Research is Care

Report to the IMHR Board

Fiscal Year **2023**

University of Ottawa
Institute of Mental Health Research
at The Royal

The | Le Royal
Mental Health - Care & Research
Santé mentale - Soins et recherche

La version française se trouve ci-dessous.

Letter from the President

Research Is Care. It is a mantra that guides everything we do here at the University of Ottawa Institute of Mental Health Research (IMHR) at The Royal. One of the powers of leading research in a hospital setting is that we are able to provide hope to those for whom other avenues of treatment have been unsuccessful. Receiving care through participation in our clinical trials and other research studies empowers our clients at a time when a sense of control over their own care may have faded.

At The Royal, we believe clients and their families should be at the centre of what we do, that they should be active participants in their own care. That is a key principle in what is known as socially accountable research, which in everyday terms refers to the application of ethics and morals to the decisions we make about how we do research, how we educate, consultation with our communities to inform what we prioritize, and how our research is applied. Researchers in this paradigm are one partner, together with clinicians, health administrators, policymakers and communities to create a health care system that meets people's needs.

Over the last year, we have developed a vision for more formally applying the principles of socially accountable research to what we do here at The Royal/IMHR. That vision, shaped by four goals, will serve as the north star in the development of our upcoming Strategic Research Plan.

- **Increase access to care through research.** Our Clinical Brain Research Centre is an anchoring program here, bringing research and innovation at the point of care, for prevention, diagnosis and treatment. We host some of the most cutting-edge equipment in the province, and provide access to diagnostic and treatment approaches unavailable elsewhere in the region – both pharmaceutical and non-pharmaceutical.

- **Build on our strengths.** Our 2023 Strategic Research Plan will build on our existing and emerging strengths on the full spectrum of research, and will define a roadmap towards our shared vision and goals.

- **Leverage innovation and technology for whole-person approaches and more personalized care.** Too often, clients in need are excluded from trials and other research protocols because they live with concurrent conditions. This pillar focuses our efforts on treating the client, acknowledging comorbidities and mind-body connections, and doing it in a personalized way. By integrating AI-powered approaches, we intend to develop and refine our diagnostic capabilities, as well as abilities for treatment response prediction.

- And finally, **accelerate impact.** That means both supporting our researchers in our interdisciplinary incubator so they are empowered to deliver results earlier in their careers, and working to translate knowledge into care faster, in part by working within a health ecosystem based on people's needs.

Our 2023 Strategic Research Plan will bring further detail to these goals and guide us in our ambition to be one of the top research hospitals in the country. You will learn more about that ambition and plan in these pages that also capture many of the significant achievements of the team at the IMHR in the last year.

The Royal's integrated annual report, which will be available mid-June, includes many IMHR success stories. In the following pages, the IMHR is pleased to provide a more detailed account of our activities in FY23 and the ambitions we have set for the future.

To our teams and to everyone involved in our success, thank you. I look forward to continuing our work towards our shared goals.

Sincerely,
Florence Dzierszinski, PhD
President, IMHR / Vice President Research, The Royal

Lettre de la Présidente

La recherche, c'est le soin. C'est un mantra qui guide tout ce que nous faisons ici à l'Institut de recherche en santé mentale de l'Université d'Ottawa (IRSM) au Royal. L'un des pouvoirs de diriger la recherche en milieu hospitalier est de pouvoir donner de l'espoir à ceux pour qui les autres voies de traitement ont échoué. Recevoir des soins grâce à la participation à nos essais cliniques et à d'autres études de recherche donne du pouvoir à nos clients à un moment où le sentiment de contrôle sur leurs propres soins peut s'être estompé.

Au Royal, nous croyons que les clients et leurs familles doivent se trouver au centre de ce que nous faisons, qu'ils doivent participer activement à leurs propres soins. C'est un principe clé dans ce que l'on appelle la recherche socialement redevable, qui, en termes quotidiens, fait référence à l'application de l'éthique et de la morale aux décisions que nous prenons sur la façon dont nous faisons de la recherche, dont nous éduquons, la consultation avec nos communautés pour informer ce que nous priorisons, et comment notre recherche est appliquée. Dans ce paradigme, les chercheurs représentent l'un des partenaires, avec les cliniciens, les administrateurs de la santé, les décideurs et les communautés pour créer un système de soins de santé qui répond aux besoins des communautés.

Au cours de la dernière année, nous avons développé une vision pour appliquer plus formellement les principes de la recherche socialement redevable à ce que nous faisons ici au Royal/IRSM. Cette vision, façonnée par quatre objectifs, servira d'étoile polaire pour l'élaboration de notre prochain plan de recherche stratégique.

- **Accroître l'accès aux soins grâce à la recherche.** Notre centre de recherche clinique sur le cerveau est un programme d'ancrage ici, apportant la recherche et l'innovation au point de service, pour la prévention, le diagnostic et le traitement. Nous hébergeons certains des équipements les plus avant-gardistes de la province et donnons accès à des approches de diagnostic et de traitement indisponibles ailleurs dans la région - des approches de traitement pharmaceutiques et non pharmaceutiques.

- **Bâtir sur nos forces.** Notre plan de recherche stratégique 2023 s'appuiera sur nos forces existantes et émergentes sur l'ensemble du spectre de la recherche et définira une feuille de route vers notre vision et nos objectifs communs.

- **Tirer partie de l'innovation et de la technologie pour des approches globales de la personne et des soins plus personnalisés.** Trop souvent, les clients dans le besoin sont exclus des essais et autres protocoles de recherche parce qu'ils vivent avec des conditions concomitantes. Ce pilier concentre nos efforts sur le traitement du client, la reconnaissance des comorbidités et des liens corps-esprit, et le fait de manière personnalisée. En intégrant des approches basées sur l'IA, nous avons l'intention de développer et d'affiner nos capacités de diagnostic, ainsi que nos capacités de prédiction de la réponse au traitement.

