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Inflection point
Canadian Life Sciences Industry Forecast 2011

BIOTECanada

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Contents

Introduction

PwC is pleased to present its fourth Canadian Life Sciences Industry Forecast, a survey conducted in collaboration with BIOTECanada. The online survey, conducted in August and September 2010, was completed by 100 respondents from corporate, academic, government and other organizations in the industry. The report is designed to understand the challenges and concerns of the Canadian life sciences industry, explore new trends and communicate reoccurring themes. The information gathered and contained within this report builds on findings from previous reports and provides an overview of current industry issues and trends. We trust that you will find the information valuable for augmenting the debate on these issues.

While years of scientific achievements are well known in the Canadian life sciences industry, the commercialization of the science is becoming more of a challenge as research moves east from a global perspective and raising capital from a Canadian perspective continues to be difficult.

The Canadian industry is at an inflection point. In these challenging economic times, Canadian companies continue to explore numerous options to raise desperately needed funds. They have shown great tenacity and perseverance in trying to build this vitally important sector of the Canadian economy. The challenge to sustain companies through the full cycle of commercialization remains a key priority for public policy leaders and the Canadian industry as we look toward long-term financial growth for Canada from the life sciences sector.

Peter Brenders
President and CEO
BIOTECanada

Gord Jans
National Leader, Pharmaceuticals and Life Sciences
PwC

Key findings

There are a number of key findings from the forecast that can be used by industry and government to shape the future for the Canadian life sciences industry.

1. ***Outlook & challenges***
   Raising capital continues to be the biggest challenge facing the industry. Business respondents to our survey are seeking in excess of $1 billion of capital. There is an increasing expectation governments need to help stimulate capital formation.

2. ***Funding***
   Almost half of survey respondents currently seeking funding are looking to raise amounts greater than $10 million. Respondents are looking to strategic partners as the primary source of this funding.

3. ***Government support***
   Respondents believe the government has significant influence in their success and in the success of the industry, in the form of funding and other incentives. The most important actions the government can take are creating favourable tax and risk capital incentives.

4. ***3 Ps – Products, profits & places***
   Amongst respondents not earning revenues, 25% believe it will take over five years for their companies to earn revenue. For respondents who do not currently have products for sale, 73% indicated that they are not expecting to have products for sale within the next two years.

5. ***Liquidity – Mergers, acquisitions & strategic alliances***
   Reflective of the current economic conditions, one of the most likely scenarios for a successful Canadian life sciences business is being acquired or participating in a merger. Valuations continue to pose the biggest challenge to deal activity.

6. ***Outsourcing***
   Most respondents do not outsource and do not consider themselves to be a virtual organization. The key advantages of a virtual business model and outsourcing are primarily financial considerations.

A total of 100 respondents from corporate, academic, government and other organizations in the industry contributed to this year's Canadian Life Sciences Industry survey. The respondents represent a total of approximately 3,000 employees across Canada and have revenues of approximately $2 billion.

Survey respondent profile

All regions of Canada were represented in this year's survey with 39% of companies' head offices based in Ontario, 28% in Western Canada (Manitoba, Saskatchewan, Alberta and British Columbia), 21% in Quebec, 7% in Atlantic Canada, and 5% from other international locations.

Eighty-one percent of the life sciences organizations surveyed have less than 100 full-time employees and 27% of respondents surveyed state that they have five or fewer full-time employees.

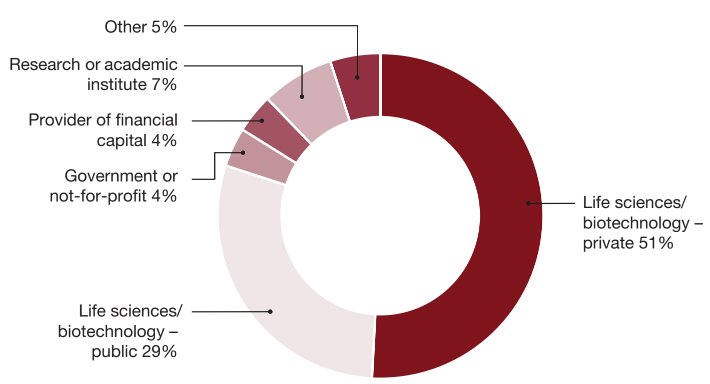
Fifty-four percent of survey respondents consisted of Chief Executive Officers or Presidents of the organization, 6% were Chief Financial Officers, and the remainder included various positions such as Chief Operating Officer, Business Development, Regulatory Affairs, etc.

Of the companies which disclosed whether or not they generated revenues, more than 60% of respondents reported that they currently generate revenues. Fifty-two percent of revenue generating companies reported revenues of less than $5 million annually.

Companies that were privately held accounted for more than one-half of all respondents, while public companies represented approximately one-third. The remainder of respondents consisted of government/not-for-profit organizations, providers of financing to life sciences companies as well as research institutes or academia (Figure 1).

The respondents surveyed cover a breadth of products and services with the largest area of focus being Therapeutics (24%), followed by Branded Pharmaceuticals (14%) and Service and tool suppliers (12%).

Figure 1: Respondent business



Outlook & challenges

Raising capital or securing strategic partnerships and attracting highly skilled employees are critical to the short- and long-term outlook for the industry.

