



# BANTING

## RESEARCH FOUNDATION

### A Department Chair took a risk on a young investigator

The inspiration for the Banting Research Foundation was the triumph of a committed young Canadian doctor over an ancient disease – diabetes. In the summer of 1921, Fredrick Banting was given the opportunity to pursue a novel research idea by a Department Chair willing to take a risk and provide the resources necessary to perform experiments that led to a transformational discovery – insulin.

Insulin is now acknowledged as being one of the most important medical discoveries of all time. In 1923, Banting and JJR Macleod, his Department Chair at the University of Toronto, were awarded the Nobel Prize in Physiology or Medicine. In the more than 90 years since, insulin has made living with diabetes manageable for many millions of people around the world. All this occurred because a leader was willing to stake scarce resources on a young investigator intent on pursuing a testable hypothesis.

The Banting Research Foundation was established in 1925 to support Frederick Banting and other biomedical researchers in Canada similarly dedicated to discovering causes and cures of diseases. For the next two decades the Foundation was essentially the only agency funding biomedical research across Canada.

As a Foundation we honour and preserve this legacy by taking calculated risks every year to assist a new generation of health and biomedical researchers with our Banting Research Foundation Discovery Awards. Our goal is to strengthen the capacity for innovative health and biomedical science research in Canada by providing financial support for the most imaginative ideas proposed by our most promising new investigators. Each year we ask ourselves, might these investigators be Canada's next Bantings?

### Investing in the Future

Scientific researchers in Canada often start their careers with very little financial support for their bold ideas. It can be difficult for early-career researchers to compete for sparse grant funds against well-established investigators with longer track records.

The Banting Research Foundation Discovery Awards exclusively fund early-career health and biomedical researchers from across Canada with imaginative new ideas that may have impact beyond a single disease. These awards fund the best and most promising ideas. Many proposals are for pilot projects designed to generate data to enable subsequent applications to federal or other national agencies that grant longer-term research support. Within 5 years of their first academic appointment and their Banting Research Foundation Discovery Award (received the first 3 years), 88% of our grantees successfully compete for funding from the Tri-Council federal agencies – the hallmark of establishing a scientific career in Canada.

Each submission undergoes rigorous evaluation by a volunteer panel of accomplished scientists who have a broad range of experience, interests, and expertise. For this reason alone, our Discovery Award confers prestige and credibility upon successful candidates at a critical formative stage of their careers.

We believe that by supporting these researchers early on, we can help to launch their promising careers so they can further explore ideas that could lead to discoveries that benefit human health. We also see this as an opportunity for Canada to maintain the level of commitment to health and biomedical research necessary to fuel discovery and retain top talent.

Currently we are able to fund only 10 to 15% of proposals received. We want to ensure that no opportunity for health and biomedical discovery is lost due to lack of resources, and that new investigators have the funds they need to explore their ideas, like Banting did.

## The Banting Legacy

Banting's legacy is not simply about insulin. It is also about Canadians imagining new discoveries to alleviate disease and improve human health, if only those with great ideas but limited resources were given an opportunity to experiment and succeed.

In 1925 there were no granting agencies or foundations to support biomedical research in Canada. The Banting Research Foundation was established that year both to commemorate the discovery of insulin and to stimulate Canadian health and biomedical research in other fields.



The inaugural fundraising campaign raised nearly half a million dollars, a considerable sum at the time, from individual and corporate donors. In 1948, the Foundation received a bequest of nearly \$1 million from the estate of Kate E Taylor of Toronto. These two endowments represent the principal source of funds from which our Trustees now disburse investment income annually as Banting Research Foundation Discovery Awards.

## Return on Investment

Since 1925, the Banting Research Foundation has awarded 1350 grants (totaling \$8 million) to outstanding early-career health and biomedical researchers across Canada. These impactful grants have enabled these young researchers to generate data to strengthen subsequent applications for longer-term grants from other funding agencies. Over the last decade, 88% of the researchers that we have funded were awarded prestigious and highly competitive federal agency research grants within five years of their first career appointment, underscoring our ability to recognize creative talent.