- Et enfin, **accélérer l'impact.** Cela signifie à la fois soutenir nos chercheurs dans notre incubateur interdisciplinaire afin qu'ils soient habilités à produire des résultats plus tôt dans leur carrière, et travailler à traduire les connaissances en soins plus rapidement, en partie en travaillant au sein d'un écosystème de santé basé sur les besoins des gens.

Notre plan de recherche stratégique 2023 détaillera ces objectifs et nous guidera dans notre ambition d'être l'un des meilleurs hôpitaux de recherche du pays. Vous en apprendrez plus sur cette ambition et ce plan dans ces pages qui résument également bon nombre des réalisations importantes de l'équipe de l'IRSM au cours de la dernière année. Le rapport annuel intégré du Royal, qui sera disponible à la mi-juin, comprend de nombreuses histoires de réussite de l'IRSM. Dans les pages suivantes, l'IRSM est heureux de fournir un compte rendu plus détaillé de nos activités au cours de l'exercice 2023 et des ambitions que nous nous sommes fixées pour l'avenir.

À nos équipes et à toutes les personnes impliquées dans notre succès, merci. J'ai hâte de poursuivre notre travail vers nos objectifs communs.
Sincèrement,

Florence Dzierszinski, PhD
présidente / vice-présidente - recherche, Le Royal

The Royal's Vision for Socially Accountable Research

Increase access to care through research

The Clinical Brain Research Centre:

- Interventional platform
- Diagnostic platform
- Prevention hub (primary and tertiary)

Targeted focus areas (in development)

- Concurrent disorders
- Difficult-to-treat depression, tertiary conditions
- Suicide prevention
- Transitional-aged-youth
- Seniors
- Vunerable populations

Leverage innovation and technology for whole-person approaches and more personalized care

- Artifical intelligence & computational science capacity
- Non-pharmaceutical treatment approaches
- Mind-body connections
- Digital health

Accelerate impact

- Incubate next-generation researchers
- Centre on lived expertise
- Transfer knowledge into practice
- Partner with an ecosystem-based mindset

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Research is Care

Planning for success: a 10-year growth ambition

Over the last three years, the IMHR has been in metamorphosis. We created the concept of the Clinical Brain Research Centre (CBRC), which comprises the Brain Imaging Centre, the newly announced BMO Innovative Clinic for Depression, the Neuromodulation Research Clinic, and other upcoming innovative programs based on integrated research, care, education and lived expertise. Separately, each of these is disrupting mental health care, giving clients access to breakthrough treatments, and challenging the status quo in how to deliver care to those experience mental illness. Together, as the CBRC, they are creating access to care through research and most importantly giving hope for those for whom more traditional approaches have failed.

One day, non-invasive, non-pharmaceutical and more personalized approaches to treatment will be widely accessible, not just to those whose illnesses have been deemed treatment resistant. But we have far to go. Today, The Royal is a small academic health science centre with a good reputation, and a brand in development. But with greater access to resources that will be transformative, we can punch above our weight on behalf of those we serve.

We know this: mental health research and care – in Canada and internationally – are significantly underfunded and under-resourced. We have made meaningful progress in destigmatizing mental illness, driving people to seek care. But if they can get care, which is not a given, clients too often find that the treatments offered are not personalized, rely on trial and error, and have changed little in decades.

We are incredibly proud of how the IMHR has transformed over the last few years, and the high-calibre team of scientists, clinicians, trainees and staff that are providing access to care through research here. We offer something unique to mental health care and research and the community is responding positively; our aspiration is that in the next 10 years we move from being an important part of the Ottawa community to an internationally known innovator in mental health care and research. To get there, we need to grow. While total research spending is just one measure of a hospital's size and impact, it is a fair proxy. Renowned hospitals attract more research grants and major gifts. Hospitals with more research money attract top talent. Top talent combined with research dollars, all else being equal, deliver more breakthroughs and innovation.

In FY2021, The Royal's (classified as a small hospital) research spending was ranked 33rd in Canada (all academic hospitals considered, irrespective of size or speciality), at $15 million, holding the same position as a year earlier. For context, the Douglas (classified as a large hospital) was 25th with almost $27 million, and CAMH (classified as a medium hospital) was 14th with almost $80 million.

What factors correlate with higher rankings?

- Research as high institutional priority and as reflected in Foundation transfers. Examples: CAMH, Baycrest
- Number of scientists: e.g., CHEO, ISMM (Research Intensity ($/researcher) is not especially high, but numbers generate a higher ranking)
- High Research Intensity ($/researcher): e.g., CAMH, Douglas, Baycrest. These organizations benefit from large institutional grants (e.g., CFI) and contracts from government (vs. researcher-specific grants), together with Foundation transfers

The top organizations also show strong numbers in Canada Research Chairs, Tri-Agency (CIHR, NSERC, SSHRC) funding, private sector funding and support staff.

	Researchers	Scientists	Research Staff	Trainees	Total
CAMH	162	123	526	638	1326
Montreal Heart Institute	80				650
Centre de recherche de l'Institut universitaire de santé mentale de Montréal	64	37		150	
Douglas		67		247	560
Baycrest	27		101	72	200
CHEO	244		249	69	562
Women's College Hospital	96		241	60	397
The Royal	72	15	94	65	231

	Products commercialized	Disclosures	New research projects in year	New Clinical Trials in year	Clinical Trials generating revenue	Subjects enrolled
CAMH	5	17	154	45	108	2870
Baycrest	7	20	19	3	0	54
CHEO	1	5	98	19	70	
Women's College Hospital	0	0	59	6	21	2756
The Royal	0	3	30	13	4	606

FY21 data. Source: Research Infosource, Top 40 Research Hospitals (Published: Fall 2022)
OHA Research and Development data FY22 – NOT FOR DISTRIBUTION

Our goal for 2033 is to rank among the top 20, which implies more than doubling our research activities.

