

## Journey to ground-breaking discovery a fascinating tale

By Mark Pavilons

A King couple's journey from international communications to being on the verge of a medical breakthrough, has been a long, arduous one.

A love of science, coupled with informing and helping the public, sparked their interest, and launched them on a fantastic voyage.

Mark Miller and Susan Elliott, founders of BirchBioMed, saw promise in a tiny molecule almost four years ago.

After burying themselves in research and working with scientists from the University of British Columbia, this small group was onto something, something big.

If it all comes together as planned, this will be a made-in-Canada, world first!

There is light at the end of the tunnel and the years dedicated to the project will soon see some very impressive results. Their dedication and commitment to the cause will not only pay dividends, but benefit all humankind.

BirchBioMed is a clinical-stage biomedical company focused on the clinical evaluation, development and commercialization of anti-scarring drugs, autoimmune therapeutics and novel strategies for transplantation.

BirchBioMed is a UBC spinoff, and holds the exclusive worldwide pharmaceutical license for two medical therapeutic technologies from UBC that mark significant medical breakthroughs in the treatment of fibrosis and certain autoimmune diseases.

Their patented ground-breaking anti-scar technology (FS2) is the key to unlocking several diseases and addressing untold other health concerns.

It's the only antifibrotic (or anti-scarring) therapeutic that prevents formation of scars and promotes the breakdown of existing scars.

This small molecule drug attacks scarring at the molecular level without hindering wound healing. It radically improves healing outcomes for burn survivors and dramatically reduces post-surgical treatment costs associated with scarring.

The group has found several ways to deliver the product topically, orally and via injection, as well as through sutures, dressings and even bandages.

The first phase of clinical trials demonstrated the safe, topical administration.

It's currently in second stage trials in the U.S.

As well, this research and development resulted in an amazing discovery. Their patented, disruptive and highly regarded autoimmune technology (AI-001) has been found to reverse type 1 diabetes, and alopecia in gold-standard animal models. It has the potential to replace all existing lifelong treatments for certain autoimmune diseases. And, it will require only short-term protocols instead of lifelong treatments.

This is not only ground-breaking, but will have enormous world-wide ramifications. The applications are seemingly limitless at this point. Some other areas this will be beneficial include repairing ocular damage and preventing organ rejection.

Miller said it will be life-changing, if not live-saving in many respects.

Initially funded by key strategic donors and government bodies, including the Canadian Institute of Health Research and the National Science and Engineering Research Council (the Canadian counterpart of the U.S. National Institutes of Health), this licensed technology has benefited from more than \$6 million in government and association grants, coupled with additional university resources. It is also the first technology that UBC, or any other Canadian institution, has advanced from the discovery stage through to completion of Phase 1 clinical trials with support strictly from government and private donations.

Miller said this highly significant achievement, coupled with extensive funding from Canada's most prestigious government research institutions, are an indication of this technology's potential importance and incalculable impact on society.

Another major, influential and respected supporter has been Canada's JDRF, a global leader in research into T1D that awarded significant early funding for the development of AI001. Type 1 diabetes (T1D) is an autoimmune disease that occurs when the body's immune system attacks and destroys the cells in the pancreas that make insulin. Unlike type 2 diabetes, T1D is not linked to being overweight, lack of exercise or other lifestyle factors. It is not preventable and its cause is unknown.

As the leading global organization funding T1D research, JDRF is supporting the best T1D studies in Canada and internationally.

Miller and Elliott, as well as Dr. Ryan Hartwell, BirchBioMed's Chief Science Officer, have been travelling across North America, espousing the virtues of this valuable research. They were recently encouraged after a presentation to top dermatologists and burn

experts that this medication will be revolutionary.

All the parts and players in this amazing story came together in perfect fashion.

Miller credits Dr. Aziz Ghahary and his team, which included Dr. Hartwell, as the co-inventors of FS1/FS2 and AI-001. That team, Miller said, has been outstanding to work with.

Both Miller and Elliott were renowned communications professionals, both from very different worlds.

Miller, a business executive and entrepreneur, is an award-winning print and broadcast journalist. He held editorial and senior management positions with The Washington Post, The Boston Globe, Hearst Newspapers and Gannett Newspapers. He was twice nominated by his editors for the Pulitzer Prize. His career as a journalist, which included political writing, as well as scientific research and reporting, led him to Maryland's University and College System, where he was in charge of governmental and public affairs and served as an adjunct professor at Towson University.

After his work in journalism and academia, Miller joined Ford Aerospace and ultimately became an executive with Ford Motor Company. He was part of the Ford executive team assigned to the reorganization and rejuvenation of Jaguar Cars, where he served as vice-president of Corporate and Public Affairs.

Susan Elliott not only has extensive marketing and sales experience, but developed strategic communications, public relations campaigns and orchestrated product launches for many prominent international companies, including Nissan, Chrysler, Mitsubishi, and Infiniti. A long-time member of the Automotive Journalists Association of Canada (AJAC), Elliott was awarded the group's highest honor, the Tony Sloga Award, in 2005.

All of this experience may not have prepared them for the biggest challenge yet to come ??a world breakthrough.

Along with investment from our shareholders, Miller said everyone on the team has contributed countless hours and their own personal funds to keep the ball rolling all these years. The end result is not the fame and glory, but rather a legacy.

When the group takes centre stage to present their life-saving treatment, Miller imagines saying, ?I had a hand in that.?

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