

Research excellence: a vital part of Héma-Québec's mission!

— SUMMARY

Organizing a blood drive
A whole team effort!



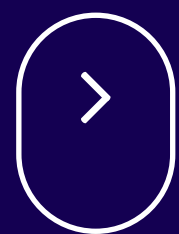
How plasma donations helped Alexandre get his head above water
Testimonial



Hanging onto life by a thread... and by a helping hand!
Testimonial



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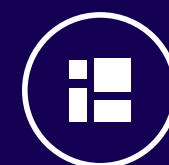
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To reach us:
Toll-free: 1 888 666-HEMA (4362)
info@hema-quebec.qc.ca

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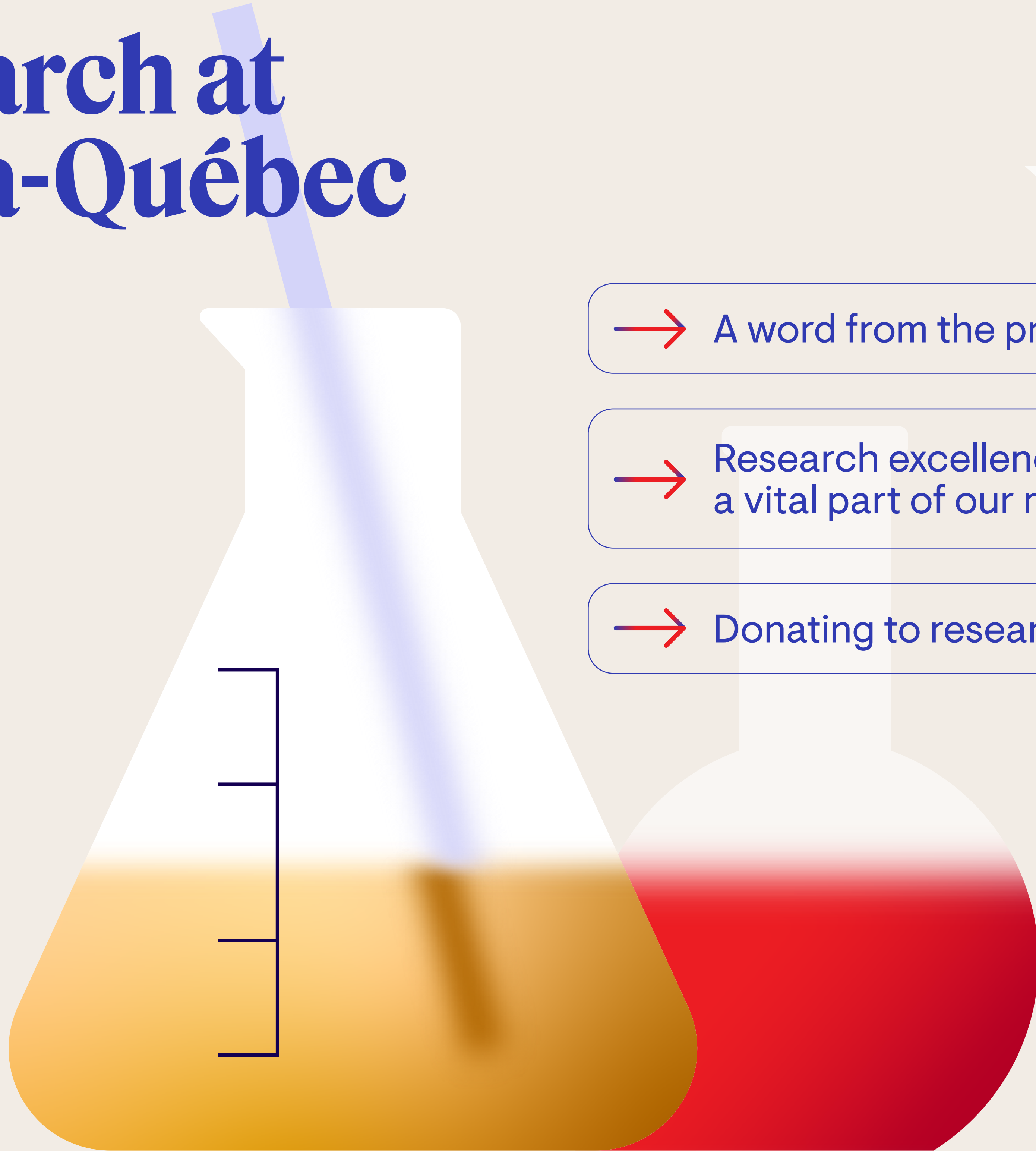
Research at Héma-Québec



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Inspired and inspiring research teams!

Héma-Québec's teams have such a wide variety of expertise, that if you asked someone what they did for their job and they said that they work at Héma-Québec, they wouldn't be giving you very much of an answer! Are they a driver? A lab tech? A nurse? A blood drive advisor? A computer technician?

Maybe they're a cutting-edge scientist, renowned worldwide as an expert in their field! After all, Héma-Québec's research teams are full of people with impressive degrees, who have published scientific papers read by scientists and doctors the world over.

Every year, our team of experienced scientists outdo themselves. Their accomplishments make Quebecers healthier, keep biological product donors safe and make our organization more effective. It's truly something to behold!

