



Canada's commitment to cancer research demonstrated in new CCRA report ***5¢ of every \$1 spent by the federal government on science and technology R&D went to cancer research in 2006***

Tuesday August 26, 2008 (TORONTO) – The Canadian Cancer Research Alliance (CCRA), in its second and expanded survey of cancer research investment in Canada, estimates that 5 cents of every \$1 spent by the federal government on all extramural science and technology R&D went to cancer research in 2006. The survey represents the most comprehensive examination of federal government investment in cancer research undertaken to date, and also provides investment figures from many of the major provincial government organizations and voluntary sector organizations that fund cancer research.

Excluding partner contributions, the federal investment in cancer research was \$212.3M out of an estimated \$3,764M of overall extramural federal R&D spending in 2006/07.¹ Research investment by the Canadian Institutes of Health Research (CIHR), Canada's lead federal funding agency for health research, accounted for the largest proportion of the cancer research investment at \$121.8M. Other federal investments exceeding \$10M were made by the Canada Foundation for Innovation (\$32.2M), the Indirect Costs program (\$22.7M) and the Canada Research Chairs program (\$17.0M).

Dr. Alain Beaudet, new President of CIHR, applauds CCRA's work in quantifying Canadian investment in cancer research. "Cancer research is a critical part of Canada's strength in health research and related sciences," says Dr. Beaudet. "The CCRA report shows the commitment of the federal government in the area of cancer research and illustrates the vital role played by CIHR as the leading funder of cancer researchers who continue to make headway in our understanding of this formidable disease."

"By not only quantifying but qualifying Canada's cancer research investment in terms of the types of research being conducted and the cancer sites being studied, our survey helps to inform cancer research funders as well as key groups like The Canadian Partnership Against Cancer on how future investments may need to be targeted in order to facilitate key discoveries in cancer prevention, detection, treatment and ongoing care," adds Dr. Elizabeth Eisenhauer, Chair of the CCRA and President of the National Cancer Institute of Canada.

Formalized in December 2003, CCRA is an alliance of cancer research funding organizations and affiliated partners working together to enhance the overall state of cancer research funding in Canada through improved communication, cooperation and coordination. Members include federal and provincial government organizations, non-government organizations and other key stakeholders within the cancer research arena. The Alliance also advises The Canadian Partnership Against Cancer on its research agenda. "The survey is important to The Partnership because it provides valuable information about the research landscape in Canada," says Ms. Jessica Hill, CEO of The Partnership. "Our organization assumed full funding of the 2007 survey, which is currently underway, and we look forward to facilitating the development of a pan-Canadian cancer research strategy over the next several months."

Survey Highlights

The Canadian Cancer Society was the single largest cancer research funder among the 10 voluntary organizations surveyed with an investment of \$44.7M, which represented nearly 12% of the total investment in 2006. Organizations, other than federal government, surpassing the \$10M cancer research investment figure in 2006 were The Terry Fox Foundation (\$19.1M), Ontario Institute for Cancer Research (\$13.3M), and Fonds de la recherche en santé du Québec (\$10.3M).

¹Based on federal government expenditures on scientific activities as published by Statistics Canada in the December 2007 edition of *Science Statistics* (Table 5-1) available at <http://www.statcan.ca/english/freepub/88-001-XIE/88-001-XIE2007008.pdf>.

This year's report provides a detailed analysis of the cancer research investment by six types of funding mechanisms: operating grants; equipment/infrastructure grants; career awards; trainee awards; institutional support; and related support grants. This stratification improves the capacity to produce comparable analysis for organizations and provinces.

Operating grants, competitive grants that support all the direct costs involved in conducting research, accounted for \$209M of the cancer research investment in 2006, and the majority of this investment (63%) came from funding programs that did not restrict researchers in terms of research area or cancer site. The survey suggests that funding programs that focus on specific research areas and/or cancer sites do fill important roles in terms of broadening the scope of research activity undertaken. The operating grant investment also showed a distinct regional distribution based on funding source when provincial populations were factored in. Per capita federal investment was highest in Quebec at nearly \$5 per person, whereas provincial investment was highest in Alberta at nearly \$2 per person, and investment by voluntary organizations was highest in Ontario at nearly \$3 per person. When the funding sources were pooled, per capita investment exceeded \$5 per person in Ontario, Quebec, British Columbia and Alberta.

