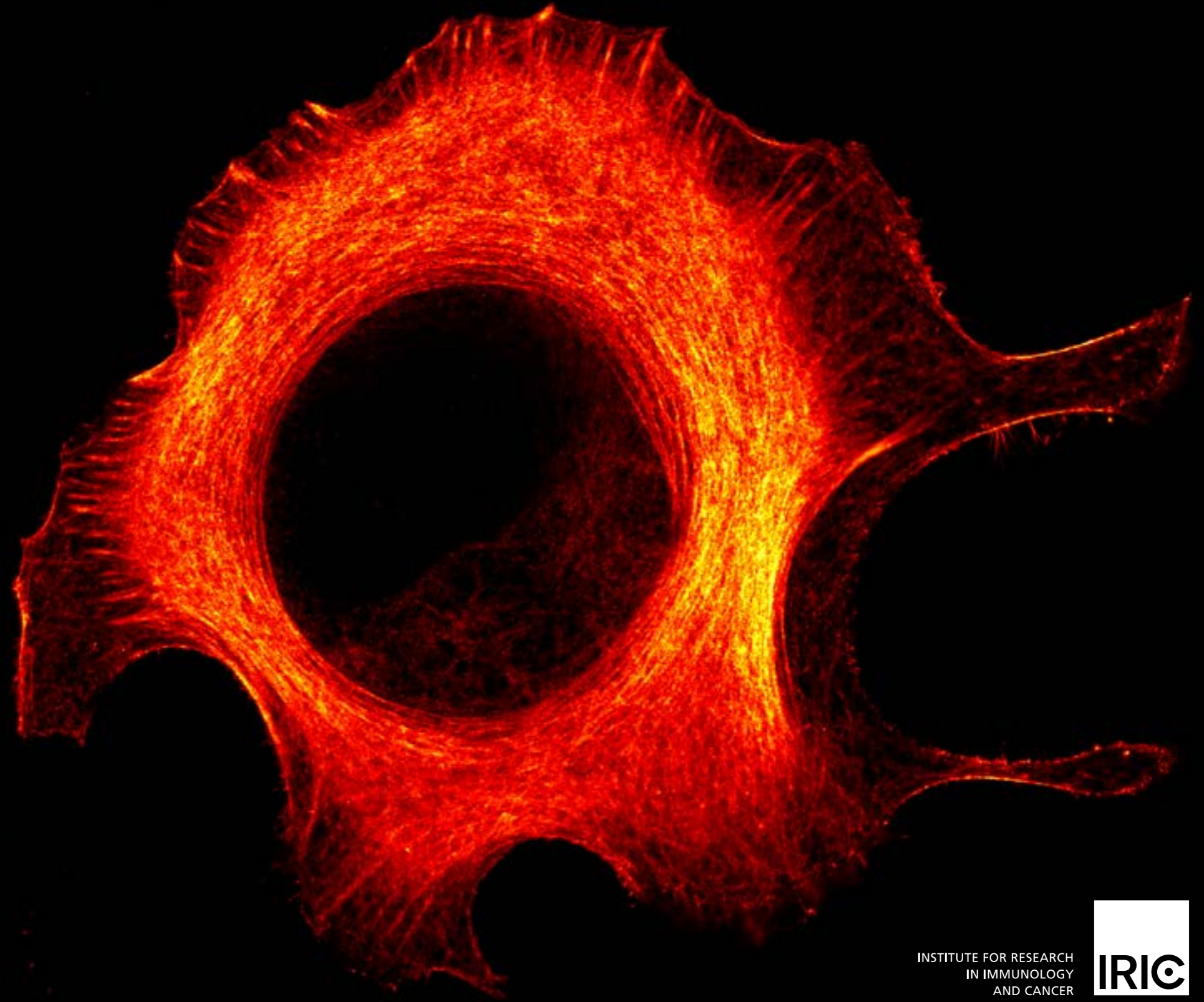


# ACTIVITY REPORT 2022-2023



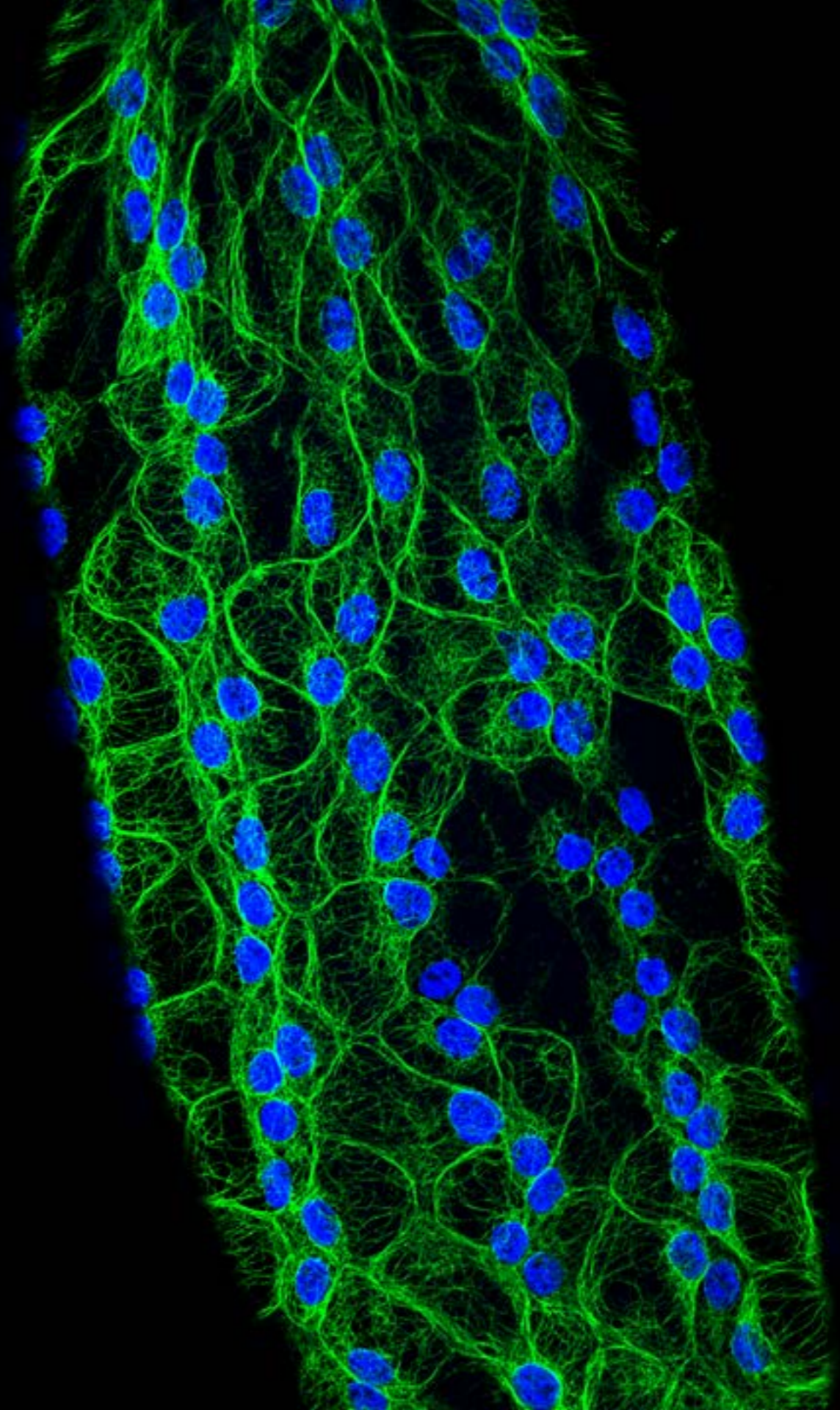
INSTITUTE FOR RESEARCH  
IN IMMUNOLOGY  
AND CANCER



Université   
de Montréal

# TABLE OF CONTENTS

- **Mission and vision of IRIC**
- **Board of directors**
- **Recruitment of researcher Vincent Q.Trinh**
- **IRIC stands out**
- **Funding to propel IRIC forward**
- **Research and development partnerships**
- **Scientific emulation**
- **A committed next generation that is distinguishing itself**
- **Distribution of students and trainees**
- **Training grants**
- **2023 Student Recruitment Event**
- **Cutting-edge technology platforms**
- **Drug discovery Unit and IRICoR**
- **Philanthropy: the impact of your donations**
- **Our donors**
- **Make a difference, donate to IRIC**
- **Financial portrait**

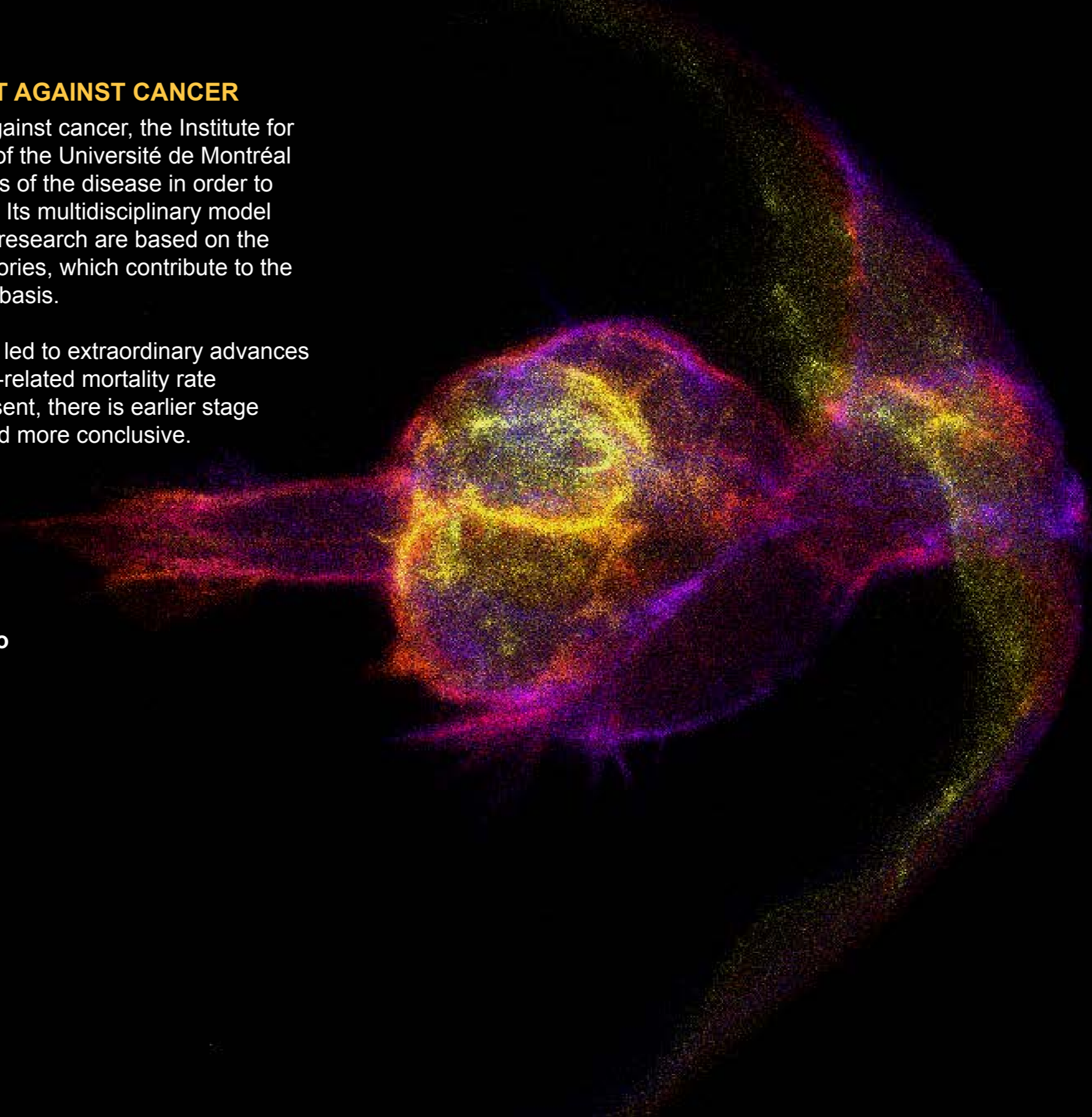


## **IRIC A KEY PLAYER IN THE FIGHT AGAINST CANCER**

Research hub dedicated to the fight against cancer, the Institute for Research in Immunology and Cancer of the Université de Montréal strives to shed light on the mechanisms of the disease in order to discover more effective new therapies. Its multidisciplinary model and its innovative way of approaching research are based on the complementary expertise of its laboratories, which contribute to the advancement of knowledge on a daily basis.