We have set this ambitious target knowing that it is not a given we will succeed. Meeting our goal will require significant growth and success in all areas. **In the following pages, we outline five pillars that together we believe create the conditions for success: great socially accountable research; top talent; brand, reputation and advocacy; partnerships and, of course, funding. These pillars are very interdependent, with the ability to create an upward spiral of success**. Outstanding research allows the Foundation to raise more funding, more funding attracts more talent. Partners seek out organizations they trust, and so on.

In the following pages, and in the coming years, we will report on the goals we have set for ourselves to achieve a Top 20 ranking across each of these success pillars, and the progress made.

FY23 in Numbers

Value of grants awarded: **$7.3 million**

Peer review publications: **245**

18 Scientists:

Active research grants: **175**

REB approved studies, active: **156**

Visiting Scholars: **7**

New grant submissions: **138**

Volunteer hours contributed: **2404+**

New grants awarded: **56**

Postdoctoral fellows: **11**

2 new patents and **1** spin-off business

Students: **74**

Clinical Investigators: **48**

Research Agreements executed: **69**

Highlights at a Glance

While the IMHR team is exceptionally productive, a few highlights from the past year bubble to the surface.

1. In our mission to bringing research to the point of care, thereby increasing access to care through research, the two first pilots of the Clinical Brain Research Centre launched this year and are growing. We provided more than 200 treatments in our esketamine this year. Our neuromodulation research clinic achieved a client response rate of 75%, versus the average of 55%.

2. We developed our research governance, including defining the mandate of the Integrative Research Committee of the IMHR Board, and onboarding Dr. Jennifer Phillips as interim Scientific Director. Dr. Florence Dzierszinski coined the term 'Research is Care'.

3. Advanced our client- and family-oriented research, adding Client Advisory Council Chair Glenda O'Hara as voting member of the Integrative Research Committee.

4. Expanded our interprofessional research and knowledge transfer portfolio.

5. Attracted two great team members: Dr. Andrew Nicholson, a Scientist cross appointed with the Atlas Institute for Veterans and Families, and Dr. Ruxandra Antochi, IMHR Physician Scientist working with the neuromodulation research clinic.

6. Further developed the Tripartite with The Royal, The Foundation and the IMHR.

7. Deepened our academic partnerships with uOttawa, including the receipt of two Canada Foundation for Innovation grants and a partnership in the context of the Canada First Research Excellence Fund award that will fund joint projects on the Brain Heart Interconnectome.

8. Development of our equity, diversity, inclusion and indigeneity portfolio at all levels of the organization to promote health and equity in our teams and our research.

9. Leadership and professional development at all levels of the organization. This year, Katie Dinelle's role was expanded to Director, integrated Brain Imaging Centre; both Katie and Tammy Beaudoin are enrolled in the LEADS program.

Great Research

Our aspiration to be a Top 20 research hospital is driven by our desire to do more and better research with greater funding. We have so much more we want to do. At the same time, we believe the way that we approach and conduct research is a differentiator in our ability to attract greater funding and support.

That we do great research is table stakes, but it does not come without deliberate planning and execution. In the coming months we will be undertaking a process to develop a three/five-year Strategic Research Plan that will help create alignment on our priorities and shape the profile of our organization. Particularly given our current small budget, it is critical to make choices about what areas of research we should pursue more deeply, and what areas of focus are inherently complementary.

Our newly appointed interim Scientific Director Dr. Jennifer Phillips will be critical in that process, shaping our research in the coming years, and how we will expand our work with more funding.

The 'how' is something that we have already done a lot of work on in the past few years, defining a uniquely 'Royal' approach to research. That approach rests on a few tenets:

Outcomes Matter:
It's not enough to do the research. We must work to make sure that the research has impact. And so we pay particularly attention to supporting knowledge transfer. We hired a knowledge mobilization specialist in 2021 and a knowledge transfer framework is in development, with a planned launch in 2023. We have developed a framework for applying the concepts of socially accountable research (outlined on page 4) to our work at The Royal.

Integration:
We build interdisciplinary research approaches and teams. The Translation of Research into Clinical Care (TRIC) and the University Medical Research Fund (UMRF) competitions were re-designed to provide funding opportunities supporting research initiatives to improve care at The Royal. These internal grants foster collaboration between clinicians, researchers, clients and families to create inter-professional research teams representing all stakeholders.

We operate under The Royal's Integrated Strategy, first introduced in December 2020, to put research at the core of what we do. That work is illustrated by the advanced plans for the Brain Imaging Centre; the integration of research, care, education, and lived expertise is in the DNA of how we operate. In the fall of 2023, we will design the initiatives for the final 18 months of the five-year integrated plan.

Clients and communities are part of everything we do. Beyond involving them in their own care, we receive guidance from our Client and Family Advisory councils. Client Advisory Council chair Glenda O'Hara is now also a voting member of the Integrative Research Committee. A representative from the Family Advisory Council will soon be added. We are working on new relationships with Ottawa-region organizations such as Community Addictions Peer Support Association (CAPSA) and Wabano Centre for Aboriginal Health, to exchange knowledge and experience.

What to watch for in FY24:

- Further development of the interventional platform of the Clinical Brain Research Centre (Music as a Social Prescription: Initiation of the Music and Mental Health Research Clinic)
- Development of the digital platform with predictive capability at the Brain Imaging Centre in partnership with CAMH and the Heart Institute
- Further development of our work with community partners
- Strategic Research Plan in place
- Scientific Advisory Council in place
- uOttawa affiliation agreement and associated research agreement executed
- Further development of interprofessional research and knowledge transfer portfolio

The 5-year expected outcomes of zone 4 (Integrating Research, Education and Clinical Care) of the integrated Strategy include:

- Everyone at The Royal will have the potential to be part of, and benefit from, world leading scientific exploration.
- The Royal will be a global leader in mental health and substance use disorders in integrated client/family oriented research, outcomes, care design, and evaluation.