Equipment/infrastructure grants accounted for \$116.7M of the 2006 cancer research investment, with the largest share of this investment being from the Canada Foundation of Innovation at \$80.4M (this included the federal contribution of \$32.2M and the estimated partner contribution of \$48.2M).

Career awards, which, for the purposes of the report, included salary awards, research chairs and establishment grants, accounted for \$37.5M of the overall cancer research investment in 2006. Nearly half of this investment (45%) was accounted for by the Canada Research Chairs program. During 2006, there were 211 chairs engaged in cancer research as part of their research activities.

In terms of trainee awards, \$26.6M was invested in trainees, most (86%) of whom were studying at Canadian institutions. Post-doctoral awards/fellowships accounted for 40% of this investment.

Over half (53%) of the overall cancer research investment was for research which was applicable to all cancers, and not specific to a cancer site. Site-specific cancer research comprised \$183.5M of the investment, with six cancer sites accounting for 70% of this investment: breast (\$48.4M); leukemia (\$23.5M); prostate (\$16.8M); colorectal (\$14.0M); brain (\$13.1M); and lung (\$12.4M). The distribution of the site-specific cancer investment varied by funding mechanism.

Future Directions

"There are several important initiatives underway which will shape the dollar distribution over the coming years, and this will be tracked in upcoming years of the survey" explains Dr. Eisenhauer. These include:

- *The Canadian Partnership for Tomorrow Project*, a pan-Canadian cohort study of 300,000 Canadians supported by The Canadian Partnership Against Cancer and its regional partners, the BC Cancer Agency, the Alberta Cancer Board, Cancer Care Ontario with the Ontario Institute for Cancer Research, Quebec's CARTaGENE project, and Cancer Care Nova Scotia with Dalhousie University collaborating for work in the Atlantic Provinces.
- The Canadian Cancer Society has launched a special Cancer Research Prevention Initiative. Its first program is focused on research into modifiable risk factors and conditions in cancer. This research program will receive up to \$3 million over the next three years. In an effort to fill another area of unmet need, the Canadian Cancer Society will also be establishing a special Centre for Health Economics, Services, Policy and Ethics Research in Cancer Control.
- The creation of The Terry Fox Research Institute, which links major research centres across Canada to focus on translational research – research designed to accelerate the pace at which scientific discoveries become practical solutions to benefit cancer patients
- The Centres of Excellence for Commercialization and Research, a key element of Canada's Science and Technology Strategy, which began funding two centres focused on cancer research in 2008.
- Recruitment by the Ontario Institute for Cancer Research of a planned 50 internationally recognized principal investigators who will work on innovation programs and platforms as well as translational research programs.

Canadian Cancer Research Survey

The Canadian Cancer Research Survey is the second collaboratively funded survey undertaken by CCRA members. Information was gathered on all research projects actively funded in calendar year 2006 (4,415 projects in total catalogued) by 34 cancer research funding organizations. All projects within the CCRA database were classified according to type of research and type of cancer. The Common Scientific Outline (CSO), an international classification system specific to cancer research,

was used as the tool to classify research type. The International Statistical Classification of Diseases and Related Health Problems, 10th Revision, Version for 2007 (ICD-10) was used to classify cancer site.

The term “cancer research investment” is used within the CCRA report to represent cancer research projects that received some form of peer review, and were administered by the organizations participating in the survey. Unless otherwise noted, research projects were included under the organization which administered the grants and awards programs even in those situations where the project was funded by more than one organization. For the full report, “Cancer Research Investment in Canada,” a video clip, and a PowerPoint presentation, please go to the CCRA web site at http://www.ccra-acrc.ca/default_en.htm.

Canadian Cancer Research Alliance (CCRA) Members & Affiliated Partners

The 24 member organizations of CCRA are: Alberta Cancer Board; Alberta Heritage Foundation for Medical Research; BC Cancer Agency; Canadian Association of Provincial Cancer Agencies; Canadian Breast Cancer Foundation; Canadian Breast Cancer Research Alliance; Canadian Cancer Society; Canadian Institutes of Health Research; CancerCare Manitoba; Cancer Care Nova Scotia; Cancer Care Ontario; Fonds de la recherche en santé du Québec; Genome Canada; Michael Smith Foundation for Health Research; National Cancer Institute of Canada; National Research Council of Canada; New Brunswick Cancer Network; Ontario Institute for Cancer Research; Prostate Cancer Research Foundation of Canada; Public Health Agency of Canada; Saskatchewan Cancer Agency; The Canadian Partnership Against Cancer; The Cancer Research Society; and The Terry Fox Foundation. Affiliated partners include Canadian Prostate Cancer Research Initiative, Canadian Tobacco Control Research Initiative, and the Quebec Breast Cancer Foundation/Fondation du cancer du sein du Québec.

