



CELEBRATING

40

YEARS OF
DISCOVERY

OUR REPORT TO DONORS



The FOUNDATION
FIGHTING BLINDNESS
You'll see: **results.**

OUR VISION

**TO RESTORE
HOPE AND SIGHT.**

OUR MISSION

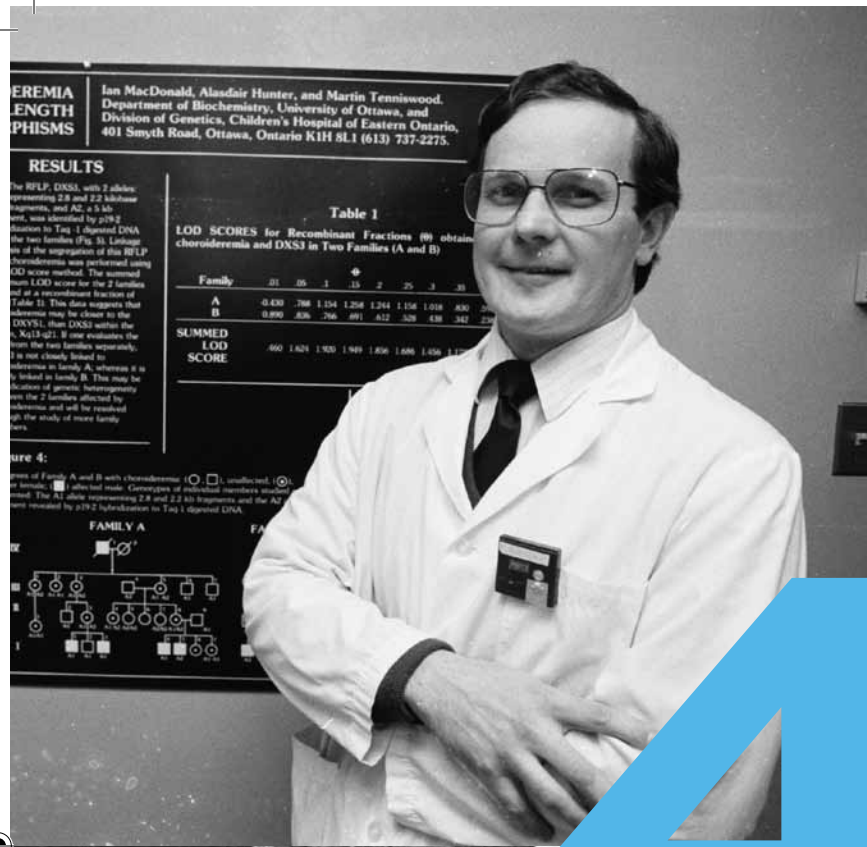
**TO LEAD THE
FIGHT AGAINST
BLINDNESS BY
ADVANCING RETINAL
DISEASE RESEARCH,
EDUCATION AND
PUBLIC AWARENESS.**



For a
Glossary of Terms
used in this report,
please see
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40

YEARS
OF RESEARCH
DISCOVERY

**FORTY YEARS AGO,
A SMALL GROUP OF
FAMILIES LIVING
WITH RETINAL EYE
DISEASES FORMED
THE FOUNDATION
FIGHTING BLINDNESS.
THE COMMUNITY
THEY BUILT HAS
ENABLED SIGHT-
SAVING RESEARCH.**

In the early years, our research efforts focused exclusively on retinitis pigmentosa and other closely related conditions, but as our scientific understanding and capacity expanded, so did our mission; now embracing many retinal conditions, including age-related macular degeneration. This report celebrates four decades of discovery and looks forward to what we can achieve in the next ten years.

Over the past 40 years, the Foundation Fighting Blindness has directed over \$25 million from you, our donors, to Canadian vision research. Together, we have created a powerful vision research community that is helping to shape the international effort to find treatments and cures for retinal disease.

In the fall of 2013, we presented our record of 40 years of research funding to a panel of three prominent scientific experts and asked for their professional assessment of our achievements. These reviewers were chosen for their remarkable scientific and clinical expertise, and because all were experienced scientific administrators. The reviewers were:

Dr. Rod McInnes

Director, Lady Davis Institute,
Jewish General Hospital;
former Director, Institute of Genetics,
Canadian Institute for Health Research;
Professor, McGill University

Dr. Kym Boycott

Clinical Geneticist, Children's Hospital of
Eastern Ontario; Principal Investigator of
FORGE (Finding of Rare Disease Genes);
Associate Professor, University of Ottawa

Dr. Eric Pierce

Director, Ocular Genomics Institute,
Massachusetts Eye and Ear;
Associate Professor, Harvard Medical;
Chair, Scientific Advisory Board,
Foundation Fighting Blindness USA

External Academic Review Panel

**You'll read comments from our expert
academic review throughout this report.
We invite you to learn more about the
science you support and about how your
support can help us restore hope and sight
in the years to come.**



FUNDING INFLUENTIAL SCIENCE

The Foundation Fighting Blindness is Canada’s largest and most productive charitable funder of vision research. Over the past 40 years, your donations have supported an impressive 202 research grants, amounting to a \$25 million investment in ground-breaking science.

