



## PROOF

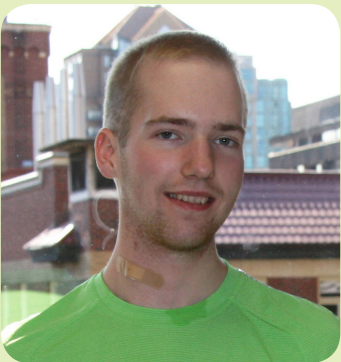
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**EXCELLENCE** *Biomarker solutions for health care.*

*Biomarqueurs – Solutions en soins de santé.*

PATIENT NEWS

Patient Spotlight: **Tyler Smith**, Heart Transplant Recipient



19-year old Tyler Smith suffered from hypertrophic cardiomyopathy and received a heart transplant earlier this year. He is a participant in the BiT program and believes that developing biomarkers to predict organ rejection and to replace painful biopsies will benefit patients immensely.

Since receiving a heart transplant, Tyler has participated in the Vancouver Sun Run, plans to travel the world, and hopes to join the medical profession in the future.

# A BiT of Patient News

## Summer 2011

Welcome to the new issue of the Biomarkers in Transplantation (BiT) patient newsletter! We want to keep you informed and updated on our progress on the BiT study as well as other interesting developments at the PROOF Centre. We like to stay connected with our patients as your participation is very important to us and extremely valuable to the process of improving patient care.

### What is the Biomarker in Transplantation (BiT) program?

The BiT team is developing blood tests that can diagnose or predict rejection in heart and kidney transplantation. The team's long term goal is to replace painful biopsies which is currently the only way to tell if a patient is experiencing organ rejection.

### How do we do that?

The PROOF Centre uses computer science to find blood-based **biomarkers** to distinguish between patients with heart or kidney rejection versus patients without rejection. Once the blood biomarkers have been identified, they are looked for in more patients to make sure they identify rejection.

### What is a **biomarker**?

A biomarker is a biological indicator such as genes, proteins, or metabolites that can be measured reliably, sensitively and specifically to detect or monitor changes in patient health. In the BiT program, we focus on sets of biomarkers that can be measured non-invasively in blood.

PROOF Team Member  
Spotlight: **Sara Assadian**,  
Clinical Research Manager



As the clinical research manager, Sara oversees the enrollment of patients into the PROOF Centre's biomarker programs, including the international sites involved in the BiT study. Sara enjoys being at the forefront of the biomarker programs, as she believes that the research conducted at the PROOF Centre will change how patients with organ transplant will be managed in the near future. "It is very encouraging knowing that you're a part of ground breaking research that will have such a great impact on patient care", says Sara.

## The latest news at BiT

Our labs have been buzzing with activity and we have some exciting developments to share with you! The BiT team has successfully identified unique sets of gene and protein biomarkers that indicate organ rejection. We have also identified biomarker sets that predict organ rejection **before** a transplant even occurs!

Catching rejection earlier, or predicting the potential risk of rejection will let doctors personalize treatments for patients. This includes choosing a medication or initiating preventative measures that are most suited to a patient at a particular time.

We have also been working hard to get our biomarker tests into the clinics. We are now re-testing them in more diverse groups of transplant patients to increase their reliability. Outside of the lab, we have been working with government regulatory agencies, health policy makers, and other partners to speed up this process.

## A heartfelt thank you to our study participants

Patient enrollment in the first phase of the BiT program was 85 heart transplant subjects, 563 kidney transplant subjects, and 122 liver transplant subjects. Enrollment for the second phase now stands at 133 heart transplant subjects which includes 3 pediatric subjects, and 347 kidney transplant subjects.

Patients who participate in our clinical trials are a fundamental part of the BiT program. Without their blood samples, we would not be able to run tests to examine how genes and proteins are expressed differently in patients who have experienced organ failure from those who haven't.

The role study participants play as ambassadors for improved care and outcomes extends beyond the BiT study. In the long run, their blood samples have the potential to assist other researchers in finding solutions to better, more personalized healthcare.

Our participants are the modern day heroes that drive innovation, improvement in health care and quality of life for the rest of us. We couldn't thank you enough!

The BiT study is only one program in the PROOF Centre developing new tools for the management of heart, lung, and kidney diseases. Read our 2nd Annual Report to Stakeholders (2010-11) to learn more about our other biomarker initiatives at [www.proofcentre.ca](http://www.proofcentre.ca)

The PROOF Centre of Excellence is supported by the Government of Canada through the Networks of Centres of Excellence Centres of Excellence for Commercialization and Research (CECR) program.

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Do you have questions about the BiT program or the PROOF Centre? Do you have feedback on our newsletter or have any ideas or stories to share? Contact us at [proof@hli.ubc.ca](mailto:proof@hli.ubc.ca)

The PROOF Centre of Excellence is an NCE CECR (Network of Centres of Excellence, Centre of Excellence in Commercialization and Research) created in 2008. The PROOF Centre is a not-for-profit society based at St. Paul's Hospital (Institute for Heart + Lung Health) in Vancouver, Canada, and hosted by the University of British Columbia. Please visit [www.proofcentre.ca](http://www.proofcentre.ca) for more information.