I am constantly inspired by their unwavering passion, and proud of everything they've accomplished. In the following pages, you'll read about some of the projects our teams are working on right now. You'll also hear, as you do in every issue of our magazine, some touching stories about the lives of people impacted by our generous donors.

Happy reading!

Nathalie Fagnan
President and Chief Executive Officer

Research excellence: A vital part of Héma-Québec's mission!

Héma-Québec's scientific research teams play a key role in serving the people of Québec and in helping the organization make new breakthroughs and optimize its operations.

Through their many projects, our research teams boost productivity and help the organization better meet needs for blood and other biological products of human origin.



In past years, Héma-Québec’s science wing has played a role in the COVID-19 pandemic response, all the while pursuing multiple research initiatives that testify to our ability to innovate and find creative solutions to numerous public health challenges—as you’ll read in the following round-up.

Rising to the occasion, and learning to pivot

When our research teams were recently handed the case of a patient who needed a very rare type of blood platelets for a potential transfusion, they came through with flying colours—creating a custom solution in no time. In cases like these, we first look for a match in local and international donor registries. Since we could not find one for this patient, Héma-Québec’s lab teams sprang into action to develop a test to identify matching blood samples. This procedure is now in the process of being standardized for use in day-to-day operations and being made available internationally.



Nipping pathogens in the bud

All of the blood donations that Héma-Québec collects are tested for known pathogens that could cause serious problems during transfusions. As a key safety issue, there is obviously no room for compromise. Our research teams are always on the lookout for potential innovations, and are currently working on implementing a technology that would eliminate any pathogens present in blood components from the outset, whether those pathogens are known or not. The effectiveness of this technology has already been proven for plasma and platelets

collected through apheresis, and it is now being adapted for red blood cells.

This is a new technique that leverages existing technologies and has the added benefit of destroying all pathogens in blood components, including pathogens that have yet to be discovered and are therefore undetectable through testing. This could also potentially boost productivity, as it would no longer be necessary to test donations.

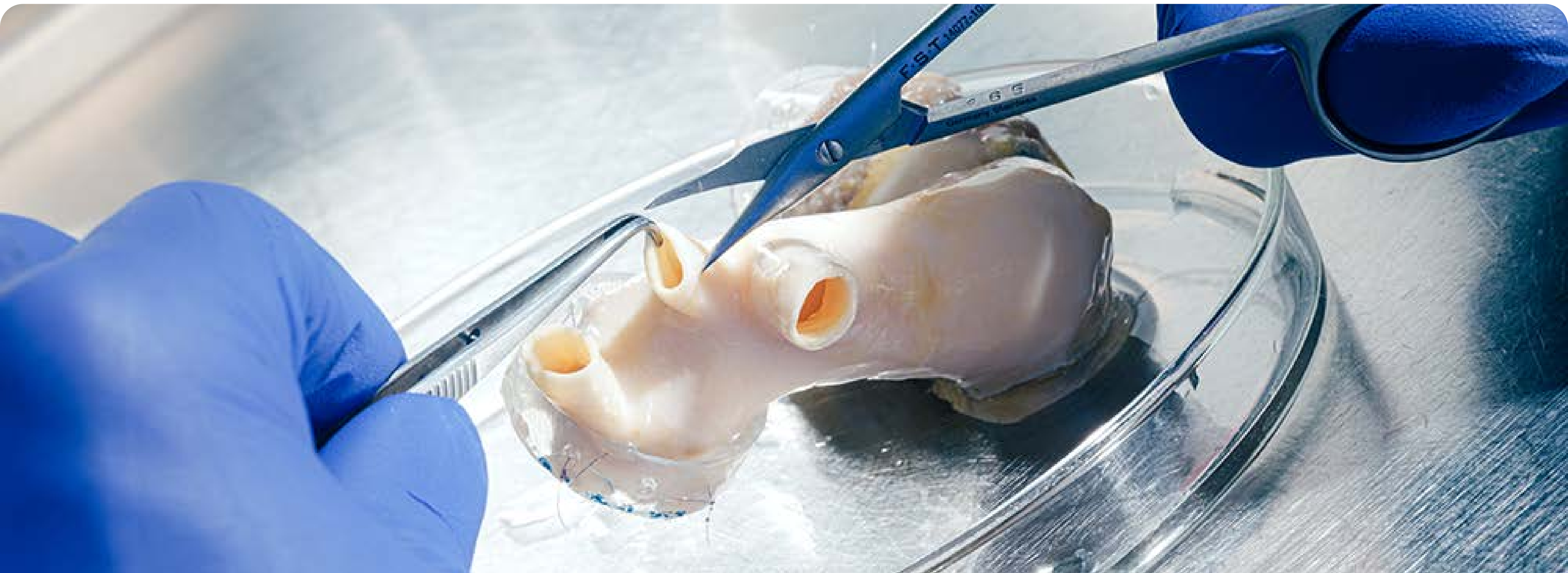
Improving the compatibility of heart valves

Héma-Québec, now the sole human tissue distributor for Québec, is making excellent progress on a research project to remove cells in heart valves in order to increase the likelihood of a transplant's success.

By treating valves this way, we hope to successfully reduce the risk of rejection and increase the lifespan of transplants, as the recipient's own cells will naturally repopulate the new valve, without doing any harm to their biomechanical functions.

