



**TRANSPLANT RESEARCH FOUNDATION of BC**  
**ANNUAL REPORT**  
**2015 - 2016**

## **MISSION**

To support BC based transplantation research that will provide solutions to benefit British Columbians whose lives are threatened by organ failure.

## **VISION**

Leading edge research, newly developed treatment strategies, technologies and therapies will ultimately eliminate the need for organ transplantation.

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## REPORT FROM THE CHAIR

It's been 9 years since my husband and I entered the 'transplant world', and I'm very fortunate to have been on the Board of TRF almost that long. I've learned a lot about the challenges facing transplant recipients in that time, some of it as the partner of a transplant recipient and some of it as a TRF Board Member.

The main thing I've come to understand is that while transplantation is a miracle and a true gift of life, it's not a cure, at least not yet, and the importance of scientific research to the lives and well being of transplant recipients cannot be overstated. It is, and will continue to be, research that keeps adding years to our loved one's survival and quality of life after transplant. That is why I and my fellow board members support TRF and we are lucky to have had a ring side seat to witness the exciting and innovative ideas developed by talented researchers and scientists in British Columbia.

Our foundation supports and encourages this work through our Venture Grant Program. This highly focused program is designed to provide early stage support for innovative ideas. We aim to fund 3 projects a year for \$25,000 each. If the amount of seed funding that is required is modest, the potential payoffs are high, and in this annual report you will read about the Venture Grant program as well as the two other exciting funding programs TRF has developed this year.

TRF is a relatively small foundation with total combined financial assets of \$752,000 and annual revenues from donations of \$120,000. While small, TRF is right sized for its mission. The objective in recent years has been to streamline operations and lower administrative costs, allowing TRF Board and staff to focus on our mission of supporting transplant research in BC that will improve the lives of solid organ transplant recipients.



We continue to look for ways to connect with and engage the transplant community around the importance of transplant research. To this end we have worked hard on developing our communication tools including a Newsletter, and I invite you to look at our Fall 2015, Winter 2016 and Summer 2016 Newsletters on the TRF website.

We have also redesigned our website to enhance the look and, more importantly, the information available on TRF and the research you support.

We understand very well that it takes time to get over the trauma associated with waiting for an organ and then recovering from the transplantation. Eventually most transplant recipients come to realize that they are living with a new set of challenges and that it is critically important for them that researchers and scientists continue to work on life extending solutions. As we continue to work to connect with more transplant recipients and their families, you can help by continuing to support TRF and sharing information about TRF with others who you know will also be interested in ensuring this important work continues.

### TRF BOARD OF DIRECTORS

Lori Lothian, Chair

Elaine Yong

Ed Ferre

Murray Wilson

Dr. Rob McMaster

Dr. Alice Mui

Kristoffer Gurlesky

Colin Yip

John Weins

Guy Lapierre

## MEET OUR NEW BOARD MEMBERS

Mr. Murray Wilson joined the TRF in 2015. In addition to being a most grateful recipient of a liver transplant, he is also a farmer, engineer and a corporate & government investment banker. Much of his career has involved dual appointments in Canada and the UK with various global executive responsibilities. He has held senior executive positions in energy, mining, technology and music industries including, Royal Bank of Canada Group and TD Securities. He has been actively involved in a number of not-for-profits. Currently, he serves on the Advisory Board - City Music for Berklee College of Music, Boston, and was Chair of the Governance Committee for Alberta Children's Hospital Foundation. Since his own liver transplant Mr. Wilson has become increasingly involved as a technical layman in the science of transplant medical research and practice in both Canada and the UK.



Edward Ferre joined BC Transplant over 20 years ago as an Organ Donation Specialist and has held several clinical and administrative roles in the organization. He has served on several national and international committees, councils and boards including: The Canadian Association of Transplantation (President); Canadian Blood Service's National Liaison Committee representing Organ Donation and Transplantation; and was appointed to the Canadian Council for Donation and Transplantation. Originally from the prairies, Ed came to British Columbia in 1987 to study Applied Physiology and has remained in BC

ever since. He completed an MBA in 2008 and in 2012 was awarded the credentials of French Wine Scholar.