The Canadian life sciences sector is at an inflection point. The sector continues to have significant potential for creating economic growth in Canada and that growth is vitally important in assisting our economic prosperity in the long term. The fundamentals remain strong: a growing and ageing global population; increasing demand for sustainable food sources; an increasing ability to pay for new medicines particularly in emerging markets; and increasing scientific knowledge about disease and populations. However, business respondents to our survey are seeking in excess of $1 billion of capital and there is an increasing expectation governments need to help stimulate capital formation. The question is whether the Canadian industry will emerge from the recent economic turmoil as a smaller but stronger sector and strengthen over time as commercial success continues to be realized.

The life sciences industry as a whole is one that is heavily dependent on cash to support research and commercialization of products and while there has been some rebound in funding in 2010, overall funding levels remain below historic norms. So it is not surprising that industry confidence is heavily impacted by current fund-raising conditions. Many in fact had to make numerous headcount reductions, sell off assets, and take other actions to preserve cash. Compared to global pharmaceutical CEOs who participated in PwC's 13th Annual Global CEO Survey[1], respondents to our survey were much less confident than their global counterparts.

Short-term confidence has improved slightly from our 2009 report: 63% of respondents are somewhat to not at all confident in the short-term outlook for the Canadian industry versus 68% in 2009. When asked about the industry's long-term outlook, 57% of respondents indicate they are somewhat to not at all confident versus 43% who are moderately to extremely confident. The data indicates there is a subtle difference in long-term confidence in that only 16% were not at all confident

1 PricewaterhouseCoopers LLP. (2010). 13th Annual Global CEO Survey. www.pwc.com/gx/en/ceo-survey/download.jhtml.

while 41% were somewhat confident (versus 31% and 32% respectively for short-term confidence). The primary reason for this lack of confidence can likely be attributed to the remains of the global recession. Emerging from the recent economic downturn, companies have aligned their priorities towards securing funding, finding strategic partners and building teams of talent to help bring them to their next development milestones.

As seen in Figure 2, the top three most challenging factors for respondents' organizations over the next two years include raising capital (60%, compared to 54% in 2009), attracting a licensing or strategic partner (43%, compared to 22% in 2009) and attracting and retaining key employees (39%, compared to 25% in 2009). The renewed interest in attracting and retaining key employees indicates that respondents are placing more importance on key employees during tough economic times.

The biggest challenge for the Canadian life sciences industry continues to be the ability to access capital (84% of respondents as per Figure 3), which has consistently been the top choice in all PwC Canadian Life Science Forecast reports to date. Other challenges include access to strategic partners (46%) and availability of expertise within Canada (33%) which has become a new top challenge in 2011. Synchronization of government initiatives grew significantly since 2009 indicating that Canadian stakeholders have reaffirmed the interest expressed in our 2007 report for a more coordinated government response to helping Canada become a stronger global competitor.

Figure 2: Which of the following issues do you feel will be the most challenging over the next two years for your organization? (respondents were asked to select top 3 choices)

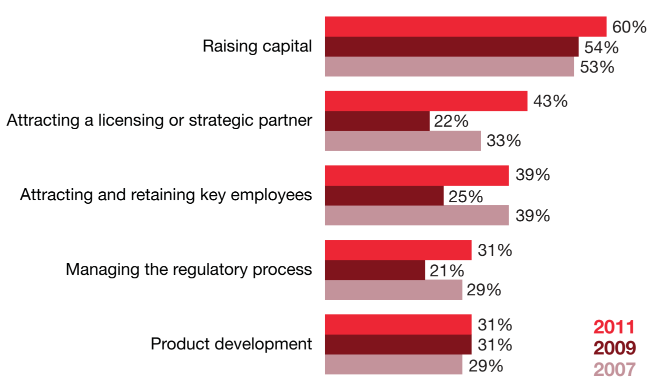


Figure 3: What do you believe are the key challenges for the Canadian life sciences industry to become a stronger global competitor? (respondents were asked to select top 3 choices)

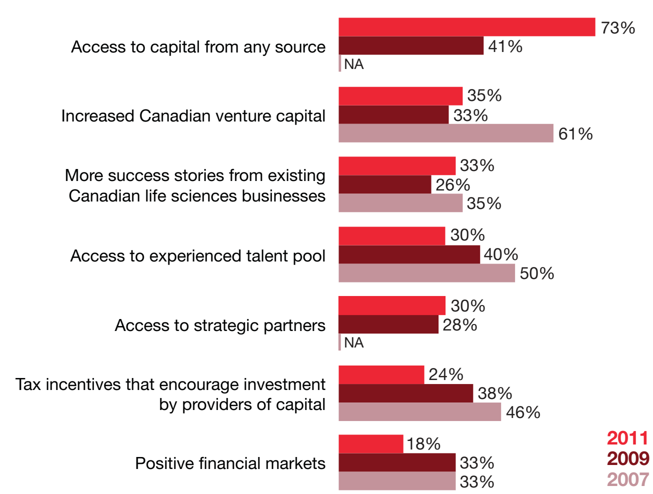
Finally, as seen in Figure 4, the top-rated critical success factors for the industry continue to be access to capital, access to talent and strategic partners, along with increased Canadian venture capital and success stories from existing businesses. Access to an experienced talent pool is no longer among the top three most important success factors, decreasing significantly year over year. In the current year access to capital increased significantly while more success stories became a top critical success factor. Success stories can have a powerful impact on both investors and companies and the renewed importance of success likely reflects in part the fact that relatively few such stories have emerged over the past two years.

For a sample of recent Canadian successes, refer to the data on pages 8 to 9 and page 27.

"The more you have successes and you communicate them, the more you can attract capital. We need to communicate and celebrate success, partnerships, joint ventures and collaborations."