Tackling the challenges of the cold chain

Héma-Québec's teams handle and transport a wide range of products, and most of them need to be kept at precise temperatures, and the wild swings in temperature that Québec experiences can really wreak havoc! That's why our research teams are continuing to hone their cutting-edge expertise by testing new materials and configurations to optimize shipping container performance. The cold chain presents some highly complex logistical issues, and innovative approaches developed in Québec are drawing growing interest internationally.



Promising research areas

In addition to the many other scientific research projects Héma-Québec has on the go, we are continuing to use genomics to sequence very rare blood types and explore stem cell matching.

We are also working to gain better insight into Québec's specificities, such as with a study on the effects of cannabis on the immune system and on red blood cells. Few countries have legalized cannabis, and research on the subject remains somewhat limited.

Another ambitious study is looking into the effects of pasteurization on the nutrients in mother's milk.

Our scientific research team is partnering with more and more researchers in Québec and abroad, in all kinds of fields. Héma-Québec is continuing to show why we are a leader in what we do!



Donating to research: Another great way to give!

To bring such major scientific studies to life, our research teams need a large number of biological samples.



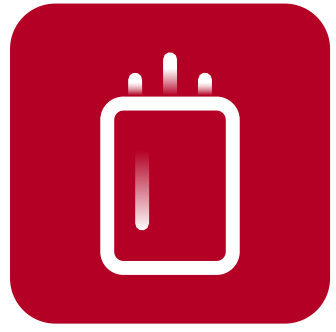
Most research samples of precious products like blood, plasma and mother's milk come from people who for one reason or another do not meet our donor eligibility criteria.

With the recent withdrawal of exclusion criteria for men who have sex with men (MSM) and people with Creutzfeldt-Jakob Disease, the number of people turned away from donating has gone down significantly. This on its own is great news, of course! But at the same time, it reduces the pool of potential donors for research. Although researchers can use the unneeded components from regular donations in some studies, there is still a pressing need for donations for research purposes.

People who want to contribute to research can show their interest and give consent when they make their donation, whether it's at a donation centre or a mobile blood drive.

They can also sign up for a newsletter to stay in the loop of our studies and results. For the moment, only people who live in the Québec City area are allowed to register for research donations.

[TO LEARN MORE OR REGISTER](#)



Blood



Organizing a blood drive is a whole team effort!



You've no doubt seen one of our signs in the window of your neighbourhood's school gym, on a utility pole near your local community centre, or at the entrance to a shopping mall. The title, in all caps, with the Héma-Québec logo: **BLOOD DRIVE**.

We organize all our other planning around recurring drives, which take place at the same place every year. Our donors know they can count on these events, and they help us maintain a stable supply. That said, Héma-Québec is always looking for new partners to widen its pool of donors and make it easier for people to donate blood.

Have you ever considered what a logistical feat it is to put on so many of these events?

Every year, Héma-Québec organizes over 1,800 blood drives across Québec to ensure the province has a sufficient and stable supply of blood. Behind these vital drives lies a finely tuned invisible orchestra of logistics, conducted by Héma-Québec and its many partners.



A symphony of planning

First, we need to choose what type of drive we're organizing and when. To plan a drive, we need to consider several key criteria: the size of the municipality, the number of active donors in the region, daily blood product needs, and our ability to find a site and volunteers. The schedule is set several months in advance. The first events to be confirmed are the higher-volume drives, especially those in remote regions, which require the team to be on site for longer.

Dedicated partners from all walks of life

Businesses and educational institutions play a key role in organizing blood drives. Although elementary and high school students can't give blood (the minimum age for donation is 18), they make amazing ambassadors for the cause—and they are also the future of donor pool. New partnerships also help spread the word about blood donation.

Other ways to get involved

Donating to a blood drive is an amazing thing—it saves lives. But for people who can't give blood products, no matter what the reason, organizing a drive or volunteering for one is just as valuable a way to contribute to this vital mission. The same is true of financial donations to the Héma-Québec Foundation. Everyone has a part to play and together, we can make a difference.

[BECOME A VOLUNTEER](#)

It's important to choose the right site. The space needs to meet strict criteria for safety, hygiene and size (in general, we need a space that is at least 2,000 square feet). Every blood drive is a team effort. Pretty much every one of Héma-Québec's departments is involved: training volunteers, doing promotion, recruiting donors and getting all material and staff where they need to go.

On the big day, nothing is left to chance: the organizing committee, drivers, supervisors, nurses, attendants and volunteers (not to mention the donors!) perform a carefully choreographed dance to make sure the drive goes off without a hitch. This attention to detail ensures people get in, out and around without a fuss, and donors are well taken care of.

Want to learn more?

Watch the *Donneurs de sens* episode on the topic!





How plasma donations helped Alexandre get his head above water

As a young man studying microbiology and immunology at McGill University while competing in high-level swimming, Alexandre Grant couldn't be stopped—until he encountered something far scarier than school and sports.

In his early twenties, while taking part in a competition and training camp in the United States, Alexandre was struck by a multi-day fever. The next week, he suddenly felt weak and experienced a tingling sensation in his hands and feet. He came back to Montréal, and his symptoms got worse and spread to other parts of his body, leading him to visit the emergency room.



