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Commercializing Living Therapies

By Stacy Johnson

Chloe Titus is five years old. She loves arts and crafts and board games, and hates spinach and bedtime. When she grows up, Chloe will be an ideal candidate to make a meaningful contribution to Canada's knowledge-based economy.

While that could arguably be said of any bright young Canadian, Chloe has an ace in her pocket; actually two: mother Emily and father Steve are both engineers, each making their own significant contribution to Canada's innovation productivity growth.

Chloe is growing up in a country that values STEM education: science, technology, engineering and mathematics. From governments to educational institutions to professional associations to the private sector and private foundations, ScholarshipsCanada.com estimates there are hundreds of groups across Canada creating programs and providing millions in scholarships to encourage students to pursue degrees in STEM. While a 2015 report commissioned by the Council of Canadian Academies (CCA), STEM Skills and Canada's Economic Productivity, "found no evidence of a current imbalance between the demand for and supply of STEM skills at the national labour market level," that conclusion is counter to what many other STEM labour reports and media outlets are claiming. On the ground, regenerative medicine is one field that is discovering that good talent is hard to find. Emily Titus is a project manager and product and process development scientist at the Centre for Commercialization of Regenerative Medicine (CCRM), a federally funded Centre of Excellence in Toronto focused on developing and commercializing cell therapy and regenerative medicine technologies. Dr. Titus has been able to successfully hire scientists and technicians for cell reprogramming and feefor-service projects, but it's a frequent worry at CCRM that certain positions can only be filled by going outside of Canada.

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Photo: Emily, Chloe and Steve Titus

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"Part of CCRM's mandate is to provide good jobs to Canadians and to grow the economy," says Michael May, President and CEO, CCRM. "Cell therapy and regenerative medicine are still so new that a skilled workforce is difficult to find. We take highly educated university graduates and train them for their roles, but when it comes to finding seasoned professionals, we have a harder time."

Joanne Thomsen, Vice President Talent at MaRS Discovery District in Toronto, echoes this sentiment. "When we post jobs for senior roles for CCRM and similar organizations who rely on experienced STEM professionals, we get hundreds of CVs, but only a small number have the specialized expertise we're seeking."

For private companies like Aercoustics Engineering Limited, where Steve Titus serves as President and CEO, internships provide a built-in system for finding new employees. Aercoustics specializes in acoustics, vibration and noise control so Mr. Titus ends up hiring a lot of engineers from Canadian universities. He's an enthusiastic proponent of taking on interns and then hiring the best ones.

According to Mr. Titus, "Recruiting young talent takes time, so we use our internships to help streamline the hiring process. Interns should not be seen as free labour. By creating a meaningful program, we can assess how our interns work on projects and how they fit within the company before they become employees."

The report from the CCA acknowledges that predicting which skills and knowledge will be needed in the future is not possible. "However, it is clear that STEM skills are central to a variety of education and job opportunities." Further, "Investments in STEM literacy are crucial for developing a skilled society that is prepared to respond to an uncertain future."

For Canada to remain competitive globally, governments, educators and business leaders should keep encouraging kids like Chloe to follow in her parents' footsteps.

Stacey Johnson is the Director of Communications at CCRM and the editor of Signals, where she has blogged about women in STEM.



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