2011 Canadian Life Sciences Industry Forecast respondent

Figure 4: Which of the following are critical success factors for the Canadian life sciences industry now? (respondents were asked to select top 3 choices)



Recent notable deals involving Canadian companies


ISRAEL
Strategic alliance
iCo Therapeutics & Immune Pharmaceuticals: $33M
CHINA
Strategic alliance
ProMetic Life Sciences & Allist Pharmaceuticals: $59M
JAPAN
Strategic alliance
Protox Therapeutics & Kissei Pharmaceutical: $75M
SOUTH AFRICA
Strategic investment
Paladin & Pharmaplan
AUSTRALIA
Merger
YM Biosciences & Cytopia

Funding

Is that a light we see at the end of the tunnel? Access to capital continues to be a significant challenge for the industry.

The importance of capital is strongly supported by our data in Figure 2 (most important challenges for your organization), Figure 3 (key challenges for the industry to become a stronger global competitor) and Figure 4 (top critical success factors). The survey results reveal that 80% of respondents cited unfavourable industry and market conditions as the top challenge to successfully raising capital for Canadian life sciences businesses (Figure 5). Accessing capital has always presented a challenge as the industry competes for risk capital with other sectors; however, there appears to be some reason for hope for innovative companies as larger biotech and pharmaceutical companies look to fill their pipelines, US venture capital investments in the sector picks up and the US IPO market opens up (albeit slowly). Canada continues to lag behind other nations who are in part sourcing their economic recovery from innovative technologies.

Fifty-four percent of business respondents are currently seeking funding with an additional 33% seeking funding within the next two years. The number of business respondents seeking over $10 million in funding has increased to 47% compared to 39% in 2009 (Figure 6), while less than $5 million continues to be a popular choice for respondents its popularity has declined. In our view, the increase in expected funding levels is due to a combination of depleted cash reserves and a weak capital-raising environment, combined with a realization by companies that raising higher levels of funds will be needed to support long-term growth objectives.

Using an average for each funding category (e.g. $7.5 million for the $5 to $10 million category and $100 million for the $100 million plus category) the amount of capital sought by respondents involved in private and public life science businesses exceeds $1 billion. Clearly there is not enough capital

Figure 5: What do you perceive to be the top three challenges to successfully raising capital for a Canadian life sciences business? (respondents were asked to select top 3 choices)

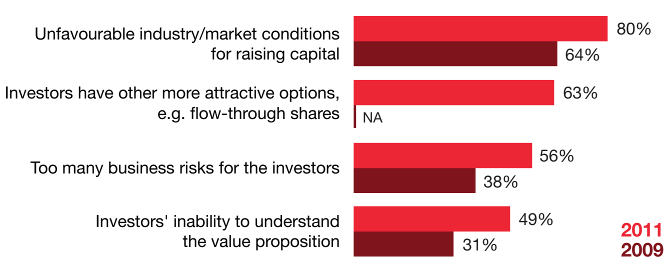
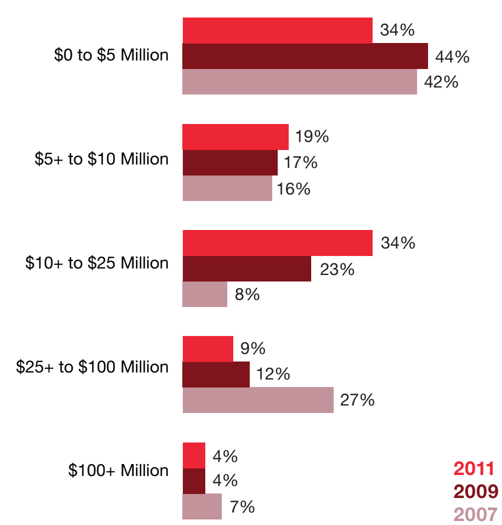


Figure 6: Approximately how much funding will you be seeking in your next round of funding?



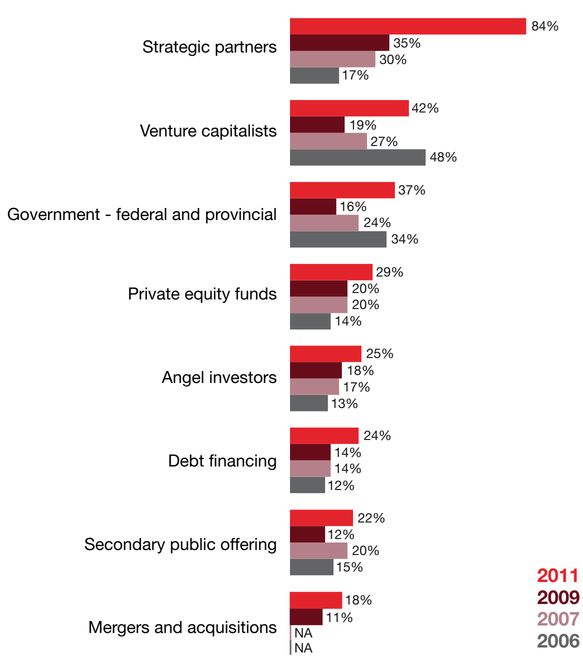
available to meet current demand, especially since our respondents represent less than a third of life sciences businesses in Canada.

When we asked the survey respondents the top three sources where they believe this money will come from, a significant majority expects funding to come from strategic partners (Figure 7). Other major sources listed include venture capitalists, government, private equity funds, and angel investors.