Cancer research provides hope. It has led to extraordinary advances over the past few decades: the cancer-related mortality rate has decreased, prevention is omnipresent, there is earlier stage screening and treatments are more and more conclusive.

**IRIC's 20<sup>th</sup> anniversary Launch Video**



# MISSION AND VISION

## MISSION

Acquiring new knowledge through high-level fundamental research, training tomorrow's scientists and accelerating the discovery of new therapies.

## VISION

Positioning itself to remain a global standard bearer in fundamental and applied research to vanquish cancer.

## IRIC'S ASSETS, PROVIDING UNDENIABLE VALUE

The Institute has a unique model that combines, under one roof: 27 teams of scientists, a research valorization team, 10 core facilities and a Drug Discovery Unit.

The synergy between all of these components is what creates its value.

## AN INCLUSIVE RESEARCH ENVIRONMENT

As an institution, IRIC seeks to promote equity and increase diversity and inclusion, in all of its forms, throughout its various programs.

To that end, the Institute encourages its members to be aware of potential implicit biases when making decisions, reviewing, grading and discussing applications and/or resource allocation so that everyone can work together to combat their negative impact. Through various initiatives (visits, workshops, screenings, etc.), IRIC wishes to catalyze increased diversity and inclusion within its walls as well as to ensure an equitable work environment for all of its members.

# THE BOARD OF DIRECTORS

IRIC has the privilege of being supported by a Board of Directors possessing diversified assets that ensures the endorsement of its strategic orientations and that promotes and sustains its mission. In 2022-2023, IRIC's Board was newly chaired by William Brock, Lawyer Emeritus of the Barreau du Québec and a partner at Davies Ward Phillips & Vineberg in Montreal and was made up of 12 active members.



**WILLIAM BROCK**  
*Chairman of the Board*

I am immensely proud to be the Chair of the Board of Directors of IRIC and to assist our leadership and world class teams of researchers and scientists. The past twenty years have seen remarkable achievements, and I am convinced that the best is yet to come.

Cancer is a scourge, and still kills far too many. The search for better understanding, new therapies and cures continues every day, and the excellence, creativity, passion and devotion of everyone at IRIC gives me great hope not only that cancer will be vanquished, but that IRIC will continue to play an indispensable role in this noble Institute.

I would like to thank our entire community, and all our supporters, not only for what they have done over the last 20 years, but also for what I am sure the future holds. We should all be proud.

## CHAIRMAN

**William Brock**  
*Chairman of the Board,  
Partner, Davies Ward Phillips & Vineberg*

## MEMBERS

**Jacques Bernier**  
*Managing Partner, Teralys Capital*

**Frédéric Bouchard**  
*Dean, Faculty of Arts and Sciences, UdeM*

**Patrick Cossette**  
*Dean, Faculty of Medicine, UdeM*

**Clarissa Desjardins**  
*Entrepreneur and Founder, Congruence Therapeutics*

**Sylvain Fortier**  
*Chief Investment and Innovation Officer,  
Ivanhoé Cambridge*

**Jean-François Leprince**  
*Managing Partner, CTI Life Sciences Fund and Chairman  
of the Board, IRICoR*

**Michel Bouvier**  
*Chief Executive Officer and Principal Investigator,  
IRIC, UdeM*

**Marie-Josée Coutu**  
*President, Marcelle and Jean Coutu Foundation  
Honorary member*

**Marie-Josée Hébert**  
*Vice-Rector of Research, Discovery,  
Creation and Innovation, UdeM*

**Jean Royer**  
*Vice-President, Distinction Capital*

**Robert Paré**  
*Fasken Martineau DuMoulin S.E.N.C.R.L., s.r.l.*

**Marc Therrien**  
*Scientific Director and Principal Investigator, IRIC, UdeM*

## AUDACITY AND HOPE

Few scientific activities have such enormous potential as the fight against cancer. Almost everyone's life will, in one way or another, be changed by this disease. And almost everyone's life could one day be transformed by advances in cancer research.

After two decades of scientific successes at IRIC, and some stunning discoveries, we can now look forward to a victory over cancer and a better life for those who suffer from it. IRIC has set itself apart through its unique approach to research. The strategy of bringing together under one roof all the disciplines essential to the discovery of new therapies and adding a research valorization team to make discoveries to their ultimate phase, acts as a formidable force of attraction for the most talented scientists and the best of the biopharmaceutical sector's next generation.

But IRIC is much more than a strategic player in the fight against cancer. It's a cause that inspires an entire community of visionaries. The secret of the Institute's success lies in the support of philanthropists, private companies and governments. Thanks to the generosity and loyalty of our partners, we can look to the future with boldness and hope.

**Daniel Jutras,**  
*Rector of Université de Montréal*

## TWO DECADES TO CELEBRATE

Over the years, IRIC has been able to set itself apart and has become a true leader with respect to advancing knowledge in the field of cancer. I have so many reasons to be happy about our recruiting, our collaborations and the funding allocated to the excellence of our scientific community. I would therefore like to thank our entire community for the year that has just ended.

The beginning of 2023 was marked by the launch of IRIC's 20th anniversary celebrations. The first initiative, the FOCUS Exhibition, was the fruit of a collaboration between scientists and philanthropists, and between science and art. The festivities continued with the in-person return of our flagship philanthropic event, Audace. Following a long break caused by the pandemic, what a pleasure it was to bring together and honor our donors, our partners and our community in the flesh!

I am most definitely very proud to work alongside motivated, engaged and creative people on a daily basis. I am very excited to begin the coming year and to continue our anniversary celebrations. .

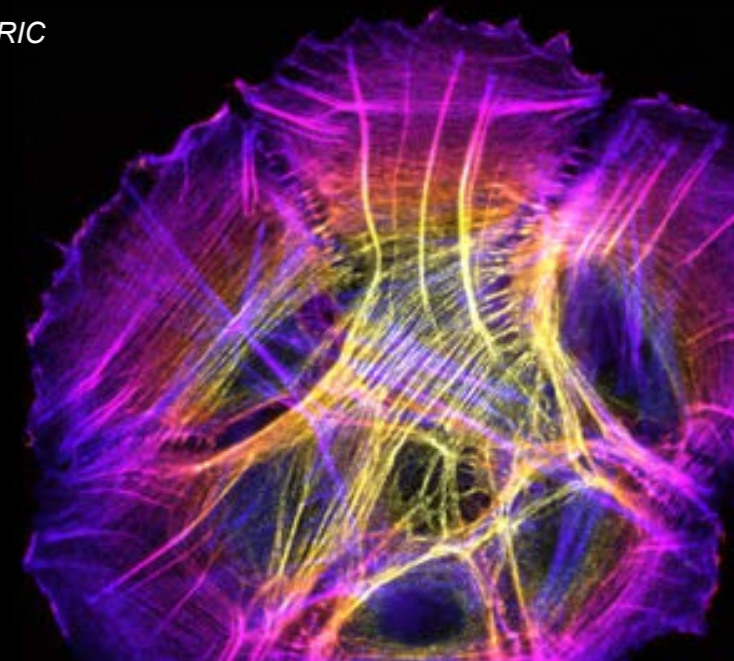
**Michel Bouvier**  
*Chief Executive Officer of IRIC*

## SCIENTIFIC MOMENTUM

Our research teams once again distinguished themselves on many levels over the past year. Whether through major funding, prestigious awards, fruitful collaborations or quality publications, the work done by our scientific community radiates beyond our walls and reflects on all of us. I am particularly proud that these accomplishments come from colleagues of all generations; from investigators just beginning their career to luminaries established in their field, everyone is contributing to the scientific buzz of our Institute.

The past year was also marked by the recruiting of a new Principal Investigator at IRIC. Through his varied expertise, his diverse responsibilities and his innovative research projects, Dr. Vincent Q. Trinh will certainly enrich our unique model based on collaboration, multidisciplinary and innovation.