To achieve these outcomes and knowing that the path to the integration of research and clinical care is to form inter-professional and inter-disciplinary teams, we started by building the necessary enablers:

ENABLERS

1 MEASUREMENT CAPABILITIES

A number of reporting requirements were developed and implemented to enable the review and assessment of the implementation of strategic initiatives including engagement of clients/families in research activities, identification of clinical and other health care professionals leading research initiatives and/or engaged in research initiatives. Through the new data reporting process, we now report quarterly metrics related to the integration of research and care.

2 RESEARCH EDUCATION

Mandatory research training was implemented as well as the development of the Clinical Research Training Series, hosting 12 sessions to date, combined with increased research ethics training. These initiatives support increased research governance across the organization, increased research data quality, the development of evidence-based-care and measurement-based-care, and mitigates risk to participants, and the organization.

3 SEED FUNDING/INCENTIVES

The Translation of Research into Clinical Care (TRIC) and the University Medical Research Fund (UMRF) competitions were re-designed to provide funding opportunities supporting research initiatives to improve care at The Royal. These internal grants foster collaboration between clinicians, researchers, clients and families to create inter-professional research teams representing all stakeholders.

4 RESEARCH GOVERNANCE

The Integrative Research Committee of the Board was developed, as well as the Research Council, an inter-professional committee formed and operationalized through nine working groups, advancing;

- Client and Family Oriented Research
- Knowledge Mobilization
- Nursing and other health care professional research

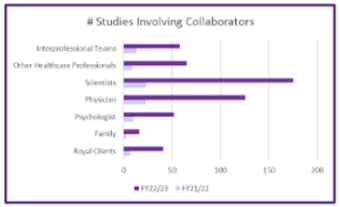
5 PARTNERSHIPS

We have partnered with a number of organizations to support further integration of research, education and clinical care. In addition, a number of researchers have been cross appointed to The Royal to support the strategic initiatives and expand our reach.

OUTCOMES

1 INTEGRATION THROUGH THE DEVELOPMENT OF INTERPROFESSIONAL TEAMS

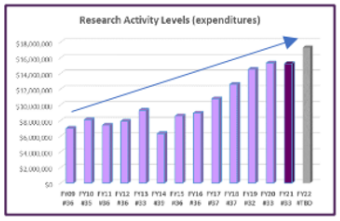
Interprofessional teams provide a built-in mechanism for knowledge mobilization and transfer



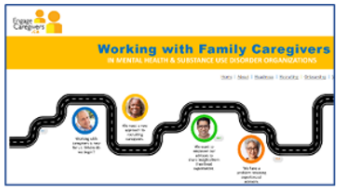
2 INCREASED RESEARCH EDUCATION ACROSS THE ORGANIZATION

Through education we enhance compliance, increase the quality of the research we do and ensure safe research experiences for our participants. This education supports the development of evidence-based-care and measurement-based care.

3 INCREASED RESEARCH ACTIVITY LEVELS ACROSS THE ORGANIZATION



4 CLIENT- and FAMILY-ORIENTED RESEARCH



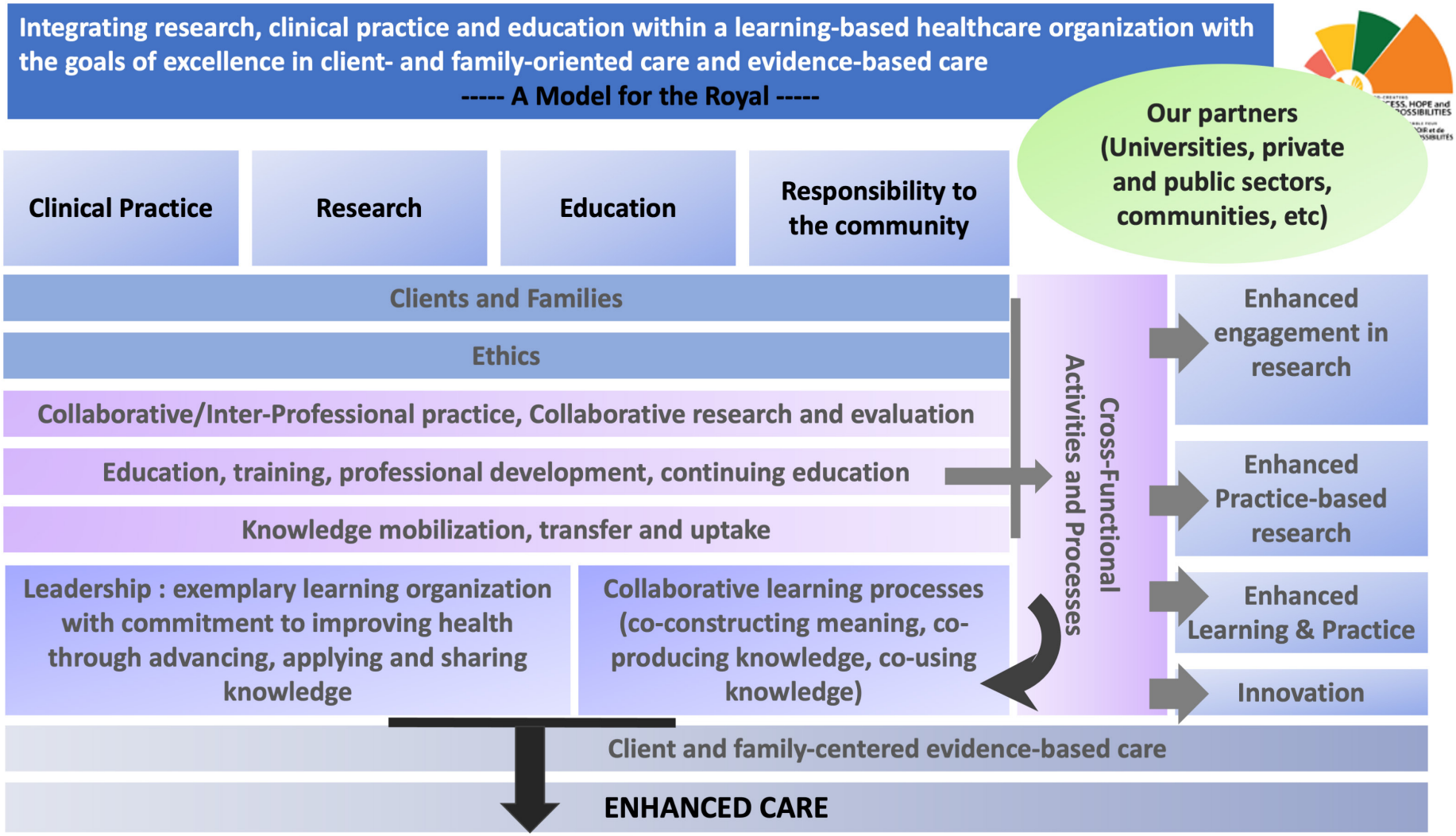
Developed resources by caregivers for caregivers (CIHR-funded)