# WHY IS TRANSPLANT RESEARCH IMPORTANT?

- In BC, there were 422 organ transplants in 2015.
- There are 4233 patients living with organ transplants in BC.
- There are more than 500 British Columbians waiting for an organ transplant.
- Between 2004-2013, over 1250 children in Canada have undergone a life-saving organ transplant.
- For patients under 18, the 10-year survival rate for heart transplant is less than 60%, for lung it is 44% and liver is 77%.
- Research has led to critical discoveries in transplantation that have significantly improved patient survival and outcomes including:
  - Improvements in organ preservation and graft survival techniques
  - Development of devices that increase the number of organs available for transplant, such as 'Ex Vivo' lung perfusion, wherein lungs that are not initially suitable for use can be repaired in an "Ex Vivo" (outside of the body) incubator prior to transplantation
  - Living donor transplants



"The success of solid organ transplantation has saved countless lives over the past 29 years but none of this would have happened without the insight and innovation provided by research. Transplantation, like all areas of medicine, remains far from perfect. We need the research mission to continue in order to bridge the gap between our current reality and our hopes, dreams and expectations."

Dr. Eric Yoshida

## ADVANCING RESEARCH THROUGH PARTNERSHIP

Over the past 100 years there has been a dramatic shift in organ transplantation outcomes. Today, people live longer and healthier lives post transplant. These advances have only been possible because of research. We know research is the answer and it's the only way to ensure advances in transplantation.

A major focus of the Transplant Research Foundation of BC over the past year has been the creation of new partnerships to better meet our vision:

**Leading edge research, newly developed treatment strategies, technologies and therapies will ultimately eliminate the need for organ transplantation.**

These partnerships are key to accelerating transplant research and contribute to a stronger, more collaborative transplant community not only in British Columbia, but across Canada.

### ASTELLAS-TRF CLINICAL TRANSPLANT RESEARCH GRANT

In 2015, Transplant Research Foundation of BC partnered with Astellas Pharma Canada to establish a brand new research grant: **Astellas/ TRF Clinical Transplant Research Grant.**

This program is committed to supporting patient-focused, clinical and collaborative research that addresses barriers in the field of organ transplantation, contributing to improving patient care on a national scope.



A key aspect of the program is to further develop collaborative and multi-disciplinary approaches to transplantation research in British Columbia and across Canada.

Two \$50,000 grants were awarded in June 2016, with plans to offer grants in 2017 and 2018.

## NATIONAL CHILD HEALTH TRANSPLANT TEAM GRANT

There are nearly 300 children in BC who have undergone a lifesaving organ transplant. That number continues to grow exponentially every year as medical advances have made it possible for some of the sickest patients to survive. But transplant remains a treatment for end-stage organ failure, not a cure.

In 2013, Elaine Yong and Aaron McArthur, parents of the first baby to undergo a heart transplant at BC Children's Hospital, launched the Addison Pediatric Transplant Research Project with TRF. The sole purpose of the fund is to raise money to support research that addresses the specific transplant-related issues unique to pediatric patients.

After raising an initial \$25,000, in August 2015, the TRF joined forces with the Canadian National Transplant Research Program (CNTRP) and the Alberta Transplant Institute (ATI) to explore the idea of launching a national research grant competition dedicated to improving the lives of pediatric transplant patients across Canada.



As initially conceived by the Addison Pediatric Project, the philosophy of this new partnership opportunity is that together we can achieve more!

This unique grant supports an innovative pediatric transplantation project that unites researchers from across Canada and across disciplines. The primary objective is to significantly improve outcomes for young solid organ recipients. The collaboration also allows research that would not otherwise be possible at a single centre.

We have raised \$100,000, with \$25,000 commitments from the Alberta Transplant Institute (ATI), BC Children's Hospital Foundation (BCCHF) and Astellas Canada.

Applications for the \$100,000 are currently being accepted through the CNTRP.



# VENTURE GRANT PROGRAM: RESEARCH IN ACTION

One of the primary programs of the Transplant Research Foundation of BC is the Venture Grant Program. This funding program is 100% supported by donations.

Through this program TRF supports innovative projects across British Columbia that have the potential to significantly impact organ transplantation.

The intent of the Venture Grant competition is to fund new areas of research (e.g. new hypotheses, techniques, or ideas) that are in a pilot/feasibility stage.

This annual program provides \$25,000 per project for seed funding to support peer-reviewed, innovative research that will improve the lives of transplant patients and those who are facing organ failure. The Peer Review element of the Venture Grant Program is designed to ensure that the projects selected for funding will, by their nature and design, contribute to scientific knowledge in the field.