About The Canadian Partnership Against Cancer

The Canadian Partnership Against Cancer is an independent organization funded by the federal government to accelerate action on cancer control for all Canadians. It brings together cancer survivors, patients and families, cancer experts and government representatives to implement the first pan-Canadian cancer control strategy. The Partnership’s vision is to be a driving force to achieve a focused approach that will help prevent cancer, enhance the quality of life of those affected by cancer, lessen the likelihood of dying from cancer, and increase the efficiency of cancer control in Canada.

Figures and Tables

Figure 1. Distribution of 2006 federal government investment in cancer research by organization/program

Figure 2. Distribution of 2006 cancer research investment by funding mechanism

Table 1. 2006 cancer research investment of organizations participating in the 2006 survey

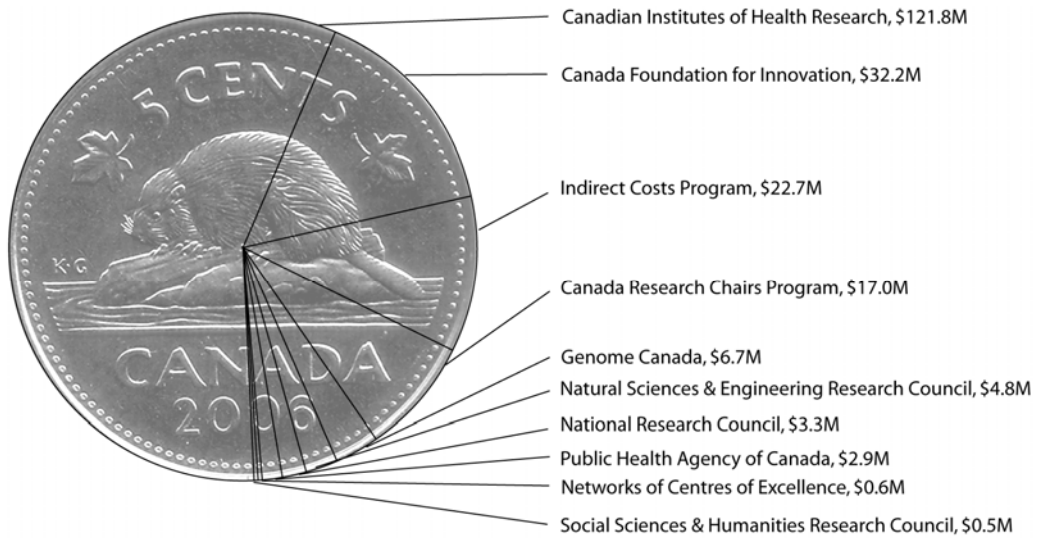
Figure 3. Per capita investment in cancer research operating grants in 2006 by province/region of principal investigator

Table 2. 2006 cancer research investment by cancer site and funding mechanism

For more information or to arrange an interview, please contact:

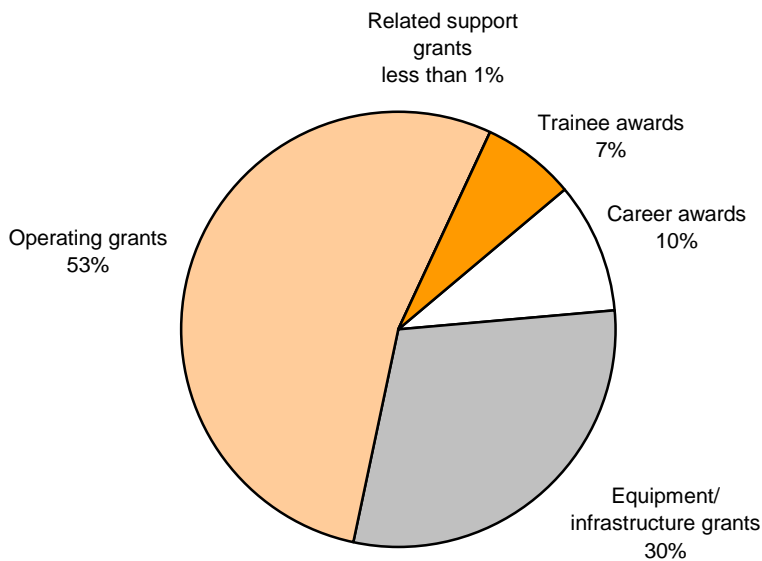
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FIGURE 1.
Distribution of 2006 federal government investment in cancer research by organization/program (\$212.3M) [1]



[1] Excludes partner contributions.

