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Research and Development (R&D) expenditures of Private Non-Profit (PNP) organizations, 2002

This release provides data on the R&D activities of the private non-profit sector. The growing partnerships between Universities, Hospitals and Research Institutes has reduced the impact of the PNP sector in the national R&D effort. Due to the decreasing magnitude of this sector, we will no longer feature the PNP data in our Service Bulletin series. Statistics Canada will continue to collect the data as it contributes to *Gross Expenditures on Research and Development (GERD)*. Users are invited to contact us for special requests.

We would like to take this opportunity to thank all of the private non-profit organizations for their continued cooperation.

Highlights

- The total intramural R&D expenditures of Private Non-Profit (PNP) organizations were \$54 million in 2002. This represents just less than a 2% increase over the revised figures of 2001 (see Table 1 and Chart 1).
- About 55% of the R&D expenditures performed by PNP organizations in 2002 were financed by the private sector. This includes funding from reporting organizations, business enterprises, and other Canadian sources (primarily other PNP funding organizations). Tables 2 and 3 as well as Chart 2 provide additional information on these sources of funds.
- Seventy-four percent of the intramural R&D expenditures of PNP organizations were devoted to medical sciences in 2002 (Table 4). The PNP sector has always concentrated its R&D expenditures in the medical sciences. This has led to the growing relationship with the university and hospital sectors.
- Cellular Biology continues to rank as the most prevalent field of medical research within the PNP Sector (Table 6).

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The organizations which make up the PNP sector are grouped into four types:

- private philanthropic foundations
- voluntary health organizations
- associations and societies
- research institutes

Private philanthropic foundations are active mainly in charitable and educational work rather than R&D and therefore allocate all of their R&D funds to extramural projects carried out by other non-profit organizations or in universities.

Larger voluntary health organizations are generally concerned with a specific topic, for example, cancer treatment and research. Most of their funds come from individuals and organizations through periodic campaigns or bequests. The support of medical R&D accounts for all of their expenditures.

Associations and societies are not usually active in R&D. The 2002 survey found two which were involved in intramural R&D, both in non-medical fields.

Research institutes conduct most of the R&D in the sector, largely in the medical sciences (see Table 4).

Field of R&D	1993	1994	1995	1996	1997	1998	1999	2000	2001 ^r	2002
	millions of dollars									
Medical sciences	67	74	79	77	72	67	48	44	40	40
Other natural sciences	3	3	2	3	1	2	6	11	9	10
Social sciences and humanities	5	9	10	10	9	9	10	3	4	4
Total	75	86	91	90	82	78	64	58	53	54

