-profit organizations with a research mission. AHFMR offers personnel awards on a competitive basis at all research career levels.

Country/ Program Name	Number of Awards	Level of Funding	Number of Years Funding	Eligible Disciplines	Intended Recipient	Description
					record as independent research over several years. Scientist internationally recognized scientific leaders in their fields of study.	
Michael Smith Research Foundation, BC Career Investigator Program	33 in 2003 (21 mths, 1.75 yrs.) 27 in 2002 (33 mths., 2.75 yrs) 29 in 2001 (45 months, 3.75 yrs) 33 in 2001 (57 months 5yes) 122 total Mandate runs out in 2006	Scholar \$80,000 Senior Scholar \$100,000 Distinguished Scholar \$120,000	Scholar 5 years non-renewable Senior Scholar 5 years non-renewable Disting. Scholar 5 years, renewable	To retain and recruit in the following themes: • Biomedical Research • Clinical Research • Health Services Research • Population Health Research	Scholar: recently completed their postdoctoral research training and are seeking, or have recently obtained within 24 months of the competition deadline, a full-time academic appointment, which is, at minimum, as an Assistant Professor or equivalent. Senior Scholars: excellent track record of independent research over several years. Distinguished Scholars Must be established, internationally recognized scientific leaders	Scholar Level Gives promising researchers the opportunity to demonstrate their ability to initiate and conduct independent research. After five years, recipients may apply for the next level of award. Senior Scholar Level Supports independent investigators who make outstanding contributions and demonstrate leadership early in their careers. They are more senior than Scholars, but are normally not ready to compete for a Distinguished Scholar award. After five years recipients may apply for the next level of award. Distinguished Scholar Level Contributes to the salary of established senior researchers (with a minimum of 10 years as an independent researcher) who are internationally recognized scientific leaders in their fields of study.
Canada – Voluntary Charitable Agencies						
Arthritis Society in partnership with CIHR and CRC	Cumulative as of 04/05 New Invest. 13 committed (\$564,462); Invest. 5 committed (\$340,300)	New Invest. \$50,000/yr + benefits Investigator \$70,000/yr + benefits	New Invest., Investigator, 5 years	To recruit and retain investigators in the area of arthritis	Investigator : investigators of outstanding ability who have shown promise of becoming leaders in their field. It is intended for health researchers who early, in their career, have developed a reputation for excellence in research. New Investigator: to develop and demonstrate their ability to initiate and carry out independent health research.	To search for the underlying causes and subsequent cures for arthritis and to promote the best possible care and treatment for people with arthritis.
NCIC Research Scientist Award	6 new annually	Value depends on number of years of postdoctoral research experience and compares to other national awards.	Max. term of 6 years	To recruit young PIs with no more than five years of research experience calculated from the beginning of their independent research career.	Eligible candidates must be the principal investigator of a fully-funded, peer-reviewed, cancer-related research grant but the source of funding may now be from the NCIC or any other recognized national granting agency.	To provide a career development opportunity for individuals committed to high standards of cancer research. Thus, the NCIC is prepared to make a commitment to investigators who themselves are prepared to make a long-term and focused commitment in the area of cancer research.
Ontario Mental Health	03/04 funded:	Senior: \$38,000/yr.	3 years, New is non-renewable,	Recruit and retain in the field of mental	Must hold a professional	Senior: The purpose of these awards is to enable the investigator