The diagnosis came quickly enough: Alexandre had Guillain-Barré syndrome (GBS), a rare disease that causes the immune system to attack the peripheral nerves. His life took an unexpected turn: in a few days, he was almost completely paralyzed. He didn't know it yet, but he would be confined to hospitals for several months.

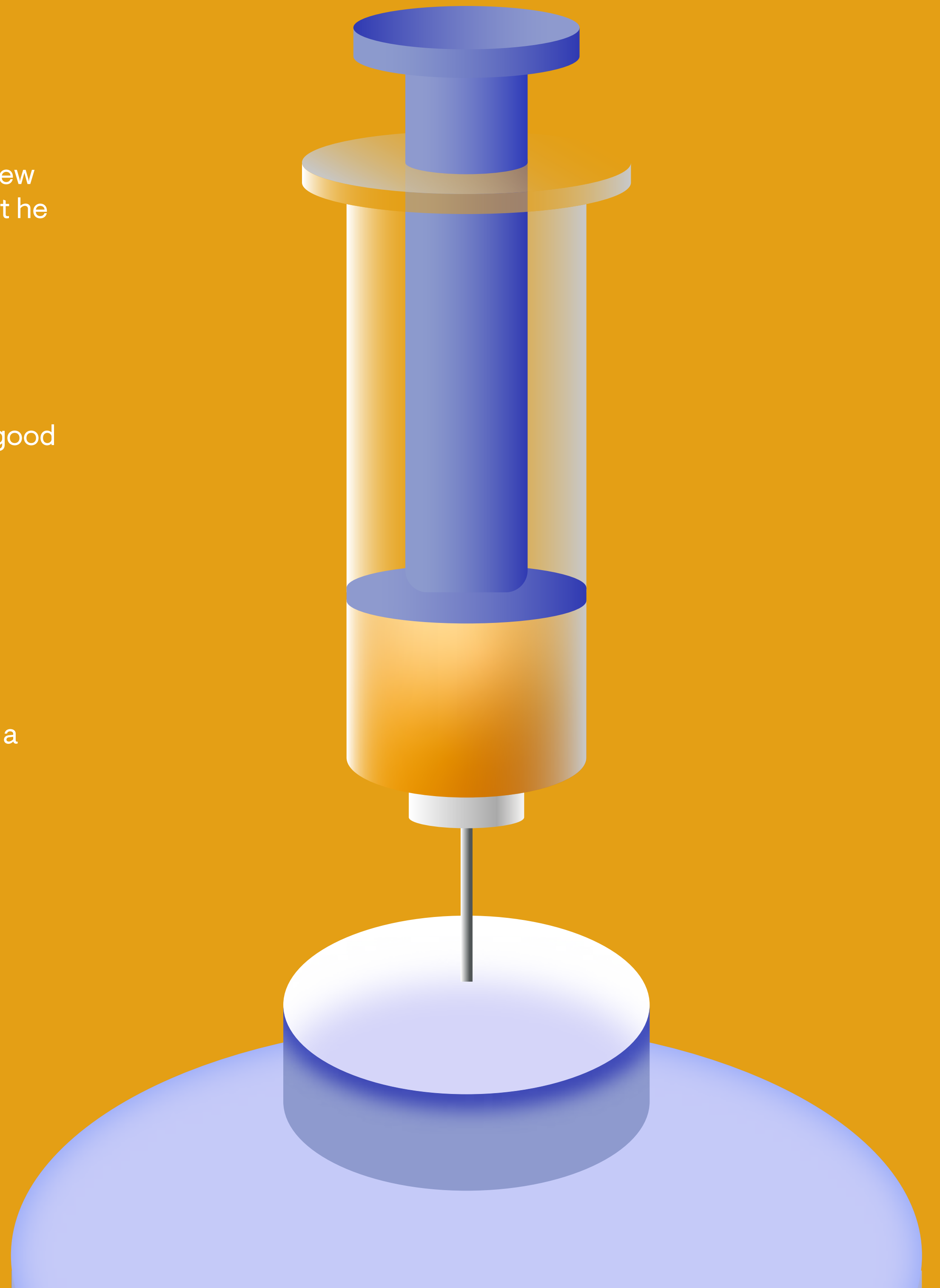
Plasma—the key to treatment

At the height of the disease, Alexandre, formerly an athlete in peak condition, could no longer walk and had to use a wheelchair to get around. Thankfully, GBS is treatable and most people with it make a good recovery, but the road back to health can be long and arduous.

To slow down Alexandre's runaway immune system, doctors gave him a plasma-derived medicine: intravenous immunoglobulin (IvIG). He could finally start his recovery.

But he wasn't out of the woods just yet—rehabilitation was without a doubt the hardest part.

[BECOME A PLASMA DONOR](#)



Learning to hope and move again

When Alexandre was transferred to the Institut de réadaptation Gingras-Lindsay, he was still in a wheelchair, and quite weak. He began an intensive month and a half course of treatment of physical therapy, occupational therapy and psychology. Taking care of his mind was just as important as looking after his body. How do you overcome feelings of loneliness and powerlessness from spending dozens of days bedridden and in pain, unable to move? The rarity of Guillain-Barré syndrome made this feeling of isolation even worse, as so few people have gone through the same thing.

