

RESEARCH AND INNOVATION AT HĒMA-QUĒBEC
YESTERDAY, TODAY AND TOMORROW



SHEDDING LIGHT ON OUR ACHIEVEMENTS

THE 2023 SCIENTIFIC ACTIVITIES REPORT



Héma-Québec’s scientific activities report sheds light on the scope of our organization’s scientific achievements. The publication of the 2023 edition coincides with Héma-Québec’s 25th anniversary. It is, therefore, an opportunity to highlight the extent to which research and innovation are central to Héma-Québec’s mission —

YESTERDAY, TODAY AND TOMORROW.

25 YEARS OF RESEARCH AT HĒMA-QUĒBEC FROM YESTERDAY TO TODAY



1998



Start of research
and development
operations

1999

Creation of a research group in charge of evaluating and optimizing the products, processes and operations

2003

Development of an in-house screening test for West Nile virus and use for testing blood products — a first in Canada!

2004

Relocation of the research activities in a new building on the campus of Université Laval

2007

Launch of a mass genotyping program for blood donors, thanks to a partnership with Génome Québec

2013

Production of plasminogen eye drops for the treatment of ligneous conjunctivitis — an innovation awarded a prize from the ADRIQ¹

2017

Merging of the Vice-présidence à la recherche et au développement and the Vice-présidence aux affaires médicales — a reorganization that gave birth to the Vice-présidence aux affaires médicales et à l'innovation and the Vice-présidence à la médecine transfusionnelle

2018

Establishment of GoPAMI²: a committee in charge of evaluating the projects submitted by scientific staff

2020

Resumption of the CCSM³ meetings — a committee that advises the advisory board on scientific progress, evaluates projects, and monitors the implementation of procedures and policies in research and development

2020-2023

Participation in COVID-19-related studies, in collaboration with the INSPQ⁴ and many other academic research partners

¹ Association pour le développement de la recherche et de l'innovation du Québec.

² Gouvernance des projets — Affaires médicales et innovation.

³ Comité consultatif scientifique et médical.

⁴ Institut national de santé publique du Québec.

SCIENTIFIC ACHIEVEMENTS
HELP SOLIDIFY HĒMA-QUĒBEC'S
POSITION AS A LEADER IN
RESEARCH AND INNOVATION.

Improving the inclusiveness of blood donation

The criterion regarding Creutzfeldt-Jakob disease was withdrawn in December 2023, after research conducted by Héma-Québec showed the safety of this measure.

Héma-Québec continues to assess the effects of expanding the eligibility to donate blood products to men who have sex with other men, a major change that came into effect in 2022.