Country/ Program Name	Number of Awards	Level of Funding	Number of Years Funding	Eligible Disciplines	Intended Recipient	Description
Foundation, Senior Research, Intermediate Research and New Investigator Fellowships	Senior: 5 Intermed.: 5 New: 7 Funds committed for 2005: \$682,244 2006: \$170,362 2007: \$145,000	Intermed.: \$36,000 (max. \$40,000 for both) New: up to \$35,000/yr	Intermediate is renewable once, Senior is renewable three times	health	research qualification in a field relevant to mental health, and be conducting investigations in an Ontario hospital, university or other institutional setting. Applicants for the Senior and intermediate Research Fellowship must also be members of the institution's full-time staff.	to secure time for research that would not otherwise be available. Intermediate: The purpose of these awards is to enable the investigator to secure time for research that would not otherwise be available. New: The purpose of these awards is to enable flexible options for a newly independent investigator to develop a line of research and to consolidate a research career.
Canadian Diabetes Assoc. Personnel Awards - Scholarships	2 new in FY 04/05 for a total of 5 committed	\$50,000/yr	5 years (with evaluation at end of 3 years)	To recruit young PIs in the field of diabetes	It must be less than 10 years since the completion of the applicant's most recent doctorate degree (MD, PhD, DSc, DDS, PharmD, or DVM), and less than 3 years since the start of an independent research appointment.	Scholarships are designed to provide support for newly appointed faculty members who have recently completed their training in research and show promise of ability to initiate and carry out independent research in diabetes at a Canadian university.
Kidney Foundation of Canada - Biomedical Scholarship	FY 04/05 1 funded FY 03/04 2 funded FY 02/03 3 funded	\$45,000/yr	2 years	To recruit PIs in the area of kidney research	Candidates should have an M.D. and have completed clinical training in nephrology or urology. Ph.D.s are also eligible if they have been appointed to a medical school and have a demonstrated interest in nephrology or urology. They should have completed at least two years of research training at the time the award is taken up.	Biomedical Scholarships provide salary support for up to two years of an initial faculty appointment at the rank of Assistant Professor or its equivalent, at an approved medical school in Canada. Applications should be made on behalf of the candidates by the institutions offering the faculty appointment.
Canadian Cystic Fibrosis Foundation (CCFF) – Scholarships Senior Scientist	Applications only accepted in odd-years (i.e., 2005) 2003 comp. – 1 funded	\$60,000/yr Senior Scientist. \$30,000/yr	1-3 years (renewable) Senior Scientist. 1 year max.	To recruit gifted investigators to CF research and retain	Must be recipient of CCFF research grant. Applications are restricted to candidates who have received their first faculty appointment within the preceding five calendar years. Applicants must hold an M.D. or Ph.D. degree, and must be sponsored by the chairman of the appropriate department and by the dean of the faculty.	Provide salary support for a limited number of exceptional investigators, offering them an opportunity to develop outstanding cystic fibrosis research programs, unhampered by heavy teaching or clinical loads.
National Neurofibromatosis Foundation – Young	6 awarded in 2003 6 in 2002	\$35,000/yr	2 years	To attract new researchers to the field	No more than seven years past completion of MD/PhD training.	The Young Investigators Awards will provide salary support not to exceed \$35,000 annually for a period of up to two years for young investigators

Country/ Program Name	Number of Awards	Level of Funding	Number of Years Funding	Eligible Disciplines	Intended Recipient	Description
Investigator Awards						to conduct research on the cause and treatments of neurofibromatosis 1 and 2.
Canada Research Chairs	2000 (Between December 2000 and April 2004 (39 months) a total of 1164 Chairs were awarded – 605 Tier 1 and 559 Tier 2.	Tier 1: \$200,000 per annum; Tier 2: \$100,000 per annum.	Tier 1: 7 years (renewable); Tier 2: 5 years (renewable once).	Natural sciences/ engineering, health, and social sciences/ humanities.	World-class Canadian researchers, whether they are working in Canada or elsewhere, as well as researchers from other countries. Only Canadian universities can nominate researchers for two kinds of Canada Research Chairs: Tier 1 Chairs: are awarded to experienced researchers whose peers acknowledge as world leaders in their field. Tier 2 Chairs are for researchers whose peers acknowledge as having the potential to be world leaders in their field.	The key objective of the CRCP is to “enable Canadian universities, together with their affiliated research institutes and hospitals, to foster research excellence and to enhance their role as world-class centres of research excellence in the global, knowledge-based economy”. ²⁰ The secondary objectives of the program are: to strengthen research excellence in Canada and increase Canada's research capacity by attracting and retaining excellent researchers in Canadian universities; to improve, through research, the training of highly qualified personnel; to improve universities' capacity for generating and applying new knowledge; and, to ensure the effective use of research resources through strategic planning by the institutions as well as through inter-institutional and inter-sectoral collaboration, as appropriate.
Killam Awards	5 Killam Prizes (i.e., one prize within each of the five disciplines) are awarded per year; 10 Killam Research Fellowships are awarded per year.	Killam Prize: \$100,000 per annum; Killam Research Fellowships: \$53,000 per annum	Killam Prize: 1 year Killam Research Fellowships: 2 years	Health sciences, natural sciences, engineering, social sciences and humanities.	Candidates for the Killam Prizes must be eminent scholars and must have demonstrated outstanding achievement/ exceptional contribution to their field of research. Killam Research Fellowship recipients are generally full professors and have demonstrated excellent research ability with extensive publications in their field of study.	The Killam Awards, administered by the Canada Council for the Arts and funded through the Killam Trust were established to “support scholars of exceptional ability engaged in research projects of broad significance and widespread interest”. ²¹ Funding is provided to the university to relieve the Killam Research Fellow of teaching/administrative duties. Killam awards may be held concurrently with a Canada Research Chair.
NSERC Industrial Research Chairs (IRC)	N/A	N/A. IRCs are funded by NSERC and an industrial organization (the industrial organization usually contributes at least half)	Senior IRC: 5 years (renewable); Associate IRC: 5 years (renewable once); Executive IRC: 5 years (non-renewable)	Natural sciences and engineering.	Senior IRCs: for distinguished senior researchers who have the qualifications to fill a tenure appointment of full professor; Associate IRCs: for promising junior researchers, who have the qualifications to fill an academic appointment as an associate professor;	The primary objectives of NSERC's Industrial Research Chairs (IRC) are to: “Assist universities in building on existing strengths to achieve the critical mass required for a major research endeavour in science and engineering of interest to industry; and/ or to assist in the development of research efforts in fields that have not yet been developed in Canadian universities but for which there is an important industrial need.” ²² The Chairs are jointly funded by NSERC and industry (generally