**Marc Therrien,**  
*Scientific Director of IRIC*



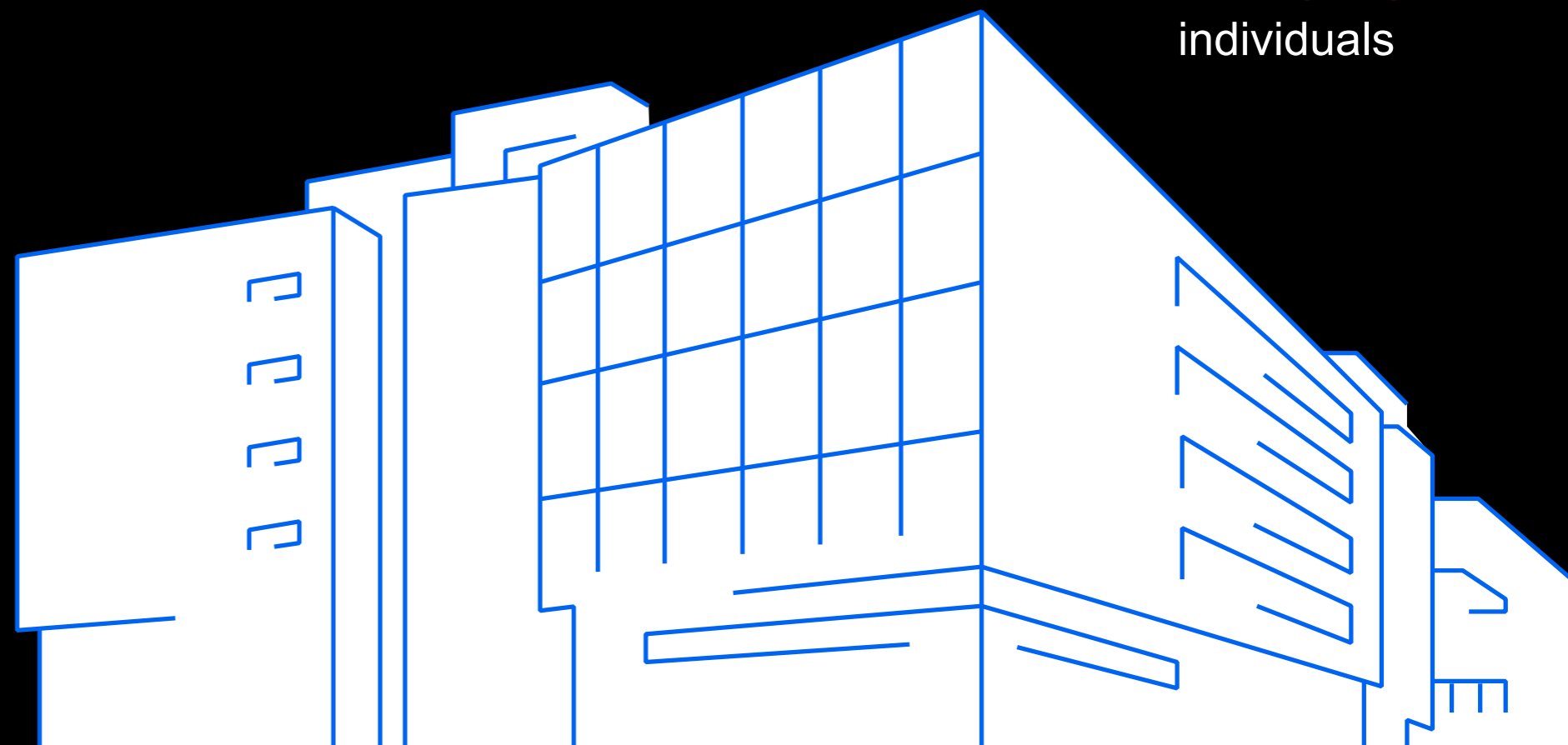
**10**  
Core Facilities

**27**  
research teams

**1**  
Drug Discovery Unit

**400**  
individuals

**150**  
students scientists



## RECRUITMENT

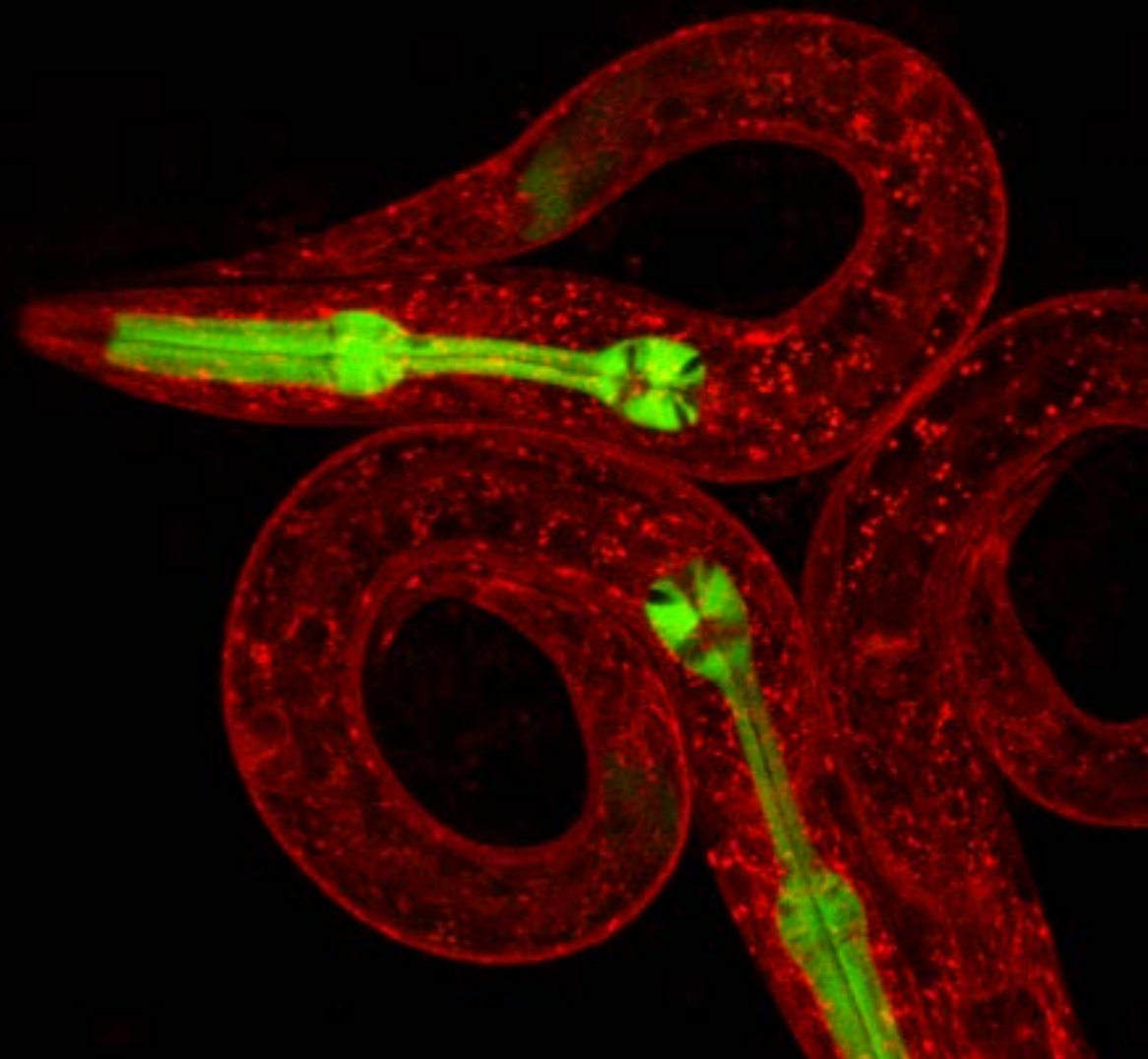
# IRIC RECRUITS VINCENT Q. TRINH TO BE A PRINCIPAL INVESTIGATOR



The Institute for Research in Immunology and Cancer (IRIC) of the Université de Montréal is proud to welcome aboard a new Principal Investigator in the Digital Histology and Advanced Pathology Research Unit, Dr. Vincent Q. Trinh, who will take up his position on July 1<sup>st</sup>, 2022. Vincent Q. Trinh's main research interest involves the role played by fibroblasts and stellate cells in the tumor microenvironment of pancreatic cancer precursor cells.

“We are delighted to welcome a young Investigator as promising as Dr. Vincent Q. Trinh to IRIC. We extend the warmest of welcomes and wish him all the best in his new duties. We are sure that he will make a tremendous contribution to IRIC's mission”, added Michel Bouvier, Chief Executive Officer of IRIC.

- Michel Bouvier, Chief Executive Officer of IRIC





# AWARDS

## HONOURED RESEARCHERS



**Michel Bouvier** appointed Knight of the Ordre national du Québec.



**Vincent Archambault** appointed Full Professor in the Department of Biochemistry and Molecular Medicine at the Université de Montréal.



**Geneviève Deblois** Honoured by the Canadian Institutes of Health Research.

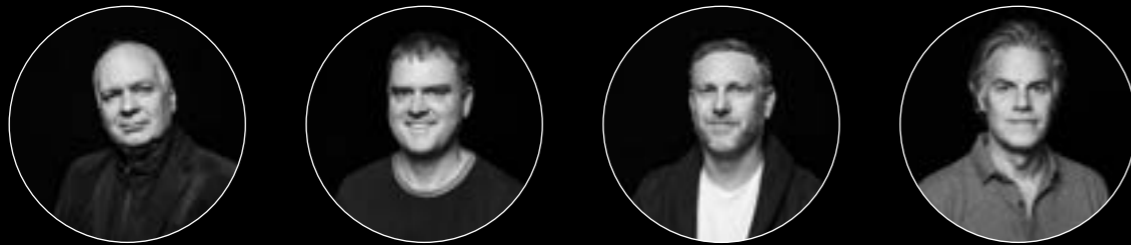


**Katherine Borden** elected to the Royal Society of Canada.

# FUNDING THAT PROPELS IRIC

## GRANTS

The excellence of the work carried out by IRIC's scientists is recognized, year after year, by their peers and by funding bodies, increasing the scope of their research.



Resulting from the most recent research grant competition of the Canadian Institutes of Health Research (CIHR), four IRIC researchers obtained funds via the Project grant program. This program aims to support original ideas having the potential to advance basic and applied health-related knowledge. Representing a total investment of \$325 million, 405 applications were funded across the country, including three from IRIC:

Michel Bouvier, Director of the Molecular Pharmacology Research Unit and Chief Executive Officer of IRIC, obtains a grant of \$1,063,350 over five years for the project "Mechanisms and consequences of spatially controlled G protein-coupled receptor signaling."

Jean-Claude Labbé, Director of the Cell Division and Differentiation Research Unit, and Matthew Smith, director of the Cancer Signalling and Structural Biology Research Unit, receive an \$833,850 grant for a period of five years for the project "Regulation of cytokinesis by the novel and conserved flavin-dependent monooxygenase enzymes OSGN -1/OSGIN."

Sylvain Meloche, Director of the Cell Signaling and Growth Research Unit, obtains a grant of \$956,250 over five years for the project "Development and preclinical validation of first-in-class dual inhibitors of the atypical MAP kinases ERK3 and ERK4."



David Knapp, Director of IRIC's Cellular Engineering Research Unit, is one of the 2023 recipients of the Terry Fox New Investigator Awards. He will receive \$433,850 over three years for the project "Understanding the cellular mechanisms of age-associated clonal hematopoiesis". The aim of the funded project is to study the mutations that lead to and characterize their effects on the normal functioning of blood stem cells.

The Cancer Research Society (CRS) has announced the recipients of 90 new research grants. With a total value of \$10.8 million, these grants support the most promising cancer research projects in the country.

David Knapp, Director of the Cellular Engineering Research Unit, is awarded \$60,000 per year for a two-year period for the project "Modelling the progression from clonal hematopoiesis to leukemia."

## FUNDING THAT PROPELS IRIC



**Sylvie Mader**, Director of the Molecular Targeting in Breast Cancer Treatment Research Unit, is awarded a grant of \$60,000 per year for two years for the project “Roles of the transcription factor FOXA1 in breast tumorigenesis” from the Cancer Research Society.