**"The TRF Venture Grant program fills a very important role in supporting development of out-of-the-box ideas that lead to true innovations in transplantation research. There are no other research grant opportunities that support early stage, high risk (eg, no initial data exists)/high reward ideas."**

**Dr. Caigan Du**

## 2015-2016 VENTURE GRANT WINNERS



### Treating multi-drug resistant infections in Transplant recipients with fecal microbiota transplants

Organ transplant patients are at increased risk of developing highly antibiotic resistant infections as a result of their transplant surgery, lengthy hospitalization and repeated use of antibiotics during their medical care. The source of these multidrug-resistant bacteria is the patient's own gut. In this study, **Dr. Manges** will test whether fecal microbiota transplantation (FMT) can remove highly drug-resistant bacteria from the gut of kidney transplant patients. FMT is a therapy that involves the infusion by enema of well screened, healthy donor stool into a patient's gut. FMT can replace the gut microbial community containing these drug-resistant bacteria, with a microbial community characterized by more beneficial organisms with lower levels of antibiotic resistance, thereby lowering a kidney transplant patients risk of hard to treat, post-transplant infections. The goals of this study are to confirm that FMT can eliminate drug resistant bacteria from the gut of Transplant recipients, and to determine how long the patient remains free of these drug resistant organisms.

## 2015-2016 VENTURE GRANT WINNERS

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### Early detection of artery thickening in pediatric heart transplant recipients

Children who have had a heart transplant are at risk for developing a disease called cardiac allograft vasculopathy (CAV) where their coronary artery walls thicken over time. Sadly, CAV is responsible for 1 in 4 patient deaths. The current way to look for CAV is to use a technique called angiography where dye is injected directly into the coronary arteries and imaged. However, the limitation of angiography is that it can only detect late stage disease and therefore treatment is less likely to work. For this project, **Dr. Harris** will use a new imaging technique called optical coherence tomograph (OCT) to detect problems developing in children's heart transplant grafts early enough to treat the problem. OCT is an imaging technique designed for use in adults that is beginning to be used in children. Dr. Harris has already performed a preliminary OCT study and found that OCT detects artery thickening earlier than angiography in children heart transplant recipients. He will now use OCT to follow these children over time in order to establish this technique for reliable, routine use.



### Transplantation of thyroids enclosed in protective pouches

The thyroid gland makes hormones which control how quickly the body uses energy, makes protein and controls the body's sensitivity to other hormone. The thyroid is often removed because of cancer or benign disease (several hundred thousand per year in N America), and loss of thyroid function leads to severe illness and disease so these people take thyroid hormone (thyroxine) replacement therapy. But people receiving thyroxine still experience side effects (weight gain, depression, headaches, cardiovascular disease) because taking thyroxine is not the same as having a functional thyroid gland that can monitor the body's metabolism and produce hormones in real time as

it is needed. Transplantation of thyroid gland back into these people would give better metabolic control. **Dr. Wiseman** will test whether thyroid glands obtained from deceased donors can be placed inside a special pouch and implanted into a recipient. The pouch will protect the thyroid gland from attack by the immune system so the recipient can live a normal life with a functioning thyroid gland without having to take anti-rejection drugs.



## YOUR DONATIONS AT WORK

Transplant medicine is changing at a breathtaking pace and BC is one of the provinces leading the way. Our province consistently produces some of the strongest clinical outcomes in Canada, due in part to the ongoing support of our incredible donors.

Donors are our partners in research. Without donors, the TRF would not exist as we are a donor led and driven funding organization. Improving the transplant journey and finding a cure will only come from sound research.

We are so grateful your ongoing support of transplant research!

- Since 2009, TRF has given out \$250,000 in Venture Grant research funding, which has been leveraged into over \$10 million dollars in external funding from national funding agencies including, Canadian Institutes of Health and Canada Foundation for Innovation.
- Funding dollars serve to develop BC transplant researchers on the world stage.
- TRF funded researchers have presented at international conferences.

### Donor Profile: Dr. Russ Reid

As an emergency room physician 30 years ago, Dr. Russ Reid saw a need to encourage more organ donors, but he had no idea he would one day be one of those desperate patients he was trying to help.

Fast forward to September 2012 when the phone rang at his home in Kamloops. His five-year old grandson picked up the phone from an unknown number, which Russ was planning to ignore. Turns out it was the transplant team calling to say they had found the retired doctor a liver. On Labour Day, he went into surgery. The liver transplant was a success and he has had no complications. "I feel better today than I did before the transplant. It has given me my life back."

Russ also sees the great importance of giving back, especially to support transplant

research. He has been a monthly donor to the TRF since shortly after his surgery. "I know how important research is to organ transplantation. It is only through ongoing innovation that transplant recipients like me can go back to the lives we were meant to have."

He has been on the frontlines of innovation himself. In the early 80s in Kamloops, Russ founded one of the first organ donor retrieval committees outside of Vancouver, establishing protocols for hospital staff to act quickly to identify potential organ donors.