²⁰ Canada Research Chairs Program. February 2002 Program Guide, page 3.

²¹ The Canada Council for the Arts. “Killam Prizes”. <http://www.canadacouncil.ca/prizes/killam/>

²² Natural Sciences and Engineering Council of Canada. “Program Guide for Professors 2003: Industrial Research Chairs (IRC)”. <http://www.nserc.gc.ca>

Country/ Program Name	Number of Awards	Level of Funding	Number of Years Funding	Eligible Disciplines	Intended Recipient	Description
					Executive IRCs: for outstanding R&D professionals.	50/50). The awards provide funding for infrastructure, the Chair's salary, research tools/instruments, as well as any general expenses related to the Chair's research program.
European Union						
Marie Curie Chairs Program	15 to 20 Chairs per year. ²³	Funding is dependent on the type and scope of project activities. Each project is generally funded between 450,000€ and 750,000€ (i.e., approximately CAN \$738,305 to CAN \$1,230,502). ²⁴	Between one to three years	The MC program awards Chairs in scientific or technological areas of research.	World-class researchers. Chair candidates can be of any nationality.	The Marie Curie Chairs Program is a publicly supported funding scheme (i.e., it is funded by the European Commission/member states). The primary objective of the Marie Curie Chairs Program is similar to that of the CRCP: to attract and retain world-class researchers to conduct research considered leading edge and "of relevance" to Europe. Other key objectives of the program deemed comparable to the CRCP's include: the promotion and recognition of research excellence; increasing the dissemination of research results; the training of highly-qualified personnel (HQP); and the promotion of collaboration and research teams. ²⁵ Chair candidates must be willing to fill a research/teaching position at a host institution in a Member State or Associated State. ²⁶ Fifty percent of an MC Chair holder's time is allocated to teaching/training new researchers such as PhD candidates (i.e., Highly Qualified Personnel), while the rest of their time is allocated to research. ²⁷ The Marie Curie Chair award is most comparable to the CRCP Tier 1 Chair awards.
European Young Investigators Award (EURYI)	25 awards per year, ²⁸	Funding for projects ranges from 150,000€ to 250,000€ (i.e., approximately CAN \$243,763 to CAN \$406,304) per annum. ²⁹	The EURYI awards are funded for a term of up to 5 years, based on the progress of the researchers	All disciplines.	Emerging "outstanding" researchers of any nationality. Candidates must possess two to ten years of postdoctoral research experience, and have "the potential to become world class leaders in their	The European Young Investigators (EURYI) award might be most comparable to the CRCP Tier 2 Chair awards. This award, supported by the European Union Research Organisations from 15 European countries ³¹ , in collaboration with the European Science Foundation, provides support for emerging "outstanding" researchers. ³² The key objective of the European Young Investigators Award is "to enable and encourage