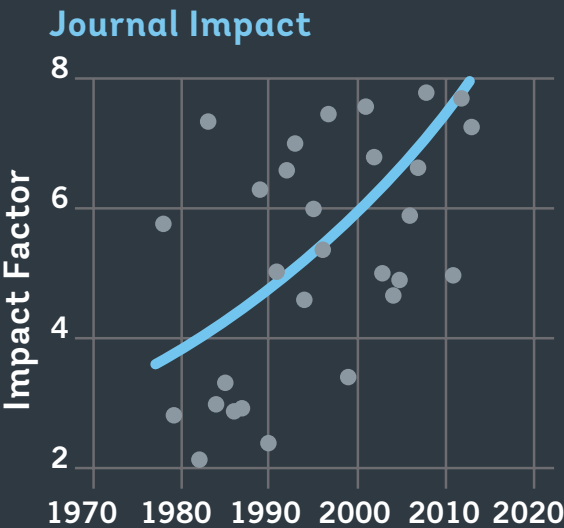
From these grants, 608 scientific papers have been published and the findings have been referenced 19,000 times by researchers around the world. References show that other scientists are using Foundation-funded research as a basis for their own work – a snowball effect that makes your support even more powerful.

The scientists we fund are part of one of the world’s most innovative scientific communities. Today over 40% of all discovery science papers in vision research are written by Canadians. Analysis shows that Canadian papers are referenced by other scientists at a rate well above the world average.

All international scientific journals are assigned an impact factor which assesses the journal’s usefulness and importance. The impact of the journals in which Foundation-funded scientists publish has been rising steadily over our entire 40 year history.

“The best measures of success are progress towards understanding the mechanisms of retinal degenerative disease and the use of this information to develop therapies. By these measures, the Foundation Fighting Blindness has had clear successes.”

External Academic Review Panel, November 2013



Scientific review papers highlight major discoveries in a particular field. This table shows the percentage of review papers published internationally in the past five years that mention Foundation-funded work.

Topic Area	%
The use of stem cells to repair the retina	62
Neuroprotective therapies to prevent vision loss	55
Gene therapies to treat retinal disease	78

“The Foundation Fighting Blindness can claim credit for numerous contributions in the field of vision research. These include, but are not limited to, research that helps us understand the process of retinal disease (including disease gene identification) as well as research directed toward the development of neuroprotective therapies, gene therapies and stem cell therapies.”

External Academic Review Panel, November 2013

NURTURING A PRODUCTIVE RESEARCH COMMUNITY

Over the past 40 years, Foundation Fighting Blindness donors have invested in research grants and renewal grants to 63 Canadian scientists. In partnerships with other funders, we have supported five major research teams.

Our grants fund prestigious Canadian researchers, but they also frequently support young scientists in the early stages of their careers. In 1974, there were very few scientists studying retinal disease in Canada, but now we receive dozens of applications each year and our reviewers must choose between many high-quality proposals. Canadian scientists volunteer their time with the Foundation Fighting Blindness to help select the projects most likely to lead to new discoveries.

In 2013, we surveyed scientists we have funded. Here is some of what they said:

- 75% said that Foundation funding helped them successfully apply to Canada's large government funding agencies – the Canadian Institutes of Health Research (CIHR) or the National Science and Engineering Research Council (NSERC) – to support the next steps of their research
- 89% stated that Foundation funding helped

them develop a research project around an idea that otherwise would not have been funded

- 82% reported that Foundation Fighting Blindness funding allowed them to maintain a research program in Canada with an emphasis on the retina

Foundation grants are also helping to train the next generation of vision scientists, so as to ensure future discoveries. Over the past 40 years, we have given specific awards to 29 graduate students and 21 post-doctoral fellows; dozens more have been trained through our grants to scientists. In total, 93% of scientists say that a grant from the Foundation Fighting Blindness has helped them train at least one outstanding young scientist.

“Foundation Fighting Blindness donors should be proud of the fine research they have funded, and of the many investigators whose careers have been strongly influenced by Foundation support.”