MEET OUR RESEARCH
TEAMS

Mathieu Drouin, MSc

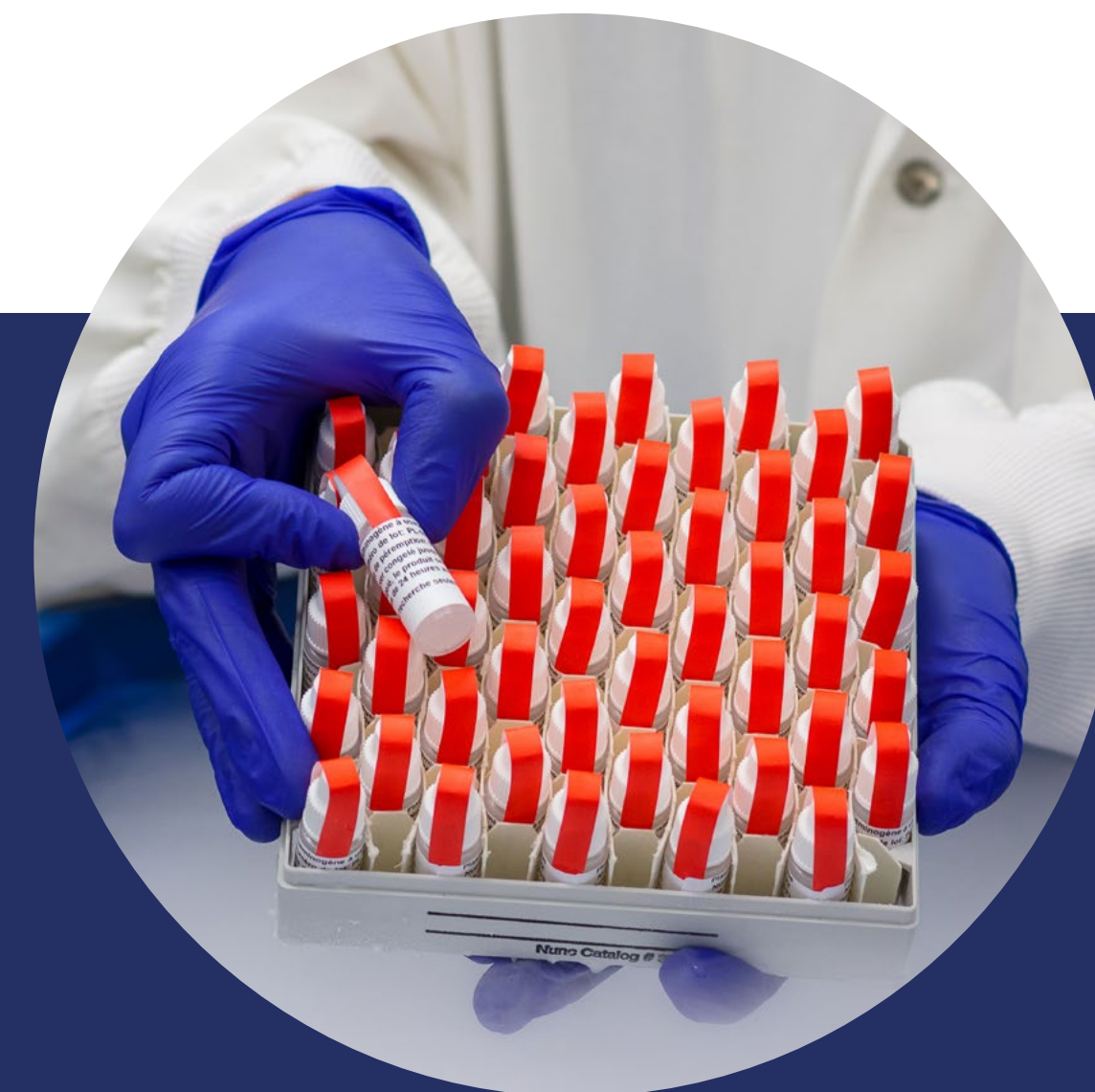
Research Professional

"Working as a research professional at Héma-Québec means leveraging innovative ideas for the organization. We feel that our research projects make a difference not only in day-to-day operations, but also in the advancement of the science of blood cells."



THE ACHIEVEMENTS OF OUR TEAMS
HELP IMPROVE THE HEALTH OF
QUÉBEC'S POPULATION.

Innovations serving the public



Four new patients with ligneous conjunctivitis — a rare genetic condition that can lead to blindness — are benefiting from plasminogen eye drops produced by Héma-Québec.

These drops have significantly improved their well-being, giving them a near-normal vision.

The rare blood program was launched in June 2023 in partnership with six hospitals.

This will allow for the needs of recipients with rare blood, who need frequent blood transfusions, to be better addressed.

Our teams are working on developing a new method to isolate granulocytes.

This method will make it possible to add value to a byproduct that is usually rejected, i.e., residual leukocytes.