Co-designed framework for Client & Family Oriented Research (CFOR)

NEXT STEPS

Aligning with our Research to Quality Roadmap (next page), we are now positioned to continue building on this foundation, refresh and continue to expand the integration of research through the expansion of the Clinical Brain Research Centre and Client and Family Oriented Research initiatives.

Research to Quality Roadmap



Research Environment

To inspire, foster and deliver great research, a well-developed research environment must be in place. While things like governance and policies are not flashy, they are key ingredients to our success. Our goal is to build the best possible environment for research to thrive.

Governance
The Strategic Research Plan (SRP) that will detail our full spectrum of research was initiated in the spring of 2023, with intended completion for approval by the Board in December 2023. The SRP will be collaborative and ecosystem-based, and owned at both the management and Board levels. Such a plan provides the context for which our researchers and potential new talent can envision a place for themselves, and at the same time ensures that we are focused with our initiatives and spending.

To complement the various committees that provide oversight, guidance and expertise to our research, we developed the Interdisciplinary Research Committee of the IMHR Board, chaired by Sonya Shorey. The Board-level Integrative Research Committee was put in place in May 2022. Our new Board liaison, Sue Walton, was hired in 2023. A new Scientific Advisory Council, comprising external subject matter experts, will be formed in the summer of 2023, in time for participation in the development of the Strategic Research Plan.

An interim Scientific Director, Dr. Jennifer Phillips, was appointed in May 2023. The search for a permanent Scientific Director is contingent on the Foundation's next campaign.

Enablers
In addition to governing oversight and strategic guidance, great research requires frameworks, organizing principles, norms and policies. Thus we have initiatives to develop or maintain frameworks for Knowledge Mobilization, Nursing and other Health Care Professional research, and Client- and Family-oriented research. (This year we increased client and family engagement in research as a metric on our scorecard.)

Everything we do, both in our work and our workplace, needs to incorporate attention to diversity. We have put in place in FY23 both an equity, diversity, inclusion and indigeneity plan and a sex- and gender-based analysis framework. To bring the former to life, we hired an EDI specialist hired in partnership with The Royal and the Foundation in Fall 2022.

Our affiliation with our academic partner uOttawa is a key enabler; they are a key stakeholder and partner in our research framework. We have been in discussions to renew our agreement since 2021, and expect to execute a new agreement in Summer 2023. A new research agreement is in development as well. We expect the implimentation process to take two years from execution date, for completion targeting Fall 2025.

Our Compliance Policies, including an efficient Research Ethics Board and clinical trial platform were modernized in FY21 and FY22 and are now evergreen. As discussed elsewhere in this report, support for clinical trials in development (contract research organizations), would need a business developer for partnership with private sector, perhaps in partnership with uOttawa or other Academic Health Science Centres. Animal Care Facilities are now compliant and partnered with uOttawa's regional system. Our financial audits are clean.

To support innovation in our researchers and the transfer of technology, we have initiated the development of our commercial strategy. To advance it further we would need a business developer to forge partnerships with the private sector, which could be done in partnership with uOttawa or other Academic Health Science Centres.

Skilled administrative support is another key enabler. We have renewed the team, have in place a business continuity plan and a talent development plan, (which led to role expansions for Tammy Beaudoin and Katie Dinelle,) onboarded young administrators learning on site, and collaborated and horizontal integrated team members with the corporate backbone (Finance, HR, Comms.) That work was completed in FY21 and processes are in development. We also have an agreement with Ottawa Methods Center to provide support for stats, CT design, etc.), which has been in place since FY21.

A risk register and pandemic plans are in place.

We have advanced our work to integrate teams through pilots and have celebrated successes of these efforts, such as Translation of Research Into Care (TRIC) grants and research clinics. (See the sections on the neuromodulation and esketamine research clinics.) Cognitive remediation and music are planned FY24 and FY25.

The interventional platform of the Clinical Brain Research Center was initiated in FY23; the diagnostic platform is partly in place, but we need to connect the elements. A prevention platform in development, but needs Foundation support to launch it and fund support staff, a $12 million ask.

Developing the Clinical Brain Research Centre

The 5-year expected outcomes of zone 2 (Advance Specialized Care) of the integrated Strategy include:

- Knowledge developed at The Royal will influence care and treatment for people with specialized and complex needs around the world.
- Clients with specialized and complex needs in the region will have access to leading-edge care and treatment, from our providers and through our capacity and knowledge mobilization across the region.