Figure 7 also reveals that the number of respondents expecting funding from venture capitalists has rebounded from a low of 19% in 2009 to 42% in 2010. Venture capital funding has always been limited in Canada. The problem has been aggravated by industry consolidation, the shortage of new venture capital specifically raised for the sector and a high demand for follow-on financings. It is not surprising, therefore, that the number of venture capital financings involving new investees are few and far between. According to Thomson Reuters[2], 2009 saw the lowest level of venture capital funding in 13 years with $1 billion of venture capital funds invested in Canada, compared to $1.3 billion in 2008—a 23% decline. Twenty-one percent of the total of these amounts went to the life sciences sector in 2009, compared to 27 % in 2008. However for the first 9 months of 2010, the CVCA and Thomson Reuters[3] reported total dollars invested at $905 million, up 28% from $709 million invested in the comparative 2009 period. Twenty-six percent of the total of these amounts went to the life sciences sector in 2010.

In the US, life sciences venture capital investment shows more promise as investment levels remain on pace in fiscal 2010 to surpass the 2009 level according to the MoneyTree Report[4]. Life sciences funding for 2010 YTD totalled $5.1 billion and accounted for 619 deals compared to $4.3 billion invested in 541 deals in the first three quarters of 2009—an increase of 17%. The average deal size in 2010 of $8.2 million was comparable to the first three quarters of 2009 at $8 million.

Figure 7: From what sources do you expect to get this funding? (respondents were asked to select top 3 choices)



2 Thomson Reuters. (2009). Canada's Venture Capital Industry.
3 Thomson Reuters. (2010). Canada's Venture Capital Industry in Q3, 2010.
4 PricewaterhouseCoopers LLP & The National Venture Capital Association. (2010). The Moneytree Report, Q3. Based on data from Thomson Reuters.

Funding in all of 2009 totalled $6.2 billion in 749 deals compared to a full year comparative of $7.9 billion in 885 deals in 2008. The life sciences sector, which is comprised of the biotechnology and medical device industries, continued to capture the largest share of funding of all industries. The Q3 MoneyTree Report[4] reported that the number of first time deals in the sector increased 44% over the prior year which suggests that venture investors are showing increased confidence in the industry's innovators.

The MoneyTree report cites an exit poll by Thomson Reuters and the NVCA which concludes an active merger and acquisitions (M&A) market and a level of initial public offerings are consistent with a slow but steady economic recovery.

"The demand for products is increasing but without capital—we will not be a player in the future."

2011 Canadian Life Sciences Industry Forecast respondent

4 PricewaterhouseCoopers LLP & The National Venture Capital Association. (2010). The Moneytree Report, Q3. Based on data from Thomson Reuters.

Government support

"We need to continue to create a favourable environment through R&D tax credits or any type of non-dilutive cash contribution"

2011 Canadian Life Sciences Industry Forecast respondent

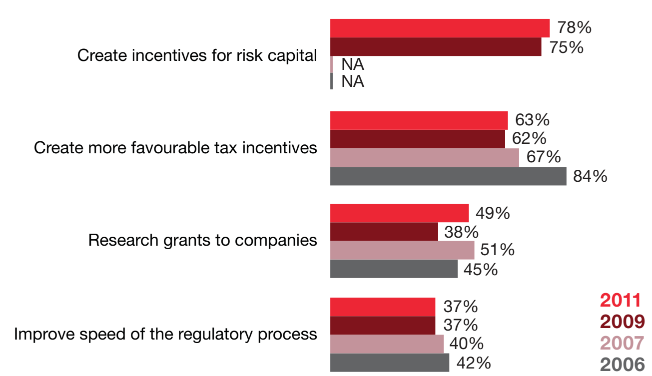
Will government step up to meet expectations? It is evident that survey respondents consistently view both the provincial and federal governments as having significant influence in their success and in the success of the industry, in the form of funding and other incentives. Consistent with previous years, the belief is that although government is not the most sought-after source of funding (strategic partners are), its most important role is to create incentives for risk capital.

Creating incentives for risk capital remains the top action (78% of respondents) that it can take to improve Canada's ability to compete globally in the life sciences industry (Figure 8). This is followed by the creation of more favourable tax incentives (63%) and research grants to companies (49%). These results speak to the ongoing need for funding, and we see this as being more pronounced in recent years as the economy weakened and access to capital declined. One example of an incentive aligned with our respondent views is the recent BIOTECanada initiative to lobby for inclusion of life sciences in the flow-through share tax system. PwC was asked to model the potential economic benefits relating to the BIOTECanada flow-through shares proposal. Based on our analysis the median impact on Canada's direct, indirect and induced economic output was estimated at approximately $1 billion including over 7,600 full-time equivalent jobs. It is also interesting to note when we asked respondents what they perceived as the top three challenges to successfully raising capital for a Canadian life sciences business, the second most common response provided was that investors have more attractive options available to them such as flow-through shares.

When asked about the role of government in the success of their own organizations, the responses were still reflective of their reliance on government as a source of funding: 72% of the respondents again chose R&D and other tax incentives as the most important role for government; nearly two-thirds (66% in 2011, compared to 56% in 2009) stated that grants or other funding contribute to the success of their organizations, and just over a third indicated employment subsidies—a significant increase from 2009. Respondents also state that effective lobbying to government is the top rated action industry can take to improve Canada's ability to compete globally, and as seen in Figure 7, government funding expectations have risen to the highest level of any of our reports. These results indicate that in the last two years, as macroeconomic concerns continue to have a major impact on an already cash-strapped industry, life sciences companies are increasingly looking to government for assistance.

