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**CANADIAN BIOTECHNOLOGY COMMUNITY'S
PRACTICES, ATTITUDES AND OPINIONS
REGARDING THE RESEARCH EXEMPTION
AND METHODS OF MEDICAL TREATMENT
EXEMPTION IN CANADIAN PATENT LAW**

FINAL REPORT

PN 4720

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Industry Canada

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1.0 EXECUTIVE SUMMARY

Environics Research Group Ltd is pleased to present this report on quantitative survey research findings to Industry Canada. These findings are based on a quantitative survey of 256 Canadians from the biotechnology research community conducted between November 13 and 24, 2000. When speaking nationally, these results are accurate to within +/- 6.1 percent, 19 times out of twenty. The margins of error are wider for the various subsamples.

Respondent Profile

Survey respondents from the biotechnology research community represent a diverse group. They represent all regions of the country and are more likely to be men than women. Survey respondents are well distributed among a variety of different size organizations.

The biotechnology research community members we interviewed were a mix of research managers, researchers, and end users of research results (i.e. someone involved in applications of biotech research) from both the private and non-private sectors. Survey respondents from the non-private sector include those working for government, Academia, hospitals and not-for-profit organizations.

In general, the individuals we interviewed from the biotechnology research community have relatively high levels of experience. Two-fifths (41%) have between 11 and 20 years of work and school experience in this field, one-third (35%) have 21 years or more experience and one in five (22%) have 10 years or less work and school experience in the field of biotechnology.

A slight majority (54%) of the biotechnology research community acquired their experience in this field entirely in Canada. When we examine the other countries community members have gained some school or work experience in the field of biotechnology, the United States (50%) and the European Union (46%) clearly emerge as the predominant areas. One in ten cite Australia/New Zealand (13%) as a place where they acquired some of this experience.

Awareness

We explored biotechnology research community members' awareness of five different patent issues, namely, the Federal Court of Appeal's recent ruling on the Harvard onco-mouse, the research exemption¹ in Canada, the current situation in Canada with respect to patent protection for methods of medical treatment, patents for the human

¹ In this report the term "research exemption" is intended to be synonymous with the phrase "research defence". A research defence does not exclude an invention from patent protection; rather it is a defence to a claim of patent infringement. If it is invoked, it is precisely because there is a patent on the invention that the researcher used. Most commonly, when a researcher is sued for infringement, he can invoke this defence provided he meets its requirements.

genome and Genome Canada. Overall, awareness levels vary considerably for each of these issues ranging from approximately one in seven for the current situation in Canada with respect to patent protection for methods of medical treatment to three-fifths of community members who correctly identify the definition for patents for the human genome and properly identify Genome Canada.

When we examine these five issues, as a test of general awareness of intellectual property issues, we find that the biotechnology research community's awareness and understanding of patenting issues is moderate at best. One-half of community members (52%) fall into the medium awareness category (52% able to correctly identify 2 or 3 of the five patenting issues). Furthermore, it is worth noting that almost twice as many members of the biotechnology research community members have a low level of understanding (31% correctly identify 0 or 1 issue) than do those that have a high level of understanding (17% correctly identify 4 or 5 of the patenting issues).

The profile of a typical biotechnology research community member with a high level of awareness and understanding of the patenting issues examined is as follows: this individual would be a research manager based in Ontario working for a large organization in the non-private sector, most likely in Academia, government or a hospital specializing in human health. This person would have a long tenure in the field of biotechnology and would likely have concentrated on biology or biochemistry during their academic career. In addition, they are more likely to own patents, or work for organizations which own patents, favour the current scope of research exemptions in Canada, and agree with the current approach to patent protection for methods of medical treatment.

Patenting Experience

Overall, patent ownership is very common in the biotechnology research field. Seven out of ten biotechnology research community members (70%) report that they or their organization owns a patent. Equal proportions say that they do not own (neither the respondent nor their organization) a patent (15%) or that they have applied for a patent but do not yet own one (15%).

In general, the typical patent owner is a research manager who has at least 11 years of work and school experience in the field of biotechnology, works for a large organization and has multiple networking partners. Conversely, patent non-owners tended to be end users of research results that have less experience in this field and work for smaller organizations.

Concern about potential patent infringement appears to be inhibiting research activity in Canada. As well, it appears that concerns over other organization's patents have a greater effect on respondent's research activities earlier rather than later in the research process. One-third of biotechnology research community members (34%) report that personal concern or concern on the part of their organization about someone else's patent led them to not begin research work. Slightly less than one-third (29%) suggest

that such concern caused them to delay research work and one in five (20%) stopped research work because of their concern about someone else's patent. In total, more than two-fifths of all biotechnology research community members surveyed (44%) indicate that concern over patents led them to alter their research activities in at least one of three stages we examined.

It seems that actions of the biotechnology research community in Canada are most affected by concerns over U.S. patent holders, likely due to the stricter enforcement and policing of their patents in the United States. More than seven out of ten community members (73%) indicate that those patent holders who caused them enough concern to change their research work plans are located in the United States. Concerns about patent holders from other countries and their impact on research work in Canada appear to be much more muted.

Biotechnology community members based in Ontario and Quebec, those with more experience in the field of biotechnology, patent owners, community members from large organizations, and private sector researchers are the most likely to report that concerns over possible patent infringements have caused them to alter their research activities.

The Research Exemption

Overall, the biotechnology research community overwhelmingly agrees (78%) with allowing a research exemption to patent protection, with non-private sector researchers, patent owners, managers/researchers, and those more active in networking the biggest supporters. Furthermore, a plurality of community members (44%) is satisfied with the current scope of the research exemption while one-third (33%) suggest that the scope should be broadened. Less than one in ten (6%) suggest that the scope of the research exemption to patent protection should be narrowed.

Patent owners, community members based in Quebec, research managers/researchers and community members from large organizations tend to prefer keeping the scope of the research exemption at its current level. On the other hand, end users of research results, those from small organizations, community members with experience that is based entirely within Canada, and those based on the Prairies and in Ontario are more likely to suggest that the scope should be broadened.

Regardless of the desired scope for the research exemption, survey respondents from the biotechnology research community overwhelmingly would like to see the nature of the research exemption written into the *Patent Act*. However, it should be noted that those that would like to see the scope of a research exemption changed from its current status are even more likely than those who prefer that the scope be kept at its current level to want the nature of this exemption explicitly included in the *Patent Act*.

In general, it appears that use of the research exemption is relatively low. Minorities within the biotechnology research community report that they are aware of the use of the research exemption by other organizations (16%) or by their own organization or

themselves (19%). Furthermore, there have been relatively few instances where the patent holder disputed the use of a research exemption.

Once again, size of organization and patent ownership influence the practices of those within the biotechnology research community. Patent owners and those from larger organizations report greater use of the research exemption. End users of research results, community members based in Atlantic Canada, and those who work in the private sector are less frequent users of the research exemption.

Patent Protection and Methods of Medical Treatment

Given the low level of awareness of this topic, many members of the biotechnology research community find it difficult to comment on the current approach in Canada with respect to patent protection for methods of medical treatment. Those community members that do comment tend to be in agreement with the current approach. Community members who specialize in human health research, those who report medicine as the primary focus of their academic studies, and community members who currently work in both the private and non-private sectors have the highest level of overall agreement.

Biotechnology community members who disagree with the current approach have concerns about its perceived restrictive nature, a preference for exemptions for medical treatments provided by other countries, express a need for revisions to the exemption and highlighted the difficulties of enforcement.

Networking Experience

As with their peers in Academia or commercial fields, members of the biotechnology research community are actively engaged in networking. This activity is not confined to Canada, nor is networking confined to any particular sector or field of endeavour. Although some members of the biotechnology research community do not network as aggressively as others, it is a prevalent activity among all members of the community.

Among the biotechnology research community as a whole, a majority of participants say that they work most closely with colleagues from academic institutions (57%) or with private sector biotechnology researchers (52%). One-third of participants say that they work closely with government (32%) or with those who undertake research for private sector pharmaceutical companies (32%). One-quarter of community members (24%) include those who work with other (non-pharmaceutical) private sector organizations in their network. Just over one-in-five community members network with those from the hospital sector (22%) with an additional eight percent who say they work with those involved in other not-for-profit activities.

While community members tend to network with colleagues elsewhere in Canada (88%), a majority also report that they undertake networking activities with colleagues in the United States (58%) and a significant minority (35%) include representatives from

European Union countries in their network. Far fewer community members report networks that include the Far East (9%), Australia, New Zealand and Oceania (4%) and elsewhere in the world (5%).

Conclusions

The following represent the most salient findings from the survey of the biotechnology research community:

- Overall, we found that the biotechnology research community's awareness and understanding of patenting issues raised is moderate at best. Interestingly, biotechnology research community members who obtained some of their work or school experience in the United States are more likely than those who obtained their experience entirely in Canada to understand that the Canadian research exemption permits someone to use a patented invention in order to experiment on and improve thereon.
- Patent ownership is very common in the biotechnology field, with seven out of ten researchers or their organization owning a patent. The size of an organization appears to be a determinant factor in patent ownership.
- Overwhelmingly, the biotechnology research community strongly supports allowing a research exemption to patent protection and use of the research exemption tends to occur without dispute from the patent holder.
- While 44 percent of biotechnology community members have a preference for the status quo with respect to the scope of the research exemption, 33 percent suggest that the scope should be broadened. Regardless of the desired scope of a research exemption (status quo, broader, narrower), community members overwhelmingly would like to see their preferred approach written into the legislation.
- Concerns about potential patent infringement appear to be inhibiting research activity in Canada, especially early in the research process. It seems that actions of the biotechnology research community in Canada are most effected by concerns over U.S. patent holders, likely due to the stricter enforcement and policing of their patents.
- Many members of the biotechnology research community find it difficult to comment on the current approach in Canada with respect to patent protection for methods of medical treatment. Those community members that do comment tend to be in agreement with the current approach.
- Of the five patenting issues we tested, the relationship between patent protection and methods of medical treatment was the item with the lowest level of awareness. Interestingly, research managers and patent owners are more likely than researchers, patent non-owners, and research end users to be aware that Canada

does not grant patents for methods of medical treatment for use on animals or humans.

- It is clear that research managers, community members from the non-private sector, those with the most experience in the field of biotechnology, those from larger organizations and patent owners are the most actively engaged in patenting issues and activities. These individuals are not only the most aware of patenting issues, but they also tend to be more active with respect to patent ownership, more concerned about possible patent infringements, the most supportive of the current scope of the research exemption, more frequent users of research exemptions, and they have higher levels of agreement with the current approach in Canada with respect to patent protection for methods of medical treatment.

2.0 INTRODUCTION

Building on previous work regarding intellectual property issues and biotechnology, Industry Canada wanted to obtain a better understanding of the practices, attitudes and opinions of the biotechnology research community towards the research exemption², methods of medical treatment exemption, as well as other intellectual property issues of interest. In this report, we provide a description of the research methodology (Section 3.0) and a detailed profile of survey respondents (Section 4.0) to help provide some context for the survey findings. With respect to the survey findings, this report outlines biotechnology community members' level of awareness and understanding of various patent issues (Section 5.0). Community members' patenting experience (Section 6.0), including patent ownership and the effect of concerns over patents on research work is also discussed. The report also provides information on biotechnology community members' level of agreement with allowing a research exemption to patent protection, their preferred scope for, and the possible codification of, the research exemption, and their use of research exemption (Section 7.0). Patent protection and methods of medical treatment (Section 8.0) discusses community members' level of agreement with current approach in Canada with respect to patent protection and reasons for disagreement with the current approach. A description of biotechnology community members' networking experience (Section 9.0) is also provided. The final section of the report – Conclusions (Section 10.0) highlights the most salient survey findings.

To collect this information, we conducted interviews with various members within the biotechnology research community. This included researchers in the not-for-profit sector (i.e. those who work directly for academic, medical and government), researchers in the for-profit sector (i.e. those who work directly for commercial enterprises) and research end-users and managers from both sectors. In all, 256 members of the biotechnology research community were interviewed. When speaking about the research community as a whole, the results are accurate to within +/- 6.1 percent, 19 times out of twenty. The margins of error for the various sub-samples are somewhat larger. As a result of the relatively smaller sample size and corresponding larger margins of error for the various subsamples, most of the subgroup differences discussed in this report are indicative rather than statistically significant.

All research work undertaken by the Environics Research Group was conducted in accordance with the professional standards and guidelines of good practice set by the Canadian Association of Marketing Research Organizations (CAMRO) and the Professional Marketing Research Society (PMRS).

² In this report the term "research exemption" is intended to be synonymous with the phrase "research defence". A research defence does not exclude an invention from patent protection; rather it is a defence to a claim of patent infringement. If it is invoked, it is precisely because there is a patent on the invention that the researcher used. Most commonly, when a researcher is sued for infringement, he can invoke this defence provided he meets its requirements.

3.0 METHODOLOGY

The results of this survey are based on questions asked to 256 professionals who are either involved with biotechnology research or who use the results of such research. The survey was conducted by telephone from November 13 to 24, 2000.

3.1 Sample Selection

Given the elite nature of the survey population, it was necessary to obtain an accurate and up-to-date list of organizations and individuals involved with biotechnology research. After reviewing a number of products available, a decision was taken to use a combination of lists available from Contact Canada as the basis for participant selection. The *Canadian Biotechnology Industry & Suppliers Guide* was used as a primary source and the *Pharma, BioPharma & Nutraceuticals Canada Industry & Suppliers Guide* was used as a secondary source from which the sample was drawn³. Prior to fielding, this list was verified and, in some cases where information was not complete or where the listed contact person was no longer applicable, updated by Environics staff.

3.2 Questionnaire Design

The final survey questionnaire was determined in consultation with the Industry Canada project team and with representatives of other organizations. Although some questions were not administered to all participants, the research instrument contained 33 distinct questions, with additional respondent information added to the data set from the *Contact Canada* database. Copies of the survey questionnaire and the detailed crosstabulations used in the analysis have been appended to this document.

3.3 Telephone Interviewing

All interviews were conducted during normal business hours and in the respondent's official language of choice. Interviews averaged slightly more than 16 minutes in length.

Field supervisors were present at all times to ensure accurate interviewing and recording of responses. Ten percent of each interviewer's work was unobtrusively monitored for quality control in accordance with the standards set out by the Canadian Association of Marketing Research Organizations.

A minimum of five calls were made to a contact phone number before classifying it as a "no answer."

³ While referrals were also sought from qualified respondents in the course of the interviews, it was not necessary to make use of any referrals so obtained to complete the fieldwork for this project.

3.4 Completion Results

Although the elite target population for this research would be considered difficult to interview by telephone, the combination of a brief interview length and the interest of the potential respondents aided us in completing the fieldwork in a relatively efficient manner. A total of 256 interviews were completed.

The effective response rate for the survey is 53 percent: the number of completed interviews (256) divided by the total sample (614) minus the non-qualifying numbers, the numbers not in service and the numbers that presented a language barrier (132).

The actual completion rate is 85 percent: the number of completed interviews (256) divided by the number of qualified respondents contacted directly (300).

The margin of error for a sample of 256 is +/- 6.1 percentage points, 19 times in 20. The margins are wider for regional and demographic subsamples.

The following table presents the detailed completion results for this survey of 256 interviews.

Completion Results Table

	#	%
Number of calls	614	100
Respondent not qualified	86	14
Number not in service/ fax number	46	7
Language barrier	0	0
Subtotal	132	21
New Base (614 - 132)	482	100
No answer/line busy/ respondent not available	182	38
Refusals	43	9
Mid-interview refusals	1	*
Subtotal	226	47
Net Completions (482 - 226)	256	53
Completion Rate (256/[482-182])		85

* Fewer than one percent

3.5 Analysis Specifications

The format of the detailed cross-tabulations was determined in consultation with the Industry Canada project authority. In most cases, the headings in these tables are self-explanatory. The exceptions are noted below.

Sector

The overall orientation of the organizations for which participants worked was considered an important variable in the analysis. Participants who worked exclusively for commercial operations (n = 131) were assigned to the private sector category. Those who worked exclusively for non-commercial organizations (n = 90), such as Academia, government, hospitals and not-for-profit organizations, were placed into a non-private sector category (as opposed to simply designating them as public sector). The minority of participants (n = 35) who were involved with organizations in both the private and non-private sector were placed into the “both” category.

Size of Organization

For the purposes of this study, an organization with 10 or fewer employees is called small, a medium size organization has between 11 and 50 employees, and those organizations with 51 or more employees is designated as large.

Awareness

This is a summary measure generated according to participant responses to Questions 8 to 12. The low awareness category was comprised of those who answered none or only one of these questions correctly. Those who were able to answer two or three questions correctly were placed into the medium awareness category and those who were able to correctly respond to four or more questions were assigned to the high awareness category.

In addition to the standard statistical techniques applied to the data for analysis or data quality purposes, Environics used other statistical applications that are useful for determining the validity of findings in small sample surveys. Where appropriate, these results are noted in the report.

4.0 RESPONDENT PROFILE

Given that this survey solicited opinions and feedback from a specialized audience (namely, the biotechnology research community) rather than the general population, we felt that it was important to first provide a profile of these respondents, which might provide some additional context for the research results. In this section, we outline the demographic characteristics of survey respondents as well as background information with respect to their current position, the sectors they work in, their area of specialization (both in their current employment and during their academic career), and their years of experience in the field of biotechnology as well as the countries where this experience took place.

4.1 Demographic Profile

It is interesting to note that a vast majority of members in the biotechnology research community are men (88%), while approximately one in ten (12%) are women. In general, biotechnology research community members are represented in all regions of Canada and reflect the areas of concentration for the biotechnology research community. One-quarter are from Quebec (27%) and Ontario (25%), one in five are from British Columbia (20%) and the Prairies (18%) and approximately one in ten are from Atlantic Canada (8%).

Survey respondents are well distributed among a variety of different size organizations. Overall, one-third of biotechnology community members are found in each of the size categories employed in the analysis: small (less than 10 employees), medium (between 11 and 50 employees) or large (more than 50 employees) organizations. More specifically, with respect to community members from small organizations, approximately one in six are from organizations with between 1 and 5 employees (17%) or between six and ten employees (15%). For the medium sized organizations, one in five survey respondents are from organizations with between 11 and 30 employees (23%) while another one in ten are from organizations with between 31 and 50 employees (11%). With respect to community members from large organizations, one in ten have between 51 and 100 employees (11%), between 101 and 300 employees (11%) or more than 300 employees (9%). Size of organization information was unavailable for four percent of the survey respondents⁴.

4.2 Current Position

Nearly one-half of survey respondents (47%) are managers of research, while another one in five (18%) suggest that researcher best describes their current position. One in ten biotechnology research community members (8%) report that they are primarily end users of research results. When we asked members of the biotechnology research community their current position, it is clear that a significant number of respondents are wearing a number of different hats in their activities. One in ten (11%) suggest that both

⁴ The number of employees in each respondent's organization was obtained from the *Contact Canada* database. In some cases this information was not made available in the database.

research manager and researcher accurately describes their current position and another one in six (16%) suggest that they are involved in another combination of the three positions (i.e. researcher and end user, end user and manager, or all three simultaneously).

Members of the biotechnology research community from the private sector (53%) are more likely than either those from the non-private sector (43%) or those who work in both of these sectors (37%) to report that they are managers of research. Those currently working in the non-private sector (33%) are three times as likely as private sector employees in the biotechnology research community (11%) and those who work in both the private and non-private sectors (9%) to indicate that researcher best describes their current position. Meanwhile, those who work in both the private and non-private sectors (26%) are relatively more likely than those from the non-private sector only (11%) and the private sector only (6%) to suggest that both research manager and researcher accurately describes their current position.

Current Position by Sector (%)				
	Total	Private	Non-Private	Both
Manager of Research	47	53	43	37
Researcher	18	11	33	9
Manager/Researcher	11	6	11	26
End user of the research results	8	12	2	9
Other combinations	16	18	10	20
<i>Q1. To begin with, which of the following best describes the nature of your current position ...?</i>				

In general, respondents from the biotechnology research community who obtained all of their experience in this field exclusively in Canada tend to have a greater likelihood of being research managers (51%) or end users of research results (12%) than those respondents who obtained some of this experience outside of Canada (Experience in Canada/United States: Manager – 44% and End User – 3%; Experience in Canada/Other Countries: Manager – 42% and End User – 5%).

Current Position by Location of Experience (%)				
	Total	Canada Only	Canada/United States	Canada/International
Manager of Research	47	51	44	42
Researcher	18	15	20	20
Manager/Researcher	11	7	14	18
End user of the research results	8	12	3	5
Other combinations	16	14	19	15
<i>Q1. To begin with, which of the following best describes the nature of your current position ...?</i>				

Looking at the results regionally, we find that, while research managers disproportionately reside in Atlantic Canada (70%), there is a greater tendency for

researchers to be from Quebec (29%) than elsewhere in Canada. Furthermore, respondents who report that they or their organization own a patent (51%) are more likely than those who do not own a patent (39%) to indicate that they are currently a manager of research.

4.3 Sector

Two-thirds of survey participants from the biotechnology research community (65%) indicate that they currently work in the private sector, one-third work in Academia (34%) and one in ten work in government (10%) or in the non-profit sector (9%), with another one in twenty currently working for hospitals (5%).⁵

Once again, we find that the biotechnology research community involves people working in multiple contexts. In this case, we find that overall, one in seven biotechnology research community members work in both the private and non-private sectors. Of note, we found that 24 survey respondents (9%) report that they work in the both the private sector and in Academia.

End users (90%) and those who report working in a number of different positions (78%) are much more likely than their colleagues to be currently working in the private sector. On the other hand, those who are both managers and researchers (63%) and those who are primarily researchers (57%) are more likely to work in Academia.

Work Sector by Current Position (%)						
	Total	Researcher	Manager of Research	End User	Manager/ Researcher	Other Combinations
Private sector	65	36	68	90	63	78
Academia	34	57	23	14	63	28
Government	10	11	15	5	4	3
Not-for-profit	9	13	7	5	7	15
Hospital	5	4	4	-	7	8
Q2. In which of the following sectors do you currently work . . . ?						
Note: multiple responses allowed						

Members of the biotechnology research community from Atlantic Canada are more likely to say that they currently work in the not-for-profit sector (17%) or for Government (17%).

It appears that there is a relationship between size of organization and the type of sector in which those from the biotechnology research community currently work. Biotechnology research community members from small and medium size organizations have a much greater tendency (75% and 76%, respectively) than those from large organizations (49%) to be working in the private sector. Conversely, those from large organizations (19%) are over-represented among those working for a level of government.

⁵ Multiple responses were allowed

Community members working in Academia are more likely to report that at least some of their work or school experience has been acquired outside of Canada, either in the United States (46%) or elsewhere in the world (47%). In comparison, one-quarter (24%) of those in Academia acquired all of their work or school experience in this country.

4.4 Areas of Specialization

As an emerging discipline drawing on a number of areas of expertise, it is not surprising that biotechnology research community members offer a number of different areas of specialization. Three out of ten (30%) spend the majority of their time in the human health area.⁶ One in five community members (21%) indicates that their primary area of specialization is plants⁷, while one in eight (13%) report that it is either animals⁸ or the environment (11%) which also includes biomaterials/waste management decomposition. Slightly less than one in ten survey respondents from the biotechnology research community (8%) say that they spend the majority of their time in administrative duties such as obtaining research funds and involvement in regulatory work and approvals. Five percent of community members cite food research (e.g. processed food products, nutrition) as their primary area of specialization. Two-fifths (41%) identify a mix of other areas of specialization in which they spend the majority of their time. These other areas include molecular biology, microbiology, homopathology, genetics, tissue engineering, vaccines, and immunology, just to name a few.

Major Areas of Specialization	
	%
Human health	30
Plants	21
Animals	13
Environment	11
Administration	8
Food	5
Other	41
DK/NA	-
Q3. In what area or areas of specialization do you spend the majority of your time?	
Note: multiple responses allowed	

Those who own patents, or who work for organizations which own patents (34%), are more likely than patent non-owners (22%) to cite human health areas as the focus of their activities.

⁶ For our purposes in this study, human health includes such areas as therapeutics for humans, diagnostics and human genomics.

⁷ The following areas of specialization are included in the plants category: agriculture – plant and seeds, plant genomics, and forestry.

⁸ For our purposes, this includes aquaculture, agriculture – animal, animal genomics, and therapeutics for animals.

Areas of specialization appear to vary depending on the region in which community members reside. For example, while those from Quebec (38%) are more likely to identify human health as their primary area of specialization, biotechnology research community members from the Prairies (36%) place a greater emphasis on research relating to plants and those from Atlantic Canada (30%) are more likely to indicate they spend the majority of their time on animal research.

Biotechnology research community members who currently work in the private sector (36%) are more likely than those who work in the non-private sector (21%) to cite human health as their primary area of specialization. Other groups more likely to mention human health as their primary area of specialization include those who work closely with at least two different sectors (39%), those with more than 20 years experience (38%), and those who suggest that they are involved in multiple activities in their current position (38%). This latter group is also more likely than their colleagues to identify the environment (23%) as a focus of their activities.

Non-private sector employees (31%) put a greater emphasis on plant research as an area of specialization than do those who work in the private sector (17%). Other groups with a greater tendency to mention research relating to plants as their primary area of specialization include: biotechnology research community members with 10 years or less of work and school experience in the field of biotechnology (32%) and community members from large organizations (29%).

It is worth noting that end users of research results are more likely than others to mention that they spend the majority of their time involved in administrative activities (24%) and food research (14%).

4.5 Experience

Survey participants have a broad and varied range of work and school experience in the field of biotechnology. In general, the individuals we interviewed from the biotechnology research community have high levels of experience. Over one half of respondents (58%) have over 15 years of work and educational experience in this field.

One in five (21%) have more than 25 years of work and school experience in this field and another one in seven (14%) have between 21 and 25 years of experience. One-quarter (23%) have between 16 and 20 years of experience, while slightly less than one in five (18%) have between 11 and 15 years of experience. One in ten (13%) have between six and ten years of experience. Less than one in ten respondents (9%) have only between 1 and 5 years of work and school experience in the field of biotechnology.

In general, patent non-owners are less experienced than those who own patents, or who work for organizations which own patents. For example, while less than one in ten patent owners (6%) have 5 years or less combined work and school experience in the field of biotechnology, this proportion more than doubles for patent non-owners (16%). Furthermore, patent owners are more likely than patent non-owners to have either

between 16 and 20 years of experience (25% vs. 18%) or more than 25 years of experience in this field (22% vs. 17%).

Years of Experience by Patent Ownership (%)			
	Total	Patent Owner	Patent Non-Owner
1 to 5	9	6	16
6 to 10	13	12	14
11 to 15	18	19	17
16 to 20	23	25	18
21 to 25	14	14	14
26 or more	21	22	17
DK/NA	1	1	1
<i>Q4. In total, how many years of work and school experience do you have in the field of biotechnology?</i>			

While managers/researchers have the longest tenure in the field of biotechnology (33% - 26 years or more), end users of research results (10%) tend to be much less likely to report being in the field for more than 25 years.

Biotechnology research community members who have ventured outside of Canada during their academic and work career tend to have spent more years in the field of biotechnology than those who have acquired all of their experience entirely in Canada. While one in five biotechnology research community members who have spent their entire career in Canada (20%) have 21 years or more experience, a majority of community members who obtained some of their experience in the United States (56%) have 21 years or more experience. In addition, one-half of respondents who gained experience in other parts of the world (49%) have this same length of work and school experience in biotechnology.

Years of Experience by Location of Experience (%)				
	Total	Canada Only	Canada/ United States	Canada/ International
1 to 5	9	16	-	-
6 to 10	13	19	5	5
11 to 15	18	20	12	15
16 to 20	23	23	22	25
21 to 25	14	9	14	20
26 or more	21	11	42	29
DK/NA	1	-	3	3
<i>Q4. In total, how many years of work and school experience do you have in the field of biotechnology?</i>				

Overall, community members based in Atlantic Canada and British Columbia, those who work in both the private and non-private sectors, those from medium and large organizations, and those who work closely with organizations from multiple sectors also

tend to have more years of experience in the field of biotechnology than their counterparts.

4.6 Location of Experience

A slight majority (54%) of the biotechnology research community acquired their experience in this field entirely in Canada. On the other hand, almost one-half (46%) have obtained at least some of their work or school experience outside of Canada.

Overall, those with less experience (10 years or less – 83%), end users of research (81%), and those from small organizations (67%) are more likely to have obtained their work and school experience entirely in Canada. The importance of each of these three factors (years of experience, position, and size of organization) on location of experience is further supported by Chi-square measures which suggest a statistically significant relationship between these variables and the location of experience. Conversely, those with more years of experience (69%), managers/researchers (63%), those working in both the private and non-private sectors (57%), researchers (55%) and biotechnology research community members from large organizations (55%) have a greater tendency to have acquired at least some of their work or school experience outside of Canada.

As the table below suggests, as years of experience increases, so too does the likelihood that members of the biotechnology research community have obtained at least some of their work or school experience outside of Canada.

Location of Experience by Years of Experience (%)				
	Total	10 years or less	11 to 20 years	21 years or more
Entirely in Canada	54	83	57	31
Canada plus other countries	46	15	43	69
DK/NA	*	2	-	-
Q5. Was this experience, both work and school, obtained entirely in Canada?				
*less than 1%				

Biotechnology research community members working only in the private sector (60%) are more likely than those who work in the non-private sector (48%) and those who work in both of these sectors (43%) to have acquired their entire work and school experience in Canada.

When we examine the other countries where community members have gained either some school or work experience in the field of biotechnology, the United States (50%) and the European Union (46%) clearly emerge as the predominant areas where Canadian expertise in this area was developed. Other parts of the world are mentioned with much less frequency. One in ten cite Australia/New Zealand (13%) as a place where they acquired some of this experience. Other areas mentioned include non-EU European countries (8%), the Far East (5%), Switzerland (5%), Africa/South Africa (5%), the Middle East (2%) and a mix of other countries (3%). This educational and

career development of current Canadian biotechnology professionals in other countries may represent an example of “Brain Gain” for Canada.