About a year after leaving the hospital and after a lengthy rehabilitation, Alexandre competed in the national swimming championships, breaking his personal bests. But the disease took a toll on his body, which could no longer endure the intense training needed to compete at the elite level, so he made the decision to retire from competitive sports at a young age to focus on his new goal: becoming a doctor.



Photo credit: Rick Katigbak



Giving back to the community

Now well-educated on the importance of plasma donation, Alexandre has become a frequent donor, making sure to visit a Héma-Québec donation centre whenever he is back in Québec from medical school at the University of Alberta.

After Alexandre's sister met a volunteer at a donation centre, she told him that there was a foundation dedicated to Guillain-Barré syndrome. That is how he got involved with the GBS/CIDP Foundation of Canada (the second acronym is for another rare neurological disease: Chronic Inflammatory Demyelinating Polyneuropathy), first as a volunteer, then representing Québec as a director on the Board. In this role, Alexandre can now contribute to raising awareness about plasma donation and support people affected by the disease in Québec. Since February 2025, Alexandre has also been the interim chair of Héma-Québec's Recipient Representatives Advisory Committee.

GBS is a rare condition, and information is not always easy to find, so patients often feel isolated. Alexandre himself had very little knowledge about the issue, even after studying in health care. That's why, in addition to providing general information about the disease, the GBS/CIDP Foundation organizes support groups and raises awareness and money for its programs. The Foundation's volunteers can also frequently be seen at Héma-Québec donation centres.

“GBS can be quite stressful and confusing for both the people who have it, and for their families and loved ones,” says Alexandre. “The Foundation helps raise awareness of the disease with the general public and health care professionals, and also promotes the importance of plasma donation.”





DOUBLE HEART VALVE TRANSPLANT

Musician Alex Henry Foster was hanging onto life by a thread... and by a helping hand!

For years, Montréal singer and musician Alex Henry Foster's flourishing career had him jetsetting around the world.

After his first international success with the pop-punk group Your Favorite Enemies, he split his time between the band's renovated home base in Drummondville, a second studio in Virginia and his adoptive home of Morocco.

Alex never felt fully at home in the role of pop star, so in his solo career he embraced a more experimental style. Loyal fans filled the seats for tour after tour, and numerous festivals invited him to grace their stages. Success surely has a way of finding Alex, but he remains humble and consistently grateful. His story hasn't been without challenges, of course—one of which nearly cost him his life.

Stopped in his prime

On a 2022 tour during a particularly scalding European summer, Alex started having bouts of dizziness and fatigue, followed by episodes that felt like mini heart attacks. One day, he fainted onstage—only briefly, but it was still enough to cut the tour short.

Once back in Québec, he went to see his doctor, who checked his vital signs and told him to go straight to the hospital for treatment. Alex was sceptical and voiced his resistance: he was supposed to be on a plane in just a few hours to start a major tour. The doctor made it clear that the situation was serious. Tour or not, there was no time to waste.



Alex found himself in the middle of a whirlwind. He was told that he needed an emergency operation for a double heart valve transplant. An eternal optimist, he was still sure that he could go ahead with his 18-month tour, but reality hit hard when the hospital staff asked whether he'd made a will.