²³ Europa. "Marie Curie Actions- Frequently Asked Questions".

http://europa.eu.int/comm/research/fp6/mariecurie-actions/pdf/faq-exc_031203.pdf. P.1

²⁴ European Research Directorate General Human Resources and Mobility. . "Marie Curie Chairs (EXC) Handbook". 2nd Edition. 2003. <http://europa.eu.int/mariecurie-actions>. P.14

²⁵ Ibid. P.6

²⁶ Member States include: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, The Netherlands, Portugal, Spain, Sweden, United Kingdom. Associated States include: Bulgaria, Cyprus, Czech Republic, Estonia, Hungary, Iceland, Israel, Latvia, Liechtenstein, Lithuania, Malta, Norway, Poland, Romania, Slovakia, Slovenia, Switzerland, and Turkey.

²⁷ European Research Directorate General Human Resources and Mobility. 2003. P.3

²⁸ European Science Foundation. "EURYI: The announcement- A new opportunity to do science in Europe". 2003.

²⁹ European Science Foundation. "EURYI Call for Proposals". 2003. <http://www.esf.org>.

Country/ Program Name	Number of Awards	Level of Funding	Number of Years Funding	Eligible Disciplines	Intended Recipient	Description
					respective field of research". ³⁰	outstanding young researchers from all over the world, to work in a European environment for the benefit of the development of European science and the building up of the next generation of leading European researchers." ³³
France						
Les Chaires internationales de Recherche Blaise Pascal	5 Chairs awarded annually.	Total of 200,000€ (i.e., approximately CAN \$326,119)	12 months of full-time work (i.e., these 12 months may cover two years).	All disciplines.	Chairs are awarded annually to foreign researchers. Similar to the Canada Research Chairs Program, Chair candidates must be distinguished, high-level researchers that are internationally renowned.	Les Chaires internationales de Recherche Blaise Pascal is a research funding scheme that was established in the Ile-de-France (Paris) region in 1996. This regional Chairs program was created in order to promote research within the region (already considered the primary area of research in France), as well as to create an international scientific network. ³⁴ Chair holders are expected to work at a higher education institution in the Ile-de-France region to conduct their research, as well as to teach. They must also make a presentation of their research to the general public at the end of their term. ³⁵ This research funding program is most like the Tier 1 awards of the CRCP.
Germany						
The Humboldt Research Awards	100 awards are granted annually. ³⁶	The funding for this program is comparable to the Canada Research Tier 2 Chairs at 75,000€ (i.e., approximately CAN \$122,330). ³⁷	The award is for a relatively short period of time of six months to one year.	All disciplines	Humboldt research awards are granted to accomplished and internationally renowned scientists and scholars living abroad (i.e., researchers that have received previous awards; have several academic publications; etc).	The key objective of Germany's Humboldt Research Awards is to honour "the academic achievements of the award winner's lifetime" and to invite award winners "to carry out research projects of their own choice in Germany in cooperation with colleagues". ³⁸ Candidates must be nominated by established researchers living in Germany.
Australia						
Federation Fellowships	25 fellowships	Provides researchers	5-year term. ³⁹	All disciplines	Leading Australian and international	Federation Fellowships are considered highly prestigious awards

³⁰ Ibid.

³¹ Countries participating in the scheme include: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Hungary, Ireland, Netherlands, Norway, Portugal, Spain, Switzerland, and the United Kingdom.

³² European Science Foundation. "EURYI: The announcement- A new opportunity to do science in Europe". 2003. <http://www.esf.org>.

³³ European Science Foundation. "EURYI Call for Proposals". 2003.

³⁴ Préfecture de la region d'Ile-de-France. "Les Chaires internationales de Recherche Blaise Pascal". France. 2003. http://www.idf.pref.gov.fr/actu/dossiers/2003/chaieres_Blaise_Pascal/presentation.pdf.

³⁵ Préfecture de la region d'Ile-de-France..