External Academic Review Panel, November 2013



Gift Of Knowledge

For nearly 30 years, **Dr. Bill Stell** has volunteered his time and expertise to the Foundation Fighting Blindness. In the 1980s, he was approached by our Board to establish a more rigorous process of scientific review. In the 1990s, he chaired our Scientific Advisory Board. Today, Dr. Stell continues to help us evaluate the work of our funded scientists and to write accurately about their findings. Like “Dr. Bill,” all of the members of our Scientific Advisory Board and other review panels volunteer their time – an amazing gift that insures we fund the projects most likely to produce sight-saving results.

USING DONOR DOLLARS EFFECTIVELY

The Foundation Fighting Blindness funds more research each year, than any other retinal disease charity in the world, outside of the USA.

We are proud to be an international leader. We are also proud of the cost effective way that we use your investment. Our evaluation showed that grants given by the Foundation Fighting Blindness are far more likely to produce scientific papers than grants given by other Canadian vision charities.

We also compared our performance to a recent evaluation done by the Canadian Institutes of Health Research of its Regenerative Medicine and Nanomedicine Initiative. This initiative funds research on potential gene and cell-based therapies, a mission similar to our own. Our results show that for every \$100,000 invested over a seven-year period, our funded scientists produced more papers outlining scientific discoveries than this benchmark initiative.

Scientific papers are an indirect measure of the value of your donations; the most significant measure is progress towards therapies.

“The therapies that are starting to be tested in humans now – gene therapies and retinal prosthetics - are incredibly crude, but 25 years ago they were inconceivable,” says Dr. Bill Stell, the Foundation’s Expert Scientific Advisor. “These developments have been driven by fundamental advances in scientific understanding.”

Scientific Papers produced per \$100,000 invested (2004 - 2010)

The Foundation Fighting Blindness	2.2
Regenerative Medicine & Nanomedicine Institute	1.4

“Research partnerships are viewed by this review panel as an effective way to leverage additional funds for retinal disease research, particularly for large-scale projects that, more often than not, focus on treatments, and are thus of keen interest to Foundation donors and community members.

There will be increasing opportunities for such partnerships in the coming years.”

External Academic Review Panel, November 2013



Partnering Power

As discovery research has begun to suggest therapies, the Foundation faces a new challenge - to help promising discoveries evolve into viable treatments. This is a costly effort that often involves teams of experts. Over the past 10 years, the Foundation Fighting Blindness has made partnerships with government and other non-profit funders on large-scale, treatment-focused research projects.

Dr. Valerie Wallace led our first large, collaborative project: a partnership with the Stem Cell Network launched in 2005.

Research partnerships allow bold action on therapies while maximizing the power of donor investments. By combining funds with likeminded partners, a \$1.7 million investment by Foundation donors has generating over \$10.8 million for the study of retinal disease treatments.

SUPPORTING INTERNATIONAL COLLABORATION

Vision research is a global effort, with hundreds of teams around the world working toward treatments for retinal disease.

Thanks to your help, Canada has a well-established and influential research community - particularly in the fundamental discovery sciences.

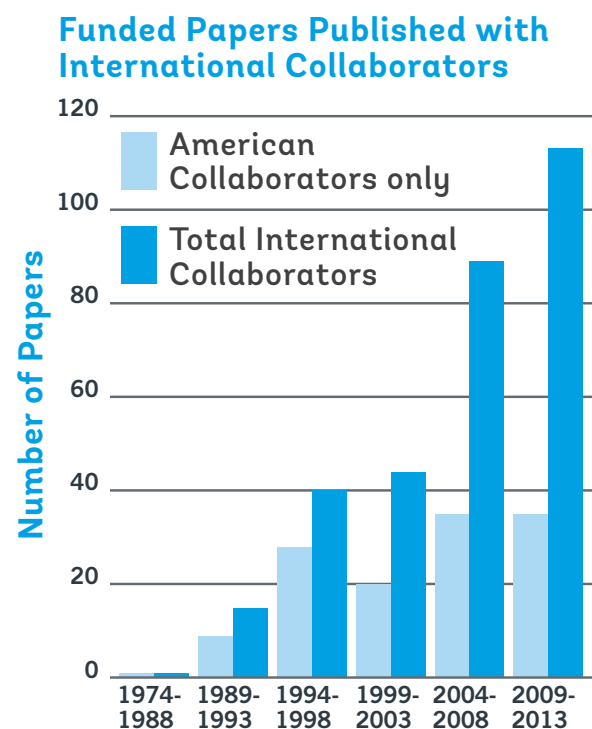
Discovery science helps us understand how the eye develops, what causes eye disease, and how we might intervene to help the cells of the eye overcome disease.

