



2009 World Micromachine Summit: Bob Marshall

> **May 6, 2009**

> **Location: Winspear Centre**

Good evening everyone.

My name is Bob Marshall and I am Vice-President, Corporate Services for Alberta Ingenuity. Our President and CEO, Dr. Peter Hackett, asked me to bring you his regrets- he is unable to be at tonight's festivities- will be arriving from Ottawa later this evening and looks forward to joining all of you at tomorrow's event.

As a sponsor of the World Micromachine Summit, it is my great privilege to be here speaking to you tonight.

I will keep my remarks brief this evening (And you all know how this goes- it's my job to be entertaining, it's your job to stay awake, and if you finish your job first, I obviously finished mine first somehow too...)

So briefly, let me tell you a bit about Alberta Ingenuity, about nanotechnology in Alberta, about Ingenuity's belief in competition, and where that all might lead, if you put it together just so.

So- Alberta Ingenuity. Alberta Ingenuity funds its activities through the interest of an endowment from the Government of Alberta. We support the discovery of new knowledge and the application of that knowledge to improve the quality of Alberta's economy, communities and environment. It is also our mandate to encourage young Albertans to pursue careers in science and engineering.

We have been in continuous growth at a rate of about 20% per year- we finished last fiscal at just over \$50 million, and we're budgeted at \$60 million for the current year. Our programs are designed to provide Alberta with key elements for sustainable growth of our knowledge economy-

- graduate students and new faculty to “prime the pump” with highly qualified people,
- Research & Commercialization Centres, Accelerators and Scholars to create and commercialize breakthroughs critical to their industry partners,
- Industry programs that place new researchers or seasoned business practitioners into companies, and particularly into growth companies, to drive new technologies into products
- And finally, Institutes that develop scientific evidence to inform public policy on solutions and best practices in areas of specific interest to the government

One of the areas in which we believe that Alberta can play a strategic role is in nanotechnology. In 2007, our provincial government announced the Alberta Nanotech Strategy, the province’s plan to capture by 2020, a 20-billion dollar market share of the world’s growing nanotechnology market. and announced a 130-million dollar investment over 5 years.

This strategic investment is being used to expand the province’s research capacity and develop new commercial applications to spur economic growth. On a national level, Alberta is home to the NRC’s National Institute for Nanotechnology, NINT. Those of you who were here for the tours yesterday saw Micralyne, saw the University of Alberta, saw ACAMP, and saw NINT. A first-hand snap-shot of some of Alberta’s depth in Nanotechnology.

And Alberta has committed to growing and developing a new generation of business and entrepreneurs to commercialize nanotechnology solutions.

For us to be successful, we need the right kind of environment and atmosphere that will inspire creativity, expertise and excellence. We know that the best way of achieving these goals is through competition.

Alberta Ingenuity believes in Competition: in strong competition, that raises the bar for everyone. And that’s an intriguing way to engage the next generation.

I mentioned that Peter Hackett is not able to be with us this evening- that is because he is one of a panel of prestigious judges for the National finals of the Sanofi-Aventis Biotalent Challenge in Ottawa. This is an annual high-school science competition intended to raise awareness among

students, educators and the public about the emerging science of biotechnology and its applications in health care, agriculture and the environment.

And the BioScience folks have created other competitions as well. The International Genetically Engineered Machine competition, known as iGEM was created for university students by a colleague of our own Dr. Chris Dambrowitz, who is Director of Ingenuity's Accelerators program. Chris has played a key role in introducing this world-class competition to Alberta students. Using standard biological parts, teams design, build, and operate biological systems to deliver specific outputs. The competition finals are held in the fall at MIT.

And teams from Alberta, representing all three universities and even one high school, have jumped at the chance to be part of this program. These students have worked on a variety of projects, like the ButaNerds who have created a clean and reliable source of butanol, an alternative biofuel. Or the team that created a bacterial vacuum, (they call it a Bacuum), to remove harmful hydrocarbons from oil sands tailing ponds. Another team focused on the ethical, environmental, economic, legal and social issues related to synthetic biology.

Remember, these are undergraduate students who started with only an interest in molecular biology. But they have taken their interests to new heights with their creativity, hard work and vision. And we've heard directly from those students that the iGEM competition has created a world of possibilities for them.

The point here is that by creating exciting competitions, our colleagues in synthetic biology are attracting, growing, and inspiring students- to see themselves, to invest in themselves, as the next generation of scientific leaders.

Now Nanotechnology is cool. And the nanotechnology community is imaginative as... all get out. So we at Ingenuity are certain that there is a student competition just waiting to develop itself in the nanotech arena- a competition which will be every bit as engaging and exciting as those in Synthetic Biology.

And given that Ingenuity believes in competition, we are prepared to help that first international nano competition get started right here. So speak with me over dinner, with Chris Dambrowitz, with Peter Hackett tomorrow, and let's get on the road to creating something truly amazing.

Which will give these students the freedom to create, and enhance their spirit to achieve something truly great.

Again, thank you for allowing me to speak this evening. I look forward to many more conversations about nanotechnology and micromachining with each of you.

Thank you.