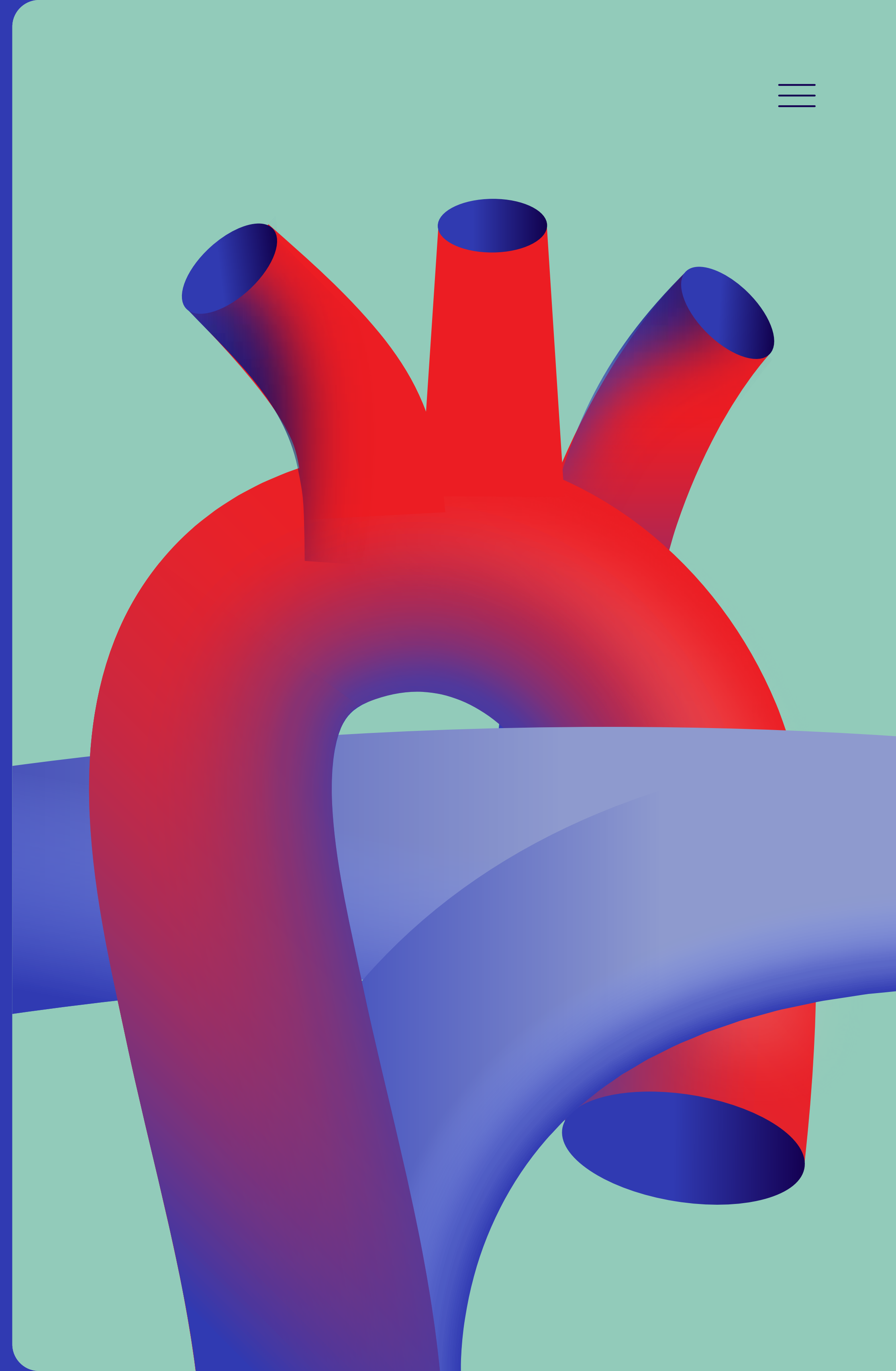
The operation was more complex than expected. It took 10 hours, and Alex was clinically dead for a brief moment before the team managed to revive him. Operations like this one involve a huge loss of blood. Alex owes his life to medical technology and, above all, to major blood transfusions.

A new life

Alex spent the next 10 days in intensive care, and then was transferred to a standard unit for another week. When he went home, even though he was confident that he'd be back on his feet soon, he had to accept that nothing would ever be quite the same.

For the first four months, he was unable to speak. He had lost so much blood that he'd suffered mini-strokes, affecting his cognitive abilities. Always a high-energy person, he now forgot words and could no longer read books or play instruments. He had always put in the work to stay in good shape, but now he wasn't sure he'd be able to exercise again.

Alex was rocked by tumultuous feelings. He felt as if he'd lost some essential part of his identity. He had to relearn how to do everything, and he felt completely derailed. He looks back on this point of his recovery as one of the hardest in his life, but also one of the most formative. He had no choice but to learn to see life in a new way—one that was truer to himself.





Alex is deeply grateful for the work of the CHU de Sherbrooke team, for the generous donors that made his transfusions possible and for the access we have to a public health system. He also feels, however, that people often underestimate the need for psychological support during the recovery period. For him, the most difficult months came after he was discharged from the hospital.

When life hangs by a thread

The whole experience has made Alex a vocal ambassador for donating blood products and human tissue. He always saw it as a duty to sign the back of his health insurance card to consent to be an organ and human tissue donor, but now he goes above and beyond to spread the word to people around him.

Thankfully, with plenty of help from his generous support network, Alex was able to get through his time of trials. A year after his surgery, he was able to begin slowly returning to his usual activities and his music career, though he was far more aware of his limits than before.

He is patiently rebuilding the physical abilities and muscle mass he lost. And he's now attuned to the little everyday things we so often take for granted.

He's come a long way. And he's lucky to be alive, as his doctors explained to him when they told him they didn't understand how he'd been able to keep up the pace he was living at: when he was admitted to the hospital, his heart was functioning at only around 10% of normal! At that point, a simple faint would have killed him. Alex was lucky, for sure—but part of his miraculous escape is also the generosity of Québec's blood product and human tissue donors.

Alex Henry Foster will soon be celebrating the first anniversary of his return to the stage, with the May 2025 release of the short album *A Nightfall Ritual*, with four tracks recorded live in concert. His next studio album is planned for November of this year.



Photo credit: Stéphanie Bujold

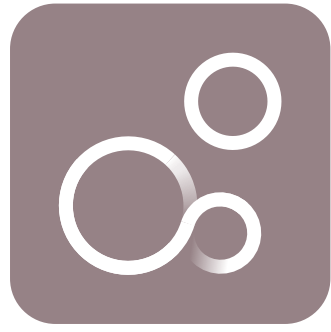
Do you know about National Organ and Tissue Donation Awareness Week?

Did you know that the last full week of April is National Organ and Tissue Donation Awareness Week? This year, we are celebrating and spreading the word from April 20 to 26. One of its main goals is to educate Quebecers about the importance of consenting to be an organ and tissue donor.

To understand how important this is, all you need to know is that one single person who donates human tissue can change the lives of up to 20 people. That's why it's so vital to sign your card to show that you consent to donation, and to discuss your choice with your loved ones so they know your intentions. Conversations about human tissue donation can change lives!