FIGURE 2.
Distribution of 2006 cancer research investment by funding mechanism (\$390.2M) [1]



[1] Excludes the estimate of the cancer-related component of the federal government's Indirect Cost program (\$22.7M).

TABLE 1.
2006 cancer research investment of organizations participating in the 2006 survey

Organization type	Organization	2006 Investment with Initiatives and Partner Contributions Included [1]
Federal government [2]	Canada Foundation for Innovation [3]	\$80,405,822
	Canada Research Chairs Program	\$16,957,083
	Canadian Institutes of Health Research	\$126,460,719
	Genome Canada [4]	\$13,773,584
	National Research Council	\$3,280,751
	Natural Sciences and Engineering Research Council	\$5,199,487
	Networks of Centres of Excellence [5]	\$1,763,695
	Social Sciences and Humanities Research Council	\$537,588
Provincial cancer agency	Alberta Cancer Board	\$9,530,181
	CancerCare Manitoba	\$1,151,874
	Cancer Care Nova Scotia	\$160,000
	Cancer Care Ontario	\$8,620,667
	Saskatchewan Cancer Agency	\$262,134
Provincial health research organization	Alberta Heritage Foundation for Medical Research	\$6,636,372
	Fonds de la recherche en santé du Québec	\$10,322,622
	Manitoba Health Research Council	\$428,680
	Medical Research Fund of New Brunswick	\$45,000
	Michael Smith Foundation for Health Research	\$6,621,855
	Nova Scotia Health Research Foundation	\$401,583
	Ontario Institute for Cancer Research	\$13,297,389
Saskatchewan Health Research Foundation	\$322,258	
Voluntary sector	Brain Tumour Foundation of Canada	\$160,723
	C17 Research Network	\$59,300
	Canadian Breast Cancer Foundation	\$7,556,566
	Canadian Cancer Society	\$44,730,918
	Ovarian Cancer Canada	\$79,000
	Prostate Cancer Research Foundation of Canada	\$1,183,059
	Quebec Breast Cancer Foundation/Fondation du cancer du sein du Québec	\$1,066,667
	The Cancer Research Society	\$5,801,790
	The Kidney Foundation of Canada	\$151,953
The Terry Fox Foundation	\$19,055,919	
Multi-sectoral partnership	Canadian Breast Cancer Research Alliance [6]	\$4,144,359
TOTAL		\$390,169,595

[1] Shows investment in the Canadian Breast Cancer Research Alliance, Canadian Prostate Cancer Research Alliance, and Canadian Tobacco Control Research Initiative under the organizations funding those initiatives.

[2] Excludes the estimate of the cancer-related component of the federal government's Indirect Cost program (\$22.7M).