Experience in Other Countries	
	%
United States	50
EU (European Union)	46
Australia/New Zealand/Oceania	13
Rest of Europe (not in EU)	8
Far East (China, Japan, S&N Korea)	5
Switzerland	5
Africa/South Africa	5
Middle East (Saudi Arabia/Israel)	2
Other	3
DK/NA	1
Q6. In what other countries was this experience acquired? Note: multiple responses allowed	

In general, biotechnology research community members from Quebec (65%), and those from small organizations (59%) are the most likely to report that some of their work or school experience was acquired in the United States. Respondents from Atlantic Canada (73%), Ontario (61%), and managers/researchers (59%) have a greater tendency to have obtained some of this experience in countries belonging to the European Union. Community members based on the Prairies (24%) and from small organizations (22%) were relatively more likely to have spent some time in Australia/New Zealand.

While those who work in both the private and non-profit sectors (20%) display a greater likelihood of having acquired some work or school experience in Switzerland, those who work closely with three or more sectors (16%) are more likely to have obtained some of this experience in non-EU European countries.

4.7 Academic Background

In keeping with the multi-disciplinary nature of biotechnology, survey respondents from the biotechnology research community had varied areas of concentration during their academic careers. The most popular area of study is biology (23%), followed by biochemistry (17%), microbiology/cell biology (15%), chemistry (13%), medicine (9%), agriculture (7%) and engineering (7%). Other areas of study mentioned less frequently include, plant science (6%), genomics (6%), immunology/immunochemistry (6%), business (6%) and veterinary medicine (5%). The remaining areas of study⁹ cited were mentioned by less than five percent of survey respondents.

⁹ Examples of these other areas of study include Environmental Studies, Physiology, Pharmacology, Physics and Food Science.

Areas of Study	
	%
Biology	23
Biochemistry	17
Microbiology/Molecular Biology/Cell Biology/Biotechnology	15
Chemistry	13
Medicine	9
Agriculture	7
Engineering	7
Plant science/Botany/Plant Pathology/Plant biology/Plant Physiology/Forestry	6
Genomics	6
Immunology/Cellular Immunology/Immunochemistry/Virology/Parasitology/Pathogenesis	6
Business	6
Veterinary Medicine	5
Other	13
DK/NA	*
Q7. What area or areas of study did you concentrate on during your academic career?	
*less than 1%	
Note: multiple responses allowed	

From a regional perspective, a number of interesting differences emerge regarding the academic background of biotechnology research community members. Community members from Quebec were relatively more likely to have concentrated on biology (35%) and medicine (20%), while those from British Columbia had a greater focus on plant science/botany (15%). Furthermore, community members from the Prairies were more likely to have concentrated on microbiology (30%), in comparison with those from Atlantic Canada who tended to have concentrated on environmental-related studies (22%). It seems that there is no clear path into biotechnology research.

It is worth noting that while none of the end users of research results we interviewed mentioned biology as a primary area of study, they had a relatively greater focus on engineering (19%) during their academic career. On the other hand, both researchers (30%) and manager/researchers (30%) were more likely to report that they concentrated on biology during their academic career.

Respondents who currently work in both the private and non-private sectors were more likely than those who currently worked in only one of these two sectors to have mentioned microbiology/molecular biology (26%) or genomics (14%) as a primary area of study.

More experienced biotechnology research community members (i.e. those with more than 20 years of work and school experience in the field of biotechnology) are more than three times as likely as those with 10 years or less experience to cite biochemistry (25% vs. 7%) as the focus of their academic careers. Those less experienced in the biotechnology research community were relatively more likely than those with greater experience to have focussed on business studies (12%) while in school.

5.0 AWARENESS

To assess the levels of awareness and understanding of the biotechnology research community, we presented them with a series of questions regarding a variety of patent issues. In each case, survey respondents were presented with three statements and asked to identify the statement that best described the patenting issue under investigation¹⁰. In total, we explored biotechnology research community members' awareness of five different topics, namely, the Federal Court of Appeal's recent ruling on the Harvard onco-mouse, the research exemption in Canada, the current situation in Canada with respect to patent protection for methods of medical treatment, patents for the human genome and Genome Canada. Overall, awareness in the community varies considerably for each of these issues, with awareness levels ranging from approximately one in seven to three-fifths of community members correctly identifying the most accurate descriptive statement. Patent issues do not appear to be a preoccupation for community members, especially those from the private sector.

5.1 Harvard Onco-Mouse

Despite the relatively high profile given to this issue, a plurality of biotechnology research community members (45%) were unwilling or unable to choose any of three statements provided as the one that best describes the Federal Court of Appeal's recent ruling on the Harvard onco-mouse. Only one-third (32%) correctly suggest that, as a result of the Federal Court's recent ruling, the Harvard onco-mouse is patentable in Canada. Another one in five (21%) think that the Harvard onco-mouse is not patentable in Canada, while only three percent suggest that Federal Court of Appeal's recent ruling on the Harvard onco-mouse meant that higher life forms, including humans, are now patentable in this country.

Those in the biotechnology research community who currently work in the non-private sector (38%) and those who work in both the private and non-private sectors (37%) are more likely than those from the private sector (26%) to correctly identify that the Federal Court's recent ruling determined that the Harvard onco-mouse is patentable in Canada.

In general, community members from larger organizations have a higher level of awareness or knowledge of the Federal Court's ruling. While one-quarter of those from small organizations (23%) know that the Harvard onco-mouse is now patentable in Canada, this proportion increased to one-third for those from medium-sized organizations (31%) and two-fifths among those from large organizations (39%).

¹⁰ The statements were rotated to eliminate order bias in the response. For a copy of the questionnaire, which includes these questions, please refer to the appendix.

Awareness of Onco-Mouse by Size of Organization (%)				
	Total	Small	Medium	Large
The Harvard onco-mouse is patentable in Canada	32	23	31	39
The Harvard onco-mouse is not patentable in Canada	21	23	25	16
Higher life forms, including humans, are patentable in Canada	3	5	1	4
DK/NA	45	49	43	42
Q8. In your opinion, which of the following statements best describes the Federal Court of Appeal's recent ruling on the Harvard onco-mouse . . . ?				

Biotechnology research community members based in British Columbia (40%), and patent owners (35%) are more likely than patent non-owners (25%), and community members from Atlantic Canada (22%) to be aware that the Federal Court's recent ruling determined that the Harvard onco-mouse is patentable in Canada.

The following groups were the most likely to be unable or unwilling to offer choose among the three statements describing the Federal Court's ruling regarding the Harvard onco-mouse: those whose current position involves a combination of activities (65%), end users of research results (57%), managers/researchers (56%), and patent non-owners (52%). It is also worth noting that as respondents' experience in this field increased their unwillingness or inability to respond to this question also increased.

5.2 Research Exemption

Exemptions to patent protection have been created either in legislation or by courts. In general, these exemptions have been created to help benefit society while also attempting to protect the interest of the patent holder in the commercialization of their invention. In Canada, the research exemption permits persons to use inventions in order to experiment and improve upon them. When members of the biotechnology research community were presented with three possible descriptions of the research exemption, almost one-half (48%) are correct in identifying that the research exemption permits persons to use inventions in order to experiment and improve upon them. One in five (22%) choose the option that suggested the research exemption permits persons to use patented inventions solely for the purpose of philosophical inquiry and another seven percent of survey respondents from the biotechnology research community believe that the research exemption permits persons to use patented inventions for any purpose. A substantial minority (23%) were unable or unwilling to choose among the three possible descriptions of the research exemption in Canada.

Research managers are more knowledgeable about the research exemption in Canada than researchers and end users of research results. One-half of managers of research (52%) are aware that the research exemption permits persons to use patented inventions in order to experiment on and improve upon them, in comparison with two-

fifths of researchers (45%) and one-third of end users of research results (33%). End users' lack of awareness or understanding of research exemptions can be further seen in the high proportion of these members (52%) who are unable or unwilling to choose a description of a research exemption from the three options provided.

It is worth noting that biotechnology research community members who obtained some of their work or school experience in the field of biotechnology in the United States (54%) are more likely than those who obtained their experience entirely in Canada (45%), to understand that the research exemption in Canada permits persons to use patented inventions in order to experiment on and improve upon them.

Awareness of Research Exemption by Location of Experience (%)				
	Total	Canada Only	Canada/ United States	Canada/ International
The research exemption permits persons to use patented inventions in order to experiment on and improve upon them	48	45	54	48
The research exemption permits persons to use patented inventions solely for the purpose of philosophical inquiry	22	24	15	25
The research exemption permits persons to use patented inventions for any purpose	7	8	3	6
DK/NA	23	23	27	20
Q9. In your opinion, which of the following statements best describes the research (or experimental use) exemption in Canada . . . ?				

Biotechnology research community members who work in both the private and non-private sectors (60%), those with the longest tenure in the field of biotechnology (58%), and those who specialize in the environment (55%) are also more likely than their counterparts to correctly identify that the research exemption permits persons to use patented inventions in order to experiment on and improve upon them.

It appears that patent ownership is an important determinant in the awareness and understanding of research exemptions in Canada. Those who own patents, or who work for organizations which own patents (51%) are more likely than patent non-owners (40%) to know that the research exemption permits persons to use patented inventions in order to experiment on and improve upon them. Furthermore, patent non-owners (32% - DK/NA) have much more difficulty than do patent owners (19% - DK/NA) in choosing at least one of the three possible definitions of research exemptions.

When we examine awareness of the research exemption by region we find that community members based in Atlantic Canada (57%) and Quebec (55%) are more

likely than those from British Columbia (35%) to have a correct understanding of the research exemption.

Survey respondents from British Columbia (37%) are more likely to believe that the research exemption permits persons to use patented inventions solely for the purpose of philosophical inquiry while respondents from the Prairies (13%) are relatively more likely to suggest that the research exemption permits persons to use patented inventions for any purpose.

It is interesting to note that members of the biotechnology research community from large organizations (30%) and those whose area of specialization is animals (28%) have a greater tendency to believe that the research exemption is applicable purely for philosophical inquiry.

5.3 *Patent Protection for Methods of Medical Treatment*

The lack of awareness of Canadian patent law issues among members of the biotechnology research community was evident when we asked survey participants to select the statement that best described the current situation in Canada with respect to patent protection for methods of medical treatment. Of the five patenting issues we tested, patent protection for methods of medical treatment was the item with the lowest level of awareness. Two-fifths of biotechnology research community members (43%) were not willing or not able to choose among the three options provided.

Nearly one-third of community members (29%) incorrectly believe that Canada grants patents for methods of medical treatment but the exemption permits doctors to treat a disease without worrying about patent infringement. Some respondents may have chosen this option because of the presence of the word “exemption” in this statement and the fact that this question followed the question about research exemptions. Even if these two factors did have some effect on respondents, it shows that biotechnology research community members do not have a clear understanding of the current situation with respect to patent protection. In fact, only one in seven community members (14%) choose the correct description, namely that Canada does not grant patents for methods of medical treatment for use on animals or humans. An equal proportion (14%) suggest that the correct description was that Canada grants patents for methods of medical treatment for use on animals but not on humans.

This lower level of awareness and understanding of the current situation in Canada with respect to patent protection for methods of medical treatment may be due to a lack of involvement in research that would provide exposure to this issue. However, even those biotechnology community members who might be expected to have a greater involvement in methods of medical treatment (i.e. those who reported medicine as their primary area of study and those who cited human health as one of their areas of specialization) did not have a greater level of awareness of this issue. In fact, community members who specialized in human health (42%) and those whose primary area of study was medicine (42%) are more likely than average to suggest that Canada

grants patents for methods of medical treatment but the exemption permits doctors to treat a disease without worrying about patent infringement.

Once again we find that there seems to be a relationship between current position and patent ownership and an understanding of patent protection issues in Canada. Research managers (20%) and patent owners (16%) are more likely than researchers (9%), patent non-owners (8%), and research end users (5%) to be aware that Canada does not grant patents for methods of medical treatment for use on animals or humans. In addition, respondents from the biotechnology research community with 21 years or more experience (17%) are more likely than those with 10 years or less experience (7%) to have the correct understanding of the current situation in Canada with respect to patent protection for methods of medical treatment. However, even among the most senior and experienced members of the community, this awareness level is quite low.

Awareness of Current Situation with Respect to Patent Protection for Methods of Medical Treatment by Current Position (%)						
	Total	Researcher	Research Manager	End User	Manager/Researcher	Other Comb.
Canada grants patents for methods of medical treatment but the exemption permits doctors to treat a disease without worrying about patent infringement	29	21	30	29	37	33
Canada does not grant patents for methods of medical treatment for use on animals or humans	14	9	20	5	11	8
Canada grants patents for methods of medical treatment for use on animals but not on humans	14	23	15	14	7	8
DK/NA	43	47	36	52	44	53
<i>Q10. In your opinion, which of the following statements best describes the current situation in Canada with respect to patent protection for methods of medical treatment. . . ?</i>						

In general, community members from Atlantic Canada (65%) display the most difficulty or unwillingness choose among the three possible descriptions of the current situation in Canada with respect to patent protection for methods of medical treatment. Biotechnology research community members from the Prairies (23%) are the most likely to correctly indicate that Canada does not grant patents for methods of medical treatment for use on animals or humans.

While researchers (23%) are more likely than community members in other positions to believe that Canada grants patents for methods of medical treatment for use on animals but not humans, researchers/managers (37%) have a greater tendency to suggest that Canada grants patents for methods of medical treatment but that the exemption permits

doctors to treat a disease without worrying about patent infringement. Members of the biotechnology research community who work in both the private and non-private sectors (37%) are also more likely to make this same assertion.

5.4 Human Genome

Biotechnology research community members are much more aware of patents for the human genome. Three-fifths of community members (62%) correctly identify that Canada currently allows patents for expressed sequence tags and DNA which satisfy the criteria of the *Patent Act*. Equal proportions feel that Canada allows patents for all data on the human genome (5%) or Canada allows patents for all expressed sequence tags and DNA (5%). While overall there appears to be a higher level of awareness for this aspect of patents, than those we reviewed above, there is still more than one-quarter of survey participants (28%) who once again, were unable or unwilling to make a choice among the options provided.

Patent owners continue to have a better understanding of many of the patenting issues we have examined in this survey than do patent non-owners. In this case, those who own patents, or who work for organizations which own patents (67%) are much more likely than patent non-owners (51%) to know that for the patents for the human genome, Canada currently allows patents for expressed sequence tags and DNA which satisfy the criteria of the *Patent Act*. Once again, patent non-owners have a higher level of difficulty or unwillingness to choose from the descriptive statements provided (38% vs. 23%).

Awareness of Patents for the Human Genome by Patent Ownership (%)			
	Total	Patent Owner	Patent Non-Owner
Canada currently allows patents for expressed sequence tags and DNA which satisfy the criteria of the Patent Act	62	67	51
Canada allows patents for all data on the human genome	5	6	5
Canada allows patents for all expressed sequence tags and DNA	5	4	6
DK/NA	28	23	38
Q11. In your opinion, which of the following statements best describes patents for the human genome ...?			

Managers/researchers (67%) and managers of research (65%) are more likely than researchers (55%) and end users of research results (43%) to be aware of the current Canadian situation with respect to the human genome. Once again, we find that end users of research results (48% - DK/NA) have a high level of non-response.

It appears that awareness and understanding of patents for the human genome varies depending on the sector in which respondents from the biotechnology research community currently work. Those who work in both the private and non-private sectors

(69%) and those who work only in the non-private sector (68%) are more likely than respondents who work only in the private sector (56%) to correctly identify that Canada currently allows patents for expressed sequence tags and DNA which satisfy the criteria of the *Patent Act*.

It is interesting to note that, as the size of an organization and number of networking partners from different sectors increases, so too does the proper understanding of patents for the human genome. However, those members of the biotechnology research community with less experience have a greater awareness of this aspect of patenting in Canada than their colleagues with more years of biotechnology experience.

From a regional perspective, we find that biotechnology research community members from Atlantic Canada (57%) are the most likely to be unable or unwilling to choose among the three possible definitions of patents for the human genome.

5.5 Genome Canada

When presented with three possible descriptions of Genome Canada, three-fifths of biotechnology research community members (61%) correctly identify that Genome Canada supports major large-scale genome projects of strategic importance to Canada. One in ten (10%) feel that Genome Canada is a leading venture capital company investing in biotechnology firms in Canada which are undertaking research in the area of human genome, while another four percent believe that Genome Canada is the Canadian subsidiary of Celera Genomics (a U.S. based company). Once again, a significant minority (25%) were unable or unwilling to choose between the three possible explanations.

Overall, we find that members of the biotechnology research community from Atlantic Canada (74%), community members who work in the non-private sector (74%) or in both the private and non-private sectors (74%), those from large organizations (74%), those with 3 or more network sector partners (70%), researchers (68%), and patent owners (66%) are more likely to correctly identify Genome Canada as an organization that supports major large-scale genome projects of strategic importance to Canada.

On the other hand, biotechnology research community members that work in the private sector (49%), those from small organizations (48%), members from the Prairies (51%), and end users of research results (52%) tend to be much less likely to make this same correct identification of Genome Canada. The lack of awareness on behalf of these four sub-groups can also be seen by the fact that they are also more likely to be unable or unwilling to select any of the provided possible definitions of Genome Canada.

Awareness of Genome Canada by Sector (%)				
	Total	Private	Non-Private	Both
Genome Canada supports major large-scale genome projects of strategic importance to Canada	61	49	74	74
Genome Canada is a leading venture capital company investing in biotechnology firms in Canada which are undertaking research in the area of human genome	10	13	8	3
Genome Canada is the Canadian subsidiary of Celera Genomics	4	5	2	6
DK/NA	25	33	16	17
Q12. In your opinion, which of the following statements best describes Genome Canada ...?				

Biotechnology research community members who obtained at least some of their experience in the United States (17%), and patent non-owners (16%) are the most likely to suggest that Genome Canada is a leading venture capital company investing in biotechnology firms in Canada which are undertaking research in the area of human genome. In addition, managers/researchers (11%) are relatively more likely to believe that Genome Canada is the Canadian subsidiary of Celera Genomics.

5.6 Awareness Scale

To gain a deeper appreciation of the level of awareness and understanding of the biotechnology research community regarding some of the patenting issues we examined in this survey, we created an awareness scale. This scale is based upon the results of the five awareness questions (the results for each individual question are discussed above) which asked survey participants to identify the best description for the following patent issues: Federal Court's ruling on the Harvard onco-mouse, research exemptions in Canada, the current situation in Canada with respect to patent protection for methods of medical treatment, patents for the human genome, and Genome Canada.

The low awareness category was comprised of those who answered none or only one of these questions correctly. Those who were able to answer two or three questions correctly were placed into the medium awareness category and those who were able to correctly respond to four or all five of the questions were assigned to the high awareness category.

Overall, the biotechnology research community's awareness and understanding of these patenting issues is moderate at best. One-half of community members (52%) fall into the medium awareness category. Furthermore, it is worth noting that almost twice as many members of the biotechnology research community members have a low level

of understanding (31%) of these issues than do those that have a high level of understanding (17%).

Awareness Scale	
	%
Low	31
Medium	52
High	17

If we were to create a profile of the typical biotechnology research community member with a high level of awareness and understanding of the patenting issues we examined, the profile would be as follows; this individual would be a research manager based in Ontario working for a large organization in the non-private sector, most likely in Academia, government or a hospital specializing in human health. This person would have a long tenure in the field of biotechnology and would likely have concentrated on biology or biochemistry during their academic career. In addition, they are more likely to own patents, or work for organizations which own patents and they favour the current scope of research exemptions in Canada and agree with the current approach with respect to patent protection for methods of medical treatment.

On the other hand, the profile of a community member with a low level of awareness would be as follows; this individual is more likely to be an end user of research results based in Quebec working for a small organization in the private sector who spends the majority of their time involved in environmental or food-related research. This person is most likely to be a patent non-owner with less than five years of work and school experience in the biotechnology field and who concentrated on business studies in their academic career.

6.0 PATENTING EXPERIENCE

To provide some additional contextual information for the research results, there was a need to obtain some information regarding the patenting experience of members of the biotechnology research community. Specifically, we explored the pervasiveness of patent ownership in this community. In addition, the effect of concerns over other organizations' patents on the research work plans of community members was also investigated.

In general, patent ownership is very common in the biotechnology field and concerns over other organizations' patents affect the research work activities differently depending on the stage at which the research work is being conducted.

6.1 Patent Ownership

Seven out of ten biotechnology research community members (70%) report that either they or their organization owns a patent. Equal proportions state that they either do not own (neither the respondent nor their organization) a patent (15%) or that they have applied for a patent but do not yet own one (15%). Given the relatively low levels of awareness we saw earlier, it is interesting to note that survey respondents were able to report on their status regarding patent ownership.

In general, the typical patent owner is a research manager who has at least 11 years of work and school experience in the field of biotechnology, works for a large organization and has multiple networking partners. Conversely, patent non-owners tended to be end users of research results that have less experience in this field and work for smaller organizations. We discuss these differences in further detail below.

There seems to be a relationship between years of experience in the field of biotechnology and patent ownership. In general, those with less than ten years of involvement in this field (58%) are much less likely than respondents with between 11 and 20 years of experience (74%) and those with more than 20 years of experience (73%) to report that they or their organization owns a patent.

The size of an organization also appears to be a determining factor in patent ownership. In general, as the size of an organization increases, so too does the likelihood that they own a patent. While one-half of biotechnology research community members from small organizations (54%) indicate that they or their organization owns a patent, this proportion increases to almost seven out of ten community members from medium-sized organizations (68%) and nine out of ten for those from large organizations (90%).

Patent Ownership by Size of Organization (%)				
	Total	Small	Medium	Large
Either you or your organization owns a patent	70	54	68	90
Neither you nor your organization owns or has ever applied for a patent	15	22	16	6
Neither you nor your organization owns a patent but you or your organization have applied for one	15	24	15	4
DK/NA	*	-	1	-
Q19. Which of the following best describes your patenting experience. . . ?				
*less than 1%				

When we examine patent ownership by the current position of biotechnology research community members we find that research managers (75%) are much more likely than end users of research results (43%) to own a patent. In addition, community members with networking partners from more sectors also have a greater tendency to own a patent (1 sector – 63%, 2 sectors – 70%, 3+ sectors – 78%).

Community members from Atlantic Canada (26%) and those who indicated that their current position consists of being both a manager and researcher (26%) are the most likely to report that, while they have applied for a patent, neither they or their organization currently owns a patent. Those in the biotechnology research community from small organizations (24%) also have a relatively greater likelihood of having applied for a patent but not yet owning one.

6.2 Effect of Concerns over Patents on Research Work

Concern about potential patent infringement appears to be inhibiting research activity in Canada. Furthermore, concerns over another organizations' patent appear to have affected survey respondents' research work differently depending on the stage that this research work is at. In general, it appears that these concerns have a greater effect earlier rather than later in the research process. For example, one-third of biotechnology research community members (34%) report that personal concern or concern on the part of their organization about someone else's patent led them to not begin research work. Slightly less than one-third (29%) suggest that such a concern caused them to delay research work and one in five (20%) stopped research work because of their concern about someone else's patent.

In total, more than two-fifths of all biotechnology research community members surveyed (44%) indicate that concern over patents led them to alter their research activities in at least one of three stages we examined.

Effect of Concerns Over Patents on Research Work			
	Yes	No	DK/NA
Not begin research work	34	64	2
Delay research work	29	71	1
Stop research work	20	79	1
Q24. Has a concern on the part of your organization or yourself about someone else's patent ever led you to . . . ?			
a) stop research work			
b) delay research work			
c) not begin research work			

Upon closer examination, we find that a number of groups within the biotechnology research community appear to be more affected by concerns about someone else's patent rights. The groups who report changing their behaviour more often includes: patent owners, biotechnology community members from large organizations, research managers, and community members based in Ontario and on the Prairies. Of these variables, patent ownership and size of organization have the most statistically significant effect on research activities. In general, these groups are more likely to report that this concern has caused them to alter their research activities. This pattern is fairly consistent across all three measures we tested (stop research work, delay research work, not begin research work).

While biotechnology research community members with the least amount of experience are more likely to suggest that a concern on the part of their organization or themselves about someone else's patent has led them to stop research work, those members with more experience are more likely to report that such a concern has led them to either delay or not begin research work.

6.3 Location of Patent Holders

To gain a better understanding of the effect concerns over other organizations' patents had on research work, we asked members of the biotechnology research community who either stopped, delayed or did not begin research work because of these concerns where the patent holder was located. It seems that actions of the biotechnology research community in Canada are most affected by concerns over U.S. patent holders, likely due to the stricter enforcement and policing of patents in the United States. Over seven out of ten community members (73%) indicate that patent holders who caused them enough concern to change their research work plans are located in the United States. Concerns about patent holders from other countries and their real impact on research work in Canada appear to be much less muted. One in ten community members (15%) mention patent holders in EU member countries and another one in ten (11%) cite patent holders in Canada as the source of their concern. Other parts of the world were mentioned with much less frequency – The Far East (4%) or non-EU European countries (3%), for example.

From a regional perspective we find that biotechnology community members from Ontario (83%) and Quebec (80%) who have revised their activities have done so due to

concerns over patent holders based in the United States. Furthermore, Ontario community members (27%) have a greater tendency to report that concerns over a patent holder in an European Union member country has caused them to alter their research activities. Community members from Quebec (20%) and Atlantic Canada (20%) are more likely to make this same assertion regarding patent holders in Canada and while those from British Columbia (21%) are more likely to cite patent holders from the Far East.

Location of Patent Holders by Region (%)						
	Total	Ontario	Quebec	B.C.	Prairies	Atlantic
United States	73	83	80	67	62	70
EU (European Union)	15	27	16	8	13	-
Canada	11	3	20	4	13	20
Far East (China, Japan, S & N Korea)	4	-	-	21	-	-
Rest of Europe (not in the EU)	3	-	-	8	4	-
Other	1	-	-	4	-	-
DK/NA	7	3	-	13	13	10
Q25. Where was the patent holder located? Note: multiple responses allowed						

The perceived impact of patent holders in the United States on research activity tends to grow as those in the biotechnology research community obtain more years of service in this field. On the other hand, concern about patent holders based in Canada tends to have more of an effect on the research work pursuits of those with less biotechnology experience.

Those who own patents, or who work for organizations which own patents (79%), are more likely than non-patent owners (54%) to cite United States patent holders as the source of concerns leading them to alter their research activities. Likewise, members of the biotechnology research community who work in the private sector (78%) have a greater likelihood than those who work in the non-private sector (69%) and those who work in both of these sectors (67%) to suggest that concerns over patent holders in the United States have caused them to adjust their research work plans.

Biotechnology research community members who are more active in their networking activities (e.g. who work closely with three or more different sectors in the field) indicate that patent holders in the United States and European Union cause them the greatest concern, and, as a result of this concern they have either stopped, delayed or chosen not to begin research work.

7.0 THE RESEARCH EXEMPTION

Industry Canada was interested in obtaining insights into the biotechnology research community's attitudes and practices with respect to the research exemption. To this end, we investigated community members' level of agreement with the allowance of a research exemption to patent protection, the reasons for not allowing a research exemption, the desired scope for the exemption, possible inclusion of the scope of research exemptions in the *Patent Act*, the use of the research exemption (both personal and other known uses) and the existence of any possible disputes over such use.

7.1 Level of Agreement

Overall, the biotechnology research community overwhelmingly agrees (78%) with allowing a research exemption to patent protection. Almost one-half (48%) strongly agree that a research exemption to patent protection should be allowed, while another one-third (30%) somewhat agree. Only slightly less than one in ten (13%) either somewhat (7%) or strongly disagree (6%) with allowing a research exemption to patent protection. In addition, another one out of every ten survey participants (9%) were unable or unwilling to offer an opinion on this question.

A number of interesting differences emerge when we more closely examined members of the biotechnology research community's opinions with respect to allowing a research exemption to patent protection. For example, those from the non-private sector (54%) are more likely than those working in both the private and non-private sectors (46%) and those working solely in the private sector (44%) to strongly agree that a research exemption to patent protection should be allowed. Managers/researchers (56%) also tended to have stronger levels of agreement with this assertion, while end users of research results were more cautious in their approval (43% somewhat agree).

It is worth noting that those who own patents, or who work for organizations which own patents (52%), are much more likely than patent non-owners (39%) to strongly agree that research exemptions should be allowed. The importance of patent ownership on attitudes toward research exemptions in Canada is further supported by Chi-square measures that suggest a statistically significant relationship exists between these two items.

Agreement with Research Exemption by Patent Ownership (%)			
	Total	Patent Owner	Patent Non-Owner
Strongly agree	48	52	39
Somewhat agree	30	25	43
Somewhat disagree	7	8	6
Strongly disagree	6	7	3
DK/NA	9	8	9
Q13. In general do you strongly agree, somewhat agree, somewhat disagree or strongly disagree with allowing a research exemption to patent protection?			

Likewise, biotechnology research community members who work closely with three or more sectors (54%) are more likely than those who work closely with only one (47%) or two sectors (43%) to strongly agree with allowing research exemptions to patent protection.

Community members who have at least some work or school experience outside of Canada have a different intensity in their belief in allowing research exemptions. Those who obtained some of this experience in the United States (42%) are less likely to strongly agree with allowing research exemptions to patent protection than those who obtained some of their work or school experience in other areas of the world (51%).

Respondents from the Prairies (53%) and Atlantic Canada (52%) are more likely than those from British Columbia (42%) to strongly agree with allowing a research exemption to patent protection.

It appears that there is a relationship between awareness of patenting issues and opinions with respect to the granting of research exemptions to patent protection. Biotechnology community members with a high level of awareness of patenting issues (59%) are much more likely than those with a low level of awareness (38%) to strongly agree that a research exemption should be allowed to patent protection.

7.2 Scope of Research Exemption

We asked those who somewhat or strongly agreed with allowing a research exemption to patent protection whether the scope of the research exemption should be kept as it is currently, broadened or narrowed. A plurality of these members of the biotechnology research community (44%) are satisfied the current scope, while one-third (33%) suggest that the scope should be broadened. Less than one in ten (6%) offer an opposite opinion, suggesting that the scope of this research exemption to patent protection should be narrowed. A significant minority (18%) are unable or unwilling to address this question of concerning their preferred scope for research exemptions.