³⁶ Alexander von Humboldt Foundation. "Humboldt Research Awards". Bonn, Germany, 2004. <http://www.humboldt-foundation.de>

³⁷ It is interesting to note that this amount is not subject to income tax.

³⁸ Alexander von Humboldt Foundation. 2004.

³⁹ Australian Research Council. "Federation Fellowships". http://www.arc.gov.au/grant_programs/discovery_federation.htm

Country/ Program Name	Number of Awards	Level of Funding	Number of Years Funding	Eligible Disciplines	Intended Recipient	Description
	are awarded per year. (There are up to 125 Chairs to fill by 2006)	with AUS \$235,201 (i.e., approximately CAN \$221,261) per annum + 26% on-costs			researchers. Researchers awarded a Federation Fellowship are generally early- to mid-career, distinguished researchers.	that represent the Australian Research Council's commitment to supporting excellence in research. Its key objectives strongly resemble those of the Canada Research Chairs, that is, to: attract and retain leading Australian researchers in key positions; attract outstanding international researchers to undertake research which is of national benefit to Australia; support research that will result in economic, environmental and social benefits to Australia; expand Australia's knowledge base and research capability; support excellent, internationally competitive research by individuals; and build and sustain world-class research teams and linkages. ⁴⁰
New Zealand						
James Cook Fellowships	5 awards granted per year.	amount is equivalent to an associate professor's salary at a university in New Zealand - approximately NZ \$86,245 ⁴¹ (equivalent to CAN \$73,651)	Fellowships last for a period of 2 years, but may be extended to 3, depending on the researcher's second-year review.	All disciplines	"Excellent" researchers who are nationals or (normally) residents of New Zealand.	Created in 1995, the James Cook Fellowship program in New Zealand is widely recognized as one of the country's most prestigious research awards. Its key objectives are to "support researchers with knowledge, skills and ideas and to recognize research professionals of excellence". ⁴² Unlike the Canada Research Chairs Program in which nationality/ residence of researchers is not considered, New Zealand's James Cook Fellowship Program aims to attract only "excellent" researchers who are nationals or (normally) residents of New Zealand. Nonetheless, Fellowship researchers are permitted to conduct their research either in an institution in New Zealand or overseas.
NZ Science and Technology Post-Doctoral Fellowships		Up to NZ \$72,500 per year (equivalent to CAN \$62,024). Fellows also have the opportunity to apply for an additional NZ \$3,000 (CAN \$2,567) for skill development. ⁴³	3 years	All disciplines. However, it is anticipated that, for 04-05, 50% of Fellowships will be targeted in areas of advanced biological, medical and health, information and communications, and technology sciences. ⁴⁴	"Emerging" researchers (i.e., researchers who have completed PhD study within the last 5 years). Recipients must also be nationals or permanent residents of New Zealand	The government of New Zealand created the NZ Science and Technology Post-Doctoral Fellowships to facilitate the development and enhancement of "science, technology and engineering skills and knowledge in New Zealand researchers who are of outstanding talent, and to apply the accumulative benefit to New Zealand". ⁴⁵ Fellowship applicants are assessed based on their academic and research "excellence", as well as the excellence of the proposed research

⁴⁰ Ibid.

⁴¹ The University of Auckland. "Salary Scale for Academic Staff".

<http://www.vacancies.auckland.ac.nz/acsalary.asp>

⁴² The Royal Society of New Zealand. p.1

⁴³ Foundation for Research Science and Technology, Government of New Zealand. "Notes for Applicants: NZ Science & Technology Post-Doctoral Fellowships". Wellington, New Zealand. 2004.

<http://www.frst.govt.nz/students/postdocs.cfm>. p.3

⁴⁴ Ibid.

⁴⁵ Ibid. p.2.

