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City could learn from tiny Ontario school; Science Dr. Paul Wilson's work in animal forensic DNA is helping Trent University flourish in the world of research

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Saint John needs to find a niche and exploit it, says a former resident who was recently awarded a Canada Research Chair.

And Dr. Paul Wilson knows what he's talking about.

Wilson works at Trent University's Natural Resources DNA Profiling and Forensic Centre. The tiny Ontario university has created a niche in the area of DNA profiling and forensics. Last year, Trent opened the doors to a new $15- million building that houses the centre. The 60,000-square-foot centre is a far cry from the portable classrooms and closet-sized labs that used to be the home for students and professors.

"Our expertise is in anything that's not a human," said Wilson, long considered a world expert in animal forensic DNA. The most common use for Wilson's work has been to link poachers to a carcass. Eventually, his techniques for DNA typing and the database he will create could be used to predict the effect climate change is having on animal species or migration routes - things that are currently being done with the use of labour intensive and costly radio-collar tracking or helicopter surveys.

Dr. Bradley N. White heads the centre and is a senior Canada Research Chair. He, too, is aware of the opportunities in research and development.

"What we've done well here, and maybe it's something the East Coast needs to look at, is really leveraging to get some partnerships."

The forensic DNA centre's major partner has been the Ontario government's Ministry of Natural Resources, but all levels of government are involved along with private industry. The second floor of the new centre actually houses Natural Resources science division. More than 60 per cent of the new DNA centre was built using government and industry funds.

Since the federal and provincial governments have paid for much of the facilities at colleges and universities, said Wilson, they are now choosing to take advantage of that infrastructure and knowledge and form partnerships.

"That's going to be the emerging model and it's important that universities be somewhat positioned for that," he said.

Finding itself at the centre of the DNA and forensic world didn't happen by accident. Called the Peterborough DNA Cluster Group, the economic development group saw a future in the life sciences and wanted to find a way to bring such research and industry to that Ontario region.

The centre's Jay Amer, director of business attraction and development, said Saint John might have already found its niche in the energy world, but now it needs to develop partnerships between the university, community college, government and industry - much in the same manner that produced Peterborough's DNA centre.

"There's still a role for being diverse and not putting all your eggs in one basket, but becoming a centre of excellence can only help you down the road," Amer said. "Find out what you do best and then make sure the world knows about it."

In less than a decade, the tiny Ontario city now counts itself as a world- class player in DNA and forensic research.

"The reality is that DNA and research transcends borders," Amer said. "You don't have to be in a big city to make it happen."

In fact, said Amer, they've been able to attract several top scientists to the centre because, like Saint John, Peterborough is a small city with a more appealing quality of life model than big centres like Toronto.

In 1996, the Ontario government decentralized operations and moved its Ministry of Natural Resources offices to Peterborough, turning on more light bulbs in the heads of people such as Amer. His group estimates that in less than two decades, the direct economic impact of the biotechnology field will exceed $100 million annually and create more than 1,500 jobs - and that's before spinoff business is factored into the equation.

"We still have a strong manufacturing base here and a great tourism industry, " said Amer. "It's a nice mix. When the Ministry of Natural Resources came, it was the last piece in the puzzle for us having the resources to develop that knowledge-based economy."

Once the data was all in, life sciences was the road they chose and the DNA Cluster Group was formed two years ago.

Amer sees a lot of similarities between Peterborough and Saint John beyond having similar-sized

populations, universities and colleges.

With Canaport LNG and another refinery proposed by Irving Oil, Amer believes Saint John should look at not only the energy sector, but the impact of the environment as well, and how it can be mitigated through technology.

"Environmental energy and connecting it with the things that's happening in the world today could be very successful there," Amer said.

"It's all about vision. You need to have some type of group of folks that will bring everybody together, focus on that vision and put those pieces in place."

Another partner in the centre is ReTiSoft Inc. It specializes in automated systems for the pharmaceutical, biotechnology, semiconductor and packaging industries. Along with Trent becoming a centre for non-human DNA research, it's also quickly becoming a centre for robotics and automated systems. That expertise sprung from the systems being used in the centre's DNA-typing work.

The Trent group resisted suggestions that it should link itself with big- city programs. In fact, they bristled at the thought.

"We were not going to focus on getting the hand-me-downs from the larger research centres," said Wilson.