We also note a gradual trend towards desiring more focused government support for certain sub-sectors. Only 25% of respondents were against this concept versus 33% in 2009 and approximately 44% in both 2007 and 2006. However, there has been a shift to the undecided category with 32% indicating they are not sure if such support is warranted while 43% do support this concept. Whether and how the government responds to this need remains to be seen.

Figure 8: What do you believe are the most important actions that government can take to improve Canada's ability to compete globally in the life sciences industry? (respondents were asked to select top 3 choices)



"Government can help and is trying to help. They need to simplify the way companies can access capital and the level of capital needs to be meaningful enough that you can get companies to a milestone."

2011 Canadian Life Sciences Industry Forecast respondent

3 Ps – Products, profits & places

Canadian companies continue to build their operations and perform the majority of their R&D here. Nearly two-thirds of companies not currently selling products expect that it will take more than two years to bring a product to market. And nearly 25% of non-revenue earning companies believe it will take over 5 years for their companies to earn revenue (similar to 2009 and 2007).

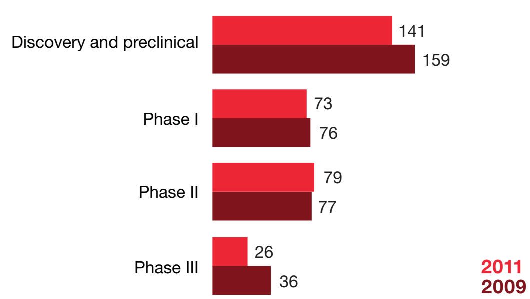
Only one-third of companies are currently profitable with half of those companies generating profits of $5 million or less. Consistent with our 2009 survey results for companies that do not currently earn profits, more than 70% believe it will take over three years to generate a profit, with more than 30% responding that it will take over five years. These results have remained relatively consistent over the past four years.

Further evidence of the long timeline to revenues and profits comes from the Canadian Life Sciences Database which indicates that 92% of current products are in the preclinical to phase II stage of development (Figure 9).

The expected time delay until revenues and profits occur is likely the primary reason survey respondents identified access to capital as one of the top key challenges for the Canadian life sciences industry.

Seventy percent of survey respondents have no plans to relocate some or all of their business outside of Canada in the next two years; this represents a decline from 80% in our 2009 survey.

Figure 9: Number of biotechnology therapeutic products in Canada's pipeline[5]



Data as of December 2010

5 Canadian Life Sciences Database. www.canadianlifesciences.com

Of the 30% of respondents planning to relocate, nearly 66% plan to head south to the US compared to 85% in 2009. Primarily, they plan to relocate their sales department (24%), R&D (17%) and head office (14%). The number of survey respondents indicating that they planned to relocate their entire operations increased to 14% from 4% in our 2009 survey. Reasons for planning to move appear to be access to capital, a larger customer market, and a larger talent pool (Figure 10) which is consistent with prior findings. In the current year better incentives from other governments increased significantly as a reason quoted for relocation.

When considering where companies will spend their capital, 74% ranked R&D in their top three uses of funds (Figure 11) and 78% intend to perform some or all of their R&D activities in Canada over the next two years (62% in 2009, 75% in 2007 and 58% in 2006).

Canada (76%) and the US (38%) appear to be where most of the survey respondents will perform their R&D activities (Figure 12). Asia, a major centre of outsourced activities, was not indicated as a major centre for their R&D, implying that respondents intend on keeping R&D close to home, and in-house. In fact, a large majority of respondents (87%) state that more than half their R&D is performed at home and 67% say they plan on increasing their R&D spend in the next year despite the recent recession. An increase in the amount of refundable R&D tax credit expenditure limits from $2 million to $3 million in recent years could be a contributing factor to why respondents intend to continue R&D in Canada particularly since 51% of respondents represent private companies.

Figure 10: What are your main reasons for relocating your business? (respondents were asked to select top 3 choices)