As the size of organization increases, so too does the likelihood that biotechnology research community members believe that the scope of a research exemption should be kept as it is currently. More than one-half of respondents from large organizations (53%) believe that the scope of the research exemption should be kept as it is currently. On the other hand, respondents from small organizations (40%) are more likely to suggest that the scope of research exemptions should be broadened. Other subgroups who feel the scope should be broadened include, survey participants from the Prairies (44%), end users of research results (44%) and biotechnology research community members based in Ontario (41%).

Scope of Research Exemption by Size of Organization (%)				
	Total	Small	Medium	Large
Kept as it is currently	44	34	45	53
Broadened	33	40	28	30
Narrowed	6	7	6	3
DK/NA	18	18	20	13
Q14. Do you feel that the scope of a research exemption to patent protection should be . . . ?				

Patent non-owners (24%) are more likely than those who own patents, or who work for organizations which own patents (15%) to be unable or unwilling to offer an opinion on the desired scope of research exemptions. When they do offer an opinion, patent owners (48%) are more likely than patent non-owners (35%) to suggest that the scope of the research exemption should be kept as it is currently. Other groups satisfied with the current scope of research exemptions include those community members from Quebec (57%) and managers/researchers (55%). In addition, private sector workers (46%) and non-private sector workers (45%) are more likely than those who currently work in both these sectors (33%) to think that the scope of a research exemption to patent protection should be kept as it is currently.

Keeping in mind the small sample size, end users of research results have very interesting opinions regarding the proper scope for research exemptions. As mentioned above, they are more likely to suggest that the scope needs to be broadened, however, at the same time they are also relatively more likely to suggest that the scope of a research exemption to patent protection should be narrowed (19%). Overall, this group has, by far, the lowest proportion (19%) that is comfortable with the status quo when it comes to defining their desired scope for research exemptions.

Biotechnology community members with a high awareness of patenting issues (57%) are much more likely than those with only a low level of awareness (31%) to suggest that the scope of a research exemption to patent protection should be kept as it is currently. In general, the lower the level of awareness, the more difficulty or resistance respondents had to comment on the proper scope of research exemptions.

Scope of Research Exemption by Awareness Level (%)				
	Total	Low	Medium	High
Kept as it is currently	44	31	46	57
Broadened	33	5	6	6
Narrowed	6	35	32	31
DK/NA	18	29	17	6
Q14. Do you feel that the scope of a research exemption to patent protection should be . . . ?				

Other subgroups that had difficulty or resistance to offering an opinion on the proper scope of research exemptions include: members of the biotechnology research community from Atlantic Canada (33%) and researchers (32%). Furthermore, the hesitancy to address this question increased as community members had more years of experience in the field of biotechnology (10 years or less – 14% DK/NA; 11-20 years – 18% DK/NA; more than 20 years – 21% DK/NA).

When examining opinions on the desired scope of research exemptions, we find that the attitudes of those who obtained their experience (both work and school) in the field of biotechnology entirely in Canada are quite different from those who obtained at least some of this experience outside of this country. Survey respondents with experience that is based entirely within Canada (42%) are almost twice as likely than those who have some experience in the United States (22%) or other countries in the world (22%) to suggest that the scope of research exemptions should be broadened. Those who have some biotechnology experience that is at least partly from the United States (49%) or other countries (49%) tend to be more satisfied with the status quo than those with an academic and work career that has taken place solely in Canada (37%).

7.3 Inclusion in Patent Act

Currently, research exemptions have been determined by court precedent. We asked members of the biotechnology research community if their desired scope for a research exemption to patent protection (status quo, narrower, broader) should be written in to the *Patent Act*. Overall, there appears to be a desire to have the description of a research exemption to patent protection codified. As the table on the following page indicates, regardless of the desired scope, survey respondents from the biotechnology research community overwhelmingly say they would like to see their preferred approach written into the legislation governing patents in Canada. Furthermore, those that would like to see the scope of a research exemption changed from its current status are even more likely than those who prefer that the scope be kept at its current level to want the nature of this exemption explicitly included in the *Patent Act*.

Almost nine out of ten community members who would like to see the scope of the research exemption to patent protection broadened (86%) would like this new scope entrenched into the *Patent Act*. Meanwhile, seven out of ten members of the biotechnology research community who would like to see the scope of the research exemption narrowed (73%) would also prefer have this new tightened scope written into

the legislation. Three-fifths of community members who are satisfied with the current scope of research exemptions (62%) feel that it should be written into the *Patent Act*. It is interesting to note that these individuals are also much more likely to be unable or unwilling to offer an opinion (18% - DK/NA) on the inclusion of their preferred approach into legislation. This higher level of non-response may be due in part to a lack of certainty regarding the current inclusion of the definition of a research exemption in the *Patent Act*. In other words, members of the biotechnology research community who prefer the status quo may have been less willing or able to answer this question because they are not unclear if the current definition is already included in the *Patent Act*. As well, there may be another factor at play here. Since these people feel the current system works well enough, an “if it ain’t broke, don’t fix it” attitude may predominate. This would explain the preference toward the status quo rather than codification.

Inclusion in Patent Act			
	Yes	No	DK/NA
Broader approach	86	11	3
Narrower approach	73	27	-
Status quo approach	62	20	18
Q15. In your opinion should this (status quo/narrower/broader) approach be written into the Patent Act?			

Private sector biotechnology community members, community members with network partners in only one sector, those from large organizations, and patent non-owners are more likely to suggest that the status quo approach should be included in the *Patent Act*. Those with between 11 and 20 years of biotechnology experience, those who have an international dimension in their work or educational experience, researchers, and those who currently work in both the private and non-private sectors are more likely to suggest that the broader approach should be included in the legislation.

7.4 Reasons for Not Allowing Research Exemptions

As noted previously, a small minority of the biotechnology research community disagreed that research exemptions to patent protection should be allowed. Therefore, we asked these individuals why they felt this way. The most popular reason cited was a concern that allowing a research exemption was unfair to the original patent holder (44%). The concern was that these individuals or organizations had put time, money and effort into developing the original patent and would be deprived the benefits of this work by the allowance of a research exemption.

One in five (18%) respondents to this question suggest that research exemptions are unnecessary, while another 15 percent feel that this exemption is often misused or abused. One in ten say that allowance of a research exemption should depend on its application (9%) or they offered a mix of other reasons (9%) for suggesting why research exemptions to patent protection should not be available.

Reasons Why Research Exemptions Should Not Be Available	
	%
Unfair to owner or original filer of patent/expenses/exclusivity to owner or investor	44
Unnecessary	18
Misuse/abuse/no regulation/Irresponsibility	15
Depends on application	9
Other	9
DK/NA	6
Q16. Why do you feel that a research exemption should not be available to patent protection?	

Due to the small number of respondents, further data analysis would not yield significant results.

7.5 Use of Research Exemption

Overall, biotechnology research community members overwhelmingly (79%) suggest that they are not aware of any incidences where another person or organization made use of their patented invention under the research exemption. Only one in six (16%) are aware of such a use of the research exemption by others.

Use by Others of Research Exemption	
	%
Yes	16
No	79
DK/NA	5
Q20. Are you aware of any incidences where another person or organization made use of your patented invention under the research exemption?	

Given their relatively lower levels of patent ownership it is interesting to note that survey respondents with 10 years or less experience (26%) are much more likely than those with more experience (11-20 years – 13%, 21+ years - 15%) to be aware of any incidences where another person or organization made use of their patented invention under the research exemption. On the other hand, it is not surprising that members of the biotechnology research community from large organizations (23%) have a higher level of awareness of such use of the research exemption, in comparison with those from small (16%) and medium-sized (8%) organizations.

Those in the biotechnology research community who gained at least some of their work or school experience in the United States (22%) are more likely than both those whose experience was acquired entirely in Canada (14%) and those who obtained some of this experience outside of Canada in countries besides the United States (14%) to be aware

of any incidences where another person or organization made use of their patented invention under the research exemption.

Community members based in Quebec (14%) are the most likely to be unable or unwilling to comment on the use of their patented invention by others under the research exemption.

Personal use of the research exemption by respondents from the biotechnology research community is only slightly higher than the known use of the exemption by others as noted above. One in five biotechnology research community members (19%) report that either they or someone else in the organization have ever used the research exemption to patent protection. Seven out of ten (70%) suggest that no such use has occurred and another one in ten (11%) do not know if any use of the research exemption has ever taken place.

Once again, we find that the size of an organization and patent ownership have a profound impact on the practices of those within the biotechnology research community. In this instance, biotechnology research community members from large organizations (34%) are much more likely than those from medium-sized organizations (13%) or small organizations (10%) to report the use of the research exemption either by themselves personally or by someone else in their organization. Likewise, those who own patents, or who work for organizations which own patents (22%) are twice as likely as patent non-owners (10%) to have used the research exemption to patent protection. The importance of size of organization and patent ownership is further supported by Pearson Chi-square tests, which indicate a significant relationship between these variables and use of the research exemption.

Use of Research Exemption by Size of Organization (%)				
	Total	Small	Medium	Large
Yes	19	10	13	34
No	70	76	78	55
DK/NA	11	14	9	12
Q21. As far as you know, have you or anyone else in your organization ever used the research exemption to patent protection. . ?				

Use of Research Exemption by Patent Ownership (%)			
	Total	Patent Owner	Patent Non-Owner
Yes	19	22	10
No	70	65	82
DK/NA	11	12	8
Q21. As far as you know, have you or anyone else in your organization ever used the research exemption to patent protection. . ?			

Biotechnology research community members who acquired at least some of their experience outside of Canada in countries besides the United States (24%) have made

greater use of the research exemption than those who gained their experience in the field of biotechnology entirely in Canada (15%).

In contrast, members of the biotechnology research community who work in the private sector (75%) are more likely than those in the non-private sector (64%) and those who work in both the private and non-private sectors (66%) to suggest that they or their organization have never used the research exemption to patent protection. End users of research results (90%) and community members from Atlantic Canada (78%) are also more likely to make this same observation.

7.6 Research Exemption Disputes

We asked the 47 survey respondents who have used (or someone else in the organization has used) the exemption if this use was ever disputed by the patent holder. Only six percent suggest that such a dispute has occurred (and in all three cases the patent holder was located in the United States). Over nine out of ten biotechnology research community members (94%) suggest that their use of the research exemption has occurred without any dispute from the patent holder.

Occurrence of Research Exemption Disputes	
	%
Yes	6
No	94
DK/NA	-
Q22. Was this use of the research exemption ever disputed by the patent holder?	

8.0 PATENT PROTECTION AND METHODS OF MEDICAL TREATMENT

Currently, Canada does not allow methods of medical treatment to be patented. Overall, given the low levels of awareness on this topics discussed earlier in this report many members of the biotechnology research community find it difficult to comment on the current approach in Canada with respect to patent protection for methods of medical treatment. Those community members that do comment tend to be in agreement with the current approach, while those who disagree with the current approach have concerns about its perceived restrictive nature, the existence of exemptions for medical treatments in other countries, the need for revisions and the difficulty in enforcement.

8.1 Level of Agreement with Current Approach

Two-fifths of the biotechnology research community (43%) were unable or unwilling to offer an assessment on their level of agreement with the current approach in Canada with respect to patent protection for methods of medical treatment. This high level of non-response mirrors the level of non-response to the earlier question regarding the best descriptor of the current situation for this aspect of patent law in Canada. Given survey participants lack of awareness of what the current situation in Canada actually is, with respect to patent protection for methods of medical treatment, it is not overly surprising that they are also unable or unwilling to make an evaluation of this approach.

One-half of survey respondents from the biotechnology research community (49%) either somewhat (32%) or strongly agree (17%) with the current approach. Conversely, approximately one in ten (8%) either somewhat (7%) or strongly disagree (1%) with the current approach on patent protection for methods of medical treatment.

Biotechnology community members who specialize in human health and those whose primary area of academic study was medicine have higher levels of agreement with the current approach in Canada with respect to patent protection for methods of medical treatment. It is worth noting that this higher level of agreement occurs despite these community members not having a higher level of awareness of the current approach in Canada with respect to patent protection for methods of medical treatment.

Not only do community members who specialize in human health have a higher level of overall agreement (61%) with the current approach in Canada with respect to patent protection for methods of medical treatment than their counterparts in other specialities, they also have a much higher level of strong agreement (25%). Keeping in the mind the small sample sizes, those who specialize in plants (9%) are the least likely to strongly agree with the current approach, and community members who focus on administrative matters (19%) or the environment (17%) have the highest levels of overall disagreement. Furthermore, community members who specialize in animal (58%) or plant research (56%) had more difficulty or resistance offering an opinion on this question.

Agreement with the Current Approach in Canada with Respect to Patent Protection for Methods of Medical Treatment by Selected Areas of Specialization (%)							
	Total	Human Health	Plants	Animals	Environment	Admin.	Other
Strongly agree	17	25	9	17	14	12	14
Somewhat agree	32	36	29	21	21	43	37
Somewhat disagree	7	9	3	2	14	19	5
Strongly disagree	1	-	3	2	3	-	2
DK/NA	43	30	56	58	48	24	42
<i>Q17. In general, do you strongly agree, somewhat agree, somewhat disagree or strongly disagree with the current approach in Canada with respect to patent protection for methods of medical treatment . . . ?</i>							

As mentioned above, it appears that a background in medicine may have some effect on opinions toward the current approach in Canada with respect to patent protection for methods of medical treatment. Seven out of ten biotechnology community members who reported that medicine was their primary area of study (71%) suggest that they strongly (38%) or somewhat agree (33%) with the current approach. Even though only a small number of respondents reported such a background (24), the intensity of this agreement was much stronger than respondents from all other academic backgrounds.

Members of the biotechnology research community who report that their current position is both a research manager and a researcher tend to have higher levels of overall agreement (59%) with the current approach in Canada, and are also the least likely to be unable or unwilling to make an assessment of the current approach (33% - DK/NA). End users' support of the current approach is much softer than other groups. Only five percent of end users of research results strongly agree with the current approach.

When we examined the results to this question from a regional perspective, a number of interesting differences emerge. While biotechnology research community members from Ontario have the highest level of overall agreement (57%) with the current approach, they also tend to be more cautious in their support (43% - somewhat agree). Community members from Quebec are the most likely to strongly agree (30%) with the current approach in Canada with respect to patent protection for methods of medical treatment, while those from the Prairies have a higher level of tepid agreement (43% - somewhat agree). Members of the biotechnology research community from Atlantic Canada (65%) are much more likely than those from the rest of the country, to be unable or unwilling to offer an assessment on this question.

Agreement with the Current Approach in Canada with Respect to Patent Protection for Methods of Medical Treatment by Region (%)						
	Total	Ontario	Quebec	BC	Prairies	Atlantic
Strongly agree	17	14	30	15	9	4
Somewhat agree	32	43	16	33	43	22
Somewhat disagree	7	5	7	6	11	9
Strongly disagree	1	-	1	2	2	-
DK/NA	43	38	45	44	36	65
Q17. In general, do you strongly agree, somewhat agree, somewhat disagree or strongly disagree with the current approach in Canada with respect to patent protection for methods of medical treatment . . . ?						

Biotechnology research community members with the least amount of work and school experience in the field of biotechnology have a much lower level of strong agreement (8%) than those with between 11 and 20 years experience (21%) and those with more than 20 years experience (18%). However, it should be noted that those with more than 20 years of experience (46%) were just as likely as those with 10 years or less experience (49%) to be unable or unwilling to provide their evaluation of the current approach in Canada with respect to patent protection for methods of medical treatment.

Non-private sector workers from the biotechnology research community (54% - DK/NA) have much more difficulty offering an opinion on this question than those from the private sector (42%) and those who work in both of these sectors (20%). Of these three subgroups, community members who currently work in both the private and non-private sectors (68%) have the highest level of overall agreement with the current approach regarding methods of medical treatment and patent protection. In addition, those who work closely with only one sector (54%) also have higher levels of overall agreement with the current approach.

It is worth noting that community members who obtained some of their experience outside of Canada in countries besides the United States tend to be the most positive about the current approach in Canada with respect to patent protection for methods of medical treatment.

Of the various subgroup differences we have noted above, additional tests of statistical significance indicate that region and sector have the strongest effect on biotechnology research community members' opinions on the current approach in Canada with respect to patent protection for methods of medical treatment.

8.2 Reasons for Disagreement with Current Approach

One-half of survey respondents who either somewhat or strongly disagreed with the current approach in Canada with respect to patent protection for methods of medical treatment (48%) did so because they feel it is too restrictive or that it limits the possibilities of developing better treatments. One in five (19%) suggest that exemptions for medical treatment should be modelled after those available in other parts of the

world. One in seven survey respondents (14%) feel that the current situation for patent protection for methods of medical treatment in Canada needs to be revised or brought up to date, while one in ten provided comments about the difficulty of enforcing patent protection (10%) or a mix of other comments (10%).

Reason for Disagreeing with Current Approach to Patent Protection for Methods of Medical Treatment	
	%
Too restrictive/limit possibilities of developing better treatments	48
Exemptions for medical treatment available in US or Europe/US system more well known, internationally	19
Needs revision/bring up to date	14
Difficulty of enforcing patent protection	10
Other	10
DK/NA	-
Q18. Why do you disagree with the current approach in Canada with respect to patent protection for methods of medical treatment?	

Due to the small number of respondents, further data analysis would not yield significant results.

9.0 NETWORKING EXPERIENCE

As with their peers in Academia or commercial fields, members of the biotechnology research community are actively engaged in networking. As this section of the report will demonstrate, this activity is not confined to Canada, nor is networking confined to any particular sector or field of endeavour. Although some members of the biotechnology research community do not network as aggressively as others, it is a prevalent activity among all members of the community.

9.1 Network Sectors

To obtain information on the networking activity of community members, we began by asking participants about the various sectors with which they work with most closely. Among the biotechnology research community as a whole, a majority of participants say that they work most closely with colleagues from academic institutions (57%) or with private sector biotechnology researchers (52%). One-third of participants say that they work closely with government (32%) or with those who undertake research for private sector pharmaceutical companies (32%). One-quarter of community members (24%) include those who work with other (non-pharmaceutical) private sector organizations in their network. Just over one-in-five community members network with those from the hospital sector (22%) with an additional eight percent who say they work with those involved in other not-for-profit activities.

Networking as an activity is more prevalent among non-private sector researchers than among those who work for the private sector. It may be that limited budgets, or a higher orientation toward information sharing, are stimulating this activity on the part of community members in the non-private sector. As well, those who own patents, or whose organizations own patents, are more likely to pursue networking activities than are those who do not. Likewise, those who include an international dimension in their work or educational experience are more likely to report higher levels of networking activity than those whose experience is based solely in Canada.

Although building linkages with Academia appears to be the priority for networking by members of the biotechnology research community, it is affected by the breadth of this activity undertaken by community members. In fact, for those who have small networks, the priority appears to be more focussed on linkages to private sector biotechnology companies (33%) than to linkages to Academia (27%). However, as the number of sectors included in the network grows, linkages to the academic community appears to take on greater significance, to 91 percent among those who include 3 or more sectors in their networks. Although every sector sees an increase in network inclusion as the number of sectors increases, the increase is most dramatic with regard to Academia.

The diversity of the network is critical for linkages to the not-for-profit sector. These linkages are absent among those whose networks are limited to only one sector and rises to 22 percent among those whose networks include three or more sectors.

Network Sectors by Breadth of Activity				
	Total %	- Number of Sectors -		
		1	2	3+
Academia	57	27	57	91
Private sector – Biotech	52	33	49	78
Private sector – Pharmaceuticals	32	12	26	61
Government	32	11	30	57
Hospital	22	4	17	46
Other private sector	24	12	18	44
Not-for-profit	8	-	2	22
DK/NA	1	-	-	-
Q26. Now for some questions on networking. With which of the following sectors do you (or your organization) work most closely . . . ?				
* Multiple Responses Accepted				

Community members based in British Columbia are the least likely to include government representatives (21%) in their network. In contrast, those who work with large organizations (44%) are among the most likely to include government representatives in their network. Those working for large organizations (31%) are also the most likely to have networks that include representatives of other, non-pharmaceutical private sector operations.

The number of years of experience that a respondent has appears to play a role in their level of networking activity. One-third of those with 21 years or more of experience (32%) report networking with 3 or more sectors, compared to only nine percent among those with less than six years of experience. Not only does the number of sectors included in the network increase with years of experience; the likelihood that private sector pharmaceutical companies (39%) and hospitals (34%) will be included in their network also increases.

Community members based in Quebec are the least likely to report networking behaviour, especially with regard to building linkages to the academic community. End-users of biotechnology research are also less likely to engage with Academia.

As can be expected, the size of the organization has an influence on the diversity of the network, with participants who work for larger organizations having a more diverse network than do those who work for small organizations. For example, one-half (51%) of those who work for the smallest organizations (five employees or less) report that they network with only one sector, compared to only 14 percent of those who work for the largest companies (301 employees or more). On the other hand, 57 percent of participants in the largest companies say that their networks include 3 or more sectors compared to only 28 percent of those from the smallest organizations.

As mentioned earlier, participants from Quebec are the least aggressive when it comes to networking activity (19% saying 3 or more sectors). While participants from organizations based in Ontario are more aggressive when it comes to networking (37%

saying 3 or more sectors), participants from Nova Scotia and Alberta tend to be the most aggressive when it comes to this activity.

9.2 Location of Network Sectors

Of course, networking is not necessarily confined to any one country or region. While community members tend to network with colleagues elsewhere in Canada (88%), a majority also report that they undertake networking activities with colleagues in the United States (58%) and a significant minority (35%) include representatives from European Union countries in their network. Far fewer community members report networks that include the Far East (9%), Australia, New Zealand and Oceania (4%) and elsewhere in the world (5%)¹¹.

Location of Network Sectors	
	%
Canada	88
United States	58
European Union (EU)	35
Far East (China, Japan, S & N Korea)	9
Australia/New Zealand/Oceania	4
Other	5
DK/NA	1
Q27 In general, are these persons or organizations located in . . . ?	
* Multiple Responses Accepted	

Community members in British Columbia are the least likely to include other Canadian-based colleagues in their networks (73%) but are the most likely to include those from the United States (67%). Community members from Ontario (17%) and British Columbia (13%) are the most likely to include the Far East in their professional networks.

Those who own patents, or who work for organizations which own patents, are more likely than patent non-owners to confine their networking activities to North America (63% vs. 45%) and the European Union (40% vs. 22%).

Aside from an apparent reluctance for community members from smaller organizations to be networking in European Union countries, organization size appears to have little influence on the international dimension of networking activities. Likewise, there is no apparent link between the international experience obtained by community members and an increase in the international nature of their networks. In other words, there is no significant difference in the international nature of these networks between those community members whose work or educational experience is based solely in Canada and those who have some international experience in their professional history.

¹¹ Other countries or parts of the world mentioned included: Middle East, Latin America, Argentina, and Brazil.

There appears to be a positive link between the number of sectors included in the network and the likelihood that the network will include an international dimension. As well, those community members who are both managers and researchers, as well as those who work for both the private and non-private sector, tend to have the broadest international component in their networks, especially with regard to the inclusion of representatives from the Far East.

10.0 CONCLUSIONS

In this section, we highlight the most salient findings from the survey of the biotechnology research community.

- Overall, we found that the biotechnology research community's awareness and understanding of patenting issues raised is moderate at best. Interestingly, biotechnology research community members who obtained some of their work or school experience in the United States are more likely than those who obtained their experience entirely in Canada to understand that the Canadian research exemption permits someone to use a patented invention in order to experiment on and improve thereon.
- Patent ownership is very common in the biotechnology field, with seven out of ten researchers or their organization owning a patent. The size of an organization appears to be a determinant factor in patent ownership. In addition, patent ownership is an important indicator of the awareness and understanding of the research exemption in Canada.
- Overwhelmingly, the biotechnology research community strongly supports allowing a research exemption to patent protection. Over nine out of ten biotechnology community members have used an invention protected by a patent for research purposes without dispute from the patent holder.
- While 44 percent of biotechnology community members have a preference for the status quo with respect to the scope of the research exemption, 33 percent suggest that the scope should be broadened. Regardless of the desired scope of a research exemption (status quo, broader, narrower), community members overwhelmingly would like to see their preferred approach written into the legislation.
- Concerns about potential patent infringement appear to be inhibiting research activity in Canada, especially early in the research process. It seems that actions of the biotechnology research community in Canada are most effected by concerns over U.S. patent holders, likely due to the stricter enforcement and policing of their patents.
- Many members of the biotechnology research community find it difficult to comment on the current approach in Canada with respect to patent protection for methods of medical treatment. Those community members that do comment tend to be in agreement with the current approach.
- Of the five patenting issues we tested, the relationship between patent protection and methods of medical treatment was the item with the lowest level of awareness. Interestingly, research managers and patent owners are more likely than researchers, patent non-owners, and research end users to be aware that Canada

does not grant patents for methods of medical treatment for use on animals or humans.

- It is clear that research managers, community members from the non-private sector, those with the most experience in the field of biotechnology, those from larger organizations and patent owners are the most actively engaged in patenting issues and activities. These individuals are not only the most aware of patenting issues, but they also tend to be more active with respect to patent ownership, more concerned about possible patent infringements, the most supportive of the current scope of the research exemption, more frequent users of research exemptions, and they have higher levels of agreement with the current approach in Canada with respect to patent protection for methods of medical treatment.

APPENDICES

Biotech Researcher Questionnaire – Field Version
November 6, 2000

Good afternoon/evening. My name is () of the Environics Research Group Ltd. We are conducting a survey on behalf of the Government of Canada. This is strictly a survey of professionals who are involved with biotechnology research and/or use the results of such research. The purpose of the survey is to obtain some insights into the practices and attitudes of the biotechnology community with regard to intellectual property issues. All your responses will be kept strictly confidential. We would like to obtain the views of both managers as well as researchers. Would you be the person we should be speaking with?

Yes (CONTINUE)

No (ASK FOR NAME OF PERSON WHO WOULD BE BEST TO SPEAK WITH)

May we begin now or is there a more convenient time for you to complete this survey?

Yes (CONTINUE)

No (SCHEDULE A CALL BACK OR, IF HARD REFUSAL, THANK AND TERMINATE)

Would you like to complete this survey in English or French?

English (CONTINUE)

French (CONTINUE)

Respondent Profile

1. To begin with, which of the following best describes the nature of your current position? **(READ & CIRCLE ALL THAT APPLY) (WATCH QUOTAS)**

01 – Researcher

02 – Manager of Research

03 – End user of the research results (i.e. someone involved in applications of biotech research)

VOLUNTEER ONLY

04 – Other (Specify:)

05 – Refused

2. In which of the following sectors do you currently work? (**READ & CIRCLE ALL THAT APPLY**) (**WATCH QUOTAS**)

01 – Private sector

02 – Academia

03 – Not-for-Profit

04 – Government

05 – Hospital

VOLUNTEER ONLY

06 – Other (Specify: _____)

07 – DK/NA

3. In what area or areas of specialization do you spend the majority of your time? (**DO NOT READ, CIRCLE ALL THAT APPLY**) (**NOTE FOR INTERVIEWER: IF RESPONDENT SAYS THERAPEUTICS, PROBE FOR HUMANS OR FOR ANIMALS; IF RESPONDENT SAYS GENOMICS, PROBE FOR PLANT, HUMAN OR ANIMAL; IF RESPONDENT SAYS AGRICULTURE, PROBE FOR PLANT AND SEEDS OR ANIMAL**)

01 – Therapeutics for humans

02 – Therapeutics for animals, excluding humans

03 – Diagnostics

04 – Plant genomics

05 – Human genomics

06 – Animal genomics

07 – Processed food products

08 – Agriculture – plant and seeds

09 – Agriculture – animal

10 – Aquaculture

11 – Environment

12 – Forestry

13 – Bioinformatics

14 – Other (Specify: _____)

15 – DK/NA

4. In total, how many years of work and school experience do you have in the field of biotechnology? (**INCLUDE HALF YEARS (e.g. 3.5) IF MENTIONED**)

01 – SPECIFY _____

02 – DK/NA

5. Was this experience, both work and school, obtained entirely in Canada?

01 – Yes **SKIP TO Q.7**

02 – No **GO TO Q.6**

03 – DK/NA **SKIP TO Q.7**

6. (IF NO IN Q.5, ASK) In what other countries was this experience acquired? (DO NOT READ AND CIRCLE ALL THAT APPLY)

- 01 – United States
- 02 – Other (Specify: _____)
- 03 – DK/NA

7. What area or areas of study, did you concentrate on during your academic career? (DO NOT READ – ACCEPT UP TO TWO/ NO PROBE)

- 01 – Agriculture
- 02 – Biochemistry
- 03 – Biology
- 04 – Business
- 05 – Chemistry
- 06 – Computer Science
- 07 – Engineering
- 08 – Genomics
- 09 – Medicine
- 10 – Physics
- 11 – Veterinary medicine
- 12 – Other (specify: _____)
- 13 – DK/NA

Awareness of Current Canadian Biotech Issues

8. In your opinion, which of the following statements best describes the Federal Court of Appeal's recent ruling on the Harvard onco-mouse? (READ & ROTATE – ACCEPT ONLY ONE RESPONSE)

- 01 – The Harvard onco-mouse *is not* patentable in Canada
- 02 – The Harvard onco-mouse *is* patentable in Canada
- 03 – Higher life forms, including humans, are patentable in Canada
- 04 – DK/NA

9. In your opinion, which of the following statements best describes the research (or experimental use) exemption in Canada? (READ & ROTATE – ACCEPT ONLY ONE RESPONSE)

- 01 – The research exemption permits persons to use patented inventions for any purpose
- 02 – The research exemption permits persons to use patented inventions in order to experiment on and improve upon them
- 03 – The research exemption permits persons to use patented inventions solely for the purpose of philosophical inquiry
- 04 – DK/NA

10. In your opinion, which of the following statements best describes the current situation in Canada with respect to patent protection for methods of medical treatment? **(READ & ROTATE – ACCEPT ONLY ONE RESPONSE)**

- 01 – Canada does not grant patents for methods of medical treatment for use on animals or humans
- 02 – Canada grants patents for methods of medical treatment for use on animals but not on humans
- 03 – Canada grants patents for methods of medical treatment but the exemption permits doctors to treat a disease without worrying about patent infringement
- 04 – DK/NA

11. In your opinion, which of the following statements best describes patents for the human genome? **(READ & ROTATE – ACCEPT ONLY ONE RESPONSE)**

- 01 – Canada allows patents for all data on the human genome
- 02 – Canada allows patents for all expressed sequence tags and DNA
- 03 – Canada currently allows patents for expressed sequence tags and DNA which satisfy the criteria of the *Patent Act*
- 04 – DK/NA

12. In your opinion, which of the following statements best describes Genome Canada? **(READ & ROTATE – ACCEPT ONLY ONE RESPONSE)**

- 01 – Genome Canada supports major large-scale genome projects of strategic importance to Canada
- 02 – Genome Canada is a leading venture capital company investing in biotechnology firms in Canada which are undertaking research in the area of human genome
- 03 – Genome Canada is the Canadian subsidiary of Celera Genomics
- 04 – DK/NA

Attitudes Toward Patent Exemptions

13. In general, do you strongly agree, somewhat agree, somewhat disagree or strongly disagree with allowing a research exemption to patent protection?