Chart 1. Intramural R&D expenditures in the PNP sector, 1993 to 2002

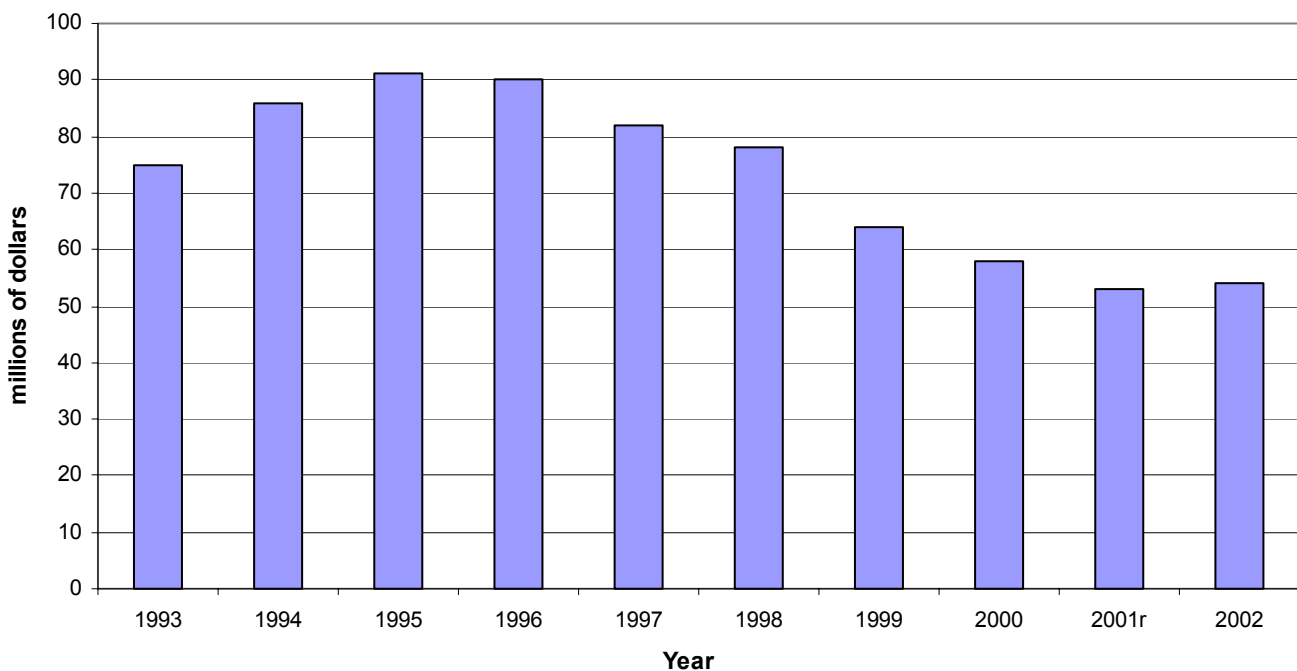


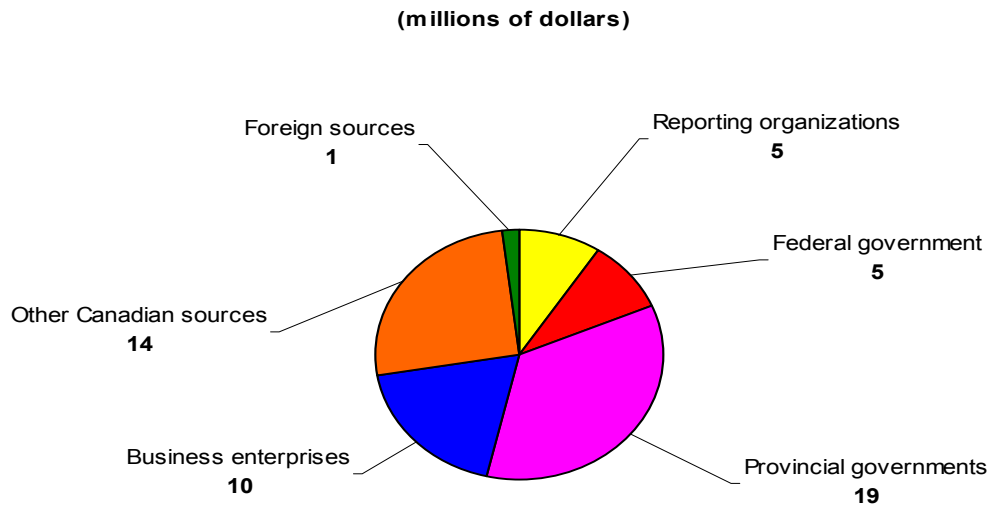
Table 2. Sources of funds for intramural R&D in the PNP sector (all sciences), by type of organization¹, 2002				
Sources of Funds	Voluntary Health Organizations	Associations and Societies	Research Institutes	Total
millions of dollars				
Reporting organizations ²	0	0	5.4	5.4
Federal government	1.0	0.1	3.7	4.8
Provincial governments	12.5	0	6.1	18.6
Business enterprises	7.2	0.2	2.5	9.9
Other Canadian sources ³	1.9	0.1	12.3	14.3
Foreign sources	0	0.5	0.3	0.8
Total	22.6	0.9	30.3	53.8

1 Private philanthropic foundations allocate all of their R&D funds to extramural projects carried out by other non-profit organizations or in universities.