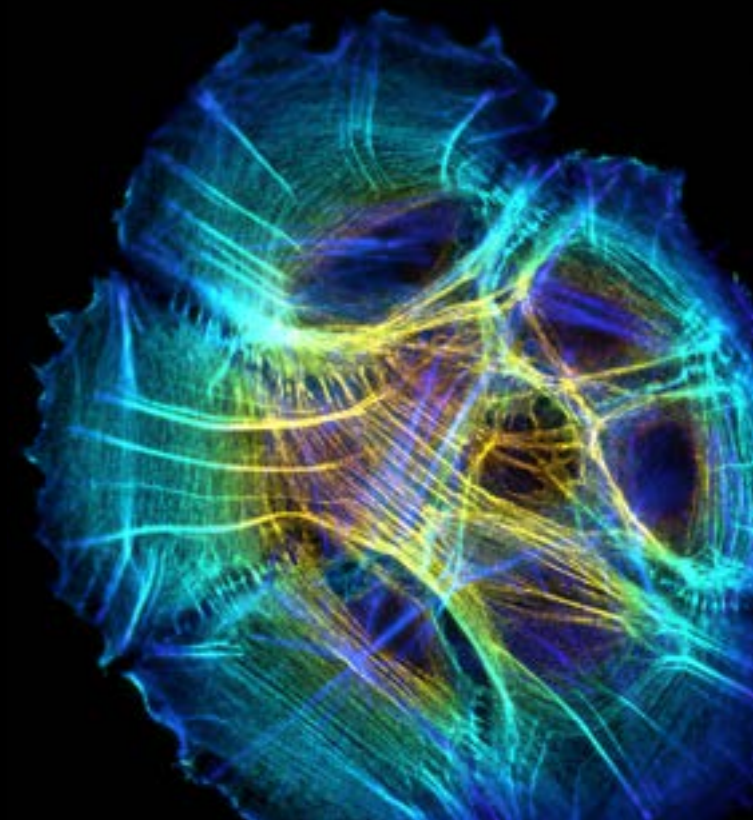
**Principal investigator Gregory Emery awarded a grant from the Canadian Institutes of Health Research.** Gregory Emery, Director of the Vesicular Transport and Cell Signalling Research Unit, has been awarded a five-year \$963,900 grant for the project “Regulation of collective cell migration by the kinase Misshapen.”



**Brian Wilhelm and partners received over \$2 million for pediatric leukemia research project.** An unprecedented partnership involving the Conseil québécois sur la découverte du médicament (CQDM), the Canadian Cancer Society (CCS), the Cole Foundation, Oncopole, philanthropists and Quebec companies has awarded \$8,485,132 to four Montreal teams for their pediatric cancer research projects.



Among these, a team involving the research groups of Brian Wilhelm and Delphine Bouilly of IRIC received a three-year grant of \$2,301,036 for the project “Using nanotechnology to detect acute myeloid leukemia (AML) and acute megakaryoblastic leukemia (AMKL), and developing new targeted treatments.”



# FUNDING THAT PROPELS IRIC

## Three IRIC researchers receive funding from the Natural Sciences and Engineering Research Council of Canada

Three IRIC researchers have been awarded grants in the Natural Sciences and Engineering Research Council of Canada (NSERC) Research Grants 2022 competition:

Vincent Archambault, Director of the Cell Cycle Regulation Research Unit, receives a grant of \$34,000 per year for 5 years from the Discovery Grants program – Individual (RGPIN) for the project “Molecular dissection of mitotic kinase functions using chemogenomics.”

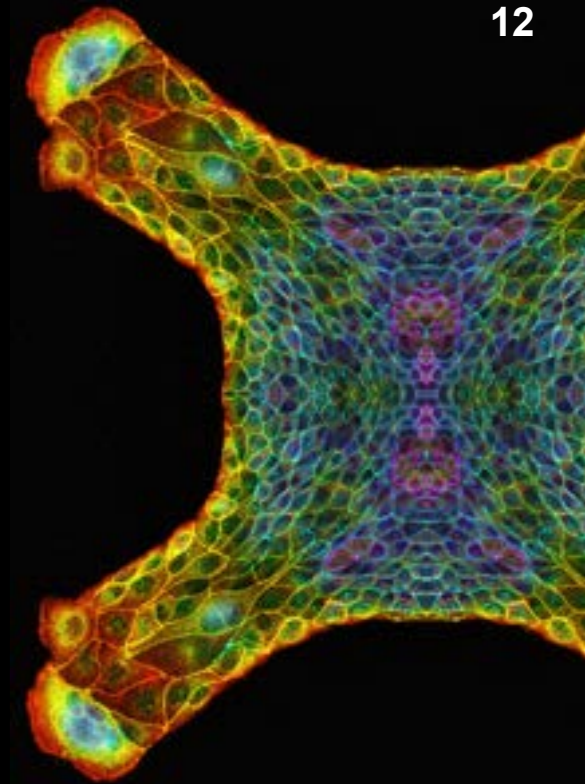
Gregory Emery, Director of the Vesicular Trafficking and Cell Signalling Research Unit, receives financial support of \$58,573 over one year from the Research Tools and Instruments grants program for the project “Tracking collective cell migration by confocal microscopy.”

Sébastien Lemieux, Director of the Functional and Structural Bioinformatics Research Unit, has been granted financial support of \$34,000 per year for 5 years from the Discovery Grants program – Individual (RGPIN) for the project “Development of reference-free algorithms for low coverage RNA-Seq characterization of cell states.”



## 3 million in support from the Stem Cell Network to study new ways to use blood stem cells in the treatment of leukemia

Guy Sauvageau, Director of IRIC’s Molecular Genetics of Stem Cells Unit, hematologist and Full Professor in the Department of Medicine of the Faculty of Medicine of the Université de Montréal, received major funding worth \$3 million over three years. The project led by Guy Sauvageau involves 8 research groups, including those of Philippe Roux and Étienne Gagnon, both investigators at IRIC. The funding is provided by the Stem Cell Network (SCN) through its new Horizon Grant Program.



## VALORISATION



### **Signature of an exclusive licensing agreement and a new research collaboration in oncology with Ipsen**

The Ipsen company exercised its licensing option to acquire the exclusive rights to one of IRIC's pre-clinical oncology research programs, which was the result of a successful research collaboration between Ipsen, IRICoR, and the Université de Montréal, initiated in May of 2020. Ipsen will lead all worldwide development and commercialization activities of the drug candidate.



### **A look back at the creation of the Epitopea company**

Founded in 2021, the transatlantic biotechnology company Epitopea is the result of collaborations between the teams of Claude Perreault and Pierre Thibault, both principal investigators at IRIC. The mission of Epitopea is to develop immunotherapies to treat different types of cancers by targeting a new class of antigens

# SCIENTIFIC EMULATION

## Trang Hoang's laboratory

Hyperactivation of the NOTCH1 pathway in T-cell acute lymphoblastic leukemia: two recent publications bring new insights.

## Guy Sauvageau's laboratory

Discovery of a new therapeutic avenue targeting the cell cycle in a subtype of acute myeloid leukemia.

## Michel Bouvier's laboratory

Major breakthrough from international collaboration paves the way for pain relief.

## Philippe Roux's laboratory

Identification of CDK12 as a new target of the RAS/MAPK pathway: implications for the treatment of melanoma.

## Sylvie Mader's laboratory

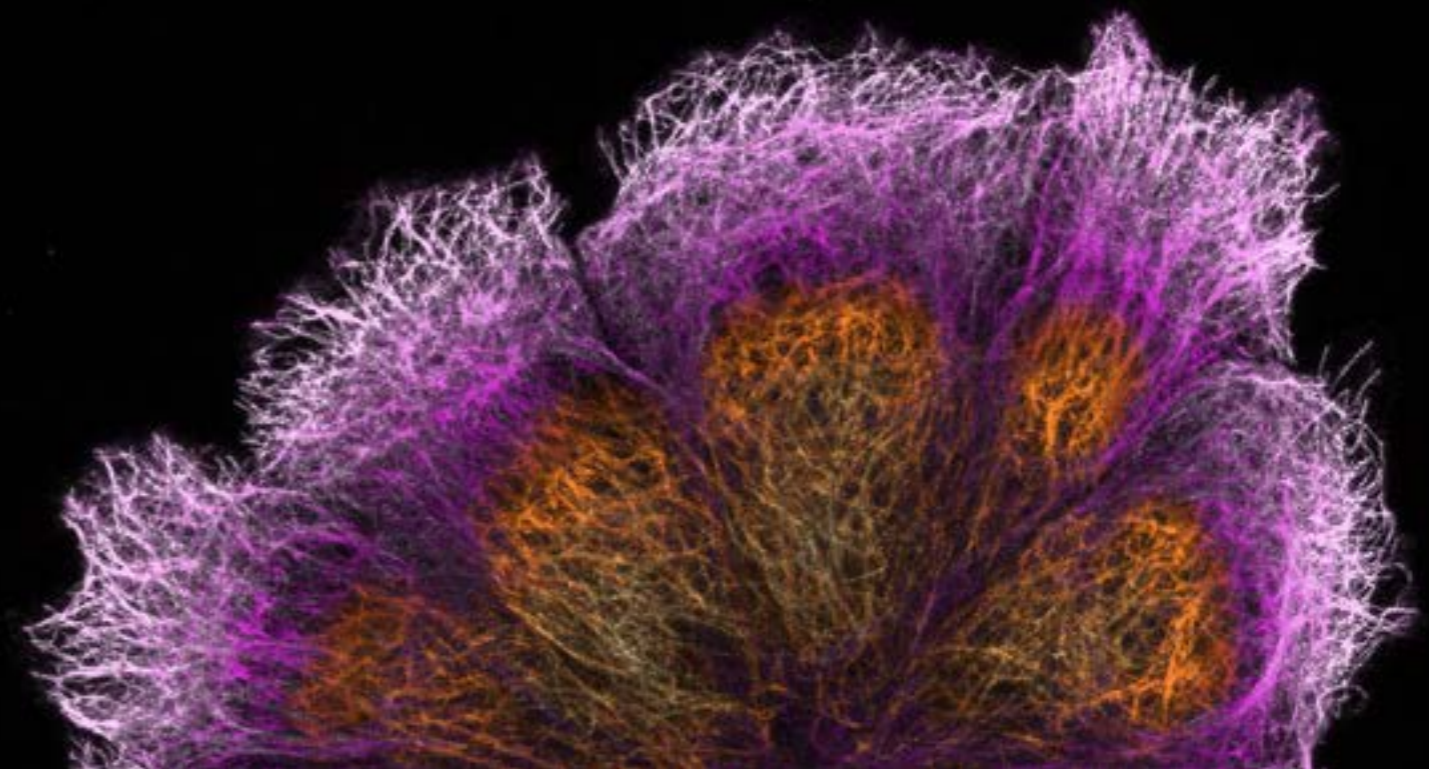
The use of the CAXII marker could improve the classification of breast tumors.

## Katherine Borden's laboratory

Discovery of new roles for eIF4E: widescale reprogramming of splicing to change the message.

## David Knapp's laboratory

Understanding the clonal competition in a metastatic context  
A new protocol to generate mature and functional T cells.



# A COMMITTED NEXT GENERATION THAT IS DISTINGUISHING ITSELF



Through this message, I would like to point out the mobilization of our students with respect to several issues and to highlight their commitment. Their determination and perseverance are the pillars of their success.

I am also proud of our Institute, which in January of 2023 adopted new measures to improve the living and working conditions of its student community. The cost of living having increased over two decades, especially over the past two years, the new guidelines adopted by IRIC will reduce the financial stress of its student community and provide a healthier environment to study in.

Furthermore, an unprecedented collaboration between the Université de Montréal, the Université de Montpellier in France and the Università di Pavia in Italy will result in developing an international Master's Program in the years to come.

These major projects are made possible thanks to our Academic Affairs Office and our next generation of students.

**Sébastien Carréno**

*Principal Investigator and Director of Academic Affairs*

## AWARDS

### Five IRIC graduates named to the Honor List of the Rector of the Université de Montréal

The Rector's Honor List highlights the outstanding academic journeys from of all graduate programs at the Université de Montréal. This list recognizes the merit and efforts of students whose progress has been exemplary.