To learn more, check out [Héma-Québec's website](#), especially its [page about human tissue donation](#)!

[LEARN MORE](#)



Not all heroes wear capes... but some wear helmets!

Ex-firefighter Sylvain Côté was facing down his second prognosis of imminent death, when for the first time he found himself on the other end of an act of heroic altruism: a total stranger had saved his life. Here is his story.

My life took an unexpected turn in November 2018, when I learned I had multiple myeloma. An incurable kind of cancer, they told me. Back then, I was a firefighter working for the city of Saguenay. The diagnosis was a huge shock, obviously... but I was determined to fight. After a course of treatment, including a transplant from my own stem cells, I was able to get back to normal life and keep on advocating for firefighters as president of the union.

September 2022 sprang a whole new challenge on me: leukemia. The doctors told me I only had three weeks to live. News like that hits hard, and it wasn't any easier the second time around. I felt the world cave in on me.



Sylvain Côté with Josée Larrivée,
Héma-Québec spokesperson

That's when the care team told me that a stem cell transplant might be a possibility, and a little door opened in front of me and let in the slightest bit of light. Unfortunately, neither my brother nor my sister were matches for me, and there was no Québec donor who matched my profile either. Hope came from an American donor. He gave me the incredible gift of a chance to survive. It wasn't a sure thing, but I had a chance. A chance to see my daughter grow up, to enjoy my retirement, to reach for the dreams I'd been holding inside me for years.

I had the transplant in November 2022. My health gradually improved, and today my bloodwork is looking great.

I make the most of every single day, and I do what I can to get more Quebecers to understand how important it is to sign up for the Stem Cell Donor Registry. The more genetic profiles we have in the bank, the more lives we can save!

I have no words to express how incredibly grateful I feel. You can't imagine how overwhelmingly connected to humanity you feel when you learn that someone, somewhere, has made the deliberate decision to save your life even though they know nothing about you—just out of pure goodwill.

And I should know it, because I got to meet the person who agreed to make the donation that saved my life. Not all stem cell transplant recipients get that chance, because the donor can always choose to stay anonymous.



Sylvain Côté with his family

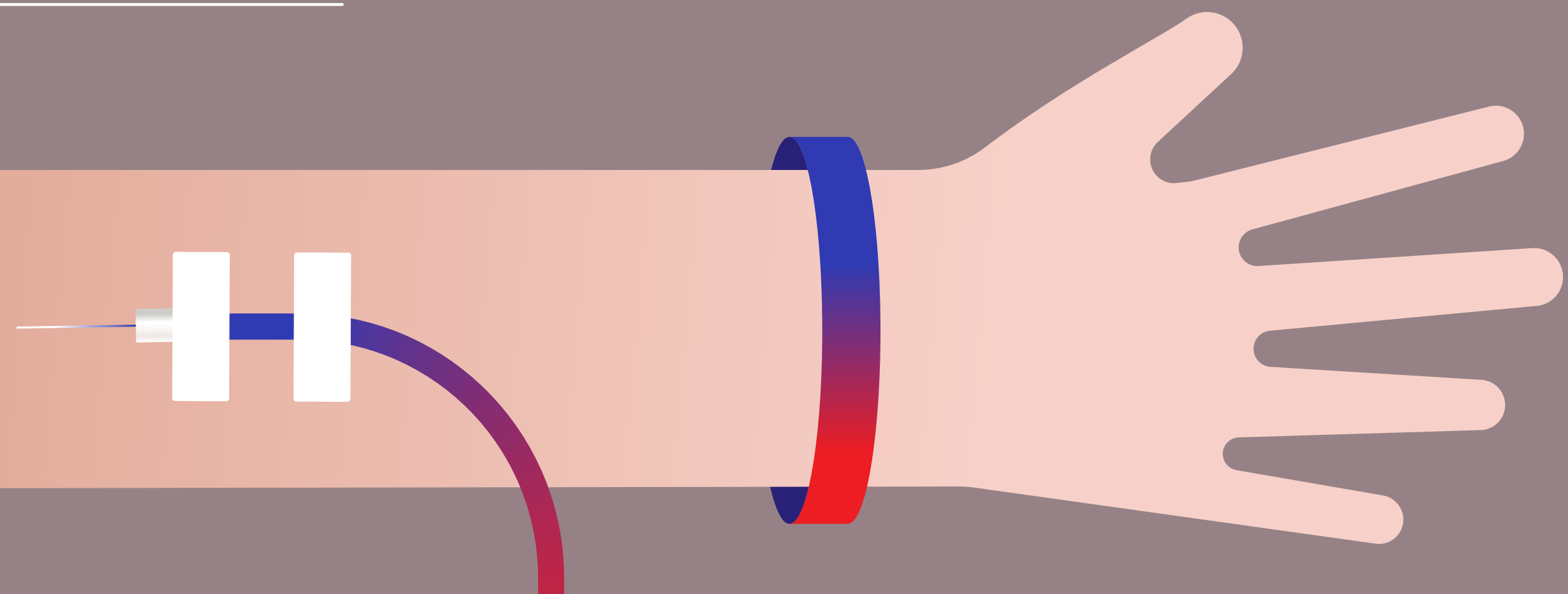


After the donation, my donor, Parker Lovelace, wrote me a letter explaining why he'd agreed to do it. Parker lost his father shortly after he turned 20, and he wanted to spare other families that pain. That's why he signed up for the stem cell registry in Atlanta. In his letter, he thanked me for having "given him something priceless" too: the chance to step up and do something that changed his whole outlook on life. At the end of the letter, he said that he was open to the idea of meeting me if I liked.