We know that the best way to find treatments and cures is for the best scientists in the world to work together. The scientists you fund are making this happen.

The accompanying graph shows the explosion of research collaborations that has happened over our 40 year history. In the first 15 years of the Foundation's history, only two Foundation-funded papers were published with international collaborators. In the most recent five-year period, nearly 60% of all published papers were research collaborations. Yes, our scientists work

extensively with American scientists, but scientists from Germany, United Kingdom, The Netherlands, France and Japan are also strongly represented among these collaborations!

In the pages that follow, you will find stories of a few of the scientists funded with your donations over the past forty years. Their work has influenced scientists around the world and helped direct the course of research on sight-saving treatments.



Joining Forces

Professor Robin Ali, Head of the Department of Genetics at the University College London (UK) launched the world's first gene therapy trial for a retinal disease in 2007. He is renowned for his ability to convert important scientific discoveries into treatments. Professor Ali recently turned to Foundation-funded scientist **Dr. Michel Cayouette** to ensure that stem cells he is using to create sight-restoring transplant cells will properly mature into vision cells.

"Foundation Fighting Blindness records show that it has supported many investigators who have contributed to global thinking about retinal disease. It is clear that Canadian researchers will continue to contribute to the development of vision therapies in the years to come."

External Academic Review Panel, November 2013

**“THE FAMILIES I
HAVE WORKED WITH
HAVE CONTRIBUTED
TREMENDOUSLY TO OUR
UNDERSTANDING OF
GENETIC EYE DISEASE.”**

DR. JANE GREEN

PROFESSOR, DISCIPLINE OF GENETICS,
MEMORIAL UNIVERSITY



DISCOVERY: MAKING A CLEAR DIAGNOSIS

If you, or someone you care about, have lived with an eye disease for many years, you'll know that early on, many retinal conditions were poorly diagnosed.

Few diseases had clear definitions, and much of the Foundation's earliest funding was applied to this challenge.

One example is the remarkable work of geneticist, Dr. Jane Green, and ophthalmologist, Dr. Gordon Johnson, who both received funding from the Foundation in the 1980s. The pair conducted detailed studies of inherited eye conditions endemic to Newfoundland, helping to more clearly describe numerous conditions, including Stargardt disease, Bardet-Biedl Syndrome, retinitis pigmentosa and Newfoundland cone-rod dystrophy. The team's close working relationships with local families, and the relatively large size of each family, revealed many details about the conditions and the nature of their inheritance.

For example, this team, and their colleagues in Memorial University's Department of Medicine, completed defining studies of Bardet Biedl Syndrome (BBS). They challenged the erroneous

assumption that mental retardation is an essential part of the condition, demonstrating how modest learning challenges and vision loss had combined and led these individuals to be underestimated. The team also defined the kidney conditions associated with BBS, allowing modern clinicians to limit serious kidney disease in this at-risk community.

The team's two pivotal papers in the New England Journal of Medicine continue to be referenced regularly by other scientists and clinicians 25 years later.



National Patient Registry

The Foundation Fighting Blindness continues to gather information about the symptoms and development of inherited retinal degenerative diseases. Today, that effort is a national one, relying on the Foundation's Patient Registry, which was created by **Dr. Elise Héon** at the Hospital for Sick Children in Toronto.

Four clinical centres across Canada now collect records, and over 775 participants living with vision loss have chosen to contribute their medical information.

Our Patient Registry is now a resource to help scientists learn about specific diseases and it also provides a means of informing participants about clinical trials relevant to their conditions.



**“DEVELOPING TECHNIQUES TO TRACE THE GENES
AND MUTATIONS ASSOCIATED WITH RETINAL
DISEASE DRAMATICALLY EXPANDED OUR
UNDERSTANDING OF INHERITED EYE DISEASE.”**

DR. ROBERT MOLDAY

DIRECTOR, CENTRE FOR MACULAR RESEARCH
UNIVERSITY OF BRITISH COLUMBIA

DISCOVERY: THE GENETIC REVOLUTION

When the Foundation's research efforts began in 1974, the genetic revolution had yet to happen. We knew that many conditions were inherited, but we had no way to link specific medical conditions to specific genes.

In the 1980s, the new science of molecular genetics began tracing disease-causing mutations. The Foundation Fighting Blindness was at the forefront, funding its first molecular genetics studies in 1985.

Foundation-funded scientists, Dr. Robert Molday and Dr. Roderick McInnes, discovered two of the earliest known genes to cause retinal degenerations – called PRPH2 and ROM1; mutations in these genes cause retinitis pigmentosa. These were the first of many genes to be discovered in Canada.