2 E.g. interests on own funds, investment income, membership dues, trust funds, payments from patients.

3 Primarily PNP organizations.

Chart 2. Sources of funds for intramural R&D in the PNP sector, 2002



Sources of Funds	1993	1994	1995	1996	1997	1998	1999	2000	2001 ^f	2002
	millions of dollars									
Reporting organizations ¹	11	21	24	23	20	16	21	8	5	5
Federal government	10	9	8	8	7	11	7	4	4	5
Provincial governments	16	18	17	18	20	19	16	16	17	19
Business enterprises	14	14	17	10	11	9	6	10	8	10
Other Canadian sources ²	17	17	19	23	23	21	11	19	18	14
Foreign sources	7	7	6	8	1	2	3	1	1	1
Total	75	86	91	90	82	78	64	58	53	54

1 E.g. interests on own funds, investment income, membership dues, trust funds, payments from patients.

2 Primarily PNP organizations.

Field of R&D	Voluntary Health Organizations	Associations and Societies	Research Institutes	Total
	millions of dollars			
Medical sciences				
Current expenditures	22.4	0	16.0	38.4
Capital expenditures	0.2	0	1.0	1.2
Sub-total	22.6	0	17.0	39.6
Other natural sciences				
Current expenditures	0	0.3	9.3	9.6
Capital expenditures	0	0.2	0	0.2
Sub-total	0	0.5	9.3	9.8
Social sciences and humanities				
Current expenditures	0	0.4	3.9	4.3
Capital expenditures	0	0	0.1	0.1
Sub-total	0	0.4	4.0	4.4
All sciences				
Current expenditures	22.4	0.7	29.2	52.3
Capital expenditures	0.2	0.2	1.1	1.5
Total	22.6	0.9	30.3	53.8

1 Private philanthropic foundations allocate all of their R&D funds to extramural projects carried out by other non-profit organizations or in universities.

Table 5. Number of persons engaged in R&D in the PNP sector (all sciences), by occupational category, 2002				
Occupational Category	Full-time staff		Part-time Staff mainly Engaged In R&D	Total
	Mainly Engaged In R&D	Engaged Part-time In R&D		
	person-years			
Scientists and engineers	142	107	6	255
Technicians and technologists	181	7	55	243
Other	236	25	42	303
Total	559	139	103	801

Table 6. Most prevalent fields of medical research, 2002	
Medical field	Number of Organizations
Cellular biology	6
Haematology	5
Immunology	4
Cancer	3
Genetics	3
Other medical fields	3
Drug and their effects	2
Nutrition and metabolism	2
Visual sciences	1
Endocrinology	1

Symbols

r revised figures

0 amount too small to be expressed, nil or zero

Note

Due to rounding, components may not add to totals.

The effort of responding organizations in providing data not always readily available is gratefully acknowledged.

This publication was prepared by **Jason Leonard**, under the supervision of **Rob Schellings**, Science, Innovation and Electronic Information Division.

<http://www.statcan.ca/english/IPS/Data/88-001-XIE.htm>

Current publications of the Science and Innovation Surveys Section include:

Industrial Research and Development, 2003 Intentions

(with 2002 preliminary estimates and 2001 actual expenditures). Catalogue No. 88-202-XIE. It presents statistics on research and development (R&D) activities performed and funded by Canadian business enterprises. The report covers current and capital expenditures on R&D, R&D as a percent of performing company revenues, R&D expenditures by province, the company's country of control, personnel engaged in R&D and payments for technological services.

<http://www.statcan.ca/english/IPS/Data/88-202-XIE.htm>

For information on concepts, survey methodology and data quality, please refer to the above publication.

Federal Scientific Activities, 2002-2003

Catalogue No. 88-204-XIE, Annual. It presents statistics on the Federal Government's activities in science and technology (S&T). It covers expenditures and person-years by type of science, performing sectors, provinces, Federal departments and agencies.

<http://www.statcan.ca/english/IPS/Data/88-204-XIE.htm>

Note of appreciation

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