To achieve these outcomes, and knowing that brain imaging combined with other technology and integrated into clinical flows can transform care, we developed the Clinical Brain Research Centre (CBRC) concept. This concept leverages the Brain Imaging Centre as an integrator and supporter of our research technologies and client-centered research programs.

Clinical Brain Research Centre – Providing Access to Novel Care Through Research

Enablers

1. **Access – Development of Pathways to Care**
   Clients of The Royal can now access clinical MRI within the walls of the hospital, increasing the likelihood that clients will successfully undergo imaging as part of their care.
   Royal Patient MRI Scans: 0 (FY20/21) → 28 (FY21/22) → 32 (FY22/23)

2. **Leverage the Power of Data for Healthcare**
   The development of major data platform is underway in collaboration with the Heart Institute, uOttawa and CAMH. The platform will support collaboration and data sharing in the area of brain-heart health advancing whole person and more personalized care.

3. **Partnerships**
   The IMHR led and collaborated on major funding initiatives to support the BIC and its research activities supporting new equipment purchases and BIC sustainability.
   - CFI-2020 (UOHI) – $3.4mil
   - CFREF (uOttawa) – $109mil (total contribution)
   - CFI-2023 (uOttawa FoM) – $1.3mil
   - CFI-2023 (CAMH) – $1.3mil
   - CFI-JELF (IMHR-Tuominen) – $900k
   - CFI-JELF (Carleton-Berman) – $350k

4. **Leadership – PET Program Expansion**
   The BIC PET Radiochemistry Program continues to mature. This program supports advanced Mental Health research at The Royal, allowing researchers and clinicians to fully leverage our PET/MRI scanner. It is a resource for our partners across the city.
   - Dedicated neuro-radiochemist hired
   - Established regional Brain PET Steering Committee
   - Implemented first new PET radiotracer

5. **Expansion of the Community**
   BIC usage has increased year on year, expanding the number of mental illnesses studied and clients involved in research.
   - Scan Revenue: $353k (FY21/22) → $555k (FY22/23)
   - Active Projects: 31 (FY21/22) → 45 (FY22/23)
   - New Projects: 7 (FY21/22) → 14 (FY22/23)

6. **Talent**
   New talent was recruited in the area of PET radiotracer development and MRI physics. The CBRC has also worked to develop talent in place.

Outcomes

2021: Neuromodulation Research Clinic
$2.5M Secured
- BIC and neuromodulation clinic connected to provide functional-MRI guided rTMS
- 26 patients have completed the full acute treatment course – 50% in remission and 73% responded
- 99 patients on the wait list

2022: Esketamine Research Clinic
$2M Secured
- Launched the esketamine research clinic, expanding on and refining pilot
- 200 individual treatments completed to date

Since launching this strategic initiative, The Royal's Brain Imaging Centre has expanded its programming and strengthened key partnerships to better support our researchers and clients. **Through the CBRC, clients now have access to specialized research-based treatments (e.g. imaging guided rTMS) and to on-site clinical imaging resources (MRI).** Securing funding from both philanthropy and granting agencies has been a central enabler to this growth. Going forward the CBRC will continue to develop under the **Advance Strategies to Integrate Research, Care, Education, and Lived Expertise** initiative.

Research Infrastructure

The CBRC technology, including the Brain Imaging Centre, Neuromodulation research clinic, sleep research lab, wet lab and animal care facilities for translational work are collectively a significant part of the research environment that we offer – creating a magnet for talent. We are working to ensuring these facilities have sustainable funding and support, for example through regional partnerships.

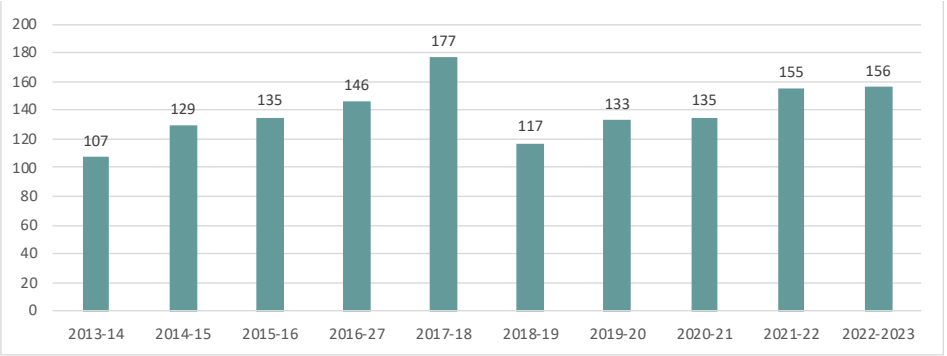
For example, we entered the Canada Foundation for Innovation (CFI) Innovation Fund (IF) 2025 competition to plan for scanner renewal in the coming years, and a plan for rTMS expansion is in place (renovations and 1 more machine). In coming years (FY24 and FY25) we will determine how to integrate these upgrades into clinical workflows. We also intend to make other large grant applications, e.g. FedDev, to support the sustainability of our infrastructure.

Finally, to leverage the power of data, we need specific digital infrastructure, including cloud-based technologies and high-power computing, including links with various databases. As part of CFI IF 2020, we received $3 million to build a data platform. In order to build it, CAMH has agreed to partner with us, in line with what they've done for the Krembil Centre for Neuroinformatics, as mentioned elsewhere in this report. We hired research an IT specialist in FY23.