This discovery was also pioneering in another way: these two scientists used very different scientific tools. Dr. Molday's group was working to understand the biochemistry of how vision cells function, while Dr. McInnes' team was focused on genetic factors. Nonetheless, when the two teams realized that they

were working on closely related genes, they exchanged data, and worked together to publish their ground-breaking findings. This is an important precedent. Research that links a genetic change to biochemical changes in the retina is critical to understanding how treatments could change the course of a disease. For example, understanding the links between molecular genetics and biochemistry has allowed Dr. Molday's lab to develop potential gene therapies for retinoschisis, Leber congenital amaurosis and Stargardt disease. Similar advances are happening for many other conditions.



Accelerating Gene Discovery

The rate of discovery of genetic mutations that cause retinal diseases has accelerated rapidly, due in large part to advances in technology. With Foundation Fighting Blindness funding, **Dr. Robert Koenekoop** has discovered over a dozen mutations associated with retinal degenerative diseases since 2010.

His team recently set an ambitious goal to identify all of the genes associated with Leber congenital amaurosis by 2016. Identifying the genes that cause retinal disease continues to be an important first step toward developing treatments.



**“CANADIAN SCIENTISTS
HAVE A SUBSTANTIAL
HISTORY OF STUDYING
THE GENETICS OF
RETINAL DISEASE, SO
IT MAKES SENSE THAT
ONE OF THE FIRST
GENE THERAPY TRIALS
WOULD HAPPEN HERE.”**

DR. IAN MACDONALD
CHAIR, DEPARTMENT OF
OPHTHALMOLOGY,
UNIVERSITY OF ALBERTA

DISCOVERY: TURNING GENETIC KNOWLEDGE INTO THERAPIES

Choroideremia is a rare, blinding disease that travels through families on the X chromosome. Because the X chromosome also helps determine a person's sex, choroideremia only affects men. It develops in the late teens and causes severe vision loss by mid-life. An affected man will have unaffected sons, but daughters will have a 50% chance of transferring the damaged gene to their own sons.

Choroideremia was one of the first conditions to be studied with Foundation funding, drawing on grants to the Department of Ophthalmology at the University of Toronto in the 1970s. Dr. Clem McCulloch published this initial work, but Dr. Ian MacDonald, at the time a young trainee in clinical genetics at the University of Ottawa, brought a new genetic focus to the work.

Dr. MacDonald was inspired to study the condition when he met Barbara Owens, a reporter with the Ottawa Citizen. Ms. Owens had cousins and uncles living with choroideremia and she had identified an ancestor with the disease, who arrived in Ontario in 1849. Working with her, Dr. MacDonald identified 1800 descendants of this original ancestor and traced the

inheritance of the disease by collecting genetic samples. Dr. MacDonald was then able to identify where the gene was located on the X chromosome. This allowed him to develop a screening test for family members to determine who was at risk.

In the years since, Dr. MacDonald has become an international expert on choroideremia. When the exact gene that causes choroideremia was identified by UK scientist, Dr. Miguel Seabra, the two men collaborated to create a diagnostic test that has become the global standard in identifying the disease. This has helped confirm the diagnosis for many men, and also allowed families to determine the risk of choroideremia to subsequent generations.

Today, Dr. MacDonald continues to collaborate with Dr. Seabra, and ophthalmological surgeon, Dr. Robert MacLaren, to test the first therapy for choroideremia. The therapy is a potential model for the treatment of many retinal diseases. A clinical trial of this gene therapy has already begun in the UK and Dr. MacDonald's trial is expected to begin treating study participants at the University of Alberta in 2014.



Testing More Gene Therapies

In October 2013, Canada's first Ocular Gene Therapy Centre was established at the University of Alberta, with support from the Foundation Fighting Blindness and a \$5 million investment from the Alberta government. At the Centre, **Dr. MacDonald** has amassed a team of retinal surgeons, vision scientists and clinical trial experts to develop and test gene therapies.

Here, Dr. MacDonald is shown with two of the Centre's experts, scientist, **Dr. Yves Sauve** (left) and surgeon, **Dr. Matthew Tennant** (right).

**“THERAPIES THAT COULD
SLOW THE LOSS OF VISION
CELLS IN PEOPLE WITH
RETINAL DEGENERATIONS
MIGHT SAVE A PERSON’S
VISION FOR MANY YEARS.”**

DR. CLAUDE GRAVEL

PROFESSEUR AGRÉGÉ ET
DIRECTEUR-ADJOINT,
DÉPARTEMENT DE PSYCHIATRIE ET DE
NEUROSCIENCES, UNIVERSITÉ LAVAL



DISCOVERY: THE GENESIS OF NEUROPROTECTIVE THERAPY

Although retinal degenerative diseases have many different causes, in most conditions the photoreceptors self-destruct in a similar way, through a process called apoptosis (cell death). Apoptosis is one of the body's key defense systems; a controlled demolition of damaged cells intended to protect the surrounding tissue. At Laval University, Dr. Claude Gravel and, then PhD student, Michel Cayouette, were part of one of the first groups to begin studying ways to control apoptosis in the retina. Therapies that aim to preserve vision by controlling apoptosis are called neuroprotective therapies.