How could you possibly say no to meeting somebody who saved your life and thanked you for it? After the letter, I started calling Parker 'Par Cœur'—that's how I pronounced his first name anyway, but I'd never noticed before how writing it in French, like the words *by heart*, fit him like a glove.

We met up on July 11, 2024, in a microbrewery in Boston. It was a very touching moment—I'll never forget it. I broke down in tears in Parker's arms. Here was this total stranger, and his blood was running in my veins. As a symbolic thank you, I gave him the firefighter's helmet I wore for my last work shift. I had been meaning to give it to my daughter, but she agreed that having her dad beside her meant a lot more than a helmet to remember him by! If I'm enjoying my retirement, if I'm still here, all of that is thanks to my donor.

Héma-Québec spokesperson Josée Larivée invited me to give a talk to all the employees at her organization. That was the first of about a dozen, and counting! I love giving these talks, especially to CEGEP students.



My story has also drawn attention from the media and from my MP, Yanick Gagnon, who helped me bring my message all the way to the National Assembly of Québec. Thanks to him, I met with Minister Boulet, and a proposed regulation was tabled to add six new cancers to the list of recognized occupational diseases.

Today, I play badminton three times a week with old friends. I'm thrilled to be able to stay in shape and enjoy my life. One of my friends teases me that my donor's cells have given me an extra boost on the badminton court—Parker's a great athlete!—but I like to think I'm just aging like a fine wine!

Now that I'm in remission for two cancers, I don't put too much stock in prognoses anymore. I've been told twice that I only had a few weeks to live. Now I make the most of every day and every minute I get with people I love. Just like when I used to fight fires, I've found a new way to try to save lives, by volunteering with firefighters and with Héma-Québec.

I've been lucky—incredibly lucky, astoundingly lucky—and I try to pass on that luck to people who will need it in the future! There's nothing better than helping others. That's a simple truth that I keep in mind all the time. It's bone deep, just like Parker's stem cells.

Sign up to the Register!

THREE STEPS TO SAVE A LIFE

Every year, thousands of people learn that they have a serious illness like cancer. For some of them, stem cell transplantation is the only chance of survival. Unfortunately, three times out of four, there is no compatible donor within the family. That is when Héma-Québec's Stem Cell Donor Registry becomes a great hope. By signing up to the Registry, you increase the chances of a patient finding a compatible donor.

- 1**
 - I qualify.
 - I am between 18 and 35 years old.
 - I am in good health.
 - I get informed and I sign up.
 - I fill out the registration form on Héma-Québec's website. I then receive an oral sample kit in the mail.
- 2**
 - If I am potentially compatible with a patient waiting for a transplant Héma-Québec contacts me in order to conduct extensive analyses to confirm my genetic compatibility with that of the patient.
- 3**
 - If all the best conditions come together, I am invited to donate my stem cells.
 - I go for a general physical exam and I sign a consent form.
 - I give my stem cells.

SIGN UP TO THE REGISTER



Mother's milk

Can you really donate mother's milk?

Absolutely! The Public Mothers' Milk Bank was created in 2014 to help mothers and their premature babies who need medical care. Around a third of mothers who give birth prematurely have difficulty producing enough milk to feed their baby. Still curious? Here are five (more) interesting facts about donating mother's milk.



1

How much milk is needed

Every year, the Public Bank provides over 3,000 litres of mother's milk to support around 1,000 premature babies in Québec.

2

Rigorous screening process

Becoming a mother's milk donor is a multi-step process that includes a phone interview, a health questionnaire and a blood test to screen for infection diseases.

3

Benefits for premature babies

The Bank's mother's milk is especially helpful for very premature babies: it helps prevent serious infections, improves digestion and supports neurological development.



4

A generous act... with no risk!

Donors must follow strict hygiene measures to guarantee that collected milk is free from all bacteria. This means that the babies get much-needed milk with no risks included!

5

Solidarity between mothers

Donating mother's milk creates a chain of solidarity between mothers and gives hope and support to families with premature babies. It's more than just a medical product—it's a powerful symbol, and it does good in more ways than one!

These facts show how crucial and beneficial mother's milk donation is for premature babies and their families.

Become a mother's milk donor

Do you have the required profile?

- Be in good health.
- Have a baby that is less than eight months of age.
- Be nursing and have an overproduction of milk.
- Be a non-smoker.
- Live in a municipality located in the Montréal or Québec city metropolitan community or reside within a one-hour drive from the following drop-off points (donation centres in Gatineau, Sherbrooke, Saguenay of Trois-Rivières).

By accepting to share your surplus milk, you are providing an invaluable service to these mothers and their premature babies.

In Québec with its love of children, there is no greater proof of solidarity between mothers.

BECOME A DONOR





HémaQuébec

BLOOD and PLASMA
MOTHER'S MILK
STEM CELLS
HUMAN TISSUES