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Association for Life Sciences Industry

RECOMMENDATIONS

FROM THE

BIOALBERTA

LABOUR MARKET INFORMATION REPORT

Recommendations from the BioAlberta Labour Market Information (LMI) Report

Introduction

The BioAlberta Labour Market Information (LMI) Report was released on September 28, 2023. The LMI study was originally undertaken because it provides access to standardized employment numbers, and such a localized study had never been done in Alberta. Access to standardized employment numbers and understanding their probable trends provides critical information about the continued growth of the life science sector in Alberta, informs program design to support small- to medium-sized enterprises, supports faster commercialization of technologies, and allows effective tracking of employment growth and job creation.

While the LMI serves to inform industry and decision makers for the reasons listed above, the information needs to be actioned to be worthwhile. To that end, BioAlberta, in consultation with an Advisory Committee made up of local industry, government and post-secondary representatives, has developed a series of suggested actions, or recommendations, based on the Alberta LMI (BioAlberta) and the National LMI (BioTalent Canada). These recommendations serve to promote and progress the continued growth and success of the life sciences industry in Alberta.

For further information, the BioAlberta LMI can be found *here*.

Key Conclusions from the Alberta LMI

- Labour demand across all sectors within the life sciences industry will increase through 2023, both through growth (ie. expansion driven by industry output growth) and replacement demand (ie. retirements). Volatility of expansion demand estimates should be noted with reference to large changes in investments both moved into, and out of, the province, changes in regulations and policies, and shifting priorities for the life sciences industry, or in sectors that are closely related to the life sciences.
- The largest employment contributors are testing laboratories, hospitals, manufacturing, and veterinary services.
- Approximately half of the life sciences sector employment is associated with Bio-Health subsector.
- The Bio-Health and Agri-Bio sectors will see peak employment by 2030, with both sectors showing R&D job functions as most in-demand.
- The largest proportions of both replacement and expansion hires will be in the functional areas of R&D, manufacturing and production, and finance and administration; replacement demand is greater than expansion demand across subsectors and functional areas.
- The life sciences industry depends on the higher education sector for its skilled labour.
- The primary driver of post-secondary education in the life sciences is domestic enrollment, but domestic graduates will not meet the increased demand for skilled labour if they seek employment outside of Alberta.
- Skilled immigrants are expected to make up part of the needed talent pool.

Recommendations

1. BioAlberta recommends that the *Alberta life sciences post-secondary institutions, industry, and enabling partners emphasize and develop tools on how to* ***engage, integrate and retain recent graduates*** *into the Alberta Life Sciences sector.*

   Key Information

   - It is important to understand how much talent trained in Alberta remains in Alberta, why talent leaves Alberta, how talent retention can be increased, and what sectors of industry are most affected by talent departure.
   - Very few faculties at some post-secondary institutions track graduate information; this needs to be expanded to all faculties and post-secondaries so that retention data is readily and widely available. Formal tracking data will help inform the strategies and steps necessary to engage, integrate and retain recent graduates.
   - Post-secondary institutions, industry, and enabling partners need to work together to make career placement services more relevant to the life sciences.

2. *BioAlberta recommends that the life science sector to continue to* ***empower, build awareness and engage with youth*** *to demonstrate the various opportunities that are available.*

   Key Information

   - Empowering the next generation with education, making hands-on experiences in biotechnology engaging and accessible, will build awareness among youth. It is vital to keep science education an important part of the Alberta school curriculum and encourage hands-on learning as much as possible. Organizations like Amino Labs North, MindFuel and WISEST encourage this awareness and should continue to be supported.
   - There are high levels of competition from other sectors and regions for the talent pool, so it will be important for the life science sector to continue to build awareness and engage with youth to demonstrate the various opportunities that are available.
   - Past and current work integrated learning (WIL) programs that function during the student's post-secondary career have demonstrated success in the training, experiential learning and exposure to various sectors within the life sciences industry. Youth empowerment, awareness, and engagement with the life sciences sector at key decision-making points have been demonstrated to impact educational choices, job searches and career paths.

3. *BioAlberta recommends that the life sciences ecosystem in Alberta* ***develop suitable, internationally recognized micro-credentials[1] that will train/retrain/cross train skilled workers from other sectors and skilled immigrants****.*

[1] Examples;: BioTalent BioSkills Recognition Program; Canadian Alliane for Skills and Training in Life Sciences (CASTL) programs and courses.

Key Information:

- While it is readily acknowledged that each sub-sector is unique and requires specialized skills sets, a greater emphasis on finding the skill sets and knowledge that are readily transferrable rather than only emphasizing where it is unique may enhance the attractiveness of the sub-sector to potential talent and inform skill upgrading programs and initiatives.
- Implementing extra-curricular, modular learning opportunities where students and/or professionals can earn one or more certificates in areas of importance to the life sciences industry will allow the life sciences sector to diversify the building and fortifying of the local talent pool.[2]
- Working with national organizations such as BioTalent Canada, and international organizations to develop and/or endorse an Alberta micro-credentialing program provides baseline recognition and consensus throughout industry.
- Professional designations, such as Regulatory Affairs Professional (RAP), should be readily recognized and encouraged.