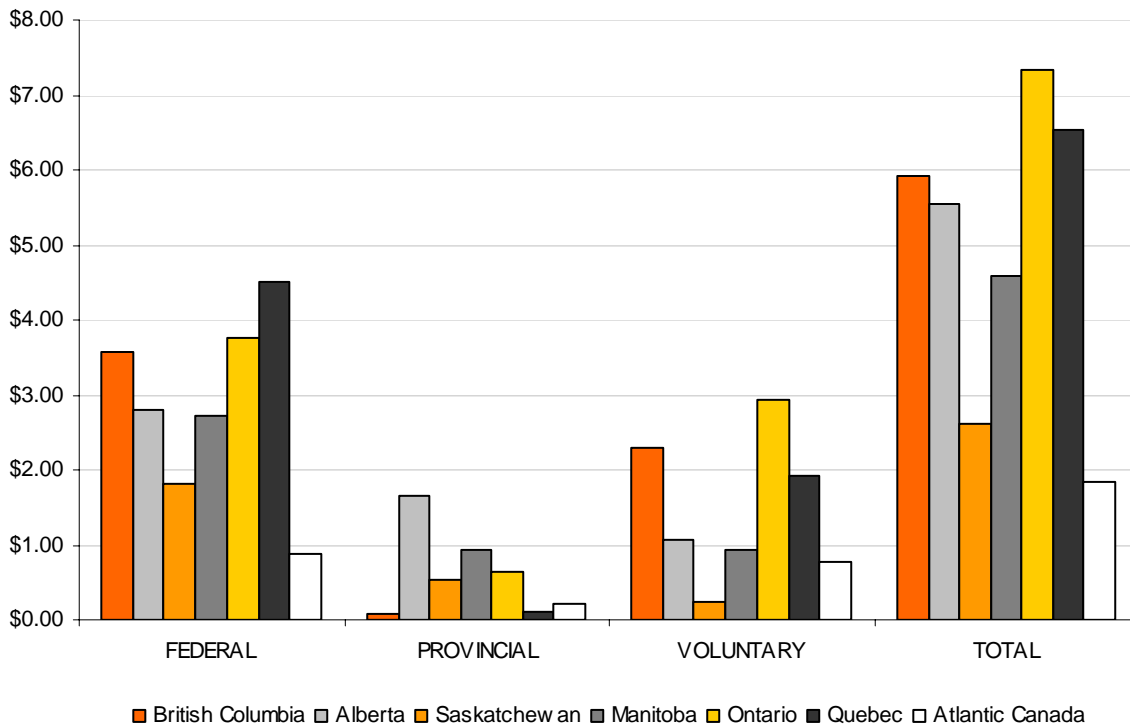
[3] The federal government contribution to the CFI projects was \$32.2M.

[4] The federal government contribution to Genome Canada projects was \$6.7M.

[5] This figure does not include funding for network management and activities. It reflects investment in cancer research projects funded by specific networks.

[6] Includes support provided by Avon Canada (\$0.95M), Breast Cancer Society of Canada (\$0.11M), CURE Foundation (\$0.23M) and the Public Health Agency of Canada (\$2.85M). Support provided by Canadian Breast Cancer Foundation, Canadian Cancer Society, Canadian Institutes of Health Research, and The Cancer Research Society are included in the figures shown for these organizations. Total research investment (all partner contributions combined) for the Canadian Breast Cancer Research Alliance was \$10.0M.

FIGURE 3.
Per capita investment in cancer research operating grants in 2006 by province/region of principal investigator (\$199.8M)



[1] The breakdown shown is based on the sector that contributed the investment, rather than the sector administering the funding program (i.e. partner contributions are allocated to their respective sector). It also excludes partner contributions made by institutions, industry and other voluntary organizations that did not participate in the survey.

TABLE 2.
2006 cancer research investment by cancer site and funding mechanism (\$183.5M)

Cancer Site	Career awards		Equipment/ infrastructure		Operating grants		Related support grants		Trainee awards		TOTAL	
	\$	%	\$	%	\$	%	\$	%	\$	%	\$	%
Brain	\$1,414,206	8.2	\$2,142,051	11.1	\$8,496,137	6.3	\$12,250	3.4	\$1,030,234	8.5	\$13,094,878	7.1
Breast	\$3,424,287	19.9	\$3,496,584	18.1	\$38,540,846	28.7	\$26,023	7.2	\$2,911,608	23.9	\$48,399,348	26.4
Colorectal	\$1,816,183	10.5	\$458,477	2.4	\$10,931,799	8.1	\$33,060	9.2	\$781,414	6.4	\$14,020,934	7.6
Leukemia	\$2,920,165	17.0	\$1,854,291	9.6	\$17,175,572	12.8	\$5,667	1.6	\$1,541,813	12.7	\$23,497,508	12.8
Lung	\$610,279	3.5	\$445,222	2.3	\$9,892,768	7.4	\$64,009	17.7	\$1,359,038	11.2	\$12,371,316	6.7
Prostate	\$1,018,083	5.9	\$4,792,074	24.9	\$10,157,312	7.6	\$27,105	7.5	\$783,763	6.4	\$16,778,337	9.1
Other sites	\$6,022,264	35.0	\$6,078,796	31.5	\$39,318,905	29.2	\$192,535	53.4	\$3,761,321	30.9	\$55,373,822	30.2
Total	\$17,225,467	100.0	\$19,267,495	100.0	\$134,513,339	100.0	\$360,648	100.0	\$12,169,193	100.0	\$183,536,142	100.0