- | | |
|------------------------|---------------------|
| 01 – Strongly agree | GO TO Q.14 |
| 02 – Somewhat agree | GO TO Q.14 |
| 03 – Somewhat disagree | SKIP TO Q.16 |
| 04 – Strongly disagree | SKIP TO Q.16 |
| 05 – DK/NA | SKIP TO Q.17 |

14. (ASK OF THOSE WHO SAID STRONGLY OR SOMEWHAT AGREE IN Q.13) Do you feel that the scope of a research exemption to patent protection should be . . . ?
(READ)

- 01 – Kept as it is currently
- 02 – Narrowed
- 03 – Broadened
- 04 – DK/NA

15. In your opinion, should this (**status quo/narrower/broader - use appropriate answer from Q.14**) approach be written into the *Patent Act*?

- 01 – Yes
- 02 – No
- 03 – DK/NA

GO TO Q.17

16. (ASK OF THOSE WHO SAID STRONGLY OR SOMEWHAT DISAGREE IN Q.13)
Why do you feel that a research exemption should not be available to patent protection?

- 01 – Specify _____

- 02 – DK/NA

17. In general, do you strongly agree, somewhat agree, somewhat disagree or strongly disagree with the current approach in Canada with respect to patent protection for methods of medical treatment?

- | | |
|------------------------|---------------------|
| 01 – Strongly agree | SKIP TO Q.19 |
| 02 – Somewhat agree | SKIP TO Q.19 |
| 03 – Somewhat disagree | GO TO Q.18 |
| 04 – Strongly disagree | GO TO Q.18 |
| 05 – DK/NA | SKIP TO Q.19 |

18. (ASK OF THOSE WHO SAID STRONGLY OR SOMEWHAT DISAGREE IN Q.17)
Why do you disagree with the current approach in Canada with respect to patent protection for methods of medical treatment?

- 01 – Specify _____

- 02 – DK/NA

Patent Behaviour

19. Which of the following best describes your patenting experience? **(READ)**

01 – Neither you nor your organization owns or has ever applied for a patent

SKIP TO Q.21

02 – Either you or your organization owns a patent

GO TO Q.20

03 – Neither you nor your organization owns a patent but you or your organization have applied for one

SKIP TO Q.21

04 – DK/NA

SKIP TO Q.21

20. **(IF RESPONDENT OR THEIR ORGANIZATION OWNS A PATENT ASK)** Are you aware of any incidences where another person or organization made use of your patented invention under the research exemption?

01 – Yes

02 – No

03 – DK/NA

21. As far as you know, have you or anyone else in your organization ever used the research exemption to patent protection?

01 – Yes

GO TO Q.22

02 – No

SKIP TO Q.24

03 – DK/NA

SKIP TO Q.24

22. **(IF YES IN Q.21, ASK:)** Was this use of the research exemption ever disputed by the patent holder?

01 – Yes

GO TO Q.23

02 – No

SKIP TO Q.24

03 – DK/NA

SKIP TO Q.24

23. **(IF YES IN Q.22, ASK:)** Where was the patent holder located? **(CODE ALL THAT APPLY – CODE AT COUNTRY LEVEL ONLY)**

01 – Canada

02 – United States

03 – Other (Specify: _____)

04 – DK/NA

24. Has a concern on the part of your organization or yourself about someone else's patent ever lead you to . . . ? **READ AND ROTATE**

- a) stop research work
 - 01 – Yes
 - 02 – No
 - 03 – DK/NA
- b) delay research work
- c) not begin research work

IF NO TO ALL THREE CHOICES IN Q.24, SKIP TO Q.26

25. (IF YES TO ANY OF THE CHOICES IN Q.24, ASK:) Where was the patent holder located? **(CODE ALL THAT APPLY – CODE AT COUNTRY LEVEL ONLY)**

- 01 – Canada
- 02 – United States
- 03 – Other (Specify: _____)
- 04 – DK/NA

Networking

26. Now for some questions on networking. With which of the following sectors do you (or your organization) work most closely? **(READ & CIRCLE ALL THAT APPLY)**

- 01 – Private sector – biotech
- 02 – Private sector – pharmaceuticals
- 03 – Other Private sector
- 04 – Hospital
- 05 – Academia
- 06 – Not-for-Profit
- 07 – Government
- 08 – DK/NA

27. In general, are these persons or organizations located in **(READ & ROTATE & CIRCLE ALL THAT APPLY)**

- 01 – Canada
- 02 – United States
- 03 – European Union
- 04 – Other (Specify: _____)
- 05 – DK/NA

28. (DO NOT READ – ONLY USE IF RESPONDENT WOULD LIKE TO MAKE
ADDITIONAL COMMENTS)

01 – Yes, have additional comments (Specify):

02 – No comments

29. Could you please provide us with names and phone numbers of others in your organization who are involved with biotechnology research and/or use the results of such research so that we may contact them for their feedback. **(RECORD UP TO TWO NAMES AND NUMBERS)**

Name: _____ Phone # _____

Name: _____ Phone # _____

30. Those are all the questions I have. Now, for quality control purposes my supervisor may verify that I conducted this interview with you, may I please have your first name only, or your initials?

Name: _____

31. And just to check that I've dialled the right number, is this (READ TELEPHONE NUMBER AND RECORD)

32. If we have any further questions, may we call you back?

Yes

No

Thank-you very much for your participation.

33. NOTE SEX...DO NOT ASK

Male

Female

34. NOTE NUMBER OF EMPLOYEES ..DO NOT ASK – INFORMATION AVAILABLE FROM GUIDE

Specify _____

DK/NA

35. City of Residence (system-recorded – obtain from Guide):

Toronto, includes the entire GTA

Vancouver, BC

Montreal, QC

Quebec City, QC

Ottawa-Hull, ON

Saskatoon, SK

Winnipeg, MB

Edmonton, AB

Calgary, AB

Victoria, BC

Guelph, ON

Halifax, NS

Fredericton, NB

St. John's, NF

Charlottetown, PEI

Other

36. Province of Residence (system-recorded):

British Columbia

Alberta

Saskatchewan

Manitoba

Ontario

Quebec

New Brunswick

Nova Scotia

Prince Edward Island

Newfoundland

Yukon

Northwest Territories

37. Region (RE-CODE)

British Columbia

Prairie Provinces

Ontario

Quebec

Atlantic Canada

38. Language of Interview (SYSTEM-CODE)

French

English

French Questionnaire

Questionnaire pour les chercheurs en biotechnologie – Version-terrain
Le 6 novembre 2000

Bonjour/Bonsoir, je m'appelle (_____) et je suis du Groupe de recherches Environics limitée. Nous effectuons une enquête au nom du gouvernement du Canada. Il s'agit d'une enquête s'adressant strictement aux professionnels oeuvrant dans le domaine de la recherche en biotechnologie et/ou ceux et celles qui utilisent les résultats de ces recherches. L'objectif de l'enquête est de recueillir les points de vue prévalant dans la communauté de la biotechnologie en ce qui a trait aux questions relatives à la propriété intellectuelle. Toutes vos réponses seront traitées dans la plus stricte confidentialité. Nous souhaitons recueillir le point de vue des gestionnaires et des chercheurs. Êtes-vous la personne à qui nous devrions parler?

Oui (POURSUIVRE)

Non (DEMANDER LE NOM DE LA PERSONNE AVEC LAQUELLE NOUS DEVRIONS PARLER)

Pouvons-nous commencer dès maintenant ou y a-t-il un moment qui vous conviendrait mieux pour répondre à cette enquête?

Oui (POURSUIVRE)

Non (PRENDRE DES ARRANGEMENTS POUR RAPPELER OU, EN CAS DE REFUS DUR, REMERCIER ET CONCLURE)

Désirez-vous que l'enquête se déroule en ANglais ou en français?

Anglais (POURSUIVRE)

Français (POURSUIVRE)

Profil du/de la répondant(e)

1. Pour débiter, lequel des énoncés suivants décrit le mieux la nature du poste que vous occupez présentement? (**LIRE ET ENCERCLER TOUTES LES RÉPONSES QUI S'APPLIQUENT**) (**RESPECTEZ LES LIMITES**)

01 – Chercheur

02 – Gestionnaire de recherches

03 – Utilisateur des résultats de recherche (i.e. une personne oeuvrant dans le domaine des applications de la recherche en biotechnologie)

RÉPONSES DONNÉES VOLONTAIREMENT SEULEMENT

04 – Autre (Préciser : _____)

05 – Refus

2. Puis, dans lequel des secteurs suivants est-ce que vous travaillez présentement?
(LIRE ET ENCERCLER TOUTES LES RÉPONSES QUI S'APPLIQUENT)
(RESPECTEZ LES LIMITES)

- 01 – Secteur privé
- 02 – Université
- 03 – Secteur à but non lucratif
- 04 – Gouvernement
- 05 – Hôpital

RÉPONSES DONNÉES VOLONTAIREMENT SEULEMENT

- 06 – Autre (Préciser : _____)
- 07 – SP/ND

3. Quel champ de spécialité occupe-t-il le plus fort de votre temps? **(NE PAS LIRE ET ENCERCLER TOUTES LES RÉPONSES QUI S'APPLIQUENT) (NOTE À L'INTERVIEWER : SI LE/LA RÉPONDANT(E) DIT THÉRAPEUTIQUE, DEMANDER DES PRÉCISIONS, HUMAINE OU ANIMALE; SI LE/LA RÉPONDANT(E) DIT GÉNOME DEMANDER DES PRÉCISIONS, HUMAINE OU VÉGÉTAUX OU ANIMAUX; SI LE/LA RÉPONDANT(E) DIT AGRICULTURE DEMANDER DES PRÉCISIONS, PLANTES ET GRAINES OR ANIUMAUX)**

- 01 – Thérapeutique humaine
- 02 – Thérapeutique animale, excluant l'être humain
- 03 – Diagnostic
- 04 – Génome des végétaux
- 05 – Génome humain
- 06 – Génome des animaux
- 07 – Produits alimentaires traités
- 08 – Agriculture – plantes et graines
- 09 – Agriculture – animaux
- 10 – Aquaculture
- 11 – Environnement
- 12 – Foresterie
- 13 – Bio-informatique
- 14 – Autre (Préciser : _____)
- 15 – SP/ND

4. Au total, combien d'années d'expérience de travail et scolaire comptez-vous dans le domaine de la biotechnologie? **(INCLURE LES DEMI-ANNÉES (E.G. : 3,5) SI ELLES SONT MENTIONNÉES)**

- 01 – PRÉCISER _____
- 02 – SP/ND

5. Avez-vous acquis cette expérience, au travail et scolaire, entièrement au Canada?

- 01 – Oui **SAUTEZ À Q.7**
- 02 – Non **PASSER À Q.6**
- 03 – SP/ND **SAUTEZ À Q.7**

6. **(SI NON À Q.5, POSEZ CETTE QUESTION)** Dans quels autres pays avez-vous acquis cette expérience? **(NE PAS LIRE ET ENCERCLEZ TOUTES LES RÉPONSES QUI S'APPLIQUENT)**

- 01 – États-Unis
- 02 – Autre (Préciser : _____)
- 03 – SP/ND

7. Dans quel domaine d'études vos études universitaires ont-elles surtout portées? **(NE PAS LIRE - ACCEPTEZ JUSQU'À DEUX RÉPONSES/NE PAS INSISTER)**

- 01 – Agriculture
- 02 – Biochimie
- 03 – Biologie
- 04 – Affaires
- 05 – Chimie
- 06 – Informatique
- 07 – Génie
- 08 – Génomique
- 09 – Médecine
- 10 – Physique
- 11 – Médecine vétérinaire
- 12 – Autre (Préciser : _____)
- 13 – SP/ND

Sensibilisation aux questions d'actualité reliées à la recherche en biotechnologie

8. Selon vous, lequel des énoncés suivants décrit le mieux le récent jugement de la cour fédérale dans l'affaire de l'onco-souris de Harvard? **(LIRE ET CHANGER L'ORDRE -- ACCEPTEZ UNE SEULE RÉPONSE)**

- 01 – L'onco-souris de Harvard *n'est pas* brevetable au Canada.
- 02 – L'onco-souris de Harvard *est* brevetable au Canada.
- 03 – Les formes de vie plus évoluées, y compris l'humain, sont brevetables au Canada.
- 04 – SP/ND

9. Selon vous, lequel des énoncés suivants décrit le mieux l'exemption aux fins de recherche (ou utilisation expérimentale) au Canada? (**LIRE ET CHANGER L'ORDRE -- ACCEPTEZ UNE SEULE RÉPONSE**)

01 – L'exemption aux fins de recherche autorise les personnes à utiliser des inventions brevetées à n'importe quelles fins.

02 – L'exemption aux fins de recherche autorise les personnes à utiliser des inventions brevetées dans le but de mener des expériences et de les améliorer.

03 – L'exemption aux fins de recherche autorise les personnes à utiliser des inventions brevetées uniquement à des fins philosophiques.

04 – SP/ND

10. Selon vous, lequel des énoncés suivants décrit le mieux la situation actuelle au Canada relative à la protection du droit d'auteur dans le cas des méthodes de traitement médical? (**LIRE ET CHANGER L'ORDRE -- ACCEPTEZ UNE SEULE RÉPONSE**)

01 – Le Canada n'accorde pas de brevets pour les méthodes de traitement médical appliquées aux animaux et aux humains.

02 – Le Canada accorde des brevets pour les méthodes de traitement médical appliquées aux animaux mais pas aux humains.

03 – Le Canada accorde des brevets pour les méthodes de traitement médical mais l'exemption autorise les médecins à traiter des maladies sans avoir à se soucier du nom respect des droits d'auteur.

04 – SP/ND

11. Selon vous, lequel des énoncés suivants décrit le mieux le brevets relatifs au génome humain? (**LIRE ET CHANGER L'ORDRE -- ACCEPTEZ UNE SEULE RÉPONSE**)

01 – Le Canada permet de breveter toutes les données relatives au génome humain.

02 – Le Canada permet de breveter toutes les séquences exprimées de marqueurs et d'ADN.

03 – Le Canada permet de breveter toutes les séquences exprimées de marqueurs et d'ADN qui satisfont aux paramètres de la *Loi sur les brevets*.

04 – SP/ND

12. Selon vous, lequel des énoncés suivants décrit le mieux Génome Canada? (**LIRE ET CHANGER L'ORDRE -- ACCEPTEZ UNE SEULE RÉPONSE**)

01 – Génome Canada appuie les projets de recherche de grande envergure sur le génome ayant une importance stratégique pour le Canada.

02 – Génome Canada est une société de capital de risque de premier plan qui investit dans des sociétés oeuvrant dans le secteur de la biotechnologie au Canada et qui entreprennent des recherches dans le domaine du génome humain.

03 – Génome Canada est la filiale canadienne de Celera Genomics.

04 – SP/ND

Attitudes relatives aux exemptions de brevets

13. De façon générale, êtes vous fortement d'accord, quelque peu d'accord, quelque peu en désaccord ou fortement en désaccord à l'exemption aux fins de recherche en matière de protection des droits d'auteur?

01 – Fortement d'accord **PASSEZ À Q.14**

02 – Quelque peu d'accord **PASSEZ À Q.14**

03 – Quelque peu en désaccord **SAUTEZ À Q.16**

04 – Fortement en désaccord **SAUTEZ À Q.16**

05 – SP/ND **SAUTEZ À Q.17**

14. (**POSEZ LA QUESTION À CEUX ET CELLES QUI SE DISENT FORTEMENT OU QUELQUE PEU D'ACCORD À Q.13**) Avez-vous l'impression que la portée de l'exemption aux fins de recherche devrait... ? (**LIRE**)

01 – Demeurer ce qu'elle est présentement

02 – être réduite

03 – être étendue

04 – SP/ND

15. Selon vous, cette portée (**inchangée/réduite/étendue -- utiliser la réponse appropriée à Q.14**) devrait-elle être inscrite dans la *Loi sur les brevets*?

01 – Oui

02 – Non

03 – SP/ND

SAUTEZ À Q.17

16. (POSEZ LA QUESTION À CEUX ET CELLES QUI SE DISENT QUELQUE PEU OU FORTEMENT EN DÉSACCORD À Q.13) Pourquoi pensez-vous qu'une exemption aux fins de recherche ne devrait pas être disponible en matière de protection d'un brevet?

01 – Préciser : _____

02 – SP/ND

17. De façon générale, êtes vous fortement d'accord, quelque peu d'accord, quelque peu en désaccord ou fortement en désaccord avec l'approche actuelle au Canada relative à la protection du droit d'auteur dans le cas des méthodes de traitement médical?

- | | |
|-------------------------------|----------------------|
| 01 – Fortement d'accord | SAUTEZ À Q.19 |
| 02 – Quelque peu d'accord | SAUTEZ À Q.19 |
| 03 – Quelque peu en désaccord | PASSEZ À Q.18 |
| 04 – Fortement en désaccord | PASSEZ À Q.18 |
| 05 – SP/ND | SAUTEZ À Q.19 |

18. (POSEZ LA QUESTION À CEUX ET CELLES QUI SE DISENT QUELQUE PEU OU FORTEMENT EN DÉSACCORD À Q.17) Pourquoi êtes-vous en désaccord avec l'approche actuelle au Canada relative à la protection du droit d'auteur dans le cas des méthodes de traitement médical?

01 – Préciser : _____

02 – SP/ND

Comportement en matière de brevets

19. Lequel des énoncés suivants décrit le mieux votre expérience en matière de brevets? (**LIRE**)

- | | |
|--|----------------------|
| 01 – Ni vous ni votre organisation avez jamais déposé une demande de brevet | SAUTEZ À Q.21 |
| 02 – Vous ou votre organisation êtes détenteur/trice d'un brevet | PASSEZ À Q.20 |
| 03 – Ni vous ni votre organisation n'êtes détenteur/trice d'un brevet mais votre organisation a déposé une demande | SAUTEZ À Q.21 |
| 04 – SP/ND | SAUTEZ À Q.21 |

20. **(SI LE/LA RÉPONDANT(E) OU SON ORGANISATION EST DÉTENTEUR/TRICE D'UN BREVET, POSEZ)** Savez-vous si une autre personne ou une autre organisation a utilisé votre invention brevetée en vertu de l'exemption aux fins de recherche?

- 01 – Oui
- 02 – Non
- 03 – SP/ND

21. En autant que vous sachiez, est-ce que vous ou une autre personne de votre organisation s'est déjà prévalu de l'exemption à la protection des brevets aux fins de recherche?

- | | |
|------------|----------------------|
| 01 – Oui | PASSEZ À Q.22 |
| 02 – Non | SAUTEZ À Q.24 |
| 03 – SP/ND | SAUTEZ À Q.24 |

22. **(SI OUI À Q.21, POSEZ :)** Cette utilisation de l'exemption aux fins de recherche a-t-elle déjà été contestée par le détenteur du brevet?

- | | |
|------------|----------------------|
| 01 – Oui | PASSEZ À Q.23 |
| 02 – Non | SAUTEZ À Q.24 |
| 03 – SP/ND | SAUTEZ À Q.24 |

23. **(SI OUI À Q.22, POSEZ :)** Où était le détenteur du brevet? **(ENCERCLEZ TOUTES LES RÉPONSES QUI S'APPLIQUENT - ENCODER AU NIVEAU DU PAYS)**

- 01 – le Canada
- 02 – les États-Unis
- 03 – Autre (Préciser : _____)
- 04 – SP/ND

24. A des inquiétudes relatives à votre organisation ou vous-même quant à savoir si un brevet détenu par quelqu'un d'autre vous a déjà conduit à ? **(LIRE ET CHANGER L'ORDRE)**

a) abandonner des travaux de recherche

- 01 – Oui
- 02 – Non
- 03 – SP/ND

b) retarder des travaux de recherche

c) ne pas entreprendre des travaux de recherche

SI NON AUX TROIS CHOIX PRÉSENTÉS À Q.24, SAUTEZ À Q.26

25. (SI OUI À UN OU L'AUTRE DES CHOIX À Q.24, POSEZ :) Où était le détenteur du brevet? (ENCERCLEZ TOUTES LES RÉPONSES QUI S'APPLIQUENT - ENCODER AU NIVEAU DU PAYS)

- 01 – le Canada
- 02 – les États-Unis
- 03 – Autre (Préciser : _____)
- 04 – SP/ND

Réseautage

26. Maintenant quelques questions sur le réseautage. Avec lequel des secteurs suivants travaillez-vous (ou votre organisation travaille) le plus étroitement? (LIRE ET ENCERCLEZ TOUTES LES RÉPONSES QUI S'APPLIQUENT)

- 01 – Secteur privé – domaine biotechnologie
- 02 – Secteur privé -- domaine pharmaceutique
- 03 – Autres du secteur privé
- 04 – Hôpital
- 05 – Université
- 06 – Secteur à but non-lucratif
- 07 – Gouvernement
- 08 – SP/ND

27. De manière générale, ces personnes ou organisations sont-elles situées... (LIRE ET VARIER L'ORDRE, ENCERCLEZ TOUTES LES RÉPONSES QUI S'APPLIQUENT)

- 01 – au Canada
- 02 – aux États-Unis
- 03 – dans l'Union européenne
- 04 – Autre (Préciser : _____)
- 05 – SP/ND

28. (NE LIRE PAS - UTILISEZ SEULEMENT SI LE/LA RÉPONDANT(E) SOUHAITE FAIRE DES COMMENTAIRES ADDITIONNELS)

01 – Oui, commentaires additionnels (préciser) :

02 – Aucun commentaire

29. Pourriez-vous s'il vous plaît nous donner les nom et numéro de téléphone d'autres personnes au sein de votre organisation qui oeuvrent dans la recherche en biotechnologie et/ou qui utilisent les résultats de ces recherches, afin que nous puissions communiquer avec elles pour obtenir leurs réactions. **(INSCRIRE JUSQU'À DEUX NOMS ET NUMÉROS DE TÉLÉPHONE)**

Nom : _____ Numéro de téléphone _____

Nom : _____ Numéro de téléphone _____

30. Voilà toutes les questions que j'avais à vous poser. Maintenant, au cas où mon superviseur voudrait s'assurer que j'ai effectué l'entrevue avec vous, pourrais-je s'il vous plaît avoir votre prénom seulement ou vos initiales?

Nom : _____

31. Et pour m'assurer que j'ai composé le bon numéro, est-ce bien le (LIRE LE NUMÉRO DE TÉLÉPHONE ET L'INSCRIRE)

32. Si nous avons d'autres questions, pouvons-nous vous rappeler?

Oui

Non

Je vous remercie beaucoup de votre participation

33. NOTER LE SEXE – NE PAS LE DEMANDER

Homme

Femme

34. NOTEZ LE NOMBRE D'EMPLOYÉS, NE PAS LE DEMANDER --
RENSEIGNEMENT DISPONIBLE DANS LE GUIDE

Précisez _____
SP/ND

35. Ville de résidence (code-système – obtenir dans le Guide):

Toronto, y compris la région du Grand Toronto
Vancouver, C-B
Montréal, QC
Québec, QC
Ottawa-Hull, ON
Saskatoon, SK
Winnipeg, MB
Edmonton, AB
Calgary, AB
Victoria, BC
Guelph, ON
Halifax, NS
Fredericton, NB
St. John's, NF
Charlottetown, PEI
Autre

36. Province de résidence (enregistrement système):

Colombie-Britannique
Alberta
Saskatchewan
Manitoba
Ontario
Québec
Nouveau-Brunswick
Nouvelle-Écosse
Île-du-Prince-Édouard
Terre-Neuve
Yukon
Territoires du Nord-Ouest

37. Région (RE-CODE)

Colombie-Britannique
Provinces des Prairies
Ontario
Québec
Canada atlantique

38. Langue de l'entrevue (CODE-SYSTÈME)

Français
Anglais

Detailed Statistical Tables

BIOTECH RESEARCH - PN4720

1. To begin with, which of the following best describes the nature of your current position?

	GENDER				REGION				LANGUAGE				Q1.CURRENT POSITION				Q2.SECTOR				Q4.YRS OF EXP.			
	Fe				Prairie				Atlantic				Resear				Pri. Non-				10yr or to or			
	TOTAL	Male	male	Ont.	Que.	B.C.	ries	ntic	lish	nch	cher	Res.	Man.	End	/	er	Sec.	Pri.	Both	Less	20yr	More		
	256	225	31	65	69	52	47	23	201	55	47	121	21	27	40	131	90	35	59	106	89			
UNWEIGHTED SAMPLE	256	225	31	65	69	52	47	23	201	55	47	121	21	27	40	131	90	35	59	106	89			
WEIGHTED SAMPLE	256	225	31	65	69	52	47	23	201	55	47	121	21	27	40	131	90	35	59	106	89			
Manager of Research	47	47	52	45	48	42	45	70	48	45	-	100	-	-	-	53	43	37	49	47	47			
Researcher	18	19	16	9	29	15	21	13	15	29	100	-	-	-	-	11	33	9	15	23	16			
Manager/researcher	11	11	10	12	12	10	13	-	10	13	-	-	-	100	-	6	11	26	8	8	13			
End user	8	8	6	14	4	10	6	4	9	5	-	-	100	-	-	12	2	9	10	9	6			
Other combinations	16	16	16	20	7	23	15	13	18	7	-	-	-	-	100	18	10	20	17	13	18			
DK/NA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			

	Q19. PAT. OWNERSHIP				Q34. SIZE OF ORGANIZATION				Q5/6.LOCATION OF EXPERIENCE				Q8-Q12. AWARENESS				Q26.NETWORKING			
	Pat.	Pat.	Non-Pat.	Sm.	Med.	La.	ada	Can/	Can/	Med.	High	Sec	Sec	Sec	Sec	Sec	Sec	Sec	Sec	Sec
UNWEIGHTED SAMPLE	256	178	77	83	87	77	137	59	79	80	132	44	89	82	82					
WEIGHTED SAMPLE	256	178	77	83	87	77	137	59	79	80	132	44	89	82	82					
Manager of Research	47	51	39	45	51	45	51	44	42	38	48	64	46	54	44					
Researcher	18	18	18	13	18	21	15	20	20	19	19	16	24	17	13					
Manager/researcher	11	11	10	12	10	10	7	14	18	10	12	7	9	5	18					
End user	8	5	16	10	10	5	12	3	5	14	6	5	9	10	6					
Other combinations	16	15	17	20	10	18	14	19	15	20	15	9	12	15	18					
DK/NA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					

ENVIRONICS RESEARCH GROUP

BIOTECH RESEARCH - RM4720

2. In which of the following sectors do you currently work?

	GENDER				REGION				LANGUAGE				Q1.CURRENT POSITION				Q2.SECTOR				Q4.YRS OF EXP.			
	Fe				Prairie				Res. Man.				Man. Oth				Pri. Non-				10yr or to			
	TOTAL	Male	female	Ont.	Que.	B.C.	ries	ntic	Eng	Fre	ear	of	End	/	er	Pri.	Non-	Sec.	Pri.	Both	Less	20yr	to or	
									lish	nch	cher	Res.	User	Res.	Com.	Only	Sec.							
UNWEIGHTED SAMPLE	256	225	31	65	69	52	47	23	201	55	47	121	21	27	40	131	90	35	59	106	89			
WEIGHTED SAMPLE	256	225	31	65	69	52	47	23	201	55	47	121	21	27	40	131	90	35	59	106	89			
Private sector	65	65	65	68	64	63	68	57	64	67	36	68	90	63	78	100	-	100	61	65	67			
Academia	34	35	26	34	32	35	32	39	34	33	57	23	14	63	28	-	60	91	24	37	35			
Government	10	10	10	14	4	8	13	17	12	4	11	15	5	4	3	-	24	11	14	11	7			
Not-for-Profit	9	8	16	9	7	6	13	17	11	4	13	7	5	7	15	-	23	9	12	7	11			
Hospital	5	5	3	9	3	2	4	4	5	4	4	4	-	7	8	-	6	20	3	2	8			
Other	*	*	-	-	-	2	-	-	*	-	-	-	-	-	3	-	1	-	-	-	1			
DK/NA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			

	Q19. PAT. OWNERSHIP						Q34. SIZE OF ORGANIZATION			Q5/6.LOCATION OF EXPERIENCE			Q8-Q12. AWARENESS			Q26.NETWORKING		
	TOTAL	Pat. Own	Pat. Non-Own	Sm all	Med ium	La rge	Can ada Only	Can/ U.S.	Can/ Int.	Med Low	ium High	1 Sec tor	2 Sec tor	3 Sec tor				
UNWEIGHTED SAMPLE	256	178	77	83	87	77	137	59	79	80	132	44	89	82	82			
WEIGHTED SAMPLE	256	178	77	83	87	77	137	59	79	80	132	44	89	82	82			
Private sector	65	66	64	75	76	49	69	59	65	70	65	55	79	60	56			
Academia	34	31	39	34	28	36	24	46	47	23	37	43	29	35	37			
Government	10	12	5	7	3	19	12	8	5	6	11	14	3	12	15			
Not-for-Profit	9	8	12	11	8	10	8	8	13	8	12	5	6	7	15			
Hospital	5	6	3	1	1	10	3	3	9	1	3	16	2	2	9			
Other	*	1	-	-	1	-	-	2	-	1	-	-	-	1	-			
DK/NA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			