Research Ethics Board Activity

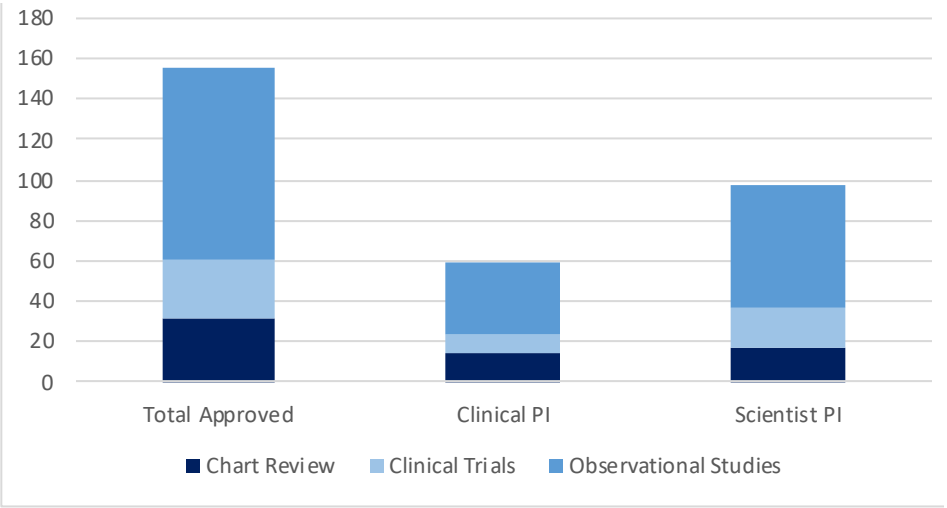
The number of Research Ethics Board (REB) approved projects is an indicator of research capacity and growth. The volume of research activities at IMHR continue to increase. REB training continues and new sessions are under development. The Beta version of the REB system has been obtained and is currently undergoing further development. It is expected to launch in September 2023.

Total Active Studies



A good indicator of our move to interdisciplinary research teams is the proportion of trials that have clinicians as principal investigator.

Types of Studies by Lead Investigator



Similarly, we are working on making the option to participate in research widely known and available at The Royal. Last year, the REB started to collect data about the clients and families that are engaging in research across the spectrum of research (from conception to implementation). Of the 156 REB-approved studies during Q4, 60 studies have recruited clients of The Royal.

Strategic Administrative Initiatives

Reporting requirements have been amended to enable the collection of metrics that are associated with the strategic goals of the organization, including the creation of interdisciplinary research teams and the inclusion of more clients of The Royal in our research. These new indicators will assist in measuring the integration of clinical care, research, and education.

- In FY23, the administration team continued to promote the importance of completing the training modules required to ensure clinical research quality and integrity, as well as compliance with regulatory requirements. In FY23 Q1, these training modules were made mandatory and are now included in the training requirements for all new employees and those involved in research activities, such as students. Note: TCPS2 and GCP are the gold standard guidelines for all individuals involved in research and are deemed mandatory by IMHR. Health Canada Division 5 training is mandatory for those involved in regulated drug trials. The remaining courses are available to all staff and are optional.
- Two new quality indicators were developed for the start of the new fiscal year. These include:
  - Percent of research projects in which a Royal clinician is the Principal Investigator or Co-Investigator
  - Percent of clients (both inpatients and outpatients) of The Royal participating in clinical research projects.

  Recent accomplishments include:

  - Continue to circulate active studies lists throughout The Royal to facilitate research participation
  - The testing of the Research Participant Recruitment Portal (Sona) is complete and researchers are now populating the database. The launch is expected at the beginning of June, making the database accessible to our clients, families, clinicians and community members.
  - Ongoing partnership with Infonetica as the online Research Ethics Board software and Research Administration Database software program are under development
  - IMHR Administration has developed and launched a pilot version of the Research Participant Satisfaction Survey. Result of the survey will be shared at the end of Q1 and this initiative will continue in subsequent quarters.

	To date	2022-2023
Referrals	171	50
Pre-screened	140	37
Enrolled (i.e. signed consent)	40	26
Randomized (i.e. started treatment)	33	19
Finished Acute Treatment Course	26	14
Continued to Maintenance	20	11
Failed Screens	5	5
Withdrew from Study	5	3
Withdrawn from Study	1	1
Completed (Acute + Maintenance)	18	6

Sara Tremblay, PhD (left) and Lisa McMurray, MD (right)

Neuromodulation Research Clinic

Neuromodulation research at the IMHR focuses on the study and treatment of major psychiatric disorders using repetitive transcranial magnetic stimulation (rTMS).

This therapy is approved by Health Canada for the treatment of major depression in adults, and is currently under study as a potential treatment for other psychiatric disorders such as schizophrenia and obsessive-compulsive disorder. For individuals that do not respond to at least one anti-depressant medication, rTMS is now considered to be a first-line recommendation.

In the latest fiscal year the clinic had 50 new referrals, making 171 to date, with a total of 18 people to date who have completed both an acute treatment care and maintenance. There is a waitlist of 99 clients.

Out of the 26 participants that finished the acute treatment course, 19% were in remission, and 31% experienced at least a 50% improvement of their symptoms (i.e. were responders) after just 4 weeks of treatment. After 6 weeks of treatment, 50% were in remission and 73% were responders, which means these participants were eligible to continue on to the maintenance phase of the trial.

The clinic is providing significant training opportunity. Dr. Sara Tremblay supervises 2 Master's students, 4 PsyD students, 1 PhD student, 1 post-doctoral fellow, and 5 volunteers. During the reporting period, 1 Master's student successfully graduated.

Funding for the clinic has been driven by the Royal Ottawa Hospital Foundation, with grants to date totalling $1.795 million. Active research grants exceed $1.2 million, while a submitted $1.99 million CIHR grant is outstanding.

The team's work at the clinic has drawn the attention of the research community, leading to invited talks, conference presentations, and several academic and news media publications, which have contributed to knowledge mobilization.