In the mid-1990s, several research groups were working to understand apoptosis in the eye, but no one knew whether or not preserving damaged cells would actually save sight. The Gravel team studied a substance produced by the body to help nerve cells grow, called CNTF (ciliary neurotrophic factor). They showed that CNTF could provide long-term protection for damaged photoreceptors in mice, and then they made an even more ground-breaking finding. This team was the first to show

that preserving retinal cells could also preserve vision.

Following these discoveries, and others, the American biotech company Neurotech invented a unique means to deliver CNTF to the retina via a tiny implanted capsule. Although there have been some setbacks in this work, the company continues to develop this therapy for both age-related macular degeneration and retinitis pigmentosa, under the trade name Renexus®.

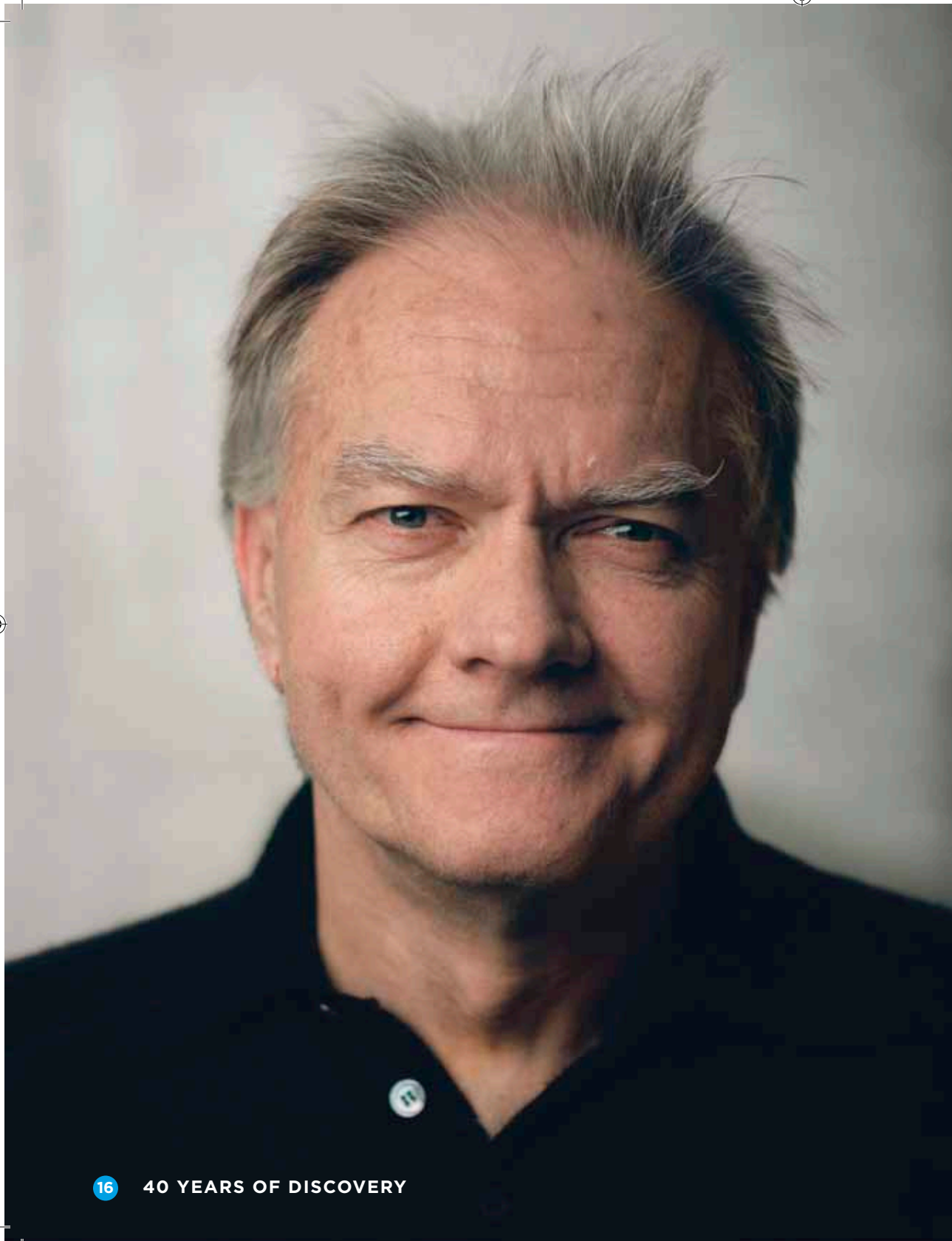
Today, the study of neuroprotective therapies is a Canadian strength. A therapy that could slow vision loss in a broad variety of conditions would be a miracle for many.