BIOTECH RESEARCH - FN4720

3. In what area or areas of specialization do you spend the majority of your time?

	GENDER			REGION			LANGUAGE			Q1.CURRENT POSITION					Q2.SECTOR			Q4.YRS OF EXP.				
	Fe			Prairie			Atlantic			Res. Man.					Man. Oth			10yr 11yr 21yr				
	TOTAL	Male	female	Ont.	Que.	B.C.	ries	ntic	lish	nch	cher	Res.	User	Res.	Com.	Pri.	Non-	or	to	or		
	256	225	31	65	69	52	47	23	201	55	47	121	21	27	40	131	90	35	59	106	89	
UNWEIGHTED SAMPLE	256	225	31	65	69	52	47	23	201	55	47	121	21	27	40	131	90	35	59	106	89	
WEIGHTED SAMPLE	256	225	31	65	69	52	47	23	201	55	47	121	21	27	40	131	90	35	59	106	89	
Human health	30	30	29	29	38	31	23	22	28	36	19	31	29	37	38	36	21	31	25	25	38	
Plants	21	20	23	15	13	23	36	22	23	13	23	21	24	22	13	17	31	9	32	20	13	
Animals	13	13	13	11	7	10	21	30	15	7	4	17	5	11	20	11	16	17	15	12	13	
Environment	11	12	6	14	12	13	6	9	10	15	11	7	19	7	23	13	7	17	7	12	13	
Administration	8	8	10	14	1	8	15	-	10	2	-	8	24	4	13	6	12	6	15	7	6	
Food	5	6	3	3	10	4	2	9	3	13	6	4	14	4	5	5	8	3	3	6	7	
Other	41	44	26	46	33	46	45	35	45	29	53	40	14	52	38	34	47	54	39	42	42	
DK/NA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

	Q19. PAT. OWNERSHIP					Q34. SIZE OF ORGANIZATION			Q5/6. LOCATION OF EXPERIENCE			Q8-Q12. AWARENESS		Q26. NETWORKING		
	TOTAL	Pat. Own	Pat. Non-Own	Sm all	Med ium	La rge	Can ada Only	Can/ U.S.	Can/ Int.	Med Low ium	High	1 Sec tor	2 Sec tor	3 Sec tor		
UNWEIGHTED SAMPLE	256	178	77	83	87	77	137	59	79	80	132	44	89	82	82	
WEIGHTED SAMPLE	256	178	77	83	87	77	137	59	79	80	132	44	89	82	82	
Human health	30	34	22	30	29	32	28	37	30	20	32	43	24	39	29	
Plants	21	20	22	18	16	29	23	10	23	20	20	25	19	20	24	
Animals	13	13	14	11	14	14	10	14	19	13	15	9	9	13	18	
Environment	11	10	16	17	8	9	14	10	9	16	11	2	15	10	9	
Administration	8	7	10	6	8	10	9	7	8	4	11	7	3	9	12	
Food	5	6	5	4	5	9	4	8	8	10	4	2	9	1	6	
Other	41	42	40	46	40	36	35	49	48	45	39	41	38	40	46	
DK/NA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

ENVIRONICS RESEARCH GROUP

BIOTECH RESEARCH - RN4720

4. In total, how many years of work and school experience do you have in the field of biotechnology?

	GENDER				REGION				LANGUAGE				Q1.CURRENT POSITION				Q2.SECTOR				Q4.YRS OF EXP.			
	TOTAL	Male	Female	Ont.	Que.	B.C.	Prairie	Atlantic	English	French	Res. cher	Man. ear	Man. of Res.	Man. End User	Oth. / Res.	Pri. Sec. Cm.	Non-Only	Pri. Sec.	Both	10yr or Less	11yr to 20yr	21yr or More		
UNWEIGHTED SAMPLE	256	225	31	65	69	52	47	23	201	55	47	121	21	27	40	131	90	35	59	106	89			
WEIGHTED SAMPLE	256	225	31	65	69	52	47	23	201	55	47	121	21	27	40	131	90	35	59	106	89			
1 to 5	9	8	13	5	10	10	9	13	9	7	4	11	5	4	13	8	10	6	37	-	-			
6 to 10	13	12	19	9	13	17	15	9	13	13	15	12	19	15	10	15	13	6	56	-	-			
11 to 15	18	17	29	25	13	19	19	13	19	15	30	18	24	7	10	17	19	23	-	44	-			
16 to 20	23	24	19	31	29	13	17	17	22	27	21	23	24	22	25	26	22	14	-	56	-			
21 to 25	14	15	10	12	14	13	17	13	14	13	13	15	14	11	15	16	12	11	-	-	40			
26 or more	21	23	6	15	20	25	19	30	19	25	17	20	10	33	25	17	20	37	-	-	60			
DK/NA	1	*	3	2	-	-	2	-	1	-	-	-	-	7	-	-	1	3	-	-	-			

	Q19. PAT. OWNERSHIP					Q34. SIZE OF ORGANIZATION			Q5/6.LOCATION OF EXPERIENCE			Q8-Q12. AWARENESS		Q26.NETWORKING			
	Pat. Own		Pat. Non-Own	Sm. all	Med. ium	La. rge	Can. Only	Can/ U.S.	Can/ Int.	Med. Low	Med. ium	High	1 Sec. tor	2 Sec. tor	3 Sec. tor		
UNWEIGHTED SAMPLE	256	178	77	83	87	77	137	59	79	80	132	44	89	82	82		
WEIGHTED SAMPLE	256	178	77	83	87	77	137	59	79	80	132	44	89	82	82		
1 to 5	9	6	16	12	8	6	16	-	-	13	7	7	11	6	9		
6 to 10	13	12	14	16	10	12	19	5	5	10	11	23	15	9	16		
11 to 15	18	19	17	18	18	18	20	12	15	20	17	18	20	20	13		
16 to 20	23	25	18	25	23	21	23	22	25	24	26	14	25	32	13		
21 to 25	14	14	14	11	14	18	9	14	20	16	14	9	11	20	12		
26 or more	21	22	17	17	25	19	11	42	29	14	22	30	17	13	32		
DK/NA	1	1	1	1	-	1	-	3	3	1	1	-	-	-	-		

BIOTECH RESEARCH - PN4720

5. Was this experience, both work and school, obtained entirely in Canada?

	GENDER				REGION				LANGUAGE				Q1.CURRENT POSITION				Q2.SECTOR				Q4.YRS OF EXP.			
	Fe				Prai Atla				Eng	Fre	Res. ear	Man. of	Man. End	Oth /	Pri. er	Non- Pri.	10yr or	11yr to	21yr or					
	TOTAL	Male	male	Ont.	Que.	B.C.	ries	ntic	lish	nch	cher	Res.	User	Res.	Com.	Only	Sec.	Both	Less	20yr	More			
UNWEIGHTED SAMPLE	256	225	31	65	69	52	47	23	201	55	47	121	21	27	40	131	90	35	59	106	89			
WEIGHTED SAMPLE	256	225	31	65	69	52	47	23	201	55	47	121	21	27	40	131	90	35	59	106	89			
Yes	54	51	74	55	55	48	55	52	53	56	45	58	81	37	48	60	48	43	83	57	31			
No	46	49	26	43	45	52	45	48	47	44	55	42	19	63	50	40	51	57	15	43	69			
DK/NA	*	*	-	2	-	-	-	-	*	-	-	-	-	-	3	-	1	-	2	-	-			

	Q19. PAT. Q34. SIZE OF OWNERSHIP ORGANIZATION						Q5/6.LOCATION OF EXPERIENCE		Q8-Q12. AWARENESS			Q26.NETWORKING			
	Pat. Own	Pat. Non-Own.	Sm all	Med ium	La rge	Can ada Only	Can/ U.S.	Can/ Int.	Med Low	ium High	1 Sec tor	2 Sec tor	3 Sec tor		
UNWEIGHTED SAMPLE	256	178	77	83	87	77	137	59	79	80	132	44	89	82	
WEIGHTED SAMPLE	256	178	77	83	87	77	137	59	79	80	132	44	89	82	
Yes	54	51	60	67	48	44	100	-	-	58	52	52	67	48	
No	46	48	40	33	52	55	-	100	100	43	48	48	33	52	
DK/NA	*	1	-	-	-	1	-	-	-	1	-	-	-	1	

ENVIRONICS RESEARCH GROUP

BIOTECH RESEARCH - RN4720

6. In what other countries was this experience acquired?

Subsample: Respondents who did not obtain their work experience entirely in Canada

	GENDER				REGION				LANGUAGE		Q1.CURRENT POSITION				Q2.SECTOR				Q4.YRS OF EXP.			
	Fe										Res.	Man.	Man.	Oth	Pri.	Non-		10yr	11yr	21yr		
	TOTAL	Male	male	Ont.	Que.	B.C.	Prai	Atla	Eng	Fre	ear	of	End	/	er	Sec.	Pri.	or	to	or		
							ries	ntic	lish	nch	cher	Res.	User	Res.	Com.	Only	Sec.	Both	Less	20yr	More	
UNWEIGHTED SAMPLE	118	110	8	28	31	27	21	11	94	24	26	51	4	17	20	52	46	20	9	46	61	
WEIGHTED SAMPLE	118	110	8	28	31	27	21	11	94	24	26	51	4	17	20	52	46	20	9	46	61	
United States	50	51	38	36	65	48	48	55	47	62	46	51	50	47	55	48	52	50	44	43	54	
EU (European Union)	46	48	13	61	39	41	29	73	47	42	46	43	50	59	40	38	50	55	56	50	43	
Australia/New Zealand/Oceania	13	13	13	11	3	4	24	45	15	4	12	14	50	6	10	12	15	10	11	13	13	
Rest of Europe (not in EU)	8	7	13	4	6	11	10	9	9	4	12	6	-	12	5	10	7	5	11	2	10	
Far East (China, Japan, S & N Korea)	5	4	25	7	3	7	5	-	5	4	12	4	-	-	5	8	2	5	11	7	3	
Switzerland	5	5	-	4	6	7	5	-	5	4	-	6	-	18	-	4	-	20	11	2	5	
Africa/South Africa	5	5	13	7	3	7	-	9	5	4	-	4	50	6	5	6	4	5	-	4	7	
Middle East (Saudi Arabia/Israel)	2	2	-	4	-	-	-	9	2	-	-	4	-	-	-	4	-	-	-	-	3	
Other	3	3	-	-	6	-	5	-	2	4	-	6	-	-	-	4	-	5	-	4	2	
DK/NA	1	1	-	-	-	4	-	-	1	-	4	-	-	-	-	-	2	-	-	2	-	

	Q19. PAT. OWNERSHIP ORGANIZATION				Q34. SIZE OF ORGANIZATION				Q5/6.LOCATION OF EXPERIENCE				Q8-Q12. AWARENESS				Q26.NETWORKING			
	Pat. Own	Pat. Non-Own	Sm all	Med ium	La rge	Can ada	Can/ U.S.	Can/ Int.	Med Low	Med High	1 Sec	2 Sec	3 Sec							
UNWEIGHTED SAMPLE	118	86	31	27	45	42	-	59	79	34	63	21	29	43	43					
WEIGHTED SAMPLE	118	86	31	27	45	42	-	59	79	34	63	21	29	43	43					
United States	50	48	58	59	47	48	-	100	27	62	41	57	38	51	58					
EU (European Union)	46	50	35	41	44	50	-	29	67	38	49	48	52	37	51					
Australia/New Zealand/Oceania	13	10	19	22	7	14	-	8	19	24	8	10	10	7	21					
Rest of Europe (not in EU)	8	8	6	11	4	7	-	3	11	15	6	-	3	2	16					
Far East (China, Japan, S & N Korea)	5	5	6	4	9	2	-	2	8	6	6	-	3	9	2					
Switzerland	5	5	6	4	4	7	-	3	8	-	10	-	7	2	7					
Africa/South Africa	5	3	10	4	4	7	-	2	8	6	6	-	3	9	2					
Middle East (Saudi Arabia/Israel)	2	1	3	4	2	-	-	2	3	3	-	5	-	2	2					
Other	3	2	3	4	4	-	-	-	4	3	2	5	7	2	-					
DK/NA	1	-	-	-	2	-	-	-	-	3	-	-	-	-	-					

BIOTECH RESEARCH - FN4720

7. What area or areas of study did you concentrate on during your academic career?

ALL MENTION

	GENDER				REGION				LANGUAGE				Q1.CURRENT POSITION				Q2.SECTOR				Q4.YRS OF EXP.			
	Fe				Pra				Res. Man.				Man. Oth				Pri. Non-				10yr	11yr	21yr	
	TOTAL	Male	male	Ont.	Que.	B.C.	ries	ntic	lish	nch	cher	Res.	User	Res.	Com.	Only	Sec.	Pri.	Both	Less	20yr	More		
UNWEIGHTED SAMPLE	256	225	31	65	69	52	47	23	201	55	47	121	21	27	40	131	90	35	59	106	89			
WEIGHTED SAMPLE	256	225	31	65	69	52	47	23	201	55	47	121	21	27	40	131	90	35	59	106	89			
Biology	23	24	23	26	35	19	15	9	19	38	30	22	-	30	28	21	27	23	20	26	22			
Biochemistry	17	18	6	14	22	15	13	22	15	22	23	16	14	22	10	15	17	23	7	16	25			
Microbiology/ Molecular Biology/ Cell Biology/ Biotechnology	15	14	26	23	-	15	30	9	19	-	13	14	14	22	18	13	14	26	14	16	16			
Chemistry	13	14	3	15	12	10	15	9	13	11	11	9	19	19	18	15	11	6	12	9	16			
Medicine	9	8	23	6	20	10	2	-	8	13	9	12	5	11	3	8	14	3	10	9	9			
Agriculture	7	7	10	6	13	-	9	4	5	15	9	8	10	-	5	7	9	3	7	8	7			
Engineering	7	7	3	3	9	10	4	9	6	9	4	5	19	15	3	8	6	6	7	7	6			
Plant Science/Botany /Plant Pathology/ Plant Biology/Plant Physiology/Forestry	6	6	6	3	-	15	9	9	8	-	6	7	5	-	8	5	10	-	8	8	3			
Genomics	6	6	3	6	1	10	9	4	7	2	6	7	-	7	5	4	6	14	7	7	4			
Immunology/Cellular Immunology/ Immunochestry/ Virology/ Parasitology/ Pathogenesis	6	6	3	12	-	4	9	4	7	-	-	7	5	11	8	5	4	11	3	8	4			
Business	6	6	6	2	12	2	4	13	4	13	2	7	14	-	8	8	3	6	12	2	7			
Veterinary medicine	5	5	3	6	1	2	6	13	5	2	4	5	5	7	3	4	3	11	3	4	7			
Geology/ Environmental Ecology/Ocean- Coastal/ Environmental Engineering/ Environmental Studies/Hydro- geology/Geography	3	3	3	2	-	2	-	22	3	-	2	2	10	-	5	2	3	3	3	3	2			
Physiology/ Neurophysiology	3	3	3	6	-	2	4	-	3	-	4	3	5	-	-	5	1	-	3	4	1			
Pharmacology	2	2	3	-	-	6	4	4	3	-	-	4	-	-	3	2	1	6	2	2	3			
Physics	2	2	-	2	1	2	2	-	1	2	2	1	-	4	3	1	1	6	2	1	2			
Food Science/ Carbohydrate Chemistry/Nutrition	1	1	3	-	-	2	4	-	1	-	6	-	-	-	-	2	1	-	3	1	-			
Other	2	2	3	6	1	2	-	-	2	2	4	2	5	-	-	2	4	-	2	4	1			
DK/NA	*	*	-	2	-	-	-	-	*	-	-	-	-	-	3	1	-	-	2	-	-			

ENVIRONICS RESEARCH GROUP

BIOTECH RESEARCH - RN4720

7. What area or areas of study did you concentrate on during your academic career?

ALL MENTION

	Q19. PAT. OWNERSHIP			Q34. SIZE OF ORGANIZATION			Q5/6. LOCATION OF EXPERIENCE			Q8-Q12. AWARENESS			Q26. NETWORKING		
	Pat. Own	Pat. Non-Own	Pat. Sm	Med	La	Large	Canada Only	Canada U.S.	Canada Int.	Med Low	Med High	Med High	1 Sec tor	2 Sec tor	3 Sec tor
UNWEIGHTED SAMPLE	256	178	77	83	87	77	137	59	79	80	132	44	89	82	82
WEIGHTED SAMPLE	256	178	77	83	87	77	137	59	79	80	132	44	89	82	82
Biology	23	26	18	23	26	19	18	22	32	21	23	30	22	23	24
Biochemistry	17	17	16	14	17	18	15	20	19	13	17	23	17	12	22
Microbiology/ Molecular Biology/ Cell Biology/ Biotechnology	15	15	16	20	9	18	14	19	19	11	17	16	13	15	18
Chemistry	13	13	10	13	11	12	14	12	10	14	14	7	18	7	12
Medicine	9	10	9	10	10	9	7	10	11	6	11	9	9	10	10
Agriculture	7	7	8	6	2	13	9	2	5	8	5	11	8	9	5
Engineering	7	6	8	7	7	5	8	5	5	10	6	2	4	7	7
Plant Science/Botany /Plant Pathology/ Plant Biology/Plant Physiology/Forestry	6	7	4	6	3	10	9	2	4	4	8	7	9	4	6
Genomics	6	6	4	6	6	5	7	5	4	4	6	9	4	4	9
Immunology/Cellular Immunology/ Immunochemistry/ Virology/ Parasitology/ Pathogenesis	6	7	3	6	3	9	7	7	5	4	6	9	2	6	10
Business	6	4	9	8	6	4	8	5	4	14	2	2	8	4	6
Veterinary medicine	5	4	6	5	3	5	4	5	5	5	5	5	4	7	2
Geology/ Environmental Ecology/Ocean- Coastal/ Environmental Engineering/ Environmental Studies/Hydro- geology/Geography	3	2	5	4	2	3	3	2	4	4	3	-	3	2	2
Physiology/ Neurophysiology	3	2	4	2	5	1	3	2	4	3	4	-	-	6	2
Pharmacology	2	2	4	1	6	-	2	2	3	1	4	-	1	5	1
Physics	2	2	1	2	-	1	1	5	1	3	2	-	1	1	2
Food Science/ Carbohydrate Chemistry/Nutrition	1	1	1	1	1	1	1	-	1	4	-	-	1	2	-
Other	2	2	3	2	3	-	2	3	4	3	2	5	-	5	2
DK/NA	*	-	1	-	1	-	1	-	-	1	-	-	1	-	-

ENVIRONICS RESEARCH GROUP

BIOTECH RESEARCH - FN4720

8. In your opinion, which of the following statements best describes the Federal Court of Appeal's recent ruling on the Harvard onco-mouse?

	GENDER				REGION				LANGUAGE				Q1. CURRENT POSITION				Q2. SECTOR				Q4. YRS OF EXP.			
	Fe										Res. Man.		Man. Oth		Pri. Non-			10yr		11yr	21yr			
	TOTAL	Male	male	Ont.	Que.	B.C.	Prai	Atla	Eng	Fre	ear	of	End	/	er	Sec.	Pri.		or	to	or			
							ries	ntic	lish	nch	cher	Res.	User	Res.	Com.	Only	Sec.	Both	Less	20yr	More			
UNWEIGHED SAMPLE	256	225	31	65	69	52	47	23	201	55	47	121	21	27	40	131	90	35	59	106	89			
WEIGHED SAMPLE	256	225	31	65	69	52	47	23	201	55	47	121	21	27	40	131	90	35	59	106	89			
The Harvard onco-mouse is not patentable in Canada	21	21	16	18	19	17	28	26	20	22	21	23	24	19	13	21	22	17	24	21	18			
The Harvard onco-mouse is patentable in Canada	32	32	32	35	26	40	30	22	34	22	32	42	14	22	15	26	38	37	36	30	31			
Higher life forms, including humans, are patentable in Canada	3	3	3	3	3	4	2	4	3	4	-	2	5	4	8	5	1	3	2	4	3			
DK/NA	45	44	48	43	52	38	40	48	42	53	47	32	57	56	65	49	39	43	39	45	47			

	Q19. PAT. OWNERSHIP				Q34. SIZE OF ORGANIZATION				Q5/6. LOCATION OF EXPERIENCE				Q8-Q12. AWARENESS				Q26. NETWORKING			
	Pat. Own	Pat. Non-Own	Pat. Sm	Pat. Med	Pat. La	Pat. Can	Pat. Can/US	Pat. Can/Int	Pat. Low	Pat. Med	Pat. High	Pat. Sec	Pat. Sec	Pat. Sec	Pat. Sec	Pat. Sec	Pat. Sec	Pat. Sec	Pat. Sec	Pat. Sec
UNWEIGHED SAMPLE	256	178	77	83	87	77	137	59	79	80	132	44	89	82	82					
WEIGHED SAMPLE	256	178	77	83	87	77	137	59	79	80	132	44	89	82	82					
The Harvard onco-mouse is not patentable in Canada	21	21	21	23	25	16	21	15	25	14	30	5	21	13	28					
The Harvard onco-mouse is patentable in Canada	32	35	25	23	31	39	31	36	28	4	27	95	26	39	30					
Higher life forms, including humans, are patentable in Canada	3	3	3	5	1	4	2	5	4	4	4	-	3	4	2					
DK/NA	45	41	52	49	43	42	45	44	43	79	39	-	49	44	39					

ENVIRONICS RESEARCH GROUP

BIOTECH RESEARCH - RN4720

9. In your opinion, which of the following statements best describes the research (or experimental use) exemption in Canada?

	GENDER			REGION				LANGUAGE				Q1. CURRENT POSITION				Q2. SECTOR				Q4. YRS OF EXP.		
	Fe			Ont.	Que.	B.C.	Prai	Atla	Eng	Fre		Res.	Man.	Man.	Oth	Pri.	Non-			10yr	11yr	21yr
	TOTAL	Male	male				ries	ntic	lish	nch		ear	of	End	/	er	Sec.	Pri.		or	to	or
												cher	Res.	User	Res.	Com.	Only	Sec.	Both	Less	20yr	More
UNWEIGHTED SAMPLE	256	225	31	65	69	52	47	23	201	55	47	121	21	27	40	131	90	35	59	106	89	
WEIGHTED SAMPLE	256	225	31	65	69	52	47	23	201	55	47	121	21	27	40	131	90	35	59	106	89	
The research exemption permits persons to use patented inventions for any purpose	7	6	13	3	9	6	13	4	6	11	6	8	5	11	3	8	8	3	8	8	6	
The research exemption permits persons to use patented inventions in order to experiment on and improve upon them	48	47	52	51	55	35	43	57	44	62	45	52	33	48	45	48	42	60	42	42	58	
The research exemption permits persons to use patented inventions solely for the purpose of philosophical inquiry	22	24	10	17	16	37	28	13	27	5	26	24	10	19	23	21	23	26	24	25	19	
DK/NA	23	23	26	29	20	23	17	26	23	22	23	16	52	22	30	24	27	11	25	25	17	

BIOTECH RESEARCH - RM4720

9. In your opinion, which of the following statements best describes the research (or experimental use) exemption in Canada?

	Q19. PAT. OWNERSHIP					Q34. SIZE OF ORGANIZATION			Q5/6. LOCATION OF EXPERIENCE			Q8-Q12. AWARENESS			Q26. NETWORKING		
	TOTAL	Pat. Own	Pat. Non-Own	Sm. all	Med ium	La rge	Canada Only	Canada U.S.	Canada Int.	Canada Low	Med ium	High	1 Sec tor	2 Sec tor	3 Sec tor		
UNWEIGHTED SAMPLE	256	178	77	83	87	77	137	59	79	80	132	44	89	82	82		
WEIGHTED SAMPLE	256	178	77	83	87	77	137	59	79	80	132	44	89	82	82		
The research exemption permits persons to use patented inventions for any purpose	7	7	8	8	9	4	8	3	6	9	8	2	7	9	6		
The research exemption permits persons to use patented inventions in order to experiment on and improve upon them	48	51	40	48	44	48	45	54	48	16	52	91	52	41	50		
The research exemption permits persons to use patented inventions solely for the purpose of philosophical inquiry	22	24	19	19	20	30	24	15	25	26	26	5	22	22	23		
DK/NA	23	19	32	24	28	18	23	27	20	49	14	2	19	28	21		

BIOTECH RESEARCH - PN4720

9. In your opinion, which of the following statements best describes the research (or experimental use) exemption in Canada?

	Q3. AREA/AREAS OF SPECIALIZATION							
	TOTAL	Hum an Hea.	Pla nts	Ani mals	Env iron ment	Admi nist rat.	Oth Food er	
UNWEIGHTED SAMPLE	256	77	34	53	29	21	14	106
WEIGHTED SAMPLE	256	77	34	53	29	21	14	106
The research exemption permits persons to use patented inventions for any purpose	7	8	9	4	3	5	7	8
The research exemption permits persons to use patented inventions in order to experiment on and improve upon them	48	51	44	45	55	48	50	43
The research exemption permits persons to use patented inventions solely for the purpose of philosophical inquiry	22	23	21	28	17	24	29	26
DK/NA	23	18	26	23	24	24	14	23

ENVIRONICS RESEARCH GROUP

BIOTECH RESEARCH - PN4720

10. In your opinion, which of the following statements best describes the current situation in Canada with respect to patent protection for methods of medical treatment?

	GENDER				REGION				LANGUAGE				Q1.CURRENT POSITION				Q2.SECTOR				Q4.YRS OF EXP.			
	Fe										Res. Man.	Man. Oth			Pri. Non-		10yr 11yr 21yr							
	TOTAL	Male	male	Ont.	Que.	B.C.	Prai	Atla	Eng	Fre	ear	of	End	/	er	Sec. Pri.	or	to	or					
							ries	ntic	lish	nch	cher	Res.	User	Res.	Com.	Only	Both	Less	20yr	More				
UNWEIGHTED SAMPLE	256	225	31	65	69	52	47	23	201	55	47	121	21	27	40	131	90	35	59	106	89			
WEIGHTED SAMPLE	256	225	31	65	69	52	47	23	201	55	47	121	21	27	40	131	90	35	59	106	89			
Canada does not grant patents for methods of medical treatment for use on animals or humans	14	14	10	18	9	10	23	4	16	5	9	20	5	11	8	11	17	7	15	17				
Canada grants patents for methods of medical treatment for use on animals but not on humans	14	16	6	8	17	19	19	4	14	16	23	15	14	7	8	16	12	14	19	12	15			
Canada grants patents for methods of medical treatment but the exemption permits doctors to treat a disease without worrying about patent infringement	29	30	23	32	23	35	30	26	31	24	21	30	29	37	33	29	27	37	34	32	22			
DK/NA	43	40	61	42	51	37	28	65	39	55	47	36	52	44	53	44	44	31	41	41	46			

BIOTECH RESEARCH - FN4720

10. In your opinion, which of the following statements best describes the current situation in Canada with respect to patent protection for methods of medical treatment?

	Q19. PAT. OWNERSHIP			Q34. SIZE OF ORGANIZATION			Q5/6. LOCATION OF EXPERIENCE			Q8-Q12. AWARENESS			Q26. NETWORKING		
	TOTAL	Pat. Own	Pat. Non-Own	Sm all	Med ium	La rge	Can ada Only	Can/ U.S.	Can/ Int.	Low	Med ium	High	1 Sec tor	2 Sec tor	3 Sec tor
UNWEIGHTED SAMPLE	256	178	77	83	87	77	137	59	79	80	132	44	89	82	82
WEIGHTED SAMPLE	256	178	77	83	87	77	137	59	79	80	132	44	89	82	82
Canada does not grant patents for methods of medical treatment for use on animals or humans	14	16	8	12	14	12	12	12	18	-	13	41	12	13	15
Canada grants patents for methods of medical treatment for use on animals but not on humans	14	12	19	19	16	9	14	14	14	15	15	11	20	15	9
Canada grants patents for methods of medical treatment but the exemption permits doctors to treat a disease without worrying about patent infringement	29	31	26	25	30	34	26	32	32	23	34	27	25	28	35
DK/NA	43	40	47	43	40	45	48	42	37	63	38	20	43	44	41

BIOTECH RESEARCH - EN4720

10. In your opinion, which of the following statements best describes the current situation in Canada with respect to patent protection for methods of medical treatment?

	Q3. AREA/AREAS OF SPECIALIZATION							
	TOTAL	Hum an	Pla nts	Ani mals	Env ironment	Admi nist.	Oth er	
UNWEIGHTED SAMPLE	256	77	34	53	29	21	14	106
WEIGHTED SAMPLE	256	77	34	53	29	21	14	106
Canada does not grant patents for methods of medical treatment for use on animals or humans	14	13	12	8	7	29	-	15
Canada grants patents for methods of medical treatment for use on animals but not on humans	14	13	12	19	14	5	29	15
Canada grants patents for methods of medical treatment but the exemption permits doctors to treat a disease without worrying about patent infringement	29	42	29	17	24	48	21	31
DK/NA	43	32	47	57	55	19	50	39

BIOTECH RESEARCH - PN4720

10. In your opinion, which of the following statements best describes the current situation in Canada with respect to patent protection for methods of medical treatment?