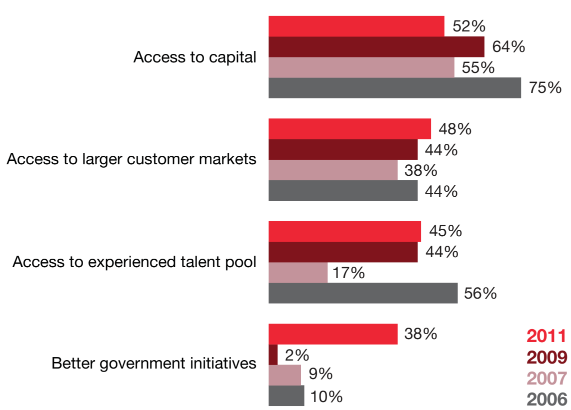
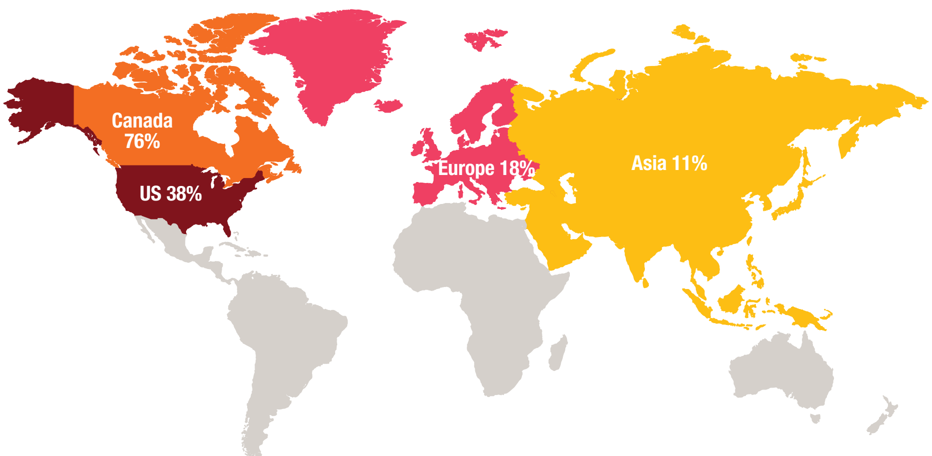
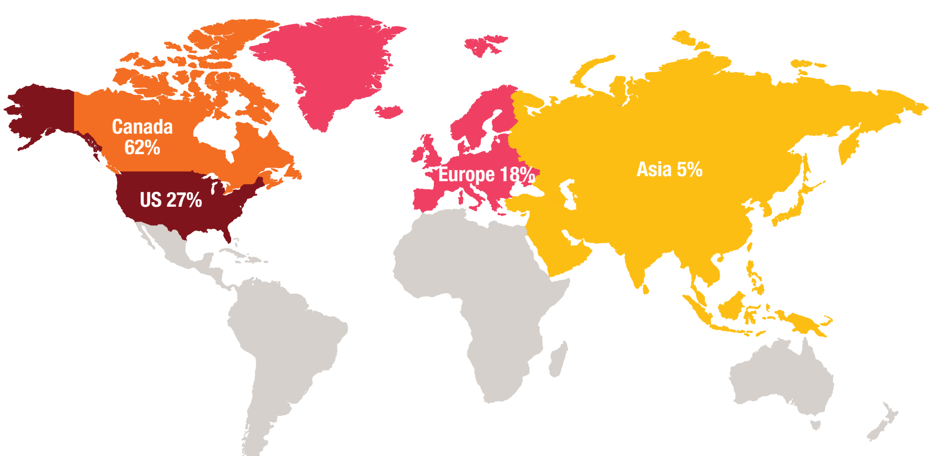


Figure 11: What is the most likely use of funds from your round of funding? (respondents were asked to select top 3 choices)

Figure 12: Where will you perform most of your R&D activities in the next 2 years? (respondents were asked to select all applicable)



2011



2009

"In order to be successful you need science, commercialization, capital and experienced people. If you don't have the right ingredients, you will not be able to bake the cake."

2011 Canadian Life Sciences Industry Forecast respondent

Liquidity – Mergers, acquisitions & strategic alliances

90% of respondents listed being acquired or participating in a merger as one of the top three most likely scenarios for a successful Canadian life sciences business.

In addition, 70% of respondents believe that licensing or selling IP or co-development/partnerships is also a likely option (Figure 13). We believe that these findings are reflective of current economic conditions, as access to capital is limited and companies will likely seek to leverage existing resources in a variety of ways. From a long-term perspective, we continue to be concerned with the relatively low ranking of "Build or maintain a sustainable business" in all of our PwC Canadian Life Sciences Forecast reports to date. The survey results continue to suggest that the Canadian industry may never achieve the critical mass and scale required to effectively compete on the global stage unless we quickly address the need for large levels of investment and global partners. This requires government and industry working collaboratively to create the enabling environment to retain operations in Canada.

Furthermore, respondents believe that strategic alliances will play a more significant role in the growth of their business than M&A (59% versus 24%). Seventy-one percent of respondents indicate that valuation issues are the main barrier to M&A in the industry (Figure 14). Tight credit markets have had a negative effect on valuations. Valuation issues were also the most highly rated choice in 2009, 2007 and 2006. Other significant barriers to M&A include conflicting management personalities, funding and lack of interest from large firms.

According to PwC's Corporate Finance group, the North American pharmaceuticals and life sciences sector continues to shift in response to the increased complexities in global health, demands from public healthcare reform, patent expiries, and technological advances, as evidenced by a consistent level of M&A activity year over year.

Figure 13: What do you consider to be the most likely scenario for the typical successful Canadian life sciences business? (respondents were asked to select top 3 choices)

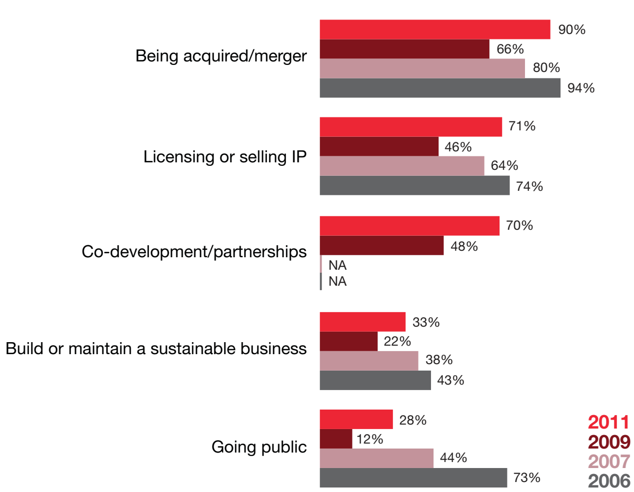
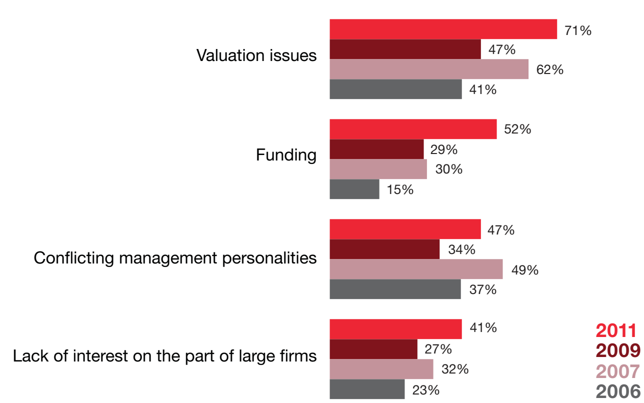


Figure 14: What do you see as the most significant barriers to mergers and acquisitions in the life sciences industry? (respondents were asked to select top 3 choices)



“Collaboration is key.”