#### Master's

- > **Thomas MacDougall** – M. Sc. in Informatics, Sébastien Lemieux's Laboratory
- > **Lucas Porras** – M. Sc. in Molecular Biology, Sylvie Mader's Laboratory

#### Doctorate

- > **Myreille Larouche** – Ph. D. in Biochemistry, Vincent Archambault's Laboratory
- > **Kévin Leguay** – Ph. D. in Molecular Biology, Sébastien Carréno's Laboratory
- > **Thomas Milan** – Ph. D. in Molecular Biology, Brian Wilhelm's Laboratory

# BREAKDOWN OF STUDENTS AND INTERNS

Country of birth	Number	Country of birth	Number
France	57	Japan	1
Canada	41	Mexico	1
Brazil	7	Spain	1
Belgium	6	Germany	1
China	6	Albania	1
India	5	Netherlands	1
Morocco	4	United States	1
Tunisia	3	Vietnam	1
Ukraine	3	Bulgaria	1
Algeria	2	Ecuador	1
Iran	2	Switzerland	1
United Arab Emirates	2	Colombia	1
Senegal	2	Estonia	1
Syria	1	South Korea	1
Roumania	1	Mali	1
Cuba	1	Italy	1
El Salvador	1		

Undergraduate (students) interns	20
Graduate (students) interns	20
Postgraduate (students) interns	6
Master's students	32
Ph.D. students	82
<b>Total</b>	<b>160</b>



# GRANTS

## Nine next generation scientists from IRIC receive a training award from the Fonds de recherche du Québec

Following the 2022-2023 competitions, the Fonds de recherche du Québec (FRQ) handed out \$39.3M in training awards. This year, the Fonds de recherche du Québec – Santé (FRQS) is providing 469 new funding offers representing a total amount of \$11.8M. The Fonds de recherche du Québec – Nature and Technologies (FRQNT) is providing 579 new awards for a total of \$12.5M. IRIC is proud to count nine scientists of its next generation among the recipients of these competitions.

### MASTERS

**Irfan Mathieu Badrudin**, Trang Hoang’s laboratory: \$35,000 grant from the FRQS for his project “Chemogenomic approach for the elimination of pre-leukemic stem cells in T-cell ALL”.

**Alexanne Bisson**, Anne Marinier’s laboratory: \$35,000 grant from the FRQNT for her project “Study of new photoreactive probes for determining the target of UM171”.

**Simon Chasles**, François Major’s laboratory: grant of \$23,334 from the FRQNT for his project “Machine learning of ribonucleic acid folding”.

**Virginie Emond-Fraser**, Vincent Archambault’s laboratory: grant of \$23,334 from the FRQNT for her project “Otefin function and regulation at the nuclear envelope and centrosomes”.

### DOCTORATE

**Léa Lacroix**, Jean-Claude Labbé’s laboratory: \$84,000 grant from the FRQS for her project “Characterization of the role of human monooxygenases OSGIN1 and OSGIN2 in the regulation of RhoA activity during cytokinesis”.

**Justine Mathé**, Claude Perreault’s laboratory: \$35,000 grant from the FRQS for her project “Regulation of MHC I expression in pulmonary epithelial cells”.

**Karla Lucia Paez Martinez**, Brian Wilhelm’s laboratory: \$70,000 grant from the FRQS for her project “Research for new anti-leukemia compounds by high-throughput screening of human leukemia models”.

**Réda M Zellag**, Jean-Claude Labbé’s laboratory: \$70,000 grant from the FRQNT for his project “Regulation of the orientation of the mitotic spindle during germline stem cells division in *Caenorhabditis elegans*”.

### POSTDOC

**Kien Tran**, Marc Therrien’s laboratory: \$90,000 grant from the FRQS for his project “Development of allosteric Ras inhibitors”.

# 2023 STUDENT RECRUITMENT EVENT

## AN EDITION OF MEETINGS AND ENCOUNTERS

The 2023 edition took place from June 7 to 9 and welcomed 23 participants from 19 universities around the world. More than 100 interviews were scheduled this year between participants and the 12 Institute researchers present at the event.

Following the event, several participants will receive a recruitment offer with an M.Sc or Ph.D project accompanied by an annual scholarship of \$23,370 (M.Sc) or \$25,578 (Ph.D) from one or many of our researchers. The training will begin between fall 2023 and fall 2024.

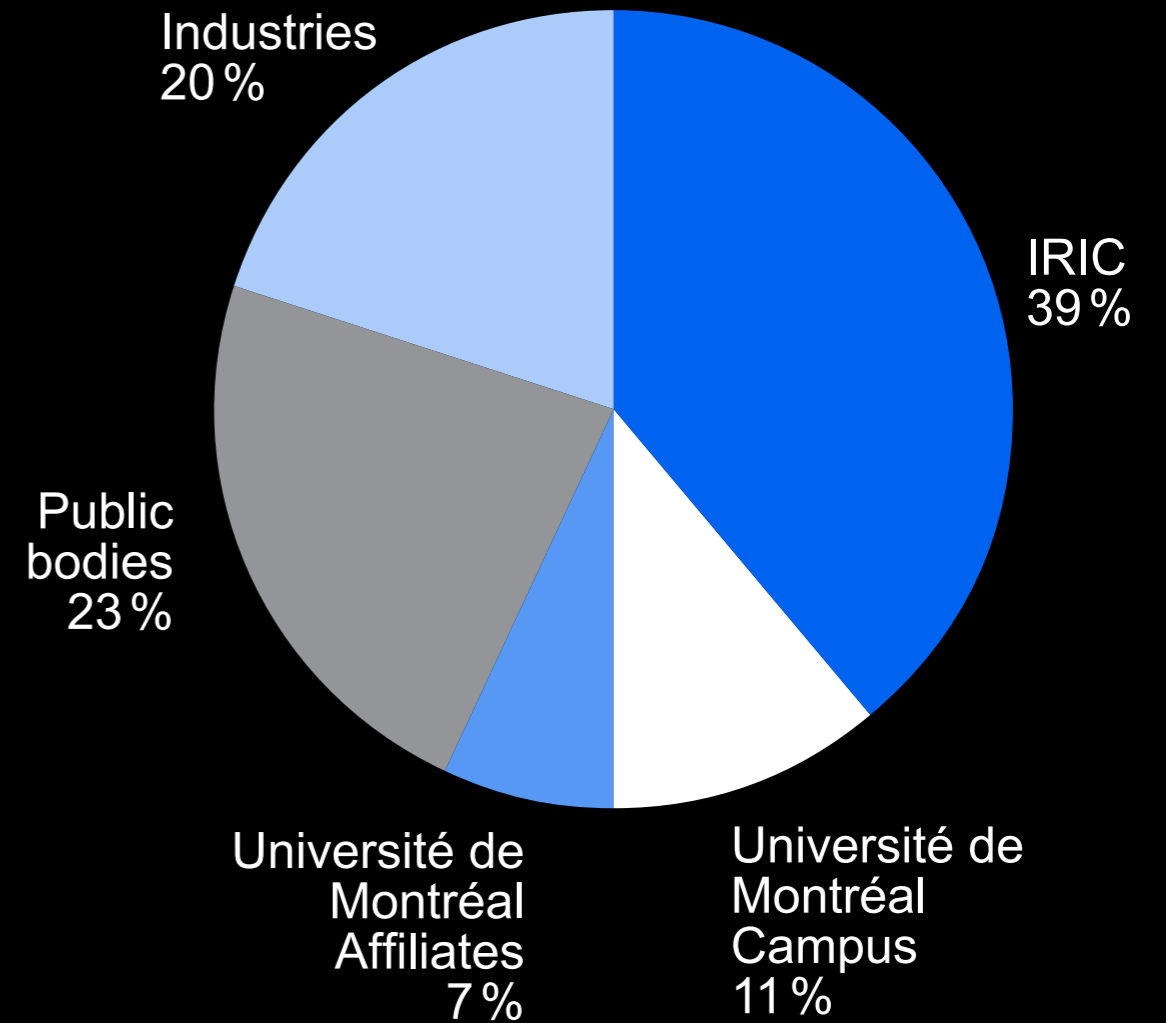


# 10 TECHNOLOGICAL CORE FACILITIES AT THE SERVICE OF THE SCIENTIFIC COMMUNITY

- > Bio-imaging
- > Bioinformatics
- > Biophysics
- > Flow cytometry
- > Genomics
- > High-throughput
- > Histology
- > Proteomics
- > *In vivo* Biology
- > Drug Discovery

## 265 RESEARCH GROUPS

2022-2023	Groupes
IRIC	28
Université de Montréal - Campus	63
Université de Montréal - Affiliates	70
Public bodies	80
Industries	24



**OPERATING INCOME: 4 M\$**

# DRUG DISCOVERY UNIT

## A VITAL ASSET FOR IRIC IN DISCOVERING NEW THERAPIES

The mission of the Drug Discovery Unit is to translate discoveries coming from the academic laboratories of IRIC and the UdeM into therapies. The work carried out by the group ranges from identifying new therapeutic targets to the nomination of clinical candidates.

Led by Anne Marinier and a team of six Assistant Directors, the Unit has 65 members, including several pharmaceutical industry veterans. Since its creation in 2008, the Unit has produced major achievements, including generating 31 patent families, as well as identifying 4 clinical candidates in oncology and cardiovascular diseases.



## PARTNERSHIPS

Collaborations were created with various players in the biopharmaceutical industry, including expanding the partnership with Ipsen in oncology.

## ACHIEVEMENTS

As part of the Médicament Québec initiative, creation of the Quebec Chemolibrary, bringing together UdeM, ULaval, McGill and USherbrooke.

## FUNDING

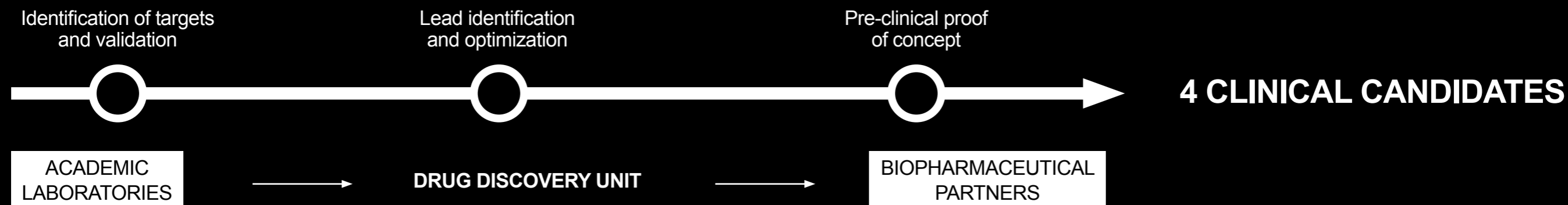


*“In addition to having allowed the development of projects leading to innovative therapies, the FACS grant managed by CQDM has ensured the sustainable growth of IRIC’s Drug Discovery Unit which is at the heart of the biopharmaceutical innovation ecosystem in Quebec “.*

– Michel Bouvier

## FUNDAMENTAL DISCOVERIES TRANSFORMED INTO THERAPEUTIC SOLUTIONS

The Drug Discovery Unit provides unique positioning for IRIC in translational research, at the interface between academia and the private sector.