Q7. AREA OF STUDY IN ACADEMIC CAREER (ALL MENTIONS)

		Agr	Bioc			Che	Comp	Eng	Ge			Vete	
	TOTAL	icul	hemi	Bio	Busi	mis	uter	inee	nom	Medi	Phy	rin.	Oth
		ture	stry	logy	ness	try	Sci.	ring	ics	cine	sics	Med	er

UNWEIGHTED SAMPLE	256	18	43	60	15	32	1	17	15	24	4	12	94
WEIGHTED SAMPLE	256	18	43	60	15	32	1	17	15	24	4	12	94
Canada does not grant patents for methods of medical treatment for use on animals or humans	14	11	12	15	7	19	-	12	13	17	-	8	15
Canada grants patents for methods of medical treatment for use on animals but not on humans	14	11	23	18	-	9	-	-	7	13	-	-	16
Canada grants patents for methods of medical treatment but the exemption permits doctors to treat a disease without worrying about patent infringement	29	17	26	22	20	25	100	29	40	42	75	42	29
DK/NA	43	61	40	45	73	47	-	59	40	29	25	50	40

BIOTECH RESEARCH - EN4720

11. In your opinion, which of the following statements best describes patents for the human genome?

	GENDER			REGION					LANGUAGE			Q1.CURRENT POSITION					Q2.SECTOR					Q4.YRS OF EXP.				
	Fe											Res. Man.		Man. Oth		Pri. Non-		10yr 11yr 21yr								
	TOTAL	Male	male	Ont.	Que.	B.C.	ries	ntic	lish	nch	cher	Res.	User	Res.	Com.	Only	Sec.	Both	Less	20yr	or	to	or	More		
UNWEIGHTED SAMPLE	256	225	31	65	69	52	47	23	201	55	47	121	21	27	40	131	90	35	59	106	89					
WEIGHTED SAMPLE	256	225	31	65	69	52	47	23	201	55	47	121	21	27	40	131	90	35	59	106	89					
Canada allows patents for all data on the human genome	5	6	-	5	7	10	2	-	5	7	9	6	5	7	-	9	2	-	8	6	3					
Canada allows patents for all expressed sequence tags and DNA	5	6	-	5	6	4	9	-	4	7	11	5	5	-	3	5	6	3	2	8	3					
Canada currently allows patents for expressed sequence tags and DNA which satisfy the criteria of the Patent Act	62	58	87	66	58	67	64	43	64	55	55	65	43	67	65	56	68	69	66	61	58					
DK/NA	28	30	13	25	29	19	26	57	27	31	26	24	48	26	33	30	24	29	24	25	35					

	Q19. PAT. OWNERSHIP					Q34. SIZE OF ORGANIZATION					Q5/6.LOCATION OF EXPERIENCE					Q8-Q12. AWARENESS					Q26.NETWORKING				
	Pat. Own	Pat. Non-Own	Sm. all	Med. ium	La rge	Can ada	Can/ U.S.	Can/ Int.	Low ium	Med ium	High	Sec tor	Sec tor	Sec tor		1	2	3							
UNWEIGHTED SAMPLE	256	178	77	83	87	77	137	59	79	80	132	44	89	82	82										
WEIGHTED SAMPLE	256	178	77	83	87	77	137	59	79	80	132	44	89	82	82										
Canada allows patents for all data on the human genome	5	6	5	7	5	5	5	7	6	11	4	-	9	4	4										
Canada allows patents for all expressed sequence tags and DNA	5	4	6	5	5	5	5	8	3	5	5	5	3	9	4										
Canada currently allows patents for expressed sequence tags and DNA which satisfy the criteria of the Patent Act	62	67	51	52	59	75	60	58	62	23	74	95	55	63	67										
DK/NA	28	23	38	36	32	14	30	27	29	61	17	-	33	24	26										

BIOTECH RESEARCH - EN4720

12. In your opinion, which of the following statements best describes Genome Canada?

	GENDER				REGION				LANGUAGE				Q1.CURRENT POSITION				Q2.SECTOR				Q4.YRS OF EXP.			
	TOTAL	Male	Female	Ont.	Que.	B.C.	Prairies	Atlantic	English	French	Researcher	Manager Res.	Manager End User	Other Res.	Other Com.	Primary Only	Non-Primary Sec.	Both	10yr or Less	11yr to 20yr	21yr or More			
UNWEIGHTED SAMPLE	256	225	31	65	69	52	47	23	201	55	47	121	21	27	40	131	90	35	59	106	89			
WEIGHTED SAMPLE	256	225	31	65	69	52	47	23	201	55	47	121	21	27	40	131	90	35	59	106	89			
Genome Canada supports major large-scale genome projects of strategic importance to Canada	61	62	58	62	65	60	51	74	62	58	68	64	52	56	53	49	74	74	63	61	61			
Genome Canada is a leading venture capital company investing in biotechnology firms in Canada which are undertaking research in the area of human genome	10	9	16	9	10	13	11	-	9	13	13	8	19	4	10	13	8	3	12	9	9			
Genome Canada is the Canadian subsidiary of Celera Genomics	4	4	3	6	6	2	4	-	4	5	4	2	-	11	8	5	2	6	2	6	4			
DK/NA	25	25	23	23	19	25	34	26	25	24	15	25	29	30	30	33	16	17	24	24	26			

BIOTECH RESEARCH - PN4720

12. In your opinion, which of the following statements best describes Genome Canada?

	Q19. PAT. OWNERSHIP					Q34. SIZE OF ORGANIZATION					Q5/6. LOCATION OF EXPERIENCE				Q8-Q12. AWARENESS				Q26. NETWORKING			
	Pat. Own		Pat. Non-Own		Sm all	Med ium	La rge	Can ada Only	Can/ U.S.	Can/ Int.	Med Low ium	Med High	1 Sec tor	2 Sec tor	3 Sec tor							
UNWEIGHTED SAMPLE	256	178	77	83	87	77	137	59	79	80	132	44	89	82	82							
WEIGHTED SAMPLE	256	178	77	83	87	77	137	59	79	80	132	44	89	82	82							
Genome Canada supports major large-scale genome projects of strategic importance to Canada	61	66	51	48	60	74	61	58	62	20	74	98	56	60	70							
Genome Canada is a leading venture capital company investing in biotechnology firms in Canada which are undertaking research in the area of human genome	10	7	16	13	11	5	9	17	8	18	8	2	9	10	10							
Genome Canada is the Canadian subsidiary of Celera Genomics	4	4	5	6	3	4	4	5	5	6	5	-	4	4	5							
DK/NA	25	22	29	33	25	17	26	20	25	56	14	-	30	27	16							

ENVIRONICS RESEARCH GROUP

BIOTECH RESEARCH - RM720

13. In general, do you strongly agree, somewhat agree, somewhat disagree or strongly disagree with allowing a research exemption to patent protection?

	GENDER			REGION			LANGUAGE			Q1.CURRENT POSITION					Q2.SECTOR			Q4.YRS OF EXP.			
	Fe			Prai Atla Eng Fre			ear of End / er			Res. Man. Man. Oth Pri. Non-					Sec. Pri.			10yr 11yr 21yr			
	TOTAL	Male	male	Ont.	Que.	B.C.	ries	ntic	lish	nch	cher	Res.	User	Res.	Ctm.	Only	Sec.	Both	Less	20yr	More
UNWEIGHTED SAMPLE	256	225	31	65	69	52	47	23	201	55	47	121	21	27	40	131	90	35	59	106	89
WEIGHTED SAMPLE	256	225	31	65	69	52	47	23	201	55	47	121	21	27	40	131	90	35	59	106	89
Strongly agree	48	51	26	45	49	42	53	52	48	45	53	47	33	56	45	44	54	46	46	49	48
Somewhat agree	30	28	42	31	22	38	34	26	32	24	26	31	43	26	30	29	28	40	29	29	33
Somewhat disagree	7	6	16	11	6	2	9	13	8	5	6	8	5	7	8	7	7	11	5	8	6
Strongly disagree	6	6	3	5	9	8	4	-	5	9	2	6	5	7	10	9	3	-	8	6	4
DK/NA	9	8	13	9	14	10	-	9	7	16	13	8	14	4	8	11	8	3	12	8	9

	Q19. PAT. OWNERSHIP					Q34. SIZE OF ORGANIZATION			Q5/6. LOCATION OF EXPERIENCE			Q8-Q12. AWARENESS			Q26. NETWORKING		
	Pat. Own		Pat. Non-Own		Sm all	Med ium	La rge	Can ada Only		Can/ U.S.	Can/ Int.	Med ium High		1 Sec tor	2 Sec tor	3 Sec tor	
UNWEIGHTED SAMPLE	256	178	77	83	87	77	137	59	79	80	132	44	89	82	82		
WEIGHTED SAMPLE	256	178	77	83	87	77	137	59	79	80	132	44	89	82	82		
Strongly agree	48	52	39	46	45	52	47	42	51	38	50	59	47	43	54		
Somewhat agree	30	25	43	35	29	26	29	34	29	31	33	20	26	39	26		
Somewhat disagree	7	8	6	10	3	9	7	8	9	10	6	7	6	7	10		
Strongly disagree	6	7	3	1	10	6	4	7	8	4	8	5	8	4	6		
DK/NA	9	8	9	8	13	6	12	8	4	18	4	9	13	7	5		

ENVIRONICS RESEARCH GROUP

BIOTECH RESEARCH - RM4720

14. Do you feel that the scope of a research exemption to patent protection should be ...?

Subsample: Respondents who strongly or somewhat agree with allowing a research exemption to patent protection

	GENDER				REGION				LANGUAGE				Q1.CURRENT POSITION				Q2.SECTOR				Q4.YRS OF EXP.			
	Fe				Prai Atla Eng Fre				Res. Man. Man. Oth				Pri. Non- Pri. Non-				10yr 11yr 21yr							
	TOTAL	Male	male	Ont.	Que.	B.C.	ries	ntic	lish	nch	cher	Res.	User	Res.	Com.	Only	Sec.	Both	Less	20yr	More			
UNWEIGHTED SAMPLE	199	178	21	49	49	42	41	18	161	38	37	94	16	22	30	95	74	30	44	83	72			
WEIGHTED SAMPLE	199	178	21	49	49	42	41	18	161	38	37	94	16	22	30	95	74	30	44	83	72			
Kept as it is currently	44	44	38	35	57	50	32	44	40	61	35	47	19	55	50	46	45	33	41	43	46			
Narrowed	6	6	5	2	6	10	5	6	5	8	-	6	19	5	3	6	3	10	7	6	4			
Broadened	33	32	38	41	24	29	44	17	35	21	32	34	44	27	27	34	30	37	39	33	29			
DK/NA	18	18	19	22	12	12	20	33	20	11	32	13	19	14	20	14	23	20	14	18	21			

	Q19. PAT. Q34. SIZE OF OWNERSHIP ORGANIZATION						Q5/6.LOCATION OF EXPERIENCE			Q8-Q12. AWARENESS			Q26.NETWORKING		
	Pat. Own	Pat. Non-Own	Sm all	Med ium	La rge		Can ada Only	Can/ U.S.	Can/ Int.	Med Low	ium High	1 Sec tor	2 Sec tor	3 Sec tor	
	TOTAL	er	Own.	all	ium rge		Only	U.S.	Int.	Low	ium	High	tor	tor	tor
UNWEIGHTED SAMPLE	199	136	63	67	64	60	105	45	63	55	109	35	65	67	65
WEIGHTED SAMPLE	199	136	63	67	64	60	105	45	63	55	109	35	65	67	65
Kept as it is currently	44	48	35	34	45	53	37	49	49	31	46	57	45	43	43
Narrowed	6	4	10	7	6	3	5	11	6	5	6	6	3	4	9
Broadened	33	33	32	40	28	30	42	22	22	35	32	31	38	30	29
DK/NA	18	15	24	18	20	13	16	18	22	29	17	6	14	22	18

ENVIRONICS RESEARCH GROUP

BIOTECH RESEARCH - PN4720

15. In your opinion, should this status quo approach be written into the *Patent Act*?

Subsample: Respondents who strongly or somewhat agree with allowing a research exemption to patent protection and who feel that the scope of a research exemption to patent protection should be kept as it is currently

	GENDER				REGION				LANGUAGE				Q1.CURRENT POSITION				Q2.SECTOR				Q4.YRS OF EXP.			
	Fe				Prairie				Res. Man.				Man. Oth				Pri. Non-				10yr 11yr 21yr			
	TOTAL	Male	male	Ont.	Que.	B.C.	ries	ntic	lish	nch	cher	ear	of	End	/	er	Sec.	Pri.	Non-	Both	Less	20yr	More	
UNWEIGHTED SAMPLE	87	79	8	17	28	21	13	8	64	23	13	44	3	12	15	44	33	10	18	36	33			
WEIGHTED SAMPLE	87	79	8	17	28	21	13	8	64	23	13	44	3	12	15	44	33	10	18	36	33			
Yes	62	62	63	59	82	57	38	50	55	83	62	59	67	58	73	73	48	60	56	64	64			
No	20	18	38	12	4	33	38	25	25	4	15	25	-	8	20	16	24	20	17	19	21			
DK/NA	18	20	-	29	14	10	23	25	20	13	23	16	33	33	7	11	27	20	28	17	15			

	Q19. PAT. OWNERSHIP			Q34. SIZE OF ORGANIZATION			Q5/6.LOCATION OF EXPERIENCE			Q8-Q12. AWARENESS			Q26.NETWORKING		
	Pat. Pat.			Can			Med			Sec			Sec		
	TOTAL	er	Own	Non- Sm	Med	La	ada	Can/	Can/	Med	High	tor	tor	tor	tor
UNWEIGHTED SAMPLE	87	65	22	23	29	32	39	22	31	17	50	20	29	29	28
WEIGHTED SAMPLE	87	65	22	23	29	32	39	22	31	17	50	20	29	29	28
Yes	62	60	68	57	62	69	67	64	55	53	64	65	72	69	46
No	20	18	23	17	31	6	15	14	26	6	22	25	17	10	29
DK/NA	18	22	9	26	7	25	18	23	19	41	14	10	10	21	25

ENVIRONICS RESEARCH GROUP

BIOTECH RESEARCH - PN4720

15. In your opinion, should this narrower approach be written into the Patent Act?

Subsample: Respondents who strongly or somewhat agree with allowing a research exemption to patent protection and who feel that the scope of a research exemption to patent protection should be narrowed

	GENDER		REGION				LANGUAGE				Q1.CURRENT POSITION				Q2.SECTOR			Q4.YRS OF EXP.			
	Fe		Prai Atla Eng Fre				ear of End / er				Res. Man. Man. Oth Pri. Non-				Sec. Pri.			10yr	11yr	21yr	
	TOTAL	Male	male	Ont.	Que.	B.C.	ries	ntic	lish	nch	cher	Res.	User	Res.	Cm.	Only	Sec.	Both	Less	20yr	More
UNWEIGHTED SAMPLE	11	10	1	1	3	4	2	1	8	3	-	6	3	1	1	6	2	3	3	5	3
WEIGHTED SAMPLE	11	10	1	1	3	4	2	1	8	3	-	6	3	1	1	6	2	3	3	5	3
Yes	73	70	100	-	67	75	100	100	75	67	-	67	67	100	100	83	50	67	67	80	67
No	27	30	-	100	33	25	-	-	25	33	-	33	33	-	-	17	50	33	33	20	33
DK/NA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

	Q19. PAT. Q34. SIZE OF OWNERSHIP ORGANIZATION					Q5/6.LOCATION OF EXPERIENCE				Q8-Q12. AWARENESS				Q26.NETWORKING		
	Pat.	Pat.	Non-Sm	Med	La	Can	Can/	Can/	Med	Med	High	tor	tor	tor		
	TOTAL	er	Own.	all	ium	rge	Only	U.S.	Int.	Low	ium	High	tor	tor	tor	
UNWEIGHTED SAMPLE	11	5	6	5	4	2	5	5	4	3	6	2	2	3	6	
WEIGHTED SAMPLE	11	5	6	5	4	2	5	5	4	3	6	2	2	3	6	
Yes	73	60	83	60	100	50	80	60	75	67	83	50	100	100	50	
No	27	40	17	40	-	50	20	40	25	33	17	50	-	-	50	
DK/NA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

BIOTECH RESEARCH - RN4720

15. In your opinion, should this broader approach be written into the Patent Act?

Subsample: Respondents who strongly or somewhat agree with allowing a research exemption to patent protection and who feel that the scope of a research exemption to patent protection should be broadened

	GENDER				REGION				LANGUAGE				Q1.CURRENT POSITION				Q2.SECTOR				Q4.YRS OF EXP.			
	Fe				Prai				Res. Man.				Man. Oth				Pri. Non-				10yr 11yr 21yr			
	TOTAL	Male	male	Ont.	Que.	B.C.	ries	ntic	lish	nch	cher	Res.	User	Res.	Com.	Only	Sec.	Pri.	Both	Less	20yr	More		
UNWEIGHTED SAMPLE	65	57	8	20	12	12	18	3	57	8	12	32	7	6	8	32	22	11	17	27	21			
WEIGHTED SAMPLE	65	57	8	20	12	12	18	3	57	8	12	32	7	6	8	32	22	11	17	27	21			
Yes	86	88	75	90	75	83	89	100	88	75	92	88	57	83	100	88	82	91	71	93	90			
No	11	11	13	10	17	17	6	-	11	13	8	9	29	17	-	9	14	9	18	7	10			
DK/NA	3	2	13	-	8	-	6	-	2	13	-	3	14	-	-	3	5	-	12	-	-			

	Q19. PAT. Q34. SIZE OF OWNERSHIP ORGANIZATION				Q5/6.LOCATION OF EXPERIENCE				Q8-Q12. AWARENESS				Q26.NETWORKING			
	Pat. Pat.				Can				Med				1 2 3			
	Own	Non-	Sm	Med	La	ada	Can/	Can/	Med	ium	High	tor	tor	tor		
	TOTAL	er	Own.	all	ium	rge	Only	U.S.	Int.	Low	ium	High	tor	tor	tor	
UNWEIGHTED SAMPLE	65	45	20	27	18	18	44	10	14	19	35	11	25	20	19	
WEIGHTED SAMPLE	65	45	20	27	18	18	44	10	14	19	35	11	25	20	19	
Yes	86	89	80	81	89	89	82	90	93	89	83	91	80	90	89	
No	11	11	10	15	6	11	14	10	7	-	17	9	12	10	11	
DK/NA	3	-	10	4	6	-	5	-	-	11	-	-	8	-	-	

ENVIRONICS RESEARCH GROUP

BIOTECH RESEARCH - RW4720

16. Why do you feel that a research exemption should not be available to patent protection?

Subsample: Respondents who strongly or somewhat disagree with allowing a research exemption to patent protection

	GENDER				REGION				LANGUAGE				Q1.CURRENT POSITION				Q2.SECTOR				Q4.YRS OF EXP.			
	Fe				Pra				Res. Man.				Man. Oth				Pri. Non-				10yr 11yr 21yr			
	TOTAL	Male	male	Ont.	Que.	B.C.	ries	ntic	Lish	nch	cher	Res.	ear of	End /	er	er	Sec.	Pri.	Only	Sec.	Both	Less	20yr	More
UNWEIGHTED SAMPLE	34	28	6	10	10	5	6	3	26	8	4	17	2	4	7	21	9	4	8	15	9			
WEIGHTED SAMPLE	34	28	6	10	10	5	6	3	26	8	4	17	2	4	7	21	9	4	8	15	9			
unfair to original filer of patent/ expenses/ exclusivity to owner or investor	44	43	50	40	50	40	33	67	42	50	50	47	-	50	43	38	44	75	63	40	44			
Unnecessary	18	18	17	10	30	40	-	-	15	25	25	18	-	25	14	14	22	25	13	13	22			
Misuse/abuse/no regulation/ irresponsibility	15	14	17	20	-	20	33	-	19	-	-	18	-	25	14	14	22	-	-	20	11			
Depends on application	9	7	17	10	-	-	33	-	12	-	25	6	50	-	-	10	11	-	13	7	11			
Other	9	11	-	20	-	-	-	33	12	-	-	6	-	-	29	14	-	-	13	7	11			
DK/NA	6	7	-	-	20	-	-	-	-	25	-	6	50	-	-	10	-	-	-	13	-			

	Q19. PAT. Q34. SIZE OF				Q5/6.LOCATION				Q8-Q12.				Q26.NETWORKING			
	OWNERSHIP ORGANIZATION				OF EXPERIENCE				AWARENESS							
	Pat.	Pat.	Non-Sm	Med La	Can	Can/	Can/	Med	1	2	3	1	2	3		
	Own	Non-	Own.	all	ium	rge	Only	U.S.	Int.	Low	ium	High	tor	tor	tor	
UNWEIGHTED SAMPLE	34	27	7	9	12	12	16	9	13	11	18	5	12	9	13	
WEIGHTED SAMPLE	34	27	7	9	12	12	16	9	13	11	18	5	12	9	13	
Unfair to original filer of patent/ expenses/ exclusivity to owner or investor	44	44	43	22	50	50	38	44	46	27	56	40	33	44	54	
Unnecessary	18	19	14	11	17	25	13	33	23	18	22	-	25	11	15	
Misuse/abuse/no regulation/ irresponsibility	15	15	14	33	8	8	13	22	15	18	6	40	8	22	15	
Depends on application	9	7	14	11	8	8	19	-	-	18	-	20	17	-	8	
Other	9	11	-	11	8	8	13	-	8	9	11	-	8	11	8	
DK/NA	6	4	14	11	8	-	6	-	8	9	6	-	8	11	-	

ENVIRONICS RESEARCH GROUP

BIOTECH RESEARCH - FN4720

17. In general, do you strongly agree, somewhat agree, somewhat disagree or strongly disagree with the current approach in Canada with respect to patent protection for methods of medical treatment?

	GENDER				REGION				LANGUAGE				Q1.CURRENT POSITION				Q2.SECTOR				Q4.YRS OF EXP.			
	Fe												Res. Man.		Man. Oth	Pri. Non-			10yr	11yr	21yr			
	TOTAL	Male	male	Ont.	Que.	B.C.	Prai	Atla	Eng	Fre	ear	of	End	/	er	Sec. Pri.			or	to	or			
							ries	ntic	lish	nch	cher	Res.	User	Res.	Com.	Only	Sec.	Both	Less	20yr	More			
UNWEIGHTED SAMPLE	256	225	31	65	69	52	47	23	201	55	47	121	21	27	40	131	90	35	59	106	89			
WEIGHTED SAMPLE	256	225	31	65	69	52	47	23	201	55	47	121	21	27	40	131	90	35	59	106	89			
Strongly agree	17	18	10	14	30	15	9	4	13	31	17	17	5	22	20	18	14	17	8	21	18			
Somewhat agree	32	32	26	43	16	33	43	22	36	15	32	30	43	37	28	31	24	51	31	36	27			
Somewhat disagree	7	5	19	5	7	6	11	9	7	7	2	7	14	7	10	6	7	11	10	4	9			
Strongly disagree	1	1	-	-	1	2	2	-	1	-	-	2	-	-	3	2	-	-	2	2	-			
DK/NA	43	43	45	38	45	44	36	65	42	47	49	45	38	33	40	42	54	20	49	38	46			

	Q19. PAT. OWNERSHIP				Q34. SIZE OF ORGANIZATION				Q5/6.LOCATION OF EXPERIENCE				Q8-Q12. AWARENESS				Q26.NETWORKING			
	Pat.	Pat.	Non-	Sm	Med	La	ada	Can/	Can/	Med	Low	ium	High	tor	tor	tor	1	2	3	
	Own	Own	Own	all	ium	rge	Only	U.S.	Int.	Low	ium	High	tor	tor	tor		Sec	Sec	Sec	
UNWEIGHTED SAMPLE	256	178	77	83	87	77	137	59	79	80	132	44	89	82	82					
WEIGHTED SAMPLE	256	178	77	83	87	77	137	59	79	80	132	44	89	82	82					
Strongly agree	17	18	14	12	22	17	12	20	22	10	19	23	24	16	11					
Somewhat agree	32	33	29	35	29	32	31	22	37	20	35	43	30	30	34					
Somewhat disagree	7	6	9	10	6	4	9	7	5	6	7	9	6	5	10					
Strongly disagree	1	1	1	4	-	-	1	-	1	3	1	-	3	-	-					
DK/NA	43	42	47	40	44	47	46	51	35	61	39	25	37	49	45					

ENVIRONICS RESEARCH GROUP

BIOTECH RESEARCH - RM4720

17. In general, do you strongly agree, somewhat agree, somewhat disagree or strongly disagree with the current approach in Canada with respect to patent protection for methods of medical treatment?

Q3. AREA/AREAS OF SPECIALIZATION

	Hum	an	Pla	Ani	Env	Admi	iron	nist	Oth
	TOTAL	Hea.	nts	mals	ment	rat.	Food	er	
UNWEIGHTED SAMPLE	256	77	34	53	29	21	14	106	
WEIGHTED SAMPLE	256	77	34	53	29	21	14	106	
Strongly agree	17	25	9	17	14	14	14	14	
Somewhat agree	32	36	29	21	21	43	43	37	
Somewhat disagree	7	9	3	2	14	19	-	5	
Strongly disagree	1	-	3	2	3	-	-	2	
DK/NA	43	30	56	58	48	24	43	42	
Conf = 90	Chi = 35.57	D of F = 24							

Q7. AREA OF STUDY IN ACADEMIC CAREER (ALL MENTIONS)

	Agr	Bioc			Che	Comp	Eng	Ge		Vete			
	icul	huri	Bio	Busi	mis	uter	inee	nom	Medi	Phy	rin.	Oth	
	TOTAL	ture	stry	logy	ness	try	Sci.	ring	ics	cine	sics	Med	er
UNWEIGHTED SAMPLE	256	18	43	60	15	32	1	17	15	24	4	12	94
WEIGHTED SAMPLE	256	18	43	60	15	32	1	17	15	24	4	12	94
Strongly agree	17	28	19	18	7	19	-	6	13	38	25	8	12
Somewhat agree	32	17	40	32	20	19	100	12	40	33	25	33	39
Somewhat disagree	7	-	9	2	13	9	-	12	7	8	25	-	7
Strongly disagree	1	-	2	-	-	-	-	6	-	-	-	-	1
DK/NA	43	56	30	48	60	53	-	65	40	21	25	58	40
Conf = NS	Chi = 47.28	D of F = 44											

BIOTECH RESEARCH - FN4720

18. Why do you disagree with the current approach in Canada with respect to patent protection for methods of medical treatment?

Subsample: Respondents who strongly or somewhat disagree with the current approach in Canada with respect to patent protection for methods of medical treatment

	GENDER				REGION				LANGUAGE				Q1.CURRENT POSITION				Q2.SECTOR				Q4.YRS OF EXP.			
	Fe				Prairie				English				Res. Man.				Man. Oth				10yr			
	TOTAL	Male	male	Ont.	Que.	B.C.	ries	ntic	lish	nch	cher	Res.	User	Res.	Com.	Only	Sec.	Pri.	Both	Less	20yr	More		
UNWEIGHTED SAMPLE	21	15	6	3	6	4	6	2	17	4	1	10	3	2	5	11	6	4	7	6	8			
WEIGHTED SAMPLE	21	15	6	3	6	4	6	2	17	4	1	10	3	2	5	11	6	4	7	6	8			
Too restrictive/ limit possibilities of developing better treatments	48	53	33	67	50	25	33	100	47	50	100	40	67	50	40	36	67	50	43	67	38			
Exemptions for medical treatment available in US or Europe/US system more well known, internationally	19	20	17	-	17	25	33	-	18	25	-	20	-	50	20	27	-	25	14	17	25			
Needs revision/bring up to date	14	13	17	33	-	25	17	-	18	-	-	10	33	-	20	18	17	-	-	17	25			
Difficulty of enforcing patent protection	10	13	-	-	17	-	17	-	12	-	-	20	-	-	-	18	-	-	29	-	-			
Other	10	-	33	-	17	25	-	-	6	25	-	10	-	-	20	-	17	25	14	-	13			
DK/NA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			

BIOTECH RESEARCH - PN4720

18. Why do you disagree with the current approach in Canada with respect to patent protection for methods of medical treatment?

Subsample: Respondents who strongly or somewhat disagree with the current approach in Canada with respect to patent protection for methods of medical treatment

	Q19. PAT. OWNERSHIP ORGANIZATION						Q5/6. LOCATION OF EXPERIENCE			Q8-Q12. AWARENESS			Q26. NETWORKING		
	Pat. Own	Pat. Non-Own	Sm	Med	La	Can Only	Can/ U.S.	Can/ Int.	Low	Med	High	1 Sec	2 Sec	3 Sec	
	TOTAL	er	Own.	all	ium	rge	Only	U.S.	Int.	Low	ium	High	tor	tor	tor
UNWEIGHTED SAMPLE	21	13	8	11	5	3	14	4	5	7	10	4	8	4	8
WEIGHTED SAMPLE	21	13	8	11	5	3	14	4	5	7	10	4	8	4	8
Too restrictive/ limit possibilities of developing better treatments	48	46	50	55	20	100	50	50	40	71	30	50	63	50	38
Exemptions for medical treatment available in US or Europe/US system more well known, internationally	19	31	-	27	20	-	21	25	20	14	30	-	13	-	38
Needs revision/bring up to date	14	8	25	9	20	-	7	25	20	14	10	25	13	-	13
Difficulty of enforcing patent protection	10	8	13	9	20	-	14	-	-	-	20	-	13	25	-
Other	10	8	13	-	20	-	7	-	20	-	10	25	-	25	13
DK/NA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

BIOTECH RESEARCH - RN4720

19. Which of the following best describes your patenting experience?

	GENDER				REGION				LANGUAGE				Q1.CURRENT POSITION				Q2.SECTOR				Q4.YRS OF EXP.			
	TOTAL	Male	Female	Ont.	Que.	B.C.	Prairies	Atlantic	English	French	Researcher	Man. Res.	Man. User	Other Res.	Other Com.	Priv. Only	Non-Sec.	Both	10yr or Less	11yr to 20yr	21yr or More			
UNWEIGHTED SAMPLE	256	225	31	65	69	52	47	23	201	55	47	121	21	27	40	131	90	35	59	106	89			
WEIGHTED SAMPLE	256	225	31	65	69	52	47	23	201	55	47	121	21	27	40	131	90	35	59	106	89			
Neither you nor your organization owns or has ever applied for a patent	15	15	19	14	14	21	11	17	15	16	15	12	48	4	15	16	16	11	25	10	15			
Either you or your organization owns a patent	70	70	65	72	71	65	74	57	70	67	68	75	43	70	68	70	68	71	58	74	73			
Neither you nor your organization owns a patent but you or your organization have applied for one	15	15	16	14	14	12	15	26	14	16	15	12	10	26	18	14	16	17	17	15	12			
DK/NA	*	*	-	-	-	2	-	-	*	-	2	-	-	-	-	-	1	-	-	1	-			

	Q19. PAT. Q34. SIZE OF OWNERSHIP ORGANIZATION					Q5/6.LOCATION OF EXPERIENCE				Q8-Q12. AWARENESS				Q26.NETWORKING		
	TOTAL	Pat. Own	Non-Sm	Med all	La rge	Can Only	Can/ U.S.	Can/ Int.	Med Low	Med High	1 Sec	2 Sec	3 Sec	1 Sec	2 Sec	3 Sec
UNWEIGHTED SAMPLE	256	178	77	83	87	77	137	59	79	80	132	44	89	82	82	82
WEIGHTED SAMPLE	256	178	77	83	87	77	137	59	79	80	132	44	89	82	82	82
Neither you nor your organization owns or has ever applied for a patent	15	-	51	22	16	6	17	17	13	19	14	11	19	16	10	
Either you or your organization owns a patent	70	100	-	54	68	90	66	69	73	59	72	82	63	70	78	
Neither you nor your organization owns a patent but you or your organization have applied for one	15	-	49	24	15	4	17	14	14	21	14	7	18	15	12	
DK/NA	*	-	-	-	1	-	-	-	-	1	-	-	-	-	-	-

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20. Are you aware of any incidences where another person or organization made use of your patented invention under the research exemption?