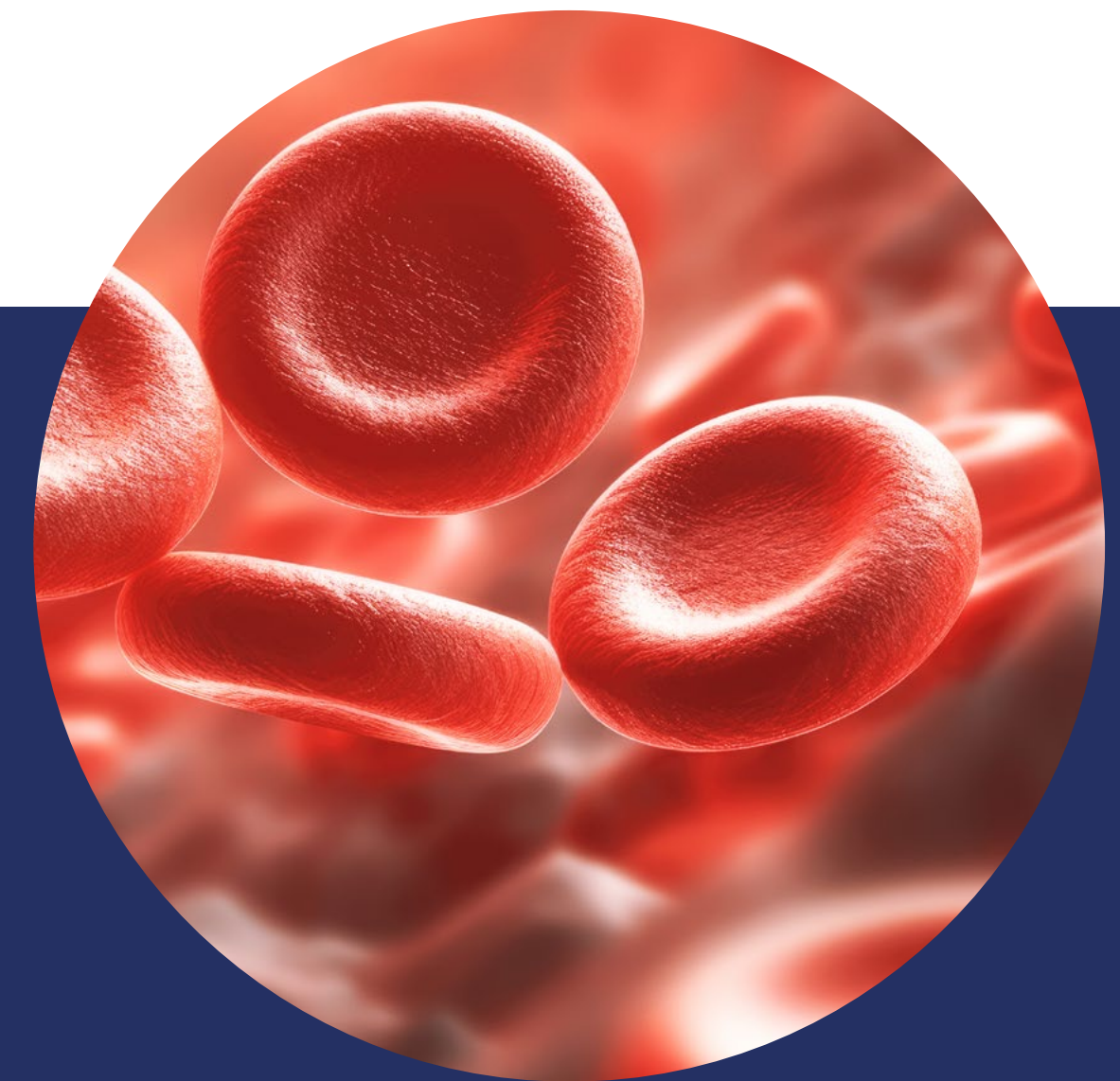
MEET OUR RESEARCH
TEAMS

Josée Perreault, PhD
Research Professional

"The aim of research is to help, facilitate, optimize and find solutions to understand and solve life's big and small challenges. Participating in this mission is what motivates me every day. I am proud that my work can have a positive impact for donors and recipients."



HĒMA-QUĒBEC HAS A CENTRAL
ROLE IN TRAINING THE NEXT
GENERATION OF SCIENTISTS AND
DISSEMINATING KNOWLEDGE IN
TRANSFUSION MEDICINE.



Outreach and training

Organization of two symposiums

The first dealing with international practices regarding the eligibility criteria for blood product donation by men who have sex with other men, in collaboration with Canadian Blood Services (CBS).

The second addressing the opportunities and challenges of cell therapy and regenerative medicine, in collaboration with TheCell Network.

Training

Eleven students (4 undergraduate students, seven master's or PhD students), three post-doctoral researchers, and two fellows in transfusion medicine were trained at Héma-Québec.

Knowledge dissemination

Héma-Québec took part in drafting the first edition of a guide intended for personnel working in hospital blood bank laboratories on the best practices to be adopted in immunohematology.

MEET OUR RESEARCH
TEAMS

Marie-Josée Fournier, MSc
Research Professional

"I'm proud to be part of Héma-Québec's mission by helping to provide high-quality blood products to the population. The Medical Affairs and Innovation team is a group of scientists whose role is to provide expertise and support to the operations. Challenges are my greatest source of motivation."



AT HĒMA-QUĒBEC, WE THINK BIG.
THE FUTURE OF OUR SCIENTIFIC
ACTIVITIES HINGES ON FIVE
ORIENTATIONS DEFINED
IN THE 2021-2027 STRATEGIC PLAN.



Looking to the future: our five priorities

1

Strengthen our position in matters of services and reference laboratory expertise with target groups

2

Define and structure Héma-Québec's role in the stem cell and cell therapy sector and obtain the ministerial mandate for the stem cell registry

3

Develop research collaborations on projects related to human tissues

4

Assess and deploy new leading-edge scientific services and a new range of biological products

5

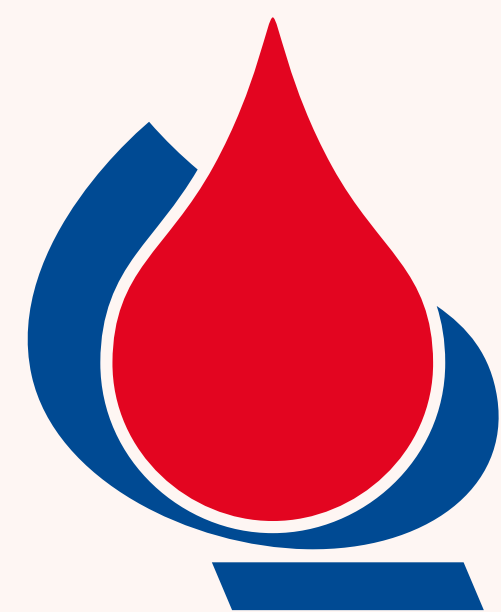
Pursue research, studies and projects with high potential

MEET OUR RESEARCH
TEAMS

Nadia Baillargeon, TM
Senior Specialist
in Erythrocyte Immunology

"The work carried out in erythrocyte immunology involves gathering and interpreting data like an investigator. Some of these clues are obtained thanks to the invaluable support of the research teams that conduct specialized analyses. Everyone works efficiently and rigorously to ensure that our expertise and innovation benefits the Québec population!"





HÉMA-QUÉBEC

www.hema-quebec.qc.ca