### PROVEN TRACK RECORD

#### Medicinal Chemistry

- > Drug design and synthesis
- > Chemical probe design
- > Computer-assisted drug design / AI-powered drug discover
- > Synthèse à grande échelle

#### Compound collections

- > Small molecules (exclusive and commercial 150K cpds)
- > Fragments collection
- > DNA-Encoded libraries (millions of cpds)

#### Biology / Pharmacology

- > Assay Development / High throughput screening
- > Drugs mechanism of action
- > Mécanisme d'action des médicaments
- > Animal models / Pre-clinical studies
  - With In vivo biology platform
- > PK/ADME/Toxicity studies
  - With Biopharmacy platform

The Drug Discovery Unit provides unique positioning for IRIC in translational research, at the interface between academia and the private sector.

**65**

Drug Hunters

**1**

Small molecules in  
IND-readiness studies

**4**

Small molecules advanced  
to the clinic



## **IRICOR, A UNIQUE ACCELERATOR THAT TRANSFORMS THE WAY TO VALORIZE RESEARCH**

A project valorization and maturation cluster in the field of drug discovery, IRICoR focuses on cancer, immunotherapy and rare diseases.

Its mandate is to accelerate the discovery, development and commercialization of highly innovative new therapies mainly developed at IRIC/UdeM with its collaborators. This is made possible by establishing strategic partnerships with industry or by creating spin-off companies.

Since its creation in 2008, IRICoR has become an important player in the Quebec Life Sciences ecosystem, in decreasing and mitigating the risks related to university assets in early stage development in the field of drug discovery. IRICoR strategically invests in selected projects in order for them to migrate from academia to the market.

IRICoR's major sources of funding include contributions from the provincial and federal governments, as well as from key partners in the biopharmaceutical industry.

## **RECRUTEMENTS**

**Elizabeth Douville, Ph.D., IAS.A**  
New President and Chief Executive Officer.

Along with new management, IRICoR welcomed four new members to its team:

**Mario Callejo, Ph.D.**  
*Vice-President, Scientific Operations*

**Claude Larose**  
*Vice-President, Business Development*

**Nioucha Rodrigue**  
*Financial Controller*

**Gwenaëlle Gavory**  
*Scientific Liaison Officer*



# IRICoR

## MESSAGE FROM MANAGEMENT

**“15 years of collaboration to advance research and improve patient care”**

This year marks 20 years for IRIC, a singular research institute, and 15 years for IRICoR, proven model in the transformation of academic research into therapeutic solutions. Fifteen years of history for two closely linked organizations.

Following over 25 years of experience as a venture capital investor in the Life Sciences field, I was able to better understand and appreciate the complex yet gratifying process of commercializing drug discovery projects. In February of this year, I joined IRICoR as President and Chief Executive Officer, interested in its innovative model for the valorization and acceleration of research aimed at developing new drug therapies for the benefit of patients.

The IRIC-IRICoR duo constitutes an agile and unique model in Quebec, successfully combining business expertise with cutting-edge research and transforming the way to valorize research. With the health of Canadians as its raison d'être, this hybrid model generates considerable socioeconomic benefits in the Life Sciences sector.

While IRICoR ensures its funding through research and development funds awarded by strategic partners, initial licensing payments, milestone payments and royalty payments, it's important to point out that the government funding received has provided vital support in obtaining IRICoR's results. The achievements, year after year, prove the soundness of each dollar invested in IRICoR by the federal and provincial governments, totalling 45 million dollars.

For the years to come, I will be eager to continue the work undertaken, leveraging my expertise and my vision in the success and outreach of the IRICoR solution and to tangibly contribute, with my team, to the valorization of promising academic projects as well as to their exit strategies, by generating investment opportunities for foreign capital through co-development partnerships with the biopharmaceutical industry, or by stimulating the growth of entrepreneurial activities in Life Sciences in Quebec by creating spin-off companies.

We'll see you in 10 years!

**Elizabeth Douville, Ph.D., IAS.A**  
President and Chief Executive Officer



## 2022-2023 SIGNIFICANT ACHIEVEMENTS

The 2022-2023 year unfolded under the theme of consolidation. IRICoR continued its support of spin-off companies such as ExCellThera, a worldwide leader in the expansion and rejuvenation of blood stem cells, which recently obtained excellent results during its Phase 2 studies on UM171 experimental cell therapy with high-risk blood cancer patients, favorable to forthcoming marketing; and Epitopea, which develops accessible and ready-to-use immunotherapies, which received an investment of \$13.6M (10,3 M€) from a first-rate group of transatlantic investors from the Life Sciences field that includes Advent Life Sciences, CTI Life Sciences Fund, Cambridge Innovation Capital (CIC) and the Fonds de solidarité FTQ.

Also, considering all of its business activities, particularly the consolidation of its collaboration with the Ipsen biopharmaceutical company (France) with the signing of an exclusive licensing agreement and the launch of two new programs in the research phase, IRICoR attracted and secured \$1.5B in foreign capital in 2022-2023 in the form of milestones, with \$65M in collaboration revenues, over the next 4 years, to ensure R&D.

## NEW PARTNERSHIPS AND COLLABORATIONS

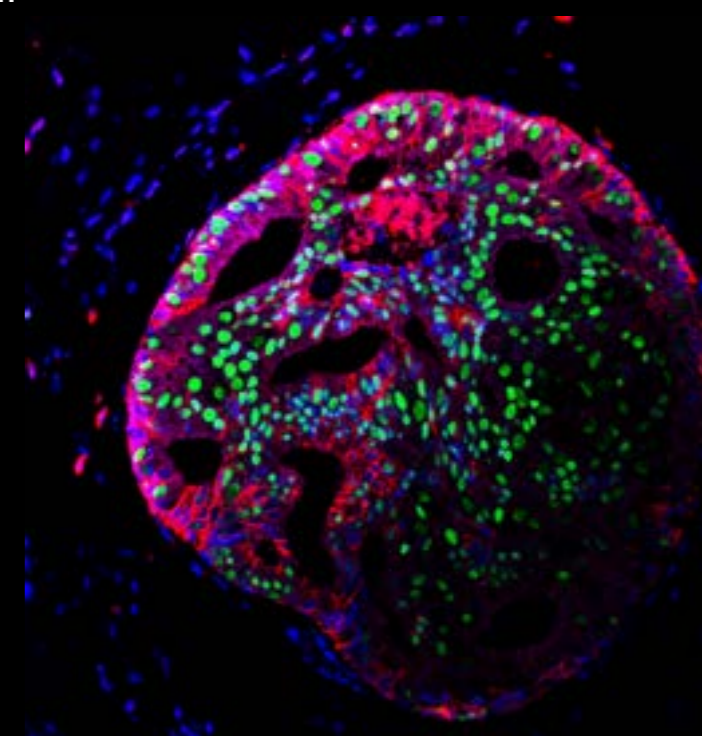
- > Signing of a new drug discovery research international public-private collaboration with ONO Pharmaceuticals (Japan); this agreement results in the significant funding of R&D (Research and Development), carried out in Canada, by the research teams involved.
- > Consolidation of our collaboration with the biopharmaceutical company Ipsen (France) by extending our partnership in oncology by signing an exclusive licensing agreement and the launch of two new programs in the research phase.

## FUNDING AND REVENUES

- > Significant investment in the spin-off company RejuvenRx Inc.; a company with three programs in development in the indications related to aging and to oncology.
- > 35 portfolio projects in various stages of development, from 4 Canadian provinces, including 2 new funded projects and 6 refunded projects, alone or in partnership with the FRQS/Oncopole, the Quebec Breast Cancer Foundation or Ovarian Cancer Canada.
- > 49 new requests for patent have been submitted.

## OUTREACH

- > IRICoR has presented its business model and its project portfolio as part of 14 national and international events.





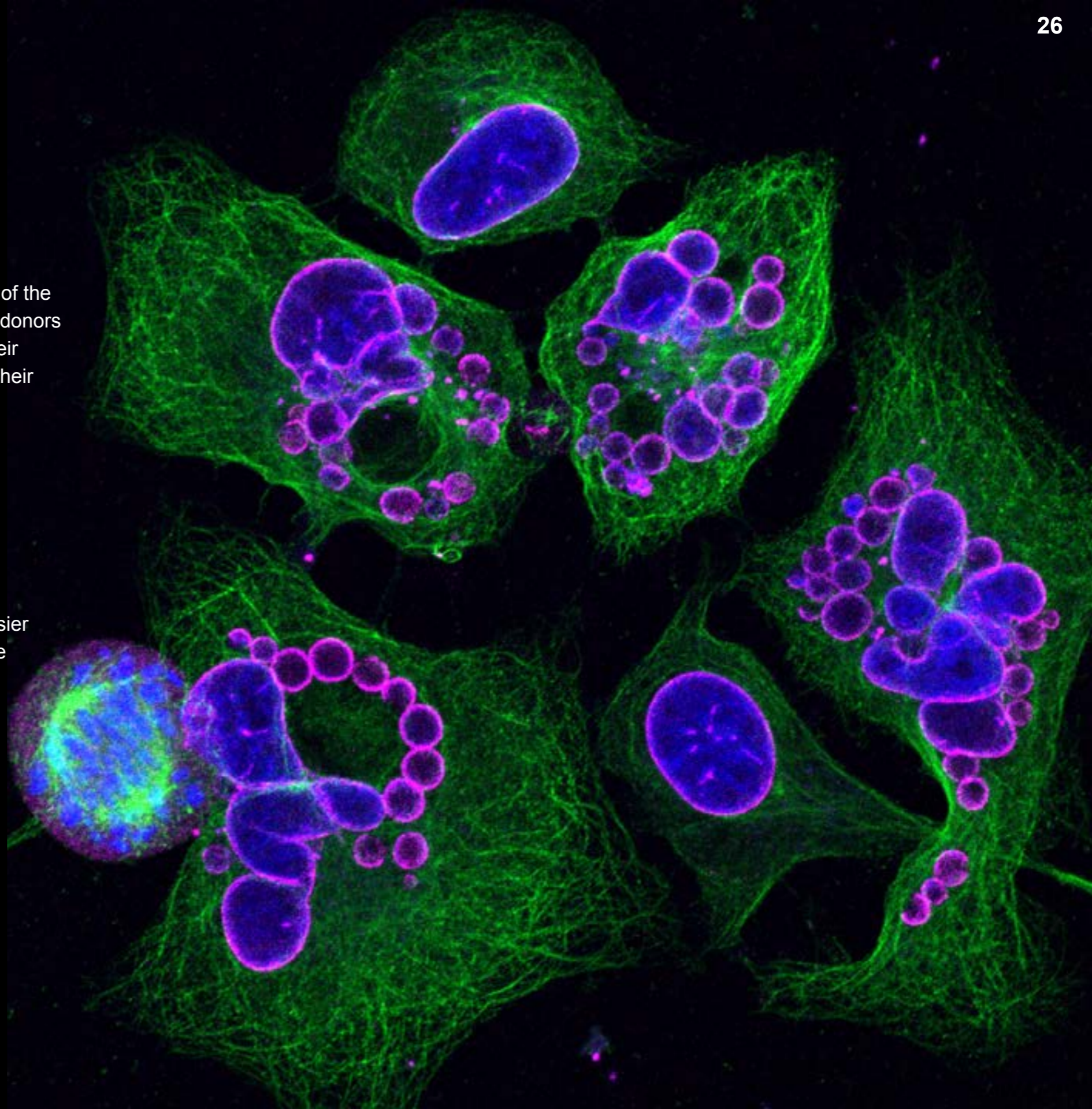
# PHILANTHROPY

## AN ENTIRE COMMUNITY SUPPORTING THE NEXT GENERATION

The Master's and Ph.D. scholarships are offered thanks to the support of the vast IRIC community: its employees, its investigators and its generous donors and partners. Through those donations IRIC's partners demonstrate their commitment to the next generation of scientists in the development of their academic career.