Halting Vision Loss

Your donations currently fund multiple research teams working on neuroprotective therapies, including XIAP gene therapy. This treatment may be useful in addressing many conditions, including retinitis pigmentosa, age-related macular degeneration and diabetic retinopathy.

Dr. Catherine Tsilfidis leads its development at the University of Ottawa. Her team is currently completing the pre-clinical studies necessary to begin a human trial.



“STEM CELLS HAVE THE AMAZING CAPACITY TO GENERATE ANY KIND OF CELL, INCLUDING THE PHOTORECEPTORS WE NEED TO RESTORE FUNCTION TO THE BLIND EYE.”

DR. DEREK VAN DER KOOY
PROFESSOR OF MEDICAL GENETICS
UNIVERSITY OF TORONTO

DISCOVERY: OUR EYES HAVE CELLS WITH THE POTENTIAL TO RESTORE SIGHT

Stem cell science has always been a Canadian strength.

The first stem cells were discovered at the University of Toronto in the 1960s, but for decades, no one expected to find them in the adult eye.

Conventional wisdom said that the cells of the retina had stopped growing, and stem cells were absent.

Ten years ago, Dr. Derek van der Kooy and his team changed all of that with the discovery of stem cells, first in the eyes of adult mice, and then in the eyes of adult humans. Since then, the team has been an international leader in the effort to use these cells to develop therapies for those blinded by retinal diseases. Dr. van der Kooy's team has shown that, although the stem cells found in the retina are dormant, they can be nurtured in a laboratory to create viable cells for transplant. Dr. van der Kooy proved this principal in 2010 by implanting human retina cells derived from stem cells into the eyes of mice. The transplants partially restored vision.

Today, the van der Kooy team is one of

multiple Canadian teams working to improve transplant techniques in order to make them efficient enough for human treatment. This requires enhanced techniques to purify the cells, and to hold the cells in place within the retina until they can grow and make connections. Five years ago, about 10% of the cells in a culture grown from stem cells would be suitable for transplant. Now, cultures produced by Dr. van der Kooy's team are more than 90% suitable. New techniques are being developed to help them grow where they are most needed to restore sight.



Stem Cells for Macular Degeneration

The Foundation now funds multiple Canadian groups working to develop stem cell therapies and make them safe and efficient enough for human use. Your donations are also funding **Dr. Gilbert Bernier**, who is using stem cells to reverse the blinding effects of advanced age-related macular degeneration (AMD). In AMD, several cell types in the centre of the retina are damaged.

Dr. Bernier's team is creating sheets of cells containing these cell types that may one day be transplanted into the macula of a person with advanced AMD – restoring central vision.

OUR FOUR-POINT RESEARCH PLAN

Over the past year, a task force of scientists, clinicians, donors, and people living with retinal disease have met and talked about the Foundation's strengths, and about how we can most effectively act to ensure that Canadians with vision loss have access to therapies as quickly as possible. From these discussions, here's how we are moving forward.

1 Fund More Discoveries

To develop potential treatments, we need continued discovery about how the retina works, and how we might fix damaged cells.

Therapies for a few conditions are being studied in humans, but for many more Canadians, we still need answers. Our evaluation has shown that Canada has an outstanding discovery research community, and that scientists around the world are turning to Canadian investigators for their discovery science expertise. The Foundation will continue to foster new discovery by selecting innovative science through open grant competitions. It is the most powerful contribution we can make to the global search for sight-saving treatments.

2 Partner to Develop Treatments

Developing treatments is costly and time-consuming. The end stages are typically undertaken by industry, but there is a significant gap between laboratory discoveries and the final development of treatments. In the next 10 years, the Foundation Fighting Blindness will proactively seek out funding partners in government, non-profit agencies and, if appropriate, in industry. These partnerships will maximize the power of your donations to generate treatments.

3 Foster Canadian Research Excellence

Research is international, but we can and should contribute to this global community by training outstanding scientists in Canada. We will work to create an environment where discovery research flourishes, and where treatments can be developed and tested, right here at home.