Country/ Program Name	Number of Awards	Level of Funding	Number of Years Funding	Eligible Disciplines	Intended Recipient	Description
						and its contribution to New Zealand. Applicants to the NZ Science and Technology Post-Doctoral Fellowships must also be nationals or permanent residents of New Zealand. The research, however, can be conducted overseas as long as the candidate has the intention of returning to the country. ⁴⁶
Japan						
JPS (Japan Society for the Advancement of Science) Postdoctoral Fellowship Program for Foreign Researchers (Gaikokujin Tokubetsu Kenkyuin)	200 fellowships per year.	Total funding ranges from ¥6,462,500 to ¥12,666,500 i.e., the equivalent of approximately CAN \$78,947 to CAN \$154,752 ⁴⁷	Fellowships may be granted for a period of 12 to 24 months. ⁴⁸	All disciplines	Young post-doctoral researchers from overseas	The JPS Postdoctoral Fellowship Program in Japan might be most easily compared with the Canada Research Chairs Program at the Tier 2 level. The key objective of this funding program is to attract young post-doctoral researchers from overseas to conduct cooperative research in the country's universities/ research institutions, so that these researchers might "advance their own research while contributing to the advancement of research in Japan and the counterpart countries". ⁴⁹ Candidates for the JPS Postdoctoral Fellowship Program must be nominated by established researchers living in Japan. Similar to the CRCP awards, researchers are selected for the award based on research achievements, estimated contribution to research capacity and collaboration, as well as the future potential of their proposed research. ⁵⁰
United States						
Fulbright Distinguished Chairs Program	Currently there are 31 awards in 15 countries.	Amounts vary by country (e.g., the Fulbright-York University Chair has a total stipend of CAN \$20,000, while the German Distinguished Chair in American Studies has a monthly stipend of	Varies by country.	All disciplines	Renowned researchers with significant research/ publication and teaching records	Created in 1945, the Fulbright Program is considered the "U.S. government's flagship program in international educational exchange". ⁵² The program is sponsored by the U.S. Department of State's Bureau of Educational and Cultural Affairs, and is administered by the Council for International Exchange of Scholars (CIES). The key objective of the program is to facilitate cooperation and mutual understanding between the United States and foreign countries. ⁵³ The Fulbright Distinguished Chairs Program award is deemed one of

⁴⁶ Foundation for Research Science and Technology, Government of New Zealand. p.2.

⁴⁷ Japan Society for the Advancement of Science. "JPS (Japan Society for the Advancement of Science) Postdoctoral Fellowship Program for Foreign Researchers: Program Guidelines". Tokyo, Japan. 2004. <http://www.jsps.go.jp/english/e-fellow/guideline16.htm>

⁴⁸ Ibid.

⁴⁹ Ibid.

⁵⁰ Japan Society for the Advancement of Science.

Country/ Program Name	Number of Awards	Level of Funding	Number of Years Funding	Eligible Disciplines	Intended Recipient	Description
		5,000€/ CAN \$8,140). ⁵¹				the most prestigious awards within the Fulbright Scholar Program. Within the program, Fulbright scholars are expected to undertake research and lecture at a host institution in a foreign country. ⁵⁴
Howard Hughes Medical Institute (HHMI)	15 Canadians are supported by HHMI	Salary as opposed to an award	indeterminate	All disciplines	HHMI's international research scholars are promising scientists from outside the United States who are making significant contributions to understanding basic biological processes or disease mechanisms, but whose careers are still developing.	By appointing scientists as Hughes investigators — rather than awarding research grants — HHMI is guided by the principle of "people, not projects." The Institute solicits nominations from these institutions, with the aim of identifying researchers who have the potential to make significant contributions to science. Since the early 1990s, investigators have been selected through rigorous national competitions. Once selected, they continue to be based at their institutions, typically leading a research group of 10-25 students, postdoctoral associates and technicians, but become Institute employees and are supported by field staff throughout the country.
Faculty Early Career Development (CAREER) Program	300 to 350 every year	Total amount of funding varies from US \$200,000 to US \$500,000 ⁵⁵	5 years	Natural sciences and social science disciplines.	Outstanding new faculty/ researchers	The CAREER award, administered by the National Science Foundation (NSF) in the United States, is deemed one of the most prestigious awards for new faculty. The objective of the CAREER program is to recognize and support the "early career- development activities of those teacher-scholars who are most likely to become the academic leaders of the 21st century". ⁵⁶ With its focus on junior researchers, the CAREER awards may be most comparable to the Canada Research Chairs Program- Tier 2 awards. The program is, however, on a much smaller scale than the CRCP, as it grants significantly fewer awards.
Presidential Early Career Awards for Scientists and Engineers (PECASE)	60 awards per year	Total funding US \$500,000	5 years	The PECASE Awards are granted only in the disciplines of science and technology	"Excellent" faculty/ researchers. Recipients of this award must be United States citizens, nationals or permanent residents.	From among the CAREER award winners, the National Science Foundation can select nominees for the Presidential Early Career Awards for Scientists and Engineers (PECASE). Created in 1996, this program is considered the "highest honor bestowed by the United States government on young professionals