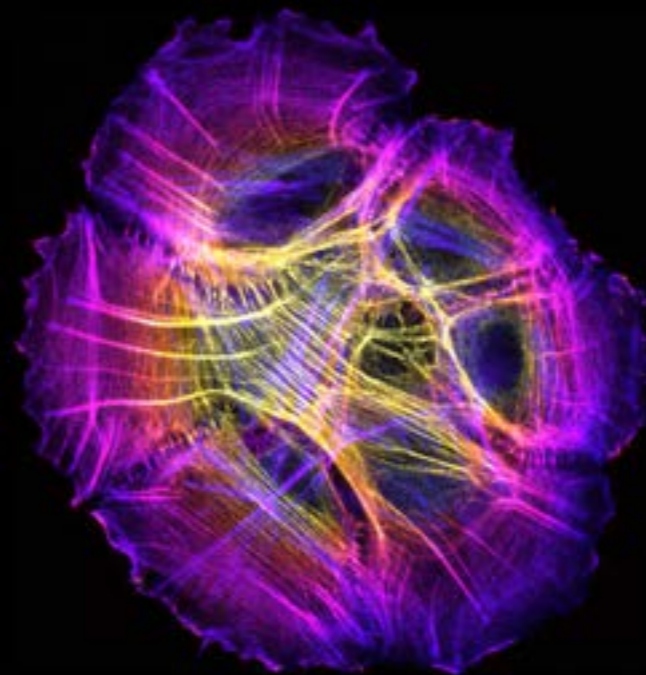
## CDPQ SUPPORTS THE NEXT GENERATION OF SCIENTISTS

IRIC is proud to announce the participation of the Caisse de dépôt et placement du Québec (CDPQ) in the creation of the Fonds Robert Tessier de la relève scientifique. The objective of this new fund is to support the Institute's master's and doctoral students through the awarding of scholarships. With this contribution, CDPQ wishes to acknowledge the commitment and leadership of Mr. Robert Tessier in the development of knowledge of our Next Generation of Scientists and the advancement of cutting.



## **POSTDOCTORAL RESEARCHER JULIETTE HUMEAU OBTAINS A SALARY GRANT**

As part of its most recent Salary Awards Competition for Postdoctoral Fellows, held this fall, IRIC awarded a postdoctoral scholarship thanks to the Power Corporation Canada fund for Next Generation Scientists. Juliette Humeau, a postdoctoral fellow in Claude Perreault's laboratory, was granted this funding because of the quality of her academic and scientific record.



## **TWO NEW RECIPIENTS ARE AWARDED POWER CORPORATION OF CANADA NEXT GENERATION OF SCIENTISTS POSTDOCTORAL FELLOWSHIPS**

The Power Corporation of Canada Next Generation of Scientists Postdoctoral Fellowships competition, held this summer, awarded funding to two IRIC postdoctoral fellows based on the quality of their research work. IRIC is proud to announce the names of the two recipients:

**Sajjad Ahrari**, from the Michel Bouvier's laboratory

**Jean-Clément Mars**, from Katherine Borden's laboratory

## **IRIC MASTER'S AND DOCTORAL SCHOLARSHIPS - FALL 2022 COMPETITION RECIPIENTS**

IRIC would like to thank Mrs. Rita Baumgartner and Mr. Aldo Baumgartner for their exemplary generosity.

### **BOURSIÈRES ET BOURSIERS DE MAÎTRISE :**

**Yousef Aleassa**, Pharmaceutical Sciences, Geneviève Deblois' Laboratory

**Maëlle Batardière**, Molecular Biology, Vincent Q. Trihn's Laboratory

**Jeanine Looman**, Biomedical Engineering, Delphine Bouilly's Laboratory

**Tyler Lussier**, Molecular Biology, Brian Wilhelm's Laboratory

**Carl Munoz**, Bioinformatics, Sébastien Lemieux's Laboratory

**Xinyue Wang**, Molecular Biology, Benjamin Kwok's and Vincent Archambault's Laboratories

## PH.D. SCHOLARSHIPS

**Elsa Berliocchi**, Molecular Biology, Philippe Roux's Laboratory

**Fadia Boudghene-Stambouli**, Pharmacology, Sylvain Meloche's Laboratory

**Stanislas Corbière**, Molecular Biology, Sébastien Carréno's Laboratory

**Faustine Gorse**, Biochemistry, Sylvie Mader's Laboratory

**Camila Lie Kiyan**, Molecular Biology, Michel Bouvier's and Sébastien Carréno's Laboratories

**Mélanie Lemaire**, Molecular Biology, François Major's Laboratory

**Hugo Philippeau**, Molecular Biology, Geneviève Deblois' Laboratory

## FOUR IRIC STUDENTS OBTAIN FUNDING TO PRESENT THEIR RESEARCH RESULTS OUTSIDE QUEBEC

As part of its most recent Travel Awards competition, IRIC awarded scholarships to four doctoral students. This financial support will enable them to present their research results at scientific conferences held outside Quebec.

**Jingjing Li**, from the laboratory of Vincent Archambault, 64<sup>th</sup> Annual Drosophila Research Conference

**Léa Marpeaux**, from the laboratory of Gregory Emery, Signaling by Adhesion Receptors from the Gordon Research Conferences series

**Basile Rambaud**, from the laboratory of Sébastien Carréno, Cell Bio 2022

**Amandine Vallet**, from the laboratory of Sylvie Mader, 5<sup>th</sup> International Cancer Symposium of the Cancer Research Center of Lyon



## IRIC'S BENEFIT GALA

To mark its in-person return on April 26, 2023, the Audace benefit-event brought together over 250 guests. Thanks to the generosity of guests and donors, over \$505,000 was raised to sustain IRIC's mission and improve cancer-fighting therapies. The evening was hosted by Stéphane Bellavance and highlighted the guest of honour, William Brock, the new Chairman of IRIC's Board of Directors. With great sensitivity and hope, he shared his experience with the disease and his vision of the importance of research. Thank you to Pomerleau, Québecor, Bellus Santé, IRICoR, Pfizer, SAQ, Santco, GSK, Power Corporation and the Marcelle and Jean Coutu Foundation.



## FOCUS

The first edition of FOCUS, an exhibition presenting science from an artistic perspective thanks to the creative talent of IRIC's scientific community, was held from February 9 to 12, 2023. The exposition showcased scientific works created by the Institute's community at Projet Casa, a Montreal-based showroom founded by Danielle Lysaught and Paul Hamelin, who have been supporting IRIC for many years. Over the course of the four-day exhibition, more than 175 visitors came to discover the creativity of IRIC's investigators. Over \$10,000 was raised through the sale of fifteen paintings and generous donations.

## SPORTING CHALLENGES

In the fall of 2022, the IRIC community joined in three renowned sporting initiatives by taking part in the Défis du Parc de la Mauricie, the Grands Prix cyclistes and the Marathon Beneva de Montréal. A total of \$26,325 was donated to the Institute thanks to the generosity and determination of our sports enthusiasts.



## OUR MAJOR DONORS

### **NATIONAL PHILANTHROPY DAY: IRIC PAYS TRIBUTE TO MR. ROBERT TESSIER**

Robert Tessier's legacy to IRIC is immense on many levels. Among other generous gestures, upon his retirement from the Caisse de dépôt et placement du Québec in 2021, he chose to make a significant gesture to benefit the next generation of scientists by establishing the Fonds de Bourses Robert Tessier de la relève scientifique de l'IRIC, with a personal contribution of \$100,000.

### **A BONE MARROW TRANSPLANT HAS UNITED DR. CLAUDE PERREAULT AND DR. ROBERT PATENAUDE FOR 40 YEARS NOW**

November of 2022 marked the 40<sup>th</sup> anniversary of a key encounter with Claude Perreault that allowed Robert Patenaude to become one of the first recipients of a bone marrow transplant in Canada. The success of the transplant enabled Robert Patenaude to resume his activities and lead an active life. He completed his medical studies and began a long career as an emergency physician.

The Patenaude-Perreault collaboration again bore fruit in 2020, with the establishment of the Fonds vaccin thérapeutique contre le cancer. The donations obtained have since resulted in obtaining promising preliminary results for ovarian, breast and lung cancer, melanoma and acute myeloid leukemia.

### **KATELYN BEDARD BONE MARROW ASSOCIATION**

The Katelyn Bedard Bone Marrow Association has been supporting the work of Dr. Claude Perreault's team for 15 years. In 2022, a donation of \$10,000 was made and to date, \$90,000 has been donated to the Perreault laboratory to drive research into hematopoietic cell transplantation and leukemia treatment.

### **THE RICHARD AND EDITH STRAUSS FOUNDATION**

For a fourth year, the Richard and Edith Strauss Foundation renews its commitment to support IRIC scientists:

\$200,000 to the pediatric leukemia project led by Brian Wilhelm, Principal Investigator at IRIC, and Dr. Sonia Cellot, Pediatric hematologist at CHU Sainte-Justine:

“Characterising the stem/progenitor cell of origin of high fatality pediatric leukemia”.

\$100,000 to the acute myeloid leukemia (AML) project led by Dr. Guy Sauvageau, Principal Investigator at IRIC and hematologist at Hôpital Maisonneuve-Rosemont:

“Identification of biological targets influencing the response to anti-AML drugs”.

### **THE FONDATION JEAN GAULIN DONATES \$24,420 TO IRIC'S GENERAL FUND**

The mission of the private family foundation Jean Gaulin is to support the well-being of the community. For many years, the foundation has supported the Institute and seek to deepen knowledge in immunology and cancer. This donation of \$24,450 will contribute to convert the discoveries of researchers into innovative therapeutic solutions for the well-being of people affected by cancer.

# MAKE THE DIFFERENCE

## DONATE TO IRIC

### DONATE NOW

For the past 20 years, your donations have enabled us to reinvent research and to make spectacular advances to shed light on the mechanisms of cancer. Your generosity has resulted in the recruitment of 35 distinguished investigators, the awarding of over 250 scholarships to the top graduate students, the funding of 21 major innovative projects and the acquisition of cutting-edge equipment, including one device for proteomics and one device for high-throughput screening.

### OTHER WAYS TO CONTRIBUTE

There are several ways to donate to IRIC. Some methods may be better suited to your needs. Visit IRIC's website to find out about your various options.

#### TAKE ACTION

Your donations allow research to make revolutionary discoveries that change the lives of those fighting cancer. Thank you!

#### MONTHLY DONATION

For greater impact

#### ONE-TIME DONATION

Every gesture makes a big difference

#### MATCHING DONATION

To increase your impact

#### DONATION OF PUBLICLY TRADED SECURITIES

A fiscally advantageous way to donate

#### TESTAMENTARY DONATION AND OTHER PLANNED DONATIONS

- Charitable bequest
- RRSP and RRIF donation
- Life Insurance donation
- Charitable gift annuity

To make your generosity last

#### IN MEMORIAM DONATION OR DONATION IN HONOUR OF SOMEONE

Perpetuate the gentle memory of a loved one.