4 Create Access to Therapies for Canadians

Vision research is global; therapies will be developed outside of our borders. Regardless of where therapies are developed, Canadians living with vision

loss deserve prompt access to new treatments. We will build relations with government and non-profit allies to speed the approval and reimbursement of therapies. Research is vital to our goals, but so is ensuring that the outcomes of that research benefit Canadians.

(We need)

knowledge of how cells work
in a complex human organism...
a deep knowledge of the science
behind a drug is the largest
predictor of (its) success.

Dr. James Sabry

Vice President, Genentech

Genentech developed Lucentis,
an effective drug for wet
age-related macular
degeneration

THE NEXT TEN YEARS

Canadian scientists are engaged in an international effort to find therapies, and they are excited about the possibilities that are emerging.

“The record shows that progress in vision research is being made and that the pace of progress is accelerating. The Foundation made an early commitment to discovery science, and to understanding the basic function of our cells and how to intervene when these functions go awry. The pace will not slow down as long as we continue funding discovery.”

Dr. Bill Stell
Foundation Expert Scientific Advisor
Professor of Cell Biology and Anatomy,
University of Calgary

“Thanks to Foundation donors, our gene discovery work has pointed the way toward new therapies. In 2014, we are publishing the results of a clinical trial of the first oral drug for childhood blindness (LCA type 2). We anticipate more clinical trials of therapies for childhood blindness at our centre in Montréal over the next 10 years, some of which are already being planned.”

Dr. Robert Koenekoop
Chief of Pediatric Ophthalmology,
Montréal Children’s Hospital
Director, McGill Ocular Genetics Laboratory

“Gene therapy will be one of a number of therapies that will be used to prevent blindness. In Canada, we’ve started with choroideremia, but I feel certain that in ten years, there will be many conditions where gene therapy will be the standard of care.”

Dr. Ian MacDonald
Chair, Department of Ophthalmology,
University of Alberta

“There will be more gene therapy successes, but the big advance in the next 10 years is going to be medical [drug] therapies that slow down retinal degenerations - and maybe if we are lucky - stop it!”

Dr. Rod McInnes
Director, Lady Davis Institute,
Jewish General Hospital

Now more than ever, your ongoing support is essential to restore hope and sight to Canadians living with vision loss.

THE MOST IMPORTANT DISCOVERIES ARE YET TO BE MADE.



Volunteers Make Research Possible

"I am proud to be one of many volunteers who helped the Foundation become a global leader in vision research. This report reinforces my belief that supporting the Foundation is the most powerful way for Canadian donors and volunteers to make sight-saving treatments a reality."

Donna Green

Board Of Directors,
Volunteer Of 18 Years

The success of the Foundation Fighting Blindness relies on volunteers who generously donate their time and expertise.

We want to acknowledge the contributions of all these volunteers in our achievements over the past 40 years.

Leadership

Our Board of Directors brings together leaders from the worlds of business, science, medicine and philanthropy - many of whom have personal experience with a blinding disease. These individuals donate their time to ensure the responsible governance of our organization, our financial stability and organizational integrity.

Scientific Excellence

Our Scientific Advisory Board is comprised of scientists who donate their time to rigorously review proposed research. Their recommendations to the Board of Directors have ensured that we fund the research most likely to lead to treatments and cures.

Community Engagement

Our community volunteers, through their enthusiasm and dedication, have raised millions of dollars for vision research over the past 40 years. Many share their personal stories of living with vision loss with the media and at public events, as well as their hope for sight-saving research to end blindness.

DEFINITIONS

PHOTORECEPTORS are cells in the retina that sense light.

RETINAL DEGENERATIVE DISEASES are blinding eye diseases caused by damage over time to the photoreceptor cells of the retina.

A GENE is a DNA instruction for a specific action within a cell. When a gene is damaged (mutated), the cell's functions are compromised. This can cause an inherited retinal degenerative disease.

GENE THERAPIES aim to prevent vision loss by replacing a damaged gene with a normal one.

NEUROPROTECTIVE THERAPIES aim to preserve vision by slowing or stopping the death of retinal cells.

STEM CELL THERAPIES use simple, undeveloped cells called stem cells. By guiding these cells to mature into retinal cells, scientists can create new vision cells to one day restore sight.



CELEBRATING

40

YEARS OF
DISCOVERY

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The FOUNDATION
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*You'll see: **results.***

THANK YOU TO OUR DONORS

YOUR SUPPORT HAS BEEN CRITICAL IN ADVANCING
VISION RESEARCH IN CANADA AND IN MAKING
EMERGING, SIGHT-SAVING THERAPIES POSSIBLE.

Charitable Registration No. 119129369RR0001