Subsample: Respondent or their organization owns a patent

	GENDER				REGION				LANGUAGE				Q1.CURRENT POSITION				Q2.SECTOR				Q4.YRS OF EXP.			
	Fe				Prai Atla Eng Fre				Res. Man. Man. Oth				Pri. Non- Pri.				10yr 11yr 21yr							
	TOTAL	Male	male	Ont. Que.	B.C.	ries	ntic	lish	nch	cher	Res.	User	Res.	Com.	Only	Sec.	Both	Less	20yr	More				
UNWEIGHTED SAMPLE	178	158	20	47	49	34	35	13	141	37	32	91	9	19	27	92	61	25	34	78	65			
WEIGHTED SAMPLE	178	158	20	47	49	34	35	13	141	37	32	91	9	19	27	92	61	25	34	78	65			
Yes	16	16	15	15	12	21	17	23	16	16	9	20	-	16	19	14	18	20	26	13	15			
No	79	79	75	83	73	76	83	77	81	70	81	75	100	79	81	83	75	72	68	81	82			
DK/NA	5	4	10	2	14	3	-	-	3	14	9	5	-	5	-	3	7	8	6	6	3			

	Q19. PAT. OWNERSHIP						Q34. SIZE OF ORGANIZATION			Q5/6.LOCATION OF EXPERIENCE			Q8-Q12. AWARENESS			Q26.NETWORKING		
	Pat. Own	Pat. Non-	Pat. Own.	Sm. all	Med. ium	La rge	Canada Only	Can/ U.S.	Can/ Int.	Med. Low	Med. High	Med. High	1 Sec tor	2 Sec tor	3 Sec tor			
	TOTAL																	
UNWEIGHTED SAMPLE	178	178	-	45	59	69	91	41	58	47	95	36	56	57	64			
WEIGHTED SAMPLE	178	178	-	45	59	69	91	41	58	47	95	36	56	57	64			
Yes	16	16	-	16	8	23	14	22	14	9	21	14	16	16	17			
No	79	79	-	82	90	68	81	76	79	87	76	75	79	79	78			
DK/NA	5	5	-	2	2	9	4	2	7	4	3	11	5	5	5			

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21. As far as you know, have you or anyone else in your organization ever used the research exemption to patent protection?

	GENDER				REGION				LANGUAGE				Q1.CURRENT POSITION				Q2.SECTOR				Q4.YRS OF EXP.			
	Fe				Prairie				Res. Man.				Man. Oth				Pri. Non-				10yr 11yr 21yr			
	TOTAL	Male	male	Ont.	Que.	B.C.	ries	ntic	lish	rch	cher	Res.	ear of	End	/	er	Pri.	Sec.	Pri.	Both	Less	20yr	More	
UNWEIGHTED SAMPLE	256	225	31	65	69	52	47	23	201	55	47	121	21	27	40	131	90	35	59	106	89			
WEIGHTED SAMPLE	256	225	31	65	69	52	47	23	201	55	47	121	21	27	40	131	90	35	59	106	89			
Yes	19	20	10	22	13	19	26	13	21	11	15	23	5	22	15	15	23	23	15	18	22			
No	70	71	61	63	74	75	64	78	68	76	72	66	90	56	78	75	64	66	75	67	72			
DK/NA	11	9	29	15	13	6	11	9	11	13	13	11	5	22	8	11	12	11	10	15	6			

	Q19. PAT. Q34. SIZE OF OWNERSHIP ORGANIZATION				Q5/6.LOCATION OF EXPERIENCE				Q8-Q12. AWARENESS				Q26.NETWORKING			
	Pat. Own	Pat. Non-Own	Pat. Small	Pat. Medium	Pat. Large	Canada Only	Canada U.S.	Canada Int.	Canada Low	Canada High	Canada Tor	Canada Tor	Canada Tor	Canada Tor	Canada Tor	Canada Tor
UNWEIGHTED SAMPLE	256	178	77	83	87	77	137	59	79	80	132	44	89	82	82	82
WEIGHTED SAMPLE	256	178	77	83	87	77	137	59	79	80	132	44	89	82	82	82
Yes	19	22	10	10	13	34	15	20	24	5	23	32	16	18	22	22
No	70	65	82	76	78	55	77	66	62	81	67	59	73	71	67	67
DK/NA	11	12	8	14	9	12	9	14	14	14	11	9	11	11	11	11

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22. Was this use of the research exemption ever disputed by the patent holder?

Subsample: Respondent or their organization has used the research exemption to patent protection

	GENDER				REGION			LANGUAGE			Q1.CURRENT POSITION				Q2.SECTOR			Q4.YRS OF EXP.			
	Fe				Prai Atla Eng			Res. Man. Man. Oth				Pri. Non-		10yr 11yr 21yr							
	TOTAL	Male	male	Ont.	Que.	B.C.	ries	ntic	lish	nch	cher	Res.	User	Res.	Com.	Only	Sec.	Both	Less	20yr	More
UNWEIGHTED SAMPLE	48	45	3	14	9	10	12	3	42	6	7	28	1	6	6	19	21	8	9	19	20
WEIGHTED SAMPLE	48	45	3	14	9	10	12	3	42	6	7	28	1	6	6	19	21	8	9	19	20
Yes	6	7	-	14	-	-	8	-	7	-	-	11	-	-	-	-	10	13	-	5	10
No	94	93	100	86	100	100	92	100	93	100	100	89	100	100	100	100	90	88	100	95	90
DK/NA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

	Q19. PAT. Q34. SIZE OF OWNERSHIP ORGANIZATION					Q5/6.LOCATION OF EXPERIENCE			Q8-Q12. AWARENESS			Q26.NETWORKING		
	Pat.	Pat.	Sm	Med	La	Can	Can/	Can/	Med	Low	High	1	2	3
	Own	Non-	Own.	all	ium	Only	U.S.	Int.	Low	ium	High	Sec	Sec	Sec
UNWEIGHTED SAMPLE	48	40	8	8	11	26	20	12	19	4	30	14	14	15
WEIGHTED SAMPLE	48	40	8	8	11	26	20	12	19	4	30	14	14	15
Yes	6	5	13	-	9	4	10	-	5	-	3	14	7	-
No	94	95	88	100	91	96	90	100	95	100	97	86	93	100
DK/NA	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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23. Where was the patent holder located?

Subsample: Respondent or their organization has used the research exemption to patent protection and the use of the research exemption was disputed by the patent holder

	GENDER				REGION				LANGUAGE				Q1.CURRENT POSITION				Q2.SECTOR				Q4.YRS OF EXP.			
	Fe				Prai Atla Eng Fre				Res. Man. Man. Oth				Pri. Non-				10yr 11yr 21yr							
	TOTAL	Male	male	Ont.	Que.	B.C.	ries	ntic	lish	nch	ear	of	End	/	er	Pri.	Non-	Both	Less	20yr	More			
											cher	Res.	User	Res.	Com.	Only	Sec.							
UNWEIGHTED SAMPLE	3	3	-	2	-	-	1	-	3	-	-	3	-	-	-	-	2	1	-	1	2			
WEIGHTED SAMPLE	3	3	-	2	-	-	1	-	3	-	-	3	-	-	-	-	2	1	-	1	2			
Canada	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
United States	100	100	-	100	-	-	100	-	100	-	-	100	-	-	-	-	100	100	-	100	100			
Other Specify	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
DK/NA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			

	Q19. PAT. OWNERSHIP			Q34. SIZE OF ORGANIZATION			Q5/6.LOCATION OF EXPERIENCE			Q8-Q12. AWARENESS			Q26.NETWORKING		
	Pat. Own	Pat. Non-Own	Sm	Med	La	Can	Can/	Can/	Med	Med	Low	High	1	2	3
	TOTAL	er	Own	all	ium	Only	U.S.	Int.	Low	ium	High	tor	Sec	Sec	Sec
UNWEIGHTED SAMPLE	3	2	1	-	1	1	2	-	1	-	1	2	1	-	2
WEIGHTED SAMPLE	3	2	1	-	1	1	2	-	1	-	1	2	1	-	2
Canada	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
United States	100	100	100	-	100	100	100	-	100	-	100	100	100	-	100
Other Specify	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DK/NA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

ENVIRONICS RESEARCH GROUP

BIOTECH RESEARCH - RM4720

24. Has a concern on the part of your organization or yourself about someone else's patent ever led you to ...?

a) Stop research work

	GENDER		REGION					LANGUAGE				Q1.CURRENT POSITION						Q2.SECTOR			Q4.YRS OF EXP.				
	Fe		Prairie					English				Res. Man.						Man. Oth			10yr 11yr 21yr				
	TOTAL	Male	male	Ont.	Que.	B.C.	ries	ntic	lish	nch	cher	ear	of	End	/	er	Pri.	Non-	Pri.	Non-	Both	Less	20yr	More	
	256	225	31	65	69	52	47	23	201	55	47	121	21	27	40	131	90	35	59	106	89				
UNWEIGHTED SAMPLE	256	225	31	65	69	52	47	23	201	55	47	121	21	27	40	131	90	35	59	106	89				
WEIGHTED SAMPLE	256	225	31	65	69	52	47	23	201	55	47	121	21	27	40	131	90	35	59	106	89				
Yes	20	20	23	26	17	17	26	9	22	13	19	23	5	26	18	24	18	14	25	22	15				
No	79	80	74	74	83	83	70	91	77	87	81	76	95	70	83	76	82	83	75	77	84				
DK/NA	1	*	3	-	-	-	4	-	1	-	-	1	-	4	-	1	-	3	-	1	1				

	Q19. PAT. OWNERSHIP					Q34. SIZE OF ORGANIZATION			Q5/6. LOCATION OF EXPERIENCE			Q8-Q12. AWARENESS			Q26. NETWORKING		
	Pat. Own	Pat. Non-Own	Pat. Sm. all	Pat. Med. ium	Pat. La rge	Canada Only	Can/ U.S.	Can/ Int.	Can/ Low	Med ium	High	Sec tor	2 Sec tor	3 Sec tor			
UNWEIGHTED SAMPLE	256	178	77	83	87	77	137	59	79	80	132	44	89	82	82		
WEIGHTED SAMPLE	256	178	77	83	87	77	137	59	79	80	132	44	89	82	82		
Yes	20	25	9	11	20	32	20	17	23	13	26	18	16	23	23		
No	79	74	91	87	80	68	79	83	77	88	73	82	83	77	76		
DK/NA	1	1	-	2	-	-	1	-	-	-	2	-	1	-	1		

ENVIRONICS RESEARCH GROUP

BIOTECH RESEARCH - PN4720

24. Has a concern on the part of your organization or yourself about someone else's patent ever led you to ...?

b) Delay research work

	GENDER				REGION				LANGUAGE				Q1.CURRENT POSITION				Q2.SECTOR			Q4.YRS OF EXP.			
	Fe					Prai	Atla	Eng	Fre	Res.	Man.	Man.	Oth	Pri.	Non-		10yr	11yr	21yr				
	TOTAL	Male	male	Ont.	Que.	B.C.	ries	ntic	lish	nch	cher	ear	of	End	/	er	Sec.	Pri.	Both	Less	20yr	More	
UNWEIGHTED SAMPLE	256	225	31	65	69	52	47	23	201	55	47	121	21	27	40	131	90	35	59	106	89		
WEIGHTED SAMPLE	256	225	31	65	69	52	47	23	201	55	47	121	21	27	40	131	90	35	59	106	89		
Yes	29	28	35	38	17	27	34	26	32	15	28	33	5	33	25	30	24	34	20	32	29		
No	71	72	65	60	83	73	64	74	67	85	72	66	95	67	73	69	74	66	78	68	70		
DK/NA	1	1	-	2	-	-	2	-	1	-	-	1	-	-	3	1	1	-	2	-	1		

	Q19. PAT. OWNERSHIP			Q34. SIZE OF ORGANIZATION				Q5/6. LOCATION OF EXPERIENCE				Q8-Q12. AWARENESS			Q26. NETWORKING		
	Pat.	Pat.		Sm	Med	La	ada	Can/	Can/	Med	High	Sec	Sec	Sec	1	2	3
	er	Own.	all	ium	ium	rge	Only	U.S.	Int.	Low	ium	tor	tor	tor			
UNWEIGHTED SAMPLE	256	178	77	83	87	77	137	59	79	80	132	44	89	82	82		
WEIGHTED SAMPLE	256	178	77	83	87	77	137	59	79	80	132	44	89	82	82		
Yes	29	33	18	22	31	35	27	29	30	15	36	32	26	33	27		
No	71	66	82	77	69	64	72	71	70	85	63	68	73	67	72		
DK/NA	1	1	-	1	-	1	1	-	-	-	2	-	1	-	1		

ENVIRONICS RESEARCH GROUP

BIOTECH RESEARCH - FN4720

24. Has a concern on the part of your organization or yourself about someone else's patent ever led you to ...?

c) Not begin research work

	GENDER				REGION				LANGUAGE				Q1.CURRENT POSITION				Q2.SECTOR				Q4.YRS OF EXP.			
	Fe		Male		Ont.	Que.	B.C.	Prai	Atla	Eng	Fre	ear	Man.	Man.	Oth	Pri.	Non-	10yr	11yr	21yr				
	TOTAL	Male	male					ries	ntic	lish	nch	cher	Res.	User	Res.	Com.	Only	Sec.	Both	Less	20yr	More		
UNWEIGHTED SAMPLE	256	225	31	65	69	52	47	23	201	55	47	121	21	27	40	131	90	35	59	106	89			
WEIGHTED SAMPLE	256	225	31	65	69	52	47	23	201	55	47	121	21	27	40	131	90	35	59	106	89			
Yes	34	35	29	34	30	38	38	30	37	25	38	38	14	41	25	36	34	29	29	37	35			
No	64	63	68	62	70	62	57	70	61	75	62	60	81	56	73	63	63	69	68	61	64			
DK/NA	2	2	3	5	-	-	4	-	2	-	-	2	5	4	3	2	2	3	3	2	1			

	Q19. PAT. Q34. SIZE OF OWNERSHIP ORGANIZATION				Q5/6.LOCATION OF EXPERIENCE				Q8-Q12. AWARENESS				Q26.NETWORKING			
	Pat.	Pat.	Non-Sm	Med La	Can	ada	Can/	Can/	Med	Med	High	tor	tor	tor		
	er	Own.	all	ium	rge	Only	U.S.	Int.	Low	ium	High	tor	tor	tor		
UNWEIGHTED SAMPLE	256	178	77	83	87	77	137	59	79	80	132	44	89	82	82	
WEIGHTED SAMPLE	256	178	77	83	87	77	137	59	79	80	132	44	89	82	82	
Yes	34	40	21	25	33	48	34	32	37	26	37	41	29	35	40	
No	64	57	79	71	67	49	64	68	63	73	60	59	70	63	56	
DK/NA	2	3	-	4	-	3	3	-	-	1	3	-	1	1	4	

ENVIRONICS RESEARCH GROUP

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25. Where was the patent holder located?

Subsample: Concern on the part of the respondent or their organization about someone else's patent has led respondents to stop, delay or not begin research work

	GENDER				REGION				LANGUAGE				Q1.CURRENT POSITION				Q2.SECTOR				Q4.YRS OF EXP.			
	Fe				Prai Atla				Eng	Fre	Res. Man.		Man. Oth		Pri.	Non-	10yr		11yr	21yr				
	TOTAL	Male	male	Ont.	Que.	B.C.	ries	ntic	lish	nch	cher	Res.	User	Res.	Com.	Only	Sec.	Both	Less	20yr	More			
UNWEIGHTED SAMPLE	113	101	12	30	25	24	24	10	96	17	22	58	4	14	15	59	39	15	24	51	37			
WEIGHTED SAMPLE	113	101	12	30	25	24	24	10	96	17	22	58	4	14	15	59	39	15	24	51	37			
United States	73	73	75	83	80	67	62	70	72	82	73	74	50	79	73	78	69	67	62	73	81			
EU (European Union)	15	16	8	27	16	8	13	-	16	12	9	14	50	21	13	19	13	7	17	14	16			
Canada	11	11	8	3	20	4	13	20	9	18	9	12	25	-	13	7	10	27	17	10	8			
Far East (China, Japan, S & N Korea)	4	4	8	-	-	21	-	-	5	-	5	2	-	7	13	7	-	7	8	4	3			
Rest of Europe (not in the EU)	3	3	-	-	-	8	4	-	3	-	-	3	-	7	-	-	3	13	-	4	3			
Other	1	1	-	-	-	4	-	-	1	-	-	-	-	-	7	2	-	-	-	-	3			
DK/NA	7	6	17	3	-	13	13	10	8	-	5	9	-	7	7	7	10	-	13	8	3			

	Q19. PAT. OWNERSHIP						Q34. SIZE OF ORGANIZATION				Q5/6.LOCATION OF EXPERIENCE				Q8-Q12. AWARENESS				Q26.NETWORKING			
	Pat. Own	Pat. Non-Own	Pat. Sm	Pat. Med	Pat. La	Pat. rge	Can ada Only	Can/ U.S.	Can/ Int.	Med Low	Med ium	High	1 Sec tor	2 Sec tor	3 Sec tor							
UNWEIGHTED SAMPLE	113	89	24	32	37	42	59	24	37	26	64	23	34	42	36							
WEIGHTED SAMPLE	113	89	24	32	37	42	59	24	37	26	64	23	34	42	36							
United States	73	79	54	66	73	81	68	88	76	65	72	87	65	69	86							
EU (European Union)	15	15	17	16	11	19	14	13	16	19	14	13	-	21	22							
Canada	11	9	17	13	11	7	14	8	8	8	13	9	15	14	3							
Far East (China, Japan, S & N Korea)	4	3	8	9	5	-	5	4	3	8	5	-	3	2	6							
Rest of Europe (not in the EU)	3	3	-	3	5	-	3	-	3	-	5	-	6	2	-							
Other	1	-	4	3	-	-	-	4	-	4	-	-	-	-	-							
DK/NA	7	4	17	13	5	5	8	4	8	12	6	4	12	7	3							

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26. Now for some questions on networking. With which of the following sectors do you (or your organization) work most closely?

	GENDER				REGION				LANGUAGE				Q1. CURRENT POSITION				Q2. SECTOR				Q4. YRS OF EXP.			
	TOTAL	Male	Female	Ont.	Que.	B.C.	Prairies	Atlantic	English	French	Res. cher	Man. ear	Man. of	Man. End	Man. /	Man. er	Pri. Sec.	Non-Pri.	Both	10yr or Less	11yr to 20yr	21yr or More		
UNWEIGHTED SAMPLE	256	225	31	65	69	52	47	23	201	55	47	121	21	27	40	131	90	35	59	106	89			
WEIGHTED SAMPLE	256	225	31	65	69	52	47	23	201	55	47	121	21	27	40	131	90	35	59	106	89			
Academia	57	57	58	63	41	62	60	74	62	38	57	56	29	70	65	50	69	51	56	56	60			
Private sector - biotech	52	55	32	49	48	58	55	52	54	45	45	53	52	52	58	45	58	63	58	49	53			
Private sector - pharmaceuticals	32	33	26	32	30	35	30	35	33	29	21	31	33	48	35	31	29	43	27	28	39			
Government	32	31	42	34	25	21	45	48	34	24	32	31	29	37	33	27	41	26	36	31	29			
Hospital	22	22	23	23	16	25	23	26	24	15	17	23	10	22	30	21	24	20	20	12	34			
Not-for-profit	8	8	10	8	6	6	9	17	9	2	4	7	10	11	10	5	16	-	14	5	7			
Other private sector	24	24	29	23	20	19	28	43	25	20	21	25	33	19	25	22	27	26	31	18	28			
DK/NA	1	1	-	2	-	4	-	-	1	-	2	-	-	-	5	1	2	-	-	2	1			

	Q19. PAT. Q34. SIZE OF OWNERSHIP ORGANIZATION					Q5/6. LOCATION OF EXPERIENCE				Q8-Q12. AWARENESS				Q26. NETWORKING			
	TOTAL	Pat. Own.	Pat. Non-Own.	Pat. Sm. all	Med. ium	La. rge	Can. Only	Can. U.S.	Can. Int.	Med. Low	Med. ium	Med. High	Med. tor	1. Sec. tor	2. Sec. tor	3. Sec. tor	
UNWEIGHTED SAMPLE	256	178	77	83	87	77	137	59	79	80	132	44	89	82	82	82	
WEIGHTED SAMPLE	256	178	77	83	87	77	137	59	79	80	132	44	89	82	82	82	
Academia	57	60	52	55	55	60	53	63	66	51	61	57	27	57	91		
Private sector - biotech	52	57	40	55	40	61	51	53	51	51	49	61	33	49	78		
Private sector - pharmaceuticals	32	37	22	19	40	35	27	41	37	20	36	41	12	26	61		
Government	32	33	30	28	24	44	31	37	35	33	33	30	11	30	57		
Hospital	22	25	16	17	24	22	18	31	28	19	22	27	4	17	46		
Not-for-profit	8	9	5	6	1	16	6	8	11	9	7	9	-	2	22		
Other private sector	24	24	26	22	18	31	21	15	35	33	20	23	12	18	44		
DK/NA	1	1	1	1	1	1	-	2	1	3	-	2	-	-	-		

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27. In general, are these persons or organizations located in ...?

	GENDER			REGION			LANGUAGE			Q1.CURRENT POSITION				Q2.SECTOR				Q4.YRS OF EXP.			
	Fe			Prai Atla Eng Fre			ear of End / er			Res. Man. Man. Oth				Pri. Non- Pri. Non-				10yr	11yr	21yr	
	TOTAL	Male	male	Ont.	Que.	B.C.	ries	ntic	lish	nch	cher	Res.	User	Res.	Com.	Only	Sec.	Both	Less	20yr	More
UNWEIGHTED SAMPLE	256	225	31	65	69	52	47	23	201	55	47	121	21	27	40	131	90	35	59	106	89
WEIGHTED SAMPLE	256	225	31	65	69	52	47	23	201	55	47	121	21	27	40	131	90	35	59	106	89
Canada	88	88	90	89	93	73	96	87	87	91	87	91	81	93	80	86	92	83	90	83	92
United States	58	58	55	63	42	67	60	65	61	47	43	58	57	78	63	64	41	77	46	58	65
European Union	35	34	39	40	35	29	32	39	34	36	30	34	24	48	40	34	34	37	25	39	36
Far East (China, Japan, S & N Korea)	9	9	6	17	1	13	6	4	11	2	9	9	-	15	10	8	7	17	3	12	8
Australia/New Zealand/Oceania	4	4	3	5	-	6	6	9	5	-	-	5	5	4	8	3	6	6	5	7	1
All over the world	2	1	3	2	-	4	-	4	2	-	-	3	-	-	-	2	1	-	2	2	1
Middle East	1	1	3	2	1	2	-	-	1	2	-	-	-	4	5	2	1	-	-	1	2
Latin America/Brazil /Argentina/South America	1	1	3	2	-	-	2	4	1	-	2	2	-	-	-	2	1	-	2	1	1
Other	1	1	-	2	1	-	-	4	1	-	2	1	-	-	3	2	1	-	2	-	2
DK/NA	1	1	-	-	1	4	-	-	1	2	2	-	-	-	5	2	1	-	-	2	1

	Q19. PAT. OWNERSHIP			Q34. SIZE OF ORGANIZATION			Q5/6.LOCATION OF EXPERIENCE			Q8-Q12. AWARENESS			Q26.NETWORKING		
	TOTAL	Pat. Own	Pat. Non-Own	Sm all	Med ium	La rge	Can ada Only	Can/ U.S.	Can/ Int.	Low	Med ium	High	1 Sec tor	2 Sec tor	3 Sec tor
UNWEIGHTED SAMPLE	256	178	77	83	87	77	137	59	79	80	132	44	89	82	82
WEIGHTED SAMPLE	256	178	77	83	87	77	137	59	79	80	132	44	89	82	82
Canada	88	89	86	84	86	92	89	85	89	84	89	91	83	85	98
United States	58	63	45	54	64	56	55	66	63	51	62	57	49	56	70
European Union	35	40	22	23	41	40	35	36	33	33	38	30	24	39	44
Far East (China, Japan, S & N Korea)	9	9	9	10	11	5	8	12	13	11	9	5	3	12	12
Australia/New Zealand/Oceania	4	4	5	5	3	4	6	2	4	5	5	2	2	4	7
All over the world	2	2	-	-	1	4	1	2	1	3	1	2	2	1	1
Middle East	1	1	1	1	1	1	1	-	1	-	2	-	-	-	4
Latin America/Brazil /Argentina/South America	1	1	3	1	1	-	1	2	1	3	1	-	1	1	1
Other	1	1	3	-	2	1	1	2	1	4	-	-	2	-	1
DK/NA	1	1	1	2	1	-	1	2	-	4	-	-	1	-	

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28. Additional comments

	GENDER				REGION				LANGUAGE			Q1.CURRENT POSITION				Q2.SECTOR				Q4.YRS OF EXP.			
	TOTAL	Male	Female	Ont.	Que.	B.C.	Prairies	Atlantic	English	French	Res. cher	Man. Res.	Man. User	Other	Other	Prim. Only	Non-Sec.	Prim. Both	10yr or Less	11yr to 20yr	21yr or More		
UNWEIGHTED SAMPLE	256	225	31	65	69	52	47	23	201	55	47	121	21	27	40	131	90	35	59	106	89		
WEIGHTED SAMPLE	256	225	31	65	69	52	47	23	201	55	47	121	21	27	40	131	90	35	59	106	89		
Comments about the survey or questions	11	11	13	5	19	13	9	4	8	20	15	7	10	22	10	9	18	-	5	15	9		
Concerns with patents/ applications/ unhappy with patent process	5	5	6	5	10	6	-	-	3	13	4	2	5	11	10	5	4	6	2	6	7		
US patent/not Canadian patent	3	3	3	-	-	8	2	9	3	-	2	3	-	-	5	3	2	3	-	1	7		
No problem/no concerns/intends to use exemption	2	2	3	5	4	-	-	-	2	4	2	2	5	4	-	2	2	3	-	3	3		
Not familiar with patent application or laws	1	1	-	2	1	-	-	4	1	2	2	1	5	-	-	1	1	3	3	1	-		
No comments	76	76	74	85	65	75	81	74	80	62	74	81	76	59	73	79	70	80	88	72	73		
Other	3	3	-	2	-	-	9	9	3	-	-	3	-	4	5	2	3	6	2	4	2		
DK/NA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		

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28. Additional comments

	Q19. PAT. OWNERSHIP ORGANIZATION					Q34. SIZE OF ORGANIZATION					Q5/6. LOCATION OF EXPERIENCE					Q8-Q12. AWARENESS					Q26. NETWORKING				
	Pat. Own		Pat. Non-Own		Sm all		Med ium		La rge		Can ada Only		Can/ U.S.		Can/ Int.		Med Low		Med ium		High		1 Sec tor	2 Sec tor	3 Sec tor
	TOTAL	er	Own																						
UNWEIGHTED SAMPLE	256	178	77	83	87	77	137	59	79	80	132	44	89	82	82										
WEIGHTED SAMPLE	256	178	77	83	87	77	137	59	79	80	132	44	89	82	82										
Comments about the survey or questions	11	11	10	8	10	14	11	10	11	13	11	9	16	5	11										
Concerns with patents/ applications/ unhappy with patent process	5	4	6	6	5	3	4	8	4	4	5	7	3	5	6										
US patent/not Canadian patent	3	3	3	4	3	1	2	5	3	4	3	-	-	2	6										
No problem/no concerns/intends to use exemption	2	3	-	1	3	3	2	3	1	3	2	2	1	2	4										
Not familiar with patent application or laws	1	2	-	1	-	3	1	2	1	1	1	2	1	1	1										
No comments	76	74	81	78	78	71	80	64	73	73	77	77	78	80	71										
Other	3	3	3	2	1	5	1	7	6	4	2	2	1	4	4										
DK/NA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-										

ENVIRONICS RESEARCH GROUP

BIOTECH RESEARCH - PN4720

GENDER

	GENDER				REGION				LANGUAGE				Q1.CURRENT POSITION				Q2.SECTOR				Q4.YRS OF EXP.			
	-----				-----				-----				-----				-----				-----			
	Fe				Prairie Atlantic				English French				Res. Man.		Man. Oth		Pri. Non-		10yr 11yr 21yr					
	TOTAL	Male	male	Ont.	Que.	B.C.	ries	ntic	lish	nch	cher	Res.	of	End	/	er	Sec.	Pri.	or	to	or			
UNWEIGHTED SAMPLE	256	225	31	65	69	52	47	23	201	55	47	121	21	27	40	131	90	35	59	106	89			
WEIGHTED SAMPLE	256	225	31	65	69	52	47	23	201	55	47	121	21	27	40	131	90	35	59	106	89			
Male	88	100	-	89	86	88	89	87	89	85	89	87	90	89	88	87	88	91	83	86	94			
Female	12	-	100	11	14	12	11	13	11	15	11	13	10	11	13	13	12	9	17	14	6			
DK/NA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			

