



The experience quotient

How to ensure new graduates are adequately prepared to work in Canada's bio-economy



Building skills for Canada's bio-economy



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BioTalent Canada helps Canada's bio-economy industry thrive globally. As a non-profit national organization of innovators leading our bio-economy, BioTalent Canada anticipates needs and creates new opportunities, delivering human resources tools, information and skills development to ensure the industry has access to job-ready people.

With a direct link to a network of leaders in Canada's bio-economy, BioTalent Canada is the industry's trusted and comprehensive source for human resource information and skills development. BioTalent Canada's research, reports, courses, employment bank and programs promote careers, assist companies with human resource issues, and encourage continuing education within the industry. BioTalent Canada is a Canadian sector council—one of many partnership organizations created to address skills-development issues in key sectors of the economy.

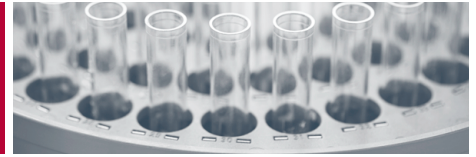
Sector councils work as a uniting element to engage business, workers, educators, professional associations and government in a strategic alliance that is focused on determining the specific skills and human resource needs that will enable the sector to thrive. Sector councils provide an industry-specific focus that highlights the technological advancements, human resource planning, training opportunities and industry forecasting, enabling businesses to better prepare for current and future developments.

BioTalent Canada's Mandate

BioTalent Canada was created in 1997:

- To help Canadian companies and academic institutions develop the highly skilled staff necessary for commercial success in biotechnology;
- To facilitate industry involvement in skills training and knowledge upgrading for employees;
- To help the Canadian biotechnology sector manage its workforce strategically with human resource tools and HR intelligence services; and
- To facilitate the entry of new workers into biotechnology by communicating job opportunities to a broad audience.

How can we 'teach' experience?



Every year, thousands of talented graduates emerge from post-secondary programs that are related directly to the bio-economy—in disciplines such as chemistry, biology, agriculture and human health. Too often, however, these new grads lack the practical skills and professional maturity to step straight into jobs with Canadian biotechnology companies.

Some 75 percent of Canada's biotechnology firms are small or medium-sized enterprises (SMEs). Few have the time or resources to provide extensive or ongoing training and development. Yet they need skilled people to keep pace with growth and seize upon emerging opportunities. And the fact is the workplace is the best environment for skills development.

A collective concern

To ensure the country's competitiveness in the global bio-economy, the human resources challenge must be solved. What's needed is a fair and effective mechanism to help students and graduates acquire the real-world skills demanded by the modern biotechnology workplace—so that when they go knocking on companies' doors, they're truly ready to get to work.

"Prior to my employment, I had limited experience in the pharmaceutical field. . . . When I started working as a clinical research associate I strengthened my knowledge and acquired actual experience. My skill advancement is evident in the translation of theoretical knowledge into practical experience."

Vanja Drobic, Medicure Inc.

Fostering the professional development of Canada's graduates ultimately benefits everyone. A January 2008 article in The Ottawa Citizen cited Statistics Canada findings that:

"...scientists and engineers contribute to more job growth than fellow grads in cultural fields."

Communities prosper where science and innovation flourish.

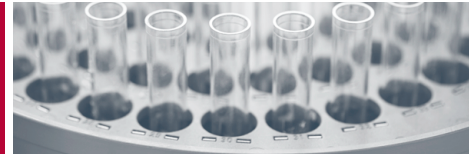
"Only 10 percent of our hiring would be of fresh graduates rather than [chemists] with experience. We find it very costly to employ fresh graduates due to their lack of experience and their maturity level. There is a lot of training and frustration involved."

Impopharma

Why biotechnology matters

As a developed nation with great capacity for innovation and research—and deep roots in agriculture and resource-related industries—Canada has emerged as an early biotechnology leader. It must work actively to maintain and strengthen that leadership. Critical to its success is having access to a pool of skilled and qualified human resources. Yet in many regions of the country demand for talent outstrips availability. Taking steps to ensure the workplace readiness of post-secondary graduates is important to filling this gap.

A model for success





The federal government's Career Focus Program, now in its ninth year, has been enormously successful at creating on-the-job skills development opportunities for recent graduates in a wide range of sectors, biotechnology among them.