4. *BioAlberta recommends that since **career and workforce development, retention and promotion** will play an important role in affecting the talent supply, that industry place a focus on continuing to develop and retain their current workforce.*

   Key Information:

   - Although the Alberta workforce is younger than average, there will still be a significant requirement for replacing current talent due to retirements. As a result, employers will need to become adept at career development and facilitation of lifelong learning opportunities to ensure that their current workforce is prepared to fill the more senior-level positions as they become vacant due to retirement.
   - Ecosystem feedback tells us that hiring new/recent graduates is not difficult, attracting/recruiting senior talent often needs to be done from outside Alberta, and mid-level career talent is the most difficult to find. It is suggested that industry and government focus on a career development and lifelong learning approach to help develop and retain existing talent to foster talent retention and growth from within the organization. That way, new talent can be transitioned into mid-level talent, and the developed mid-level talent has the potential to become senior talent within the organization or province.

5. *BioAlberta recommends that the Alberta life sciences industry and post-secondary institutions emphasize and develop tools on how to **engage, integrate and retain talent, including recent newcomers and immigrants** into the Alberta Life Sciences sector.*

   Key Information:

   - Through the end of the decade, much of the growth of the Alberta labour supply will be attributed to immigration. This is the case for most regions in Canada. The life

[2] BioAlberta Report: Bridging the Life Sciences Talent Gap 2019

sciences sector in Alberta will compete with other provinces and other industries for skilled immigrants and talent supply.

- Additional research in understanding the current diversity of the Alberta life sciences workforce along with identifying specific needs and barriers to enhancing diversity may provide valuable information for the development of relevant tools for the sector.
- Employers who are actively working to support diversity, equity and inclusion in their workplace are more likely to benefit from attracting and retaining talent provided by international students, internationally educated professionals, and recent immigrants.

6. *BioAlberta recommends that the life sciences industry and its enabling partners* ***undertake further studies****, making use of point-in-time estimates and tracking sector and larger context developments, including the Alberta LMI studies as part of the National LMI study conducted by BioTalent Canada, and conducting an economic impact study.*

Key Information:

- An economic impact study would aim to very clearly show output, income earned and jobs created or supported by the life sciences industry, attaching dollar values for clear and present communication of the economic impact of the life sciences industry on Alberta's larger economy.
- The life sciences industry continues to grow, change and evolve. Estimates of labour market tightness change rapidly with announcements such as the opening of three large new pharma-manufacturing facilities in Alberta, significant changes in immigration quotas/programming, competing sectors obtaining large new investments in R&D, and new well-funded post-secondary programs related to the sector. As a result, it is important for the sector to continuously monitor sector-level developments/changes and larger contextual shifts to understand potential labour market impacts for the sector – especially as we consider the lessons learned about pandemic preparedness from the recent Covid-19 pandemic.
- Specifically including human health services in future studies and defining the portion of the human health services ecosystem that integrates with the life sciences and health innovation ecosystems would present a fuller picture of the life sciences industry.
- Continuously aligning the Alberta LMI with the National study and data presentation allows for clear interpretation of data both locally and in the larger national context.

<u>Work Under Way</u>

It is important to note that some work to address the expanding life sciences sector and the anticipated talent shortage is already under way. Initiatives such as:

- BioTalent Canada is entering into agreements with some industry enabling partners and to make the BioTalent BioSkills Recognition Program available to expose more talent to the skills recognition system.

- Every two years, BioAlberta partners with Deloitte to produce the State of the Industry (SOI) report.
- The Ministry of Advanced Education has funded a WIL Voucher administrated through BioAlberta which has seen great demand and positive feedback from industry.
- The University of Calgary's MBT program has engaged Axial Bridge to teach a graduate-level course on regulatory affairs.
- The University of Calgary recently formed a new Biomedical Engineering (BME) Department, launched in 2021 to offer a BSc in BME which includes an internship component. It will be expanded to offer a course-based MEng in BME in 2024.
- Alberta Innovates, through the Alberta Clinical Research Consortium (ACRC), provides funding for clinical trial trainees and delivers programs in partnership with post-secondary institutions on careers opportunities in clinical research. The ACRC has a priority to support the development of a sustainable and qualified clinical health research workforce and community. Alberta Innovates also funds trainee and fellowship positions at Alberta post-secondary institutions through a variety of other programs.
- In addition to launching a dedicated province-wide online course portal early in 2024, API is launching a training program hub with licensed courses from organizations such as BioTalent Canada, CASTL, and RAPS.
- TalentED YYC is a Calgary-wide job board hosted by Calgary Economic Development and funded by the Government of Alberta.
- The Alberta Petri Dish is a provincial version of the national The Petri Dish™ hosted by BioTalent Canada.

These efforts are to be commended. Gaps need to be addressed and filled as the industry continues to grow and move forward.

Conclusion

Presented herein are six recommendations to decision-makers in industry, enabling partners, and government that seek to both inform and initiate action. BioAlberta remains committed to representing and promoting the vibrant and diverse life sciences industry in Alberta, and to leading advocacy for positive change – growth of the life sciences industry means growth for Alberta's economy, benefitting Alberta both locally and on an international stage.

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