	Q19. PAT. OWNERSHIP						Q34. SIZE OF ORGANIZATION			Q5/6.LOCATION OF EXPERIENCE			Q8-Q12. AWARENESS			Q26.NETWORKING		
	TOTAL	Pat.	Pat.	Sm	Med	La	Can Only	Can/ U.S.	Can/ Int.	Low	Med ium	High	1 Sec tor	2 Sec tor	3 Sec tor			
		er	Own.													Own.		
UNWEIGHTED SAMPLE	256	178	77	83	87	77	137	59	79	80	132	44	89	82	82			
WEIGHTED SAMPLE	256	178	77	83	87	77	137	59	79	80	132	44	89	82	82			
Male	88	89	86	86	85	95	83	95	92	91	87	84	87	87	90			
Female	12	11	14	14	15	5	17	5	8	9	13	16	13	13	10			
DK/NA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			

ENVIRONICS RESEARCH GROUP

BIOTECH RESEARCH - RN4720

REGION

	GENDER			REGION			LANGUAGE			Q1. CURRENT POSITION				Q2. SECTOR				Q4. YRS OF EXP.			
	Fe			Prairie			Atlantic			Res. Man.				Man. Oth				10yr or Less			
	TOTAL	Male	female	Ont.	Que.	B.C.	ries	ntic	lish	nd	ear	of	End	/	er	Sec.	Pri.	Both	Less	20yr	More
UNWEIGHTED SAMPLE	256	225	31	65	69	52	47	23	201	55	47	121	21	27	40	131	90	35	59	106	89
WEIGHTED SAMPLE	256	225	31	65	69	52	47	23	201	55	47	121	21	27	40	131	90	35	59	106	89
Newfoundland	1	1	-	-	-	-	-	13	1	-	-	2	-	-	3	-	2	3	-	3	-
Prince Edward Island	1	1	-	-	-	-	-	13	1	-	2	2	-	-	-	2	-	3	-	-	3
Nova Scotia	4	4	6	-	-	-	-	48	5	-	-	8	5	-	-	5	4	3	7	1	7
New Brunswick	2	2	3	-	-	-	-	26	3	-	4	2	-	-	5	2	4	-	3	3	1
Quebec	27	26	32	-	100	-	-	-	7	100	43	27	14	30	13	31	28	11	27	27	27
Ontario	25	26	23	100	-	-	-	-	32	-	13	24	43	30	33	25	23	31	17	34	20
Manitoba	3	3	-	-	-	-	15	-	3	-	-	4	-	-	5	3	1	6	5	3	1
Saskatchewan	6	5	13	-	-	-	34	-	8	-	11	5	5	11	3	4	10	6	10	7	2
Alberta	9	10	3	-	-	-	51	-	12	-	11	8	10	11	10	10	6	17	5	7	16
British Columbia	20	20	19	-	-	100	-	-	26	-	17	18	24	19	30	20	21	20	25	16	22

	Q19. PAT. OWNERSHIP			Q34. SIZE OF ORGANIZATION			Q5/6. LOCATION OF EXPERIENCE			Q8-Q12. AWARENESS			Q26. NETWORKING		
	Pat. Own			Pat. Non-Sm			Can Only			Med Low			1 2 3		
	TOTAL	er	Own	all	ium	rge	Only	U.S.	Int.	Low	ium	High	tor	tor	tor
UNWEIGHTED SAMPLE	256	178	77	83	87	77	137	59	79	80	132	44	89	82	82
WEIGHTED SAMPLE	256	178	77	83	87	77	137	59	79	80	132	44	89	82	82
Newfoundland	1	1	1	1	-	3	1	2	3	1	2	-	1	1	1
Prince Edward Island	1	1	1	1	1	1	1	2	1	1	2	-	-	1	2
Nova Scotia	4	3	6	2	7	4	4	7	6	8	2	7	2	4	7
New Brunswick	2	2	4	5	1	1	3	-	3	1	3	2	2	2	2
Quebec	27	28	26	22	31	25	28	34	19	29	27	25	43	22	16
Ontario	25	26	23	27	22	30	26	17	30	19	28	30	16	32	29
Manitoba	3	3	1	5	1	3	4	2	1	3	3	2	4	1	2
Saskatchewan	6	6	6	6	6	6	9	2	5	8	5	9	4	7	7
Alberta	9	10	8	10	10	8	7	14	13	11	8	9	8	9	12
British Columbia	20	19	22	22	21	19	18	22	19	20	22	16	19	21	20

ENVIRONICS RESEARCH GROUP

BIOTECH RESEARCH - PN4720

DO NOT ASK - LANGUAGE OF INTERVIEW

	GENDER				REGION				LANGUAGE				Q1. CURRENT POSITION				Q2. SECTOR				Q4. YRS OF EXP.			
	-----				-----				-----				-----				-----				-----			
	Fe				Prairie Atlantic				English French				Res. Man.		Man. Oth		Pri. Non-		10yr 11yr 21yr					
	TOTAL	Male	female	Ont.	Que.	B.C.	ries	ntic	lish	nch	cher	Res.	of	End	/	er	Sec.	Pri.	or	to	or			
UNWEIGHTED SAMPLE	256	225	31	65	69	52	47	23	201	55	47	121	21	27	40	131	90	35	59	106	89			
WEIGHTED SAMPLE	256	225	31	65	69	52	47	23	201	55	47	121	21	27	40	131	90	35	59	106	89			
English	79	79	74	100	20	100	100	100	100	-	66	79	86	74	90	75	80	89	81	78	76			
French	21	21	26	-	80	-	-	-	-	100	34	21	14	26	10	25	20	11	19	22	24			
DK/NA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			

	Q19. PAT. OWNERSHIP				Q34. SIZE OF ORGANIZATION				Q5/6. LOCATION OF EXPERIENCE				Q8-Q12. AWARENESS				Q26. NETWORKING			
	TOTAL	Pat. Own	Pat. Non-Own	Pat. Sm	Med	La	Can Only	Can/ U.S.	Can/ Int.	Med Low	Med High	1 Sec	2 Sec	3 Sec	tor	tor	tor	tor	tor	tor
UNWEIGHTED SAMPLE	256	178	77	83	87	77	137	59	79	80	132	44	89	82	82					
WEIGHTED SAMPLE	256	178	77	83	87	77	137	59	79	80	132	44	89	82	82					
English	79	79	77	83	72	84	77	75	85	76	79	82	64	84	88					
French	21	21	23	17	28	16	23	25	15	24	21	18	36	16	12					
DK/NA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					

ENVIRONICS RESEARCH GROUP

BIOTECH RESEARCH - RW4720

NUMBER OF EMPLOYEES

	GENDER				REGION				LANGUAGE		Q1.CURRENT POSITION				Q2.SECTOR				Q4.YRS OF EXP.			
	TOTAL	Male	Female	Ont.	Que.	B.C.	Prairies	Atlantic	English	French	Researcher	Manager	End User	Other	Primary	Non-Primary	Both	10yr or Less	11yr to 20yr	21yr or More		
UNWEIGHTED SAMPLE	256	225	31	65	69	52	47	23	201	55	47	121	21	27	40	131	90	35	59	106	89	
WEIGHTED SAMPLE	256	225	31	65	69	52	47	23	201	55	47	121	21	27	40	131	90	35	59	106	89	
1 to 5 employees	17	17	19	14	17	15	19	26	17	18	11	15	24	19	28	19	12	23	25	14	15	
6 to 10 employees	15	15	19	20	9	19	17	9	17	7	13	16	14	19	15	11	26	14	20	11		
11 to 30 employees	23	24	19	17	28	25	21	26	20	33	26	26	24	22	13	29	14	23	22	25	22	
31 to 50 employees	11	9	23	12	12	10	11	9	11	11	9	11	19	11	10	14	9	6	7	9	16	
51 to 100 employees	11	10	13	6	13	15	6	13	10	13	13	12	5	15	5	10	13	6	14	10	9	
101 to 300 employees	11	12	-	14	6	8	17	9	12	5	17	9	10	4	13	8	13	11	10	8	13	
301+ employees	9	10	-	15	9	6	4	9	10	4	4	8	5	11	18	5	17	6	5	9	10	
DK/NA	4	3	6	2	7	2	4	-	2	9	9	4	-	-	-	-	10	-	3	4	3	

	Q19. PAT. OWNERSHIP			Q34. SIZE OF ORGANIZATION			Q5/6. LOCATION OF EXPERIENCE			Q8-Q12. AWARENESS			Q26.NETWORKING		
	TOTAL	Pat. Own	Pat. Non-Own	Small	Medium	Large	Canada Only	U.S.	Int.	Low	Medium	High	1st Sec	2nd Sec	3rd Sec
UNWEIGHTED SAMPLE	256	178	77	83	87	77	137	59	79	80	132	44	89	82	82
WEIGHTED SAMPLE	256	178	77	83	87	77	137	59	79	80	132	44	89	82	82
1 to 5 employees	17	12	29	53	-	-	20	15	15	25	16	7	25	11	15
6 to 10 employees	15	13	21	47	-	-	20	12	10	16	15	14	19	12	15
11 to 30 employees	23	21	27	-	68	-	23	22	24	29	21	18	24	28	17
31 to 50 employees	11	12	8	-	32	-	8	14	14	5	15	9	11	15	7
51 to 100 employees	11	13	4	-	-	35	9	10	13	11	9	14	9	10	13
101 to 300 employees	11	15	1	-	-	35	7	14	15	9	11	14	7	12	13
301+ employees	9	11	5	-	-	30	9	10	6	4	10	16	4	7	15
DK/NA	4	3	5	-	-	-	4	3	3	1	3	9	1	5	5

BIOTECH RESEARCH - RM4720

CITY OF RESIDENCE

	GENDER				REGION				LANGUAGE				Q1. CURRENT POSITION				Q2. SECTOR				Q4. YRS OF EXP.			
	Fe		Male		Ont.	Que.	B.C.	Prairie	Atlantic	English	French	Res. Man.		Man. Oth		Pri. Non-Sec.	Pri. Sec.	Both	10yr or Less	11yr to 20yr	21yr or More			
	TOTAL	Male	male									ear	of	End / User	Res.							Com.		
UNWEIGHTED SAMPLE	256	225	31	65	69	52	47	23	201	55	47	121	21	27	40	131	90	35	59	106	89			
WEIGHTED SAMPLE	256	225	31	65	69	52	47	23	201	55	47	121	21	27	40	131	90	35	59	106	89			
Montreal	10	11	6	-	38	-	-	-	4	33	17	12	5	7	-	11	12	3	7	13	9			
Vancouver	10	9	16	-	-	48	-	-	12	-	6	10	10	11	13	11	10	6	10	8	12			
Saskatoon	6	5	13	-	-	-	34	-	8	-	11	5	5	11	3	4	10	6	8	7	3			
Toronto	6	6	3	23	-	-	-	-	7	-	2	6	5	7	10	4	9	6	-	8	7			
Ste-Foy	5	4	10	-	17	-	-	-	1	18	13	2	5	-	5	5	6	-	3	8	2			
Edmonton	4	4	3	-	-	-	23	-	5	-	4	5	-	7	3	4	4	6	3	2	8			
Calgary	4	4	-	-	-	-	21	-	5	-	6	2	5	-	8	5	1	9	2	4	6			
Mississauga	4	4	-	15	-	-	-	-	5	-	-	2	10	4	10	6	-	6	5	4	3			
Ottawa	3	3	6	12	-	-	-	-	4	-	2	3	5	7	-	1	7	3	5	5	-			
Guelph	3	3	3	11	-	-	-	-	3	-	2	2	5	4	5	2	2	6	2	4	2			
Victoria	3	3	-	-	-	13	-	-	3	-	2	2	10	4	3	1	4	6	3	3	2			
Winnipeg	2	3	-	-	-	-	13	-	3	-	-	3	-	-	5	2	1	6	5	2	1			
Laval	2	1	6	-	7	-	-	-	-	9	4	1	-	-	5	1	3	3	2	-	4			
Fredericton	2	1	3	-	-	-	-	17	2	-	2	2	-	-	3	1	3	-	3	2	-			
London	2	2	-	6	-	-	-	-	2	-	4	1	-	-	3	2	1	3	-	2	2			
Kingston	2	2	-	6	-	-	-	-	2	-	-	2	-	4	-	2	2	-	3	2	-			
St. Johns	1	1	-	-	-	-	-	13	1	-	-	2	-	-	3	-	2	3	-	3	-			
North Vancouver	1	1	-	-	-	6	-	-	1	-	-	1	-	-	5	2	-	-	3	1	-			
Delta	1	1	-	-	-	6	-	-	1	-	-	2	5	-	-	2	-	-	3	-	1			
Burnaby	1	1	-	-	-	6	-	-	1	-	2	1	-	-	3	1	1	3	-	1	2			
Bedford	1	*	3	-	-	-	-	9	1	-	-	1	5	-	-	1	-	3	2	-	1			
Dartmouth	1	1	-	-	-	-	-	9	1	-	-	2	-	-	-	2	-	-	-	-	2			
St. Catharines	1	1	-	3	-	-	-	-	1	-	-	1	5	-	-	-	-	6	-	2	-			
Halifax	1	1	-	-	-	-	-	9	1	-	-	2	-	-	-	-	2	-	2	-	1			
Charlottetown	1	1	-	-	-	-	-	9	1	-	2	1	-	-	-	1	-	3	-	-	2			
Kentville	1	1	-	-	-	-	-	9	1	-	-	2	-	-	-	1	1	-	2	-	1			
Hamby	1	*	3	3	-	-	-	-	1	-	-	1	5	-	-	2	-	-	-	2	-			
St.-Hyacinthe	1	1	-	-	3	-	-	-	-	4	-	2	-	-	-	1	1	-	-	-	2			
Windsor	1	-	6	2	-	-	-	4	1	-	-	1	-	-	3	2	-	-	-	2	-			
Waterloo	1	1	-	2	1	-	-	-	1	-	-	1	-	-	3	1	1	-	2	-	1			
Pointe-Claire	1	1	-	-	3	-	-	-	*	2	4	-	-	-	-	-	2	-	-	1	1			
Etobicoke	*	*	-	2	-	-	-	-	*	-	-	1	-	-	-	1	-	-	-	1	-			
St. Andrews	*	*	-	-	-	-	-	4	*	-	2	-	-	-	-	-	1	-	-	-	1			
Port Coquitlam	*	*	-	-	-	2	-	-	*	-	2	-	-	-	-	-	1	-	-	1	-			
Woodbridge	*	*	-	2	-	-	-	-	*	-	2	-	-	-	-	1	-	-	-	1	-			
Oakville	*	-	3	2	-	-	-	-	*	-	-	-	5	-	-	1	-	-	-	1	-			
Abbotsford	*	*	-	-	-	2	-	-	*	-	2	-	-	-	-	1	-	-	2	-	-			
Kelowna	*	-	3	-	-	2	-	-	*	-	-	1	-	-	-	-	1	-	-	1	-			
Bamfield	*	*	-	-	-	2	-	-	*	-	-	1	-	-	-	-	1	-	2	-	-			
Shelburne	*	*	-	-	-	-	-	4	*	-	-	1	-	-	-	1	-	-	-	-	1			
Lanzville	*	*	-	-	-	2	-	-	*	-	-	-	-	-	3	1	-	-	-	-	1			
Hampstead	*	*	-	-	-	-	-	4	*	-	-	-	-	-	3	1	-	-	-	1	-			
Minto	*	*	-	-	-	-	2	-	*	-	-	1	-	-	-	1	-	-	-	1	-			
Ridgeville	*	*	-	2	-	-	-	-	*	-	-	-	-	4	-	1	-	-	-	-	1			
Airdrie	*	*	-	-	-	-	2	-	*	-	-	-	5	-	-	1	-	-	-	1	-			
Saanichton	*	*	-	-	-	2	-	-	*	-	-	1	-	-	-	1	-	-	-	1	-			
Lawrencetown	*	*	-	-	-	-	-	4	*	-	-	1	-	-	-	-	1	-	2	-	-			
Summerland	*	*	-	-	-	2	-	-	*	-	-	1	-	-	-	-	1	-	2	-	-			
(continued)																								

(continued)

ENVIRONICS RESEARCH GROUP

BIOTECH RESEARCH - RM720

CITY OF RESIDENCE

	GENDER				REGION				LANGUAGE				Q1. CURRENT POSITION				Q2. SECTOR			Q4. YRS OF EXP.			
	Fe		Male		male	Ont.	Que.	B.C.	ries	ntic	lish	nch	ear of	Man. Res.	End User	Man. Res.	Oth. Ctm.	Pri. Only	Non-Sec.	10yr or Both	11yr Less	21yr 20yr	to or More
TOTAL	256	225	31	65	69	52	47	23	201	55	47	121	21	27	40	131	90	35	59	106	89		
UNWEIGHTED SAMPLE	256	225	31	65	69	52	47	23	201	55	47	121	21	27	40	131	90	35	59	106	89		
WEIGHTED SAMPLE	256	225	31	65	69	52	47	23	201	55	47	121	21	27	40	131	90	35	59	106	89		
Regina	*	*	-	-	-	-	2	-	*	-	-	1	-	-	-	-	-	3	2	-	-		
Scarborough	*	*	-	2	-	-	-	-	*	-	-	1	-	-	-	1	-	-	-	1	-		
West Vancouver	*	*	-	-	-	2	-	-	*	-	-	-	-	-	3	-	-	3	-	-	1		
Souris	*	*	-	-	-	-	-	4	*	-	-	1	-	-	-	1	-	-	-	-	1		
Fort Saskatchewan	*	*	-	-	-	-	2	-	*	-	-	-	-	4	-	1	-	-	-	-	1		
Burlington	*	*	-	2	-	-	-	-	*	-	-	-	5	-	-	1	-	-	-	1	-		
Concord	*	*	-	2	-	-	-	-	*	-	-	1	-	-	-	1	-	-	2	-	-		
Richmond	*	*	-	-	-	2	-	-	*	-	-	-	-	4	-	-	-	3	-	-	1		
Aurora	*	*	-	2	-	-	-	-	*	-	-	1	-	-	-	-	-	3	-	-	1		
Charlesbourg	*	*	-	-	1	-	-	-	-	2	-	1	-	-	-	1	-	-	-	1	-		
Quebec City	*	*	-	-	1	-	-	-	-	2	-	1	-	-	-	1	-	-	-	1	-		
Sidney	*	*	-	-	-	2	-	-	*	-	2	-	-	-	-	-	1	-	-	1	-		
Sillery	*	*	-	-	1	-	-	-	-	2	-	-	-	4	-	-	1	-	-	-	1		
St.-Laurent	*	*	-	-	1	-	-	-	-	2	-	-	-	4	-	1	-	-	2	-	-		
St. Rouald	*	*	-	-	1	-	-	-	-	2	-	-	5	-	-	1	-	-	-	-	1		
Riviere-du-Loup	*	*	-	-	1	-	-	-	-	2	-	1	-	-	-	1	-	-	-	1	-		
St.-Jean-sur-Richelieu	*	-	3	-	1	-	-	-	-	2	-	-	-	4	-	1	-	-	-	1	-		
Granby	*	*	-	-	1	-	-	-	-	2	-	1	-	-	-	1	-	-	-	-	1		
Mirabel	*	*	-	-	1	-	-	-	-	2	-	1	-	-	-	1	-	-	2	-	-		
St.-Hubert	*	*	-	-	1	-	-	-	-	2	-	1	-	-	-	1	-	-	-	-	1		
Longueuil	*	*	-	-	1	-	-	-	-	2	-	1	-	-	-	1	-	-	-	-	1		
Nepean	*	*	-	2	-	-	-	-	*	-	-	1	-	-	-	-	1	-	-	-	1		
St.-Antoine-sur-Richelieu	*	*	-	-	1	-	-	-	-	2	-	1	-	-	-	1	-	-	2	-	-		
Ste-Rosalie	*	-	3	-	1	-	-	-	-	2	-	1	-	-	-	1	-	-	-	-	1		
Aldergrove	*	*	-	-	-	2	-	-	*	-	-	-	-	-	3	1	-	-	-	-	1		
North York	*	*	-	2	-	-	-	-	*	-	-	-	-	-	3	1	-	-	-	1	-		
Lachine	*	*	-	-	1	-	-	-	*	-	-	1	-	-	-	1	-	-	2	-	-		
Sherbrooke	*	*	-	-	1	-	-	-	-	2	2	-	-	-	-	-	-	3	2	-	-		
Temiscaming	*	*	-	-	1	-	-	-	-	2	-	1	-	-	-	1	-	-	-	1	-		
Fleurimont	*	*	-	-	1	-	-	-	-	2	-	-	-	4	-	-	-	3	-	-	1		
Rock Forest	*	*	-	-	1	-	-	-	-	2	-	-	-	4	-	1	-	-	2	-	-		
Chatham	*	*	-	2	-	-	-	-	*	-	-	1	-	-	-	1	-	-	-	-	1		
Trois-Rivieres	*	*	-	-	1	-	-	-	-	2	-	-	-	4	-	-	1	-	-	1	-		
Rouyn-Noranda	*	-	3	-	1	-	-	-	-	2	2	-	-	-	-	-	1	-	2	-	-		
Dorval	*	*	-	-	1	-	-	-	*	-	-	1	-	-	-	1	-	-	2	-	-		

BIOTECH RESEARCH - PN4720

CITY OF RESIDENCE

	Q19. PAT. Q34. SIZE OF					Q5/6. LOCATION				Q8-Q12.				Q26. NETWORKING			
	OWNERSHIP ORGANIZATION					OF EXPERIENCE				AWARENESS							
	TOTAL	Pat. Own	Pat. Non-Own	Sm all	Med ium	La rge	Can ada Only	Can/ U.S.	Can/ Int.	Low	Med ium	High	Sec tor	1 Sec tor	2 Sec tor	3 Sec tor	
UNWEIGHTED SAMPLE	256	178	77	83	87	77	137	59	79	80	132	44	89	82	82		
WEIGHTED SAMPLE	256	178	77	83	87	77	137	59	79	80	132	44	89	82	82		
Montreal	10	12	6	7	13	9	10	12	9	6	11	14	13	9	9		
Vancouver	10	9	12	7	10	12	10	10	8	6	13	7	9	9	12		
Saskatoon	6	6	8	6	6	6	8	2	6	8	5	9	4	9	6		
Toronto	6	7	4	4	3	10	4	10	9	5	4	14	-	10	7		
Ste-Foy	5	4	6	4	2	5	5	7	3	9	2	7	4	7	2		
Edmonton	4	5	3	4	6	3	1	8	8	5	3	7	1	4	9		
Calgary	4	4	4	5	3	4	4	5	4	4	5	-	6	2	4		
Mississauga	4	3	5	6	3	3	6	2	3	6	3	2	7	2	2		
Ottawa	3	4	1	2	2	5	6	-	-	6	-	6	-	1	2	6	
Guelph	3	2	4	4	2	3	1	-	6	1	4	2	3	2	2		
Victoria	3	3	1	4	-	5	2	-	5	-	5	2	3	2	2		
Winnipeg	2	3	1	5	-	3	3	2	1	3	2	2	3	1	2		
Laval	2	2	3	1	3	1	1	3	3	3	2	2	3	1	1		
Fredericton	2	1	4	4	-	1	2	-	1	-	2	2	1	1	2		
London	2	2	-	1	1	3	1	2	4	-	3	-	1	1	2		
Kingston	2	2	1	2	2	-	1	-	3	-	2	5	-	4	1		
St. Johns	1	1	1	1	-	3	1	2	3	1	2	-	1	1	1		
North Vancouver	1	1	1	4	-	-	1	2	1	3	1	-	-	2	1		
Delta	1	1	3	-	2	1	1	3	-	-	1	5	2	-	1		
Burnaby	1	1	1	1	1	1	-	3	1	1	1	2	2	1	-		
Bedford	1	-	3	1	1	-	1	2	1	1	1	-	2	-	-		
Damouth	1	1	1	1	1	-	1	-	3	-	-	-	-	1	1		
St. Catharines	1	1	1	1	-	1	1	-	-	-	-	5	-	1	1		
Halifax	1	1	-	-	1	1	-	2	1	-	-	5	-	-	2		
Charlottetown	1	1	1	-	1	1	1	-	-	-	2	-	-	1	1		
Kentville	1	1	-	-	1	1	1	-	1	1	-	2	-	1	1		
Honby	1	1	1	1	1	-	1	-	-	1	1	-	1	1	-		
St.-Hyacinthe	1	1	-	-	1	1	-	3	-	1	1	-	1	-	1		
Windsor	1	1	-	1	1	-	1	-	1	-	2	-	1	1	-		
Waterloo	1	-	3	1	1	-	1	-	-	1	1	-	1	1	-		
Pointe-Claire	1	1	-	-	1	1	1	2	-	3	-	-	1	1	-		
Etobicoke	*	-	1	1	-	-	-	2	1	-	1	-	-	-	1		
St. Andrews	*	1	-	-	1	-	-	-	1	-	1	-	-	1	-		
Port Coquitlam	*	1	-	1	-	-	-	2	-	1	-	-	-	1	-		
Woodbridge	*	-	1	-	1	-	-	-	1	1	-	-	-	1	-		
Oakville	*	1	-	-	1	-	1	-	-	-	1	-	1	-	-		
Abbotsford	*	1	-	-	1	-	-	-	1	1	-	-	-	1	-		
Kelowna	*	1	-	-	1	-	1	-	-	1	-	-	-	1	-		
Bamfield	*	-	1	-	1	-	1	-	-	-	1	-	-	1	-		
Shelburne	*	-	1	-	1	-	-	2	1	1	-	-	-	-	1		
Lanzville	*	-	1	1	-	-	-	2	-	1	-	-	-	-	-		
Hampstead	*	1	-	1	-	-	1	-	-	1	-	-	1	-	-		
Minto	*	1	-	-	1	-	1	-	-	-	1	-	1	-	-		
Ridgeville	*	1	-	1	-	-	-	-	1	-	1	-	-	-	1		
Airdrie	*	1	-	-	1	-	1	-	-	1	-	-	1	-	-		
Saanichton	*	1	-	-	1	-	1	-	-	1	-	-	1	-	-		
Lawrencetown	*	-	1	-	-	1	-	2	1	1	-	-	-	-	1		
(continued)																	

(continued)

ENVIRONICS RESEARCH GROUP

BIOTECH RESEARCH - RW4720

CITY OF RESIDENCE

	Q19. PAT. OWNERSHIP			Q34. SIZE OF ORGANIZATION			Q5/6. LOCATION OF EXPERIENCE			Q8-Q12. AWARENESS			Q26. NETWORKING		
	Pat. Own	Pat. Non-Own	Pat. Sm	Med	La	Can	ada	Can/	Can/	Med	Low	ium	High	tor	tor
TOTAL	er	Own	all	ium	rge	Only	U.S.	Int.	Low	ium	High	tor	tor	tor	tor
UNWEIGHTED SAMPLE	256	178	77	83	87	77	137	59	79	80	132	44	89	82	82
WEIGHTED SAMPLE	256	178	77	83	87	77	137	59	79	80	132	44	89	82	82
Sumnerland	*	1	-	1	-	-	1	-	-	-	1	-	1	-	-
Regina	*	1	-	1	-	-	1	-	-	1	-	-	-	-	1
Scarborough	*	1	-	-	1	-	1	-	-	1	-	-	-	1	-
West Vancouver	*	1	-	1	-	-	-	-	1	1	-	-	-	-	1
Souris	*	1	-	1	-	-	-	2	1	1	-	-	-	-	1
Port Saskatchewan	*	1	-	-	-	1	1	-	-	-	-	2	-	1	-
Burlington	*	1	-	-	-	1	1	-	-	1	-	-	-	-	1
Concord	*	1	-	-	-	1	1	-	-	-	1	-	-	-	1
Richmond	*	1	-	-	1	-	-	-	1	-	1	-	-	1	-
Aurora	*	1	-	-	1	-	1	-	-	-	-	2	-	1	-
Charlesbourg	*	-	1	-	1	-	-	-	1	-	1	-	1	-	-
Quebec City	*	1	-	-	1	-	-	-	1	-	1	-	1	-	-
Sidney	*	-	-	-	1	-	-	-	-	1	-	-	-	-	-
Sillery	*	-	1	1	-	-	-	2	-	1	-	-	-	1	-
St.-Laurent	*	-	1	-	1	-	1	-	-	1	-	-	1	-	-
St. Romuald	*	1	-	-	1	-	1	-	-	1	-	-	1	-	-
Riviere-du-Loup	*	1	-	-	-	1	1	-	-	-	1	-	1	-	-
St.-Jean-sur-Richelieu	*	1	-	-	1	-	-	2	-	-	1	-	1	-	-
Granby	*	1	-	-	-	1	-	2	-	-	1	-	1	-	-
Mirabel	*	1	-	-	1	-	1	-	-	-	1	-	1	-	-
St.-Hubert	*	1	-	1	-	-	1	-	-	-	1	-	1	-	-
Longueuil	*	1	-	-	-	1	1	-	-	-	1	-	1	-	-
Napier	*	1	-	-	-	1	-	2	-	1	-	-	-	1	-
St.-Antoine-sur-Richelieu	*	-	1	1	-	-	1	-	-	1	-	-	1	-	-
Ste-Rosalie	*	-	1	-	-	1	1	-	-	-	1	-	-	1	-
Aldergrove	*	-	1	1	-	-	1	-	-	1	-	-	-	-	1
North York	*	-	1	1	-	-	1	-	-	-	1	-	-	-	1
Lachine	*	1	-	1	-	-	1	-	-	-	1	-	1	-	-
Sherbrooke	*	1	-	1	-	-	1	-	-	-	1	-	1	-	-
Tamscaming	*	1	-	1	-	-	1	-	-	1	-	-	1	-	-
Fleurimont	*	1	-	-	1	-	-	2	-	-	1	-	1	-	-
Rock Forest	*	-	1	-	1	-	1	-	-	-	1	-	-	-	1
Chatham	*	1	-	-	-	1	-	-	1	-	1	-	-	1	-
Trois-Rivieres	*	1	-	-	1	-	-	-	1	-	1	-	-	1	-
Rouyn-Noranda	*	-	1	1	-	-	1	-	-	-	-	2	1	-	-
Dorval	*	1	-	-	-	1	-	-	1	-	1	-	-	-	1

ENVIRONICS RESEARCH GROUP