⁵¹ Council for International Exchange of Scholars (CIES). "Fulbright Distinguished Chairs Program". Washington, DC, United States. 2004. http://www.cies.org/ab_dc/

⁵² Council for International Exchange of Scholars (CIES). "Fulbright Scholar Program". Washington, DC, United States. http://www.cies.org/about_fulb.htm.

⁵³ Ibid.

⁵⁴ Council for International Exchange of Scholars (CIES). "Fulbright Distinguished Chairs Program".

⁵⁵ National Science Foundation. "Faculty Early Career Development (CAREER) Program". Arlington, Virginia, USA. 2002. <http://www.nsf.gov/home/crssprgm/career/start.htm>. p. 3

⁵⁶ National Science Foundation. "2004 Guide to Programs: NSF Funding Opportunities". Arlington, Virginia, USA. 2004. <http://www.nsf.gov>. p.12

Country/ Program Name	Number of Awards	Level of Funding	Number of Years Funding	Eligible Disciplines	Intended Recipient	Description
						at the outset of their independent research careers". ⁵⁷ Some of the key objectives of the program include: continuing the development of awardees; fostering innovative developments in science and technology; promoting connections between research and national goals; and emphasizing the importance of science and technology for the nation's future. ⁵⁸
** (Proposed) Basic Assistance Grant- Federal Research Chair		Level 1 Chairs are granted \$200,000 per annum, Level 2 Chairs are granted \$100,000 per annum.	Level 1 Chairs: 7 years (renewable) Level 2 Chairs: 5 years (renewable once).	Physical, natural, social, and biomedical sciences and engineering,	Level 1: researchers who have been acknowledged by their peers as world-class leaders in their field of research. Level 2: researchers who have been acknowledged by their peers of having the potential to become world-class leaders in their field of research.	<p>The United States Federal Demonstration Partnership (FDP), an organization made up of 10 federal agencies and 92 research institutions, works to "streamline the administration of federally sponsored research" by maximizing research resources and minimizing administrative costs.⁵⁹ In January 2004, this association held a committee meeting with the purpose of evaluating funding award mechanisms based on program versus project models. One of the proposed initiatives that came out of this meeting was the Basic Assistance Grant- The Federal Research Chair program.⁶⁰ The Federal Research Chairs program is still under review.</p> <p>The proposed Federal Research Chair program is modeled on the CRCP. The program's design is almost identical to that of the CRCP. For instance, Chairs are granted to "excellent" researchers in the disciplines of physical, natural, social, and biomedical sciences and engineering, who are considered leaders in their respective discipline. Researchers are nominated by their universities, and are selected based on: "1) scientific merit; 2) relevance to the mission and areas of research interests of the federal agencies; 3) multiple grants; 4) a minimum of 2 years of remaining funding; and 4) a total annual research portfolio at the time of nomination that is greater than \$500,000 direct costs".⁶¹</p> <p>The key objectives of the program are different from those of the CRCP. Although the programs have the similar objective of advancing knowledge in the Chairs' research fields through individual and collaborative work with other researchers, the Federal Research</p>

⁵⁷ Ibid.

⁵⁸ National Science Foundation.

⁵⁹ Federal Demonstration Partnerships. "About Federal Demonstration Partnerships". http://thefdp.org/About_FDP.html

⁶⁰ Ibid.

⁶¹ Federal Demonstration Partnerships. "The Basic Assistance Grant- the Federal Research Chair (Draft of 12/8/03)". http://thefdp.org/BA_FedChair_Draft.pdf.

Country/ Program Name	Number of Awards	Level of Funding	Number of Years Funding	Eligible Disciplines	Intended Recipient	Description
						Chairs program has a greater focus on facilitating research and grants administration and long-term financial security.