Since his transplant, Russ has not slowed down. He is Chair of the Board of Directors for the BC Seniors Games, overseeing 2500 volunteers, along with all aspects of planning the games. He is also participating in the games, playing hockey on one of the teams. When not doing this massive job, he enjoys traveling

with his wife, skiing and playing golf.

"As a physician, I have seen firsthand how far science has advanced transplantation. Consider this - the first successful liver transplant in Canada took place in 1982. That was only thirty years before my surgery. Research saves lives. It's as simple as that."

To learn how you can become a monthly donor go to [www.trfbc.org](http://www.trfbc.org).



# SUMMARY OF FINANCIAL RESULTS

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## Assets and Investment Income

Over the last two years TRF has enjoyed a substantial income from the investment of the Transplant Research Foundation of BC Fund and the Addison Fund. In the 2015-2016 fiscal year, income from investments was \$40,265. This income contributes significantly to supporting TRF's operating costs.

In June 2015, TRF entered into a partnership with VGH & UBC Hospital Foundation. TRF gifted its assets to the VGH & UBC Hospital Foundation for the purpose of establishing the Transplant Research Foundation of BC Fund and the Addison Fund. The Funds are managed by Phillips, Hager and North Investment Management and Leith Wheeler Investment Council.

## Donations

Donations have been relatively stable over the last 5 years. Over 60% of donations come from major donors who provide gifts over \$5,000 per year. The balance of the donations comes from individual donors and companies who wish to support transplant research in BC.

One of the Board's aims over the next few years is to increase donations to the Fund, and we anticipate that with the support of VGH & UBC Hospital Foundation this is a realistic goal. First, we are working hard to increase awareness of TRF and its work in the transplant community. We believe that transplant recipients and their families will support TRF and its mission if they understand the importance of transplant research to the health and wellbeing of transplant recipients. Second, with VGH & UBC Hospital Foundation's assistance, we are working to increase major donor support and have embarked on a campaign to raise \$300,000 over three years for the Venture Grant Program. We feel that given the clear success of this program over time, we will be successful in finding support.

## Research Grants

TRF provided Venture Grants totaling \$75,000 during the 2015-2016 fiscal year. This was an increase of \$25,000 (for one additional research grant) from the prior two fiscal years.

As we consider our efficiency in directing donation dollars to research, it is important to account for TRF's success in delivering research grants through partnerships. TRF's work to establish the Astellas/TRF Clinical Research Grant and the National Child Health Transplant Team Grant have resulted in an addition \$200,000 of Grant Funds that have or will be provided in the 2016-2017 fiscal year.

## Expenses/Operating Costs

At TRF we have worked hard at reducing our administrative costs. The financial statements show a marked reduction in expenses for the year even though it was a year of transition. We anticipate this picture will further improve in the 2016-2017 fiscal year when a full year of the partnership is shown. Much of the cost savings can be attributed to the partnership with VGH & UBC Hospital Foundation that provides a number of services to TRF for a fixed rate of 8% of donations to the Fund. Included in this fee are all expenses related to the receiving and processing of donations including credit card fees, as well as support for fundraising activities, donor communications and the like.

TRF employs the services of one part time employee whose time is devoted almost entirely to delivery of our programs. Total compensation for fiscal 2015-2016 was \$32,500, which includes \$6,400 for the Administrative Assistant, a position that was eliminated in August 2015. Cost savings are also achieved through TRF's 'working' board whose members contribute their time and talent to tasks that would otherwise be provided by paid staff. These include expertise on communications, research and fundraising.

# The Transplant Research Foundation of BC, The Transplant Research Foundation of BC Fund and the Addison Fund

A summary from the Combined Statement of Operations and Changes in Net Assets (Unaudited)\*

For the year ending March 31, 2016, with comparative information from previous year.

	2015/16	2014/15
<b>Revenue:</b>		
Philanthropic	\$ 116,253	\$ 119,038
Investment Income	40,265	62,240
	156,518	181,278
<b>Expenses:</b>		
Foundation operations	27,757	36,718
Fundraising	9,236	17,744
	36,993	54,462
<b>Excess of revenue over expenses before disbursements and grants</b>	<b>119,525</b>	<b>126,817</b>
Community outreach and engagement program delivery	28,954	25,681
Research grants	75,000	50,000
<b>Excess of revenue over expenses, disbursements, and grants</b>	<b>15,571</b>	<b>51,136</b>
Fund balances, beginning of year	724,290	671,853
Change in fair value of investments	11,458	1,301
Fund balances, end of year	\$ 751,319	\$ 724,290

\*This is an unaudited summary of the Statement of Operations and Changes in Net Assets. To view the complete set of unaudited financial statements inclusive of notes, please email: [newlife@trfbc.org](mailto:newlife@trfbc.org)