The biotechnology component of the Career Focus Program is administered by BioTalent Canada. It provides salary subsidies to employers—to a maximum of \$10,000—for contracts of up to 12 months.

Employers surveyed by BioTalent Canada have indicated strongly that the subsidy was important to their staffing decisions. Some would not otherwise have been able to bring on the talent they needed; some would have had to make compromises in order to satisfy their requirements.



The program has in fact helped employers meet staffing needs beyond the short term:

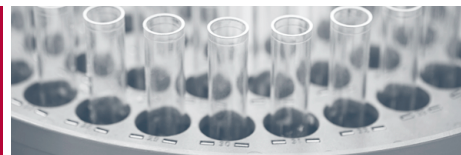
- 
 83% of graduates who completed the Career Focus Program in 2007 were hired by their host company at the end of the initial contract, and
- 
 100% of graduates who completed the program found employment.

Graduate student participation in the Career Focus program by province/territory - 2005 - 2008

| BC | AB | SK | MB | ON | QC |
|----|----|----|----|----|----|
| 20 | 3 | 7 | 3 | 32 | 7 |

These 72 participants were hired from a total pool of 287 applicants. 53 were women and 21 represented visible minorities. At this time, there is no clear information as to why there was not more participation from Canada's Atlantic provinces.

The chance to 'get real'



The real-world workplace learning and skills development made possible by the Career Focus Program is necessary for two reasons:

- 1) because students need acculturation to the fast-paced, multitasking nature of work in Canada's small and medium-sized biotechnology companies; and
- 2) because post-secondary curricula are not keeping up with the evolution of biotechnology, producing graduates whose basic knowledge in a given area must be built upon for relevance to the kinds of jobs and work available.

"With a B.Sc. degree, Warren was working as a labourer where his scientific skills were of no use. After his graduation he never had a chance to have any hands-on experience working in a laboratory. . . . [The Career Focus Program] contributes in a significant way in creating opportunities for our young science graduates not only in utilizing their educations and training in a productive way but also in filling the skills workforce need so desperately being felt by Canada's biotechnology industry."

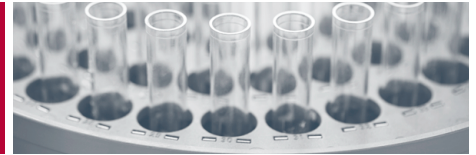
PBR Laboratories

"GeminX would have created the position of Research Associate but we would not have hired someone without experience."

GeminX Biotechnologies



Concentrating on Cooperation



As is the case with many complex issues, the under-preparation of post-secondary graduates for biotechnology careers can't be solved by any one organization or sector alone. Whatever the solution, it will have to be collaborative: a joint effort among government, industry and academia.

Canada's post-secondary institutions and biotechnology companies must work together at the national level to develop curricula and ensure that the education students receive is current and relevant to the sector's needs. Partnership is absolutely essential. Outside of discipline-specific knowledge, what students require are flexibility and well-roundedness: companies need staff who can 'wear many hats', who may be technically specialized but who are professionally versatile.

The Globe and Mail in May 2007 featured an article, "*High Impact*," suggested the positive outcomes such collaboration can achieve, saying:

"Academia may have once worked in intellectual isolation. These days, western Canada's post-secondary schools are showing what can be achieved through learning and research deeply integrated with the interests of business and society."



Why incentives count

Government incentives or subsidies such as those available through the Career Focus Program are also important. Given the resource limitations of many of Canada's bio-economy companies—which must remain lean and nimble to compete globally—a little financial support can go a long way, affording the breathing room necessary to take on inexperienced staff and invest time in their training.

BioTalent Canada is committed to doing its part to help Canadian companies and academia develop the highly skilled staff necessary for global success, facilitating industry involvement in skills training and the upgrading of knowledge for employees—and creating employment opportunities for Canadian graduates in Canada.

Strong Board of Directors

The Board of Directors is composed of experts in the field of HR: CEO's, CFO's and CSO's from across Canada with extensive financial and industry experience representing companies and organizations in Canada's bio-economy. BioTalent Canada is not a membership organization and therefore relies on the guidance provided by its dedicated volunteer Board of Directors.

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