2011 Canadian Life Sciences Industry Forecast respondent

The total number of announced deals in North America in Q3 2010 was 63 compared to 70 in Q2 and 53 in Q1 bringing the number of announced deals YTD to 186. Disclosed deal value for the third quarter was $30 billion versus $25 billion in Q2 2010 and $43 billion in Q1, including one deal worth $28 billion, bringing the YTD total deal value to $98 billion. Canada continues to represent approximately 10% of the total deals by volume.

Small, innovative companies looking for an exit will continue to benefit from large pharmaceutical and biotechnology companies that need to fill pipelines. Many of these large companies have accumulated substantial cash reserves to buffer them during the recession. If the economy continues to improve, their position could bode well for young, cash-starved life sciences innovators.

“Large companies with very little in the R&D pipeline are turning to collaborations, M&A, and equity investment to fuel innovation,” Tracy Lefteroff, Global Managing Partner of the Venture Capital practice at PwC said. “It’s not coming from inside. This is the sweet spot for young biotechnology and medical device companies.” However, as noted in Figure 14, one of the key challenges for Canadian companies is to attract interest from these larger global players suggesting the need for new approaches and support mechanisms in Canada.

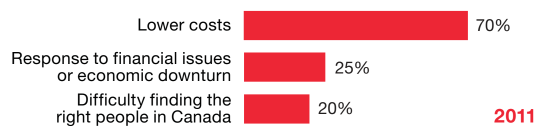
Most respondents do not outsource and do not consider themselves to be a virtual organization.

Outsourcing

Since outsourcing and use of a virtual business model are frequently topics of debate within the industry, for the first time we dedicated a few survey questions to explore these issues in more detail.

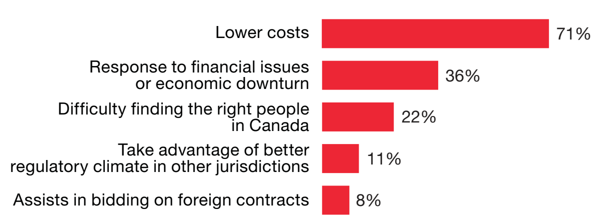
Our overall results indicate a majority of respondents (58%) do not currently outsource any core functions within their business. Digging further, we note the tendency to outsource within organizations with less than 20 employees is actually not any different than the tendency for larger organizations (42% versus 41%) so outsourcing has become ubiquitous amongst all sizes of organizations. For those that do outsource, the overwhelming advantage relates to financial considerations (Figure 15). Specifically lower costs and responding to the economic downturn are the top two reasons for outsourcing which is not surprising given the continuing difficulty in raising capital for many organizations. The function most likely to be outsourced is core research and product development operations (50%). However, it appears unlikely that outsourced R&D functions will be heading to lower cost centres outside North America since a significant majority of organizations intend to conduct most of their R&D activities in the next two years in Canada and to a lesser extent in the US (Figure 12). Other functions likely to be outsourced include administrative functions (33%) and management functions (14%).

Figure 15: What are the key advantages to outsourcing for you? (respondents were asked to select all applicable)



Similarly, our overall results indicate the majority of respondents (59%) do not consider themselves to be a virtual organization. Not surprisingly, companies with less than 20 employees consider themselves to be more virtual than larger organizations (56% versus 20%). For those that are not currently virtual organizations, our results indicate almost all (93%) are not seriously considering a change to a virtual model. This is an encouraging sign since, given the decline in the number of companies and funding levels over the last two years, a significant shift to virtualization would likely have presented a further challenge for Canada's aspirations to become a stronger global competitor in life sciences. The key advantages of a virtual business model are similar to those for outsourcing: primarily financial considerations (Figure 16).

Figure 16: What are the key advantages of the virtual business model for you? (respondents were asked to select all applicable)

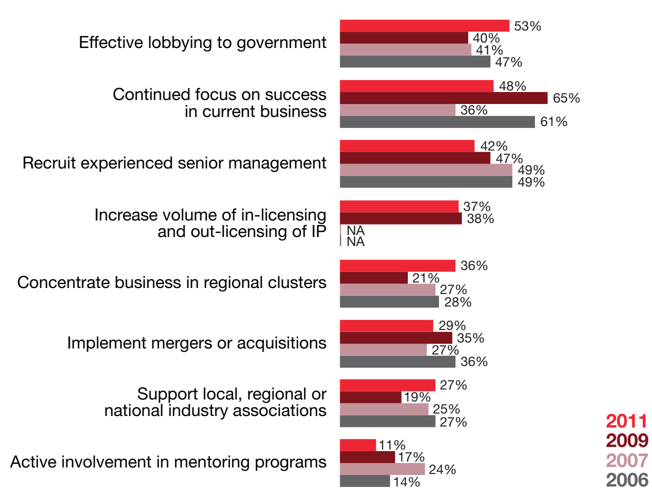


Where do we go from here?