Many of our grants sparked remarkable discoveries that transformed the practice of medicine and surgery, reduced illness and death rates, and propelled many of our recipients to positions of leadership and influence across Canada. Here are some highlights:

Between 1935-1950, we supported the first clinical trials (by Charles H Best, Gordon Murray and their colleagues) of Heparin, a powerful anticoagulant that is widely used in open-heart and organ transplant surgery to prevent the formation of blood clots. In the 1960s and 70s the Foundation funded Henry G Friesen, Charles H Hollenberg, John H Dirks (all at McGill U at the time), and Louis Siminovitch (U of Toronto), whose discoveries have benefited countless Canadians with hormone, kidney and genetic disorders. In the 1980s and 1990s, awardees included Adolfo de Bold (Queen's U at the time), who discovered a new heart hormone fundamental to the management of heart failure and Michael Salter (U of Toronto) who discovered the role of sensory neurons in diabetes.

Our award recipients have been recognized through the most prestigious scientific and lifetime achievement honours and awards in Canada. A total of 29 of our award recipients have been inducted into The Order of Canada, and 24 of our award recipients have been awarded Canada's Gairdner Foundation International awards. Of all the Laureates of the Canadian Medical Hall of Fame, 18% were supported by The Banting Research Foundation early on in their careers.



## Meeting the Challenge

For over 90 years we have invested in the future of health and biomedical research and the careers of new investigators, with the aim of stimulating new discoveries and demonstrating positive returns on our investment. We hope to continue for another 90 years and beyond.

The current research funding environment in Canada is changing, and proportionally less is available to support discovery research. This can make it difficult for early-career researchers to get the funding they need to explore new ideas that may lead to practical innovations.

The Foundation receives 50-80 grant applications per year, and our current endowment allows us to fund only about 6-7 of these. Many outstanding proposals go unsupported because of lack of funds and no other organizations in Canada provide this opportunity.

Many grant recipients have acknowledged with gratitude that it was through the productivity enabled by the Foundation's grant that they were able to establish a secure program of long-term funding from other agencies. As noted by Carl Ernst, Canada Research Chair in Psychiatric Genetics at McGill University, who received a Banting Research Foundation Award in 2012,

*“Young investigators in health research in Canada have very few opportunities to secure funding without competing with well-established investigators, so this provided precious funds in a very important time in my career.”*

This means that the Banting Research Foundation and the realization of its goal to strengthen the capacity for innovative health science in Canada is more important than ever. To continue to fund the best and the most promising new investigators in Canada, and encourage them the way Banting was encouraged, we need to provide more funding – so we don't miss the next important discovery.

## Our Goal

Our goal is to enhance our capacity to support early-career health and biomedical researchers in Canada over the next several years. We want to continue the legacy that was started by a Department Chair willing to take a risk on a new investigator over 90 years ago.

Here is how you can help us achieve our goal:

### **Support the Endowment Fund**

Our endowment fund was created in 1925 and has since grown to over \$4.7 million. This endowment provides funding for early-career health and biomedical researchers. However it has limited capacity. We want to protect the legacy that was established over 90 years ago, and build our capacity to help launch the research careers of new investigators. This investment may lead to important discoveries in Canada. Your support will ensure that we can continue the legacy that was inspired by Banting.

### **Support the Discovery Award Program**

Our Discovery Award program provides one-year research grants to applicants receiving the highest scores in an annual peer-reviewed competition. Grants are reviewed by a panel of accomplished scientists experienced in a wide range of health and biomedical research disciplines to ensure that the best and brightest researchers are identified. Our funding generally supports pilot projects intended to enable early-career health and biomedical investigators to generate data for subsequent applications to other funding agencies. Your contribution can go a long way in helping us to fund additional awards so we can support these researchers early in their careers.

We have seen what can happen when someone is willing to take a risk on a new idea and invest in someone early on in their career. Please join us in taking a similar step and help to launch Canada's next Banting.



Saint-Irénée, Quebec, painted by Frederick Banting, circa 1931



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