#### For companies:

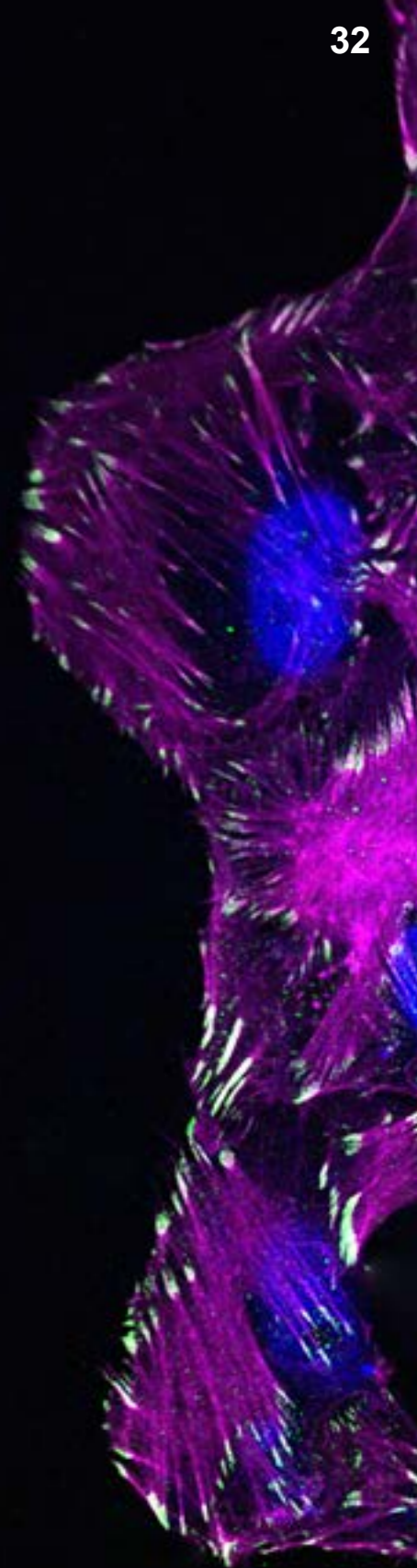
- Donation
- Contribution in goods and services
- Sponsorships

Be an agent of change and accelerate discoveries

#### ORGANIZE A FUNDRAISING EVENT

Every idea is a good one to advance research!

For more information concerning the various types of donations, you can also contact Steve Ntambwe, Philanthropy Development Advisor, at (514) 343-6111, #27938 or by email: [steve.ntambwe@umontreal.ca](mailto:steve.ntambwe@umontreal.ca)



# FINANCIAL PORTRAIT

## REVENUS \$40,957,139

	Operating	Research	Capital assets	Total
Université de Montréal	\$7,765,714	\$3,978,219		\$11,743,933
Grants	\$2,962,387	\$11,468,015		\$14,430,402
Student and postdoctoral awards		\$1,446,199	\$1,446,199	\$ (1)
Chairs and salary awards		\$682,366		\$682,366
Contracts with industry	\$7,663,294	\$7,663,294		
Core Facilities – External clients	\$2,935,885			\$2,935,885 (2)
Donations and sponsorships	\$424,873	\$1,624,028		\$2,048,901 (3)
Other	\$6,159			\$6,159
<b>TOTAL</b>	<b>\$14,095,019</b>	<b>\$26,862,120</b>		<b>\$40,957,139</b>

(1) Includes IRIC Great Challenges against Cancer Scholarships, IRIC members Ph.D. Awards, IRIC Next Generation Awards and IRIC Awards

(2) Excludes the amounts from IRIC investigators (\$1,848,620), these being included in research grant revenues

(3) Solely donations and sponsorships received. Excludes IRIC Great Challenges against Cancer Scholarships, IRIC members Ph.D. Awards, IRIC Next Generation Awards and IRIC Awards

The financial situation does not indicate a deficit, but rather the expression of revenues and expenses during the financial year. IRIC manages over 300 research funds (contracts and grants) that have different terms and conditions.



**EXPENSES \$48,914,076**

	Operating	Research	Capital assets	Total
Salaries and benefits	\$8,132,099	\$22,989,047		\$31,121,146 (4)
Supplies and services	\$1,992,775	\$9,497,657		\$11,490,432
Maintenance and repairs	\$3,484,325	\$1,336,078		\$4,820,403
Scientific equipment	\$283,067	\$1,199,029		\$1,482,096
<b>TOTAL</b>	<b>\$13,892,265</b>	<b>\$35,021,810</b>		<b>\$48,914,076</b>

(4) Includes Principal Investigator salaries paid by the Université de Montréal

The financial situation does not indicate a deficit, but rather the expression of revenues and expenses during the financial year. IRIC manages over 300 research funds (contracts and grants) that have different terms and conditions.



**Vincent Archambault**  
*Cell Cycle Regulation*



**Katherine Borden**  
*Structure and Function of the Cell*



**Delphine Bouilly**  
*Design and Application  
of Electronic Nanobiosensors*



**Michel Bouvier**  
*Molecular Pharmacology*



**Sébastien Carréno**  
*Cellular Mechanisms of Morphogenesis  
during Mitosis and Cell Motility*



**Geneviève Deblois**  
*Metabolic and Epigenetic  
Alterations in Cancer*



**Gregory Emery**  
*Vesicular Trafficking  
and Cell Signalling*



**Louis Gaboury**  
*Histology and Molecular Pathology*



**Étienne Gagnon**  
*Cancer Immunobiology*



**Trang Hoang**  
*Hematopoiesis and Leukemia*



**David Knapp**  
*Cellular Engineering*



**Jean-Claude Labbé**  
*Cell Division and Differentiation*



**Sébastien Lemieux**  
*Functional and Structural Bioinformatics*



**Julie Lessard**  
*Chromatin Structure  
and Stem Cell Biology*



**Sylvie Mader**  
*Molecular Targeting in Breast Cancer*



**François Major**  
*RNA Engineering*



**Anne Marinier**  
*Drug Discovery*



**Sylvain Meloche**  
*Signalling and Cell Growth*



**Philippe Roux**  
*Cell Signalling and Proteomics*



**Claude Perreault**  
*Immunobiology*



**Vincent Q. Trinh**  
*Digital Histology and Advanced Pathology*



**Guy Sauvageau**  
*Molecular Genetics of Stem Cells*



**Matthew Smith**  
*Cancer Signalling  
and Structural Biology*



**Marc Therrien**  
*Intracellular Signalling*



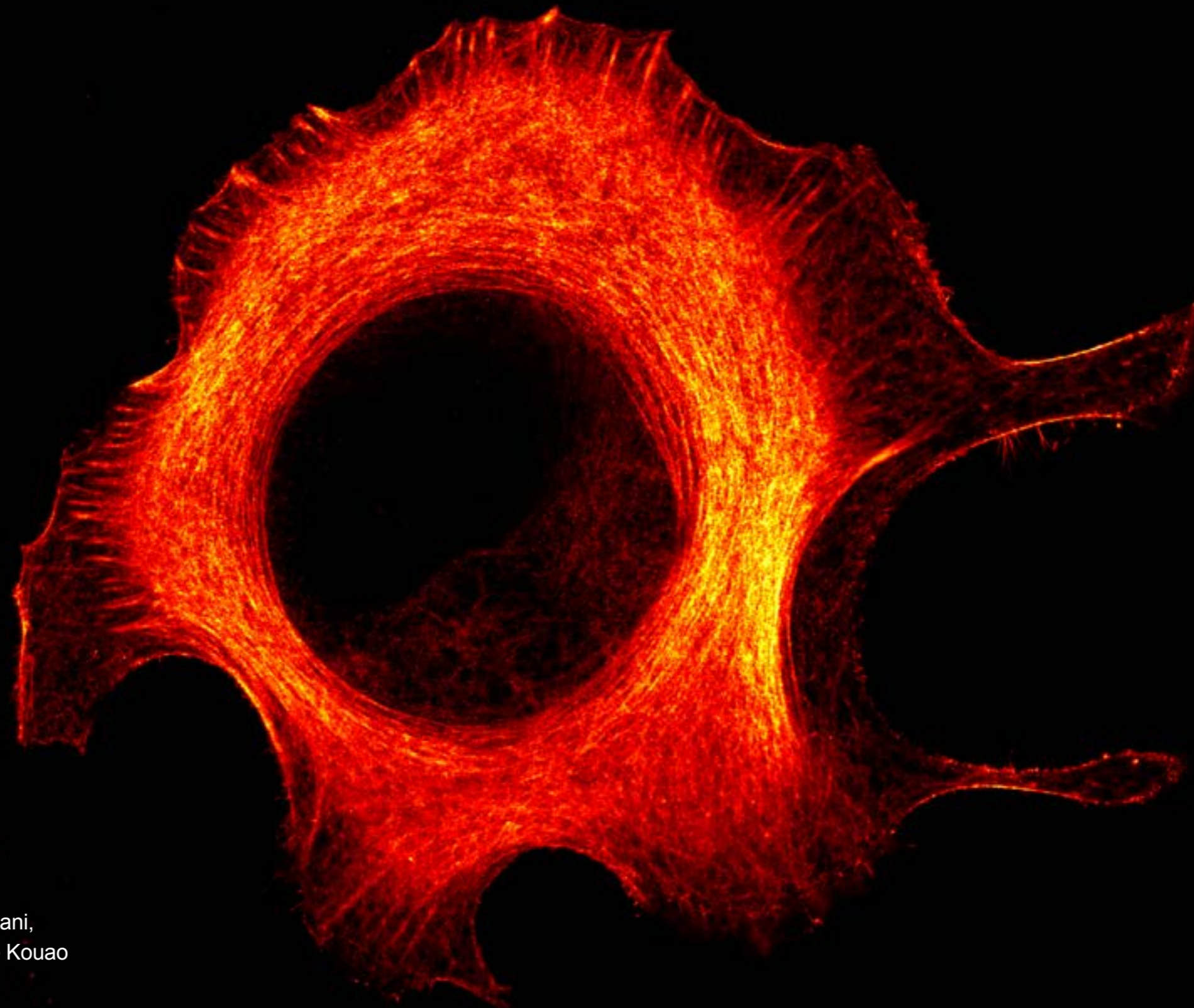
**Pierre Thibault**  
*Proteomics and Bioanalytical Mass*



**Alain Verrault**  
*Chromosome Biogenesis*



**Brian Wilhelm**  
*High-Throughput Genomics*



INSTITUTE FOR RESEARCH  
IN IMMUNOLOGY  
AND CANCER



Université   
de Montréal

Legal deposit

Library and Archives Canada, 2023

Editorial Committee

Judith Lafaille, Myreille Larouche, Anne Ferré, Julie Mantovani,  
Steve Ntambwe, Chantal Malette, Sébastien Roy, Charlène Kouao

Graphic design: Bruno Ricca

Photos: Lara Elis Alberici Delsin, Jack Bauer, Christian Brault, Christian Charbonneau, Damien Garrido,  
Myreille Larouche, Justine Latour, Léa Marpeaux, Gabriela Molinari, Roberto Karine Normandin, Lucas Porras, Anaïs Vivet