As noted in our recent publication Biotech Reinvented[6], the global life sciences industry is undergoing significant challenges and changes. In particular, the business model relied on by life sciences companies for the past 30 years is breaking down. Raising risk capital has become increasingly difficult; the life sciences industry has not reduced the inherent risk in drug discovery and development; and the growing shift in the research base to Asia could significantly alter the economic landscape within the industry in the near future. Meanwhile the need for the industry to feed the growing demands for better healthcare, improve resource management, provide agricultural innovation, manage animal health and develop new manufacturing and industrial practices continues to rise.

According to our respondents, part of the answer is shown in Figure 17. Their view of the most important actions industry can take to improve Canada's ability to compete globally is effective lobbying to government followed closely by continued focus on success in their current business. The increase in importance of government lobbying is interesting although it has been a top three choice each year we have conducted our survey. Also interesting is the increase in the importance of concentrating businesses in regional clusters and the slow but steady decline over time of the importance of recruiting experienced senior management. While each of the actions identified in Figure 17 are important in their own right, we submit these are necessary but not sufficient conditions for future success.

Figure 17: What do you believe are the most important actions that industry can take to improve Canada's ability to compete globally in the life sciences industry? (Respondents were asked to select top 3 choices)



6 PricewaterhouseCoopers LLP. (2010). Biotech Reinvented; Where Do You Go From Here? http://www.pwc.com/gx/en/pharma-life-sciences/pdf/biotech-reinvented.pdf

"Success really will be measured by taking innovation and commercializing it."

2011 Canadian Life Sciences Industry Forecast respondent

In our view, part of the pathway to success lies in changing the business model to a more collaborative approach as noted in our Biotech Reinvented paper. In discussing the need for a new business model in the life sciences industry in this paper, we note the industry must become more efficient and one way to achieve efficiency is to increase collaboration and partnerships, not just in the R&D process but also in commercialization and the supply chain. Part of the answer also lies in new ways to incentivise risk capital in Canada. Whether this is implemented by an extension of the flow-through share rules or enhanced R&D tax credits or low tax rates for special economic zones or tax incentives for venture capital investing is less important than taking action in the near term. Implementation of one or more of these incentives should include explicit transparent performance measures to hold entrepreneurs and managers accountable for receiving such incentives. Part of the answer lies in concentrating our limited resources more effectively to support commercialization efforts to better compete against initiatives in other countries designed to build what Canada has already established with its bio-economy.

Some $80 billion of our national GDP is generated by the development and use of biotech based innovation[7]. For a nation as rich in knowledge and resources, Canada holds a unique opportunity to grow the value of its bio-economy into a key driver of its economic growth. Alignment of public policy into a fully enabling ecosystem supporting the full life cycle of development from discovery into the marketplace is critical to our global competitiveness. Despite the severe economic reality of the past two years, the Canadian life sciences industry remains focussed on its long-term objectives of bringing life improving products to market.

From mentoring young entrepreneurs to building consensus on industry solutions, all industry stakeholders together with our governments have a role to play in building our sector.

7 Journal of Industrial Biotechnology (2008, December). Measuring the biobased economy: A Canadian perspective.

Recent key commercial events

Cardiome – Brinavess EU launch	Cardiome Pharma's intravenous formulation of Brinavess™ received marketing approval in the European Union, Iceland and Norway for the rapid conversion of recent onset atrial fibrillation to sinus rhythm in adults.
Labopharm – Oleptro US launch	Labopharm received FDA approval for Oleptro™ (trazodone hydrochloride) Extended Release Tablets, a novel once-daily formulation of the antidepressant trazodone, for the treatment of major depressive disorder in adults.
Nuvo Research – Pennsaid US uptake	Nuvo Research will commercialize and distribute its landmark drug, Pennsaid™, in the U.S. through Covidien. Pennsaid™ is a non-steroidal anti-inflammatory drug indicated for the treatment of the signs and symptoms of osteoarthritis of the knee. Nuvo's U.S. licensee, Covidien will commence U.S. commercialization activities for Pennsaid™.
Theratechnologies – Egrifta US approval and launch	Theratechnologies has received FDA approval for Egrifta™ as the first and only treatment indicated to reduce excess abdominal fat in HIV-infected patients with lipodystrophy (abdominal lipohypertrophy). Egrifta™ will be exclusively commercialized in the U.S. by EMD Serono.

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Interviewees

We would like to thank all of the survey respondents for completing the survey and sharing your point of view.

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Elie Farah, President and CFO, Transition Therapeutics Inc.
Steve West, CEO, Nordion Inc.
Thomas Reeves, President and CEO, Interface Biologics Inc.
Thomas Wellner, President and CEO, Therapure Biopharma Inc.
Benoit Gravel, Vice-President, Field & Operations and Canada Consumer Healthcare, Sanofi Aventis
Cédric Bisson, Managing Partner, iNovia Capital
John Meekison, CFO, iCo Therapeutics Inc.

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About BIOTECanada

BIOTECanada is dedicated to the sustainable commercial development of biotechnology innovation in Canada. It is the national industry-funded association with over 250 member companies representing the broad spectrum of biotech constituents including emerging and established firms in the health, industrial, and agricultural sectors, as well as academic and research institutions and other related organizations.

BIOTECanada is the national non-profit association dedicated to building the bio-based economy in Canada. From cleaner energy to sustainable agriculture; from greener manufacturing to life-saving health therapies, Canadian biotech firms are discovering ways to revolutionize the economy and improve our lives, everyday.

We are the voice of Canadian biotechnology to governments, investors, stakeholders, and the public.

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