In addition to the significant client waitlist, we have seen excellent engagement from those that have received treatment, willing to share their experience with various stakeholders such as the Royal Ottawa Foundation. One client has accepted to be included as a client partner in a research grant application. We are also in the process of forming a client advisory committee for the clinic. Finally, in collaboration with researchers from the University of Ottawa, we have started to collect qualitative interview data in a subsample of clients to obtain a comprehensive overview of their experience with rTMS treatment.

In the coming months, the Neuromodulation Research Clinic will continue its rapid growth. In terms of infrastructure, we will be renovating the space in the summer of 2023 to create more rTMS treatment rooms and more capacity for staff members. We will acquire another rTMS machine in June 2023, which, together with new staff, will allow us to significantly increase our capacity.

In terms of research, we will have two rTMS clinical trials to start up this year. One Brain Canada-funded trial will be starting in May 2023, which will involve PET imaging to help us understand how rTMS changes brain activity and help develop a tool to predict response to treatment. In September 2023, we will start a trial which use fMRI-guided technology to better personalize rTMS treatments.

Jennifer Phillips, PhD, research lead of the Esketamine Research Clinic / BMO Innovative Clinic for Depression

	To date
Referrals	21
Failed referral screening[a]	10
Accepted for intake	11
In active intake	1
Accepted for treatment[b]	10
Consented for research participation[c]	8
Received at least one treatment	10
Finished induction phase treatment	10
Continued to maintenance treatment	9
Received treatment for >12 weeks[d]	6
Treatments administered overall[e]	207

Esketamine Research Clinic

A major element of the Clinical Brain Research Centre, the Esketamine Clinic (renamed after year end as the BMO Innovative Clinic for Depression with a major gift of $2 million) has been operational for 18 months, with the first treatment administered in September 2021. Patients treated in the Esketamine Clinic receive esketamine twice weekly during the initial induction phase of four weeks. Maintenance treatments are administered every week or once every two weeks at the discretion of the treating physician for up to 24 additional weeks

Two additional Royal clients are receiving ongoing maintenance treatment post-research participation in IMHR (former participants of the Janssen esketamine clinical trials, site PI: Pierre Blier). Five treatments were administered by the Esketamine Service through this stream as of March 31, 2023.

The clinic has growth thanks to the support of three major sources, an initial Innovation Grant of $806,500 awarded to Raj Bhatla and Katerina Nikolitch, $25,000 in seed funding, obtained from the Foundation to support standard research data collection, and most recently, the grant from BMO to support general operations and research. That grant is particularly important because it is unrestricted, and allows growth of the clinic including the needed support staff.

Research is Care

The esketamine clinic is a perfect example when research is paired with care. Program evaluation and research data collection are embedded directly into the provision of care. The overarching goal of the standardized research collection is to test the real-world clinical effectiveness of esketamine to elicit rapid and sustained decrease in depressive symptoms in patients resistant to other forms of treatment

Our focus is on capturing changes in depressive symptoms, suicidal ideation, anxiety, anhedonia, hopelessness, quality of life, and individualized patient-identified goals. In addition to standardized data collection, we are also pursuing embedded research projects which focus on three key areas:

- whether changes in inflammatory and metabolic biomarkers of depression can be useful in predicting clinical outcome during esketamine treatment.
- the effect of offering concurrent treatment with esketamine and Behavioral Activation versus esketamine alone.
- the anti-suicidal effects of esketamine.

As we look ahead, we want to increase patient flow to the service. Our group will continue to meet with possible referring psychiatrists at The Royal to educate them about this novel treatment and to explain how our service functions. In addition, we will build on preliminary steps to partner with community general psychiatry hospitals to make this service available to physicians working outside the Royal.

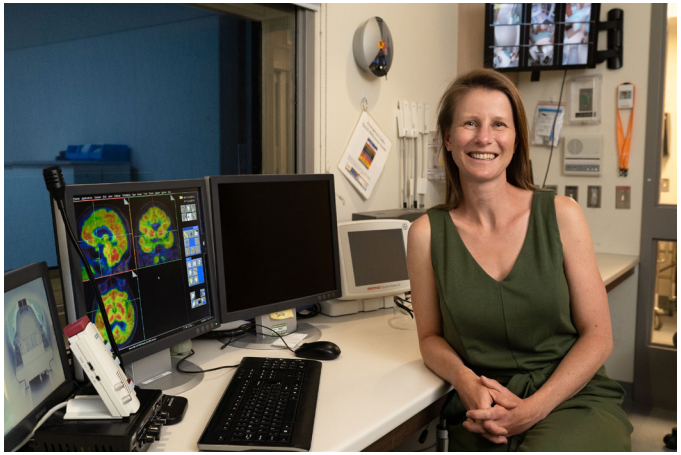
[a]Total number of patients who failed referral screening = 10. Of these, 6 patients had no insurance coverage, 1 patient with insurance was denied coverage for esketamine, 3 patients were not interested in pursuing treatment upon contact by the team.

[b]In terms of demographics, 5 men, 4 women, and 1 nonbinary individual have been treated to date with a mean age of 44.7 years. Patients' primary diagnoses were major depressive disorder (9) and bipolar disorder (1). Patients average pre-treatment depressive symptom severity corresponded to severe depression.

[c]For patients not consenting to research, 1 did not consent, 1 exceeded age cut-off for research study.

[d]Individuals still receiving treatment at 12 weeks from initiation (1 month induction phase + at least 2 months maintenance treatments). It can be inferred that these patients derived some benefit from treatment (we are not basing treatment continuation criteria according to strict measurement-based response cut-offs, instead it is at the discretion of the treating psychiatrist and the patient).

[e]The total number of treatments/patient ranged from 8-33, with a mean of 20.7 treatments/patient. The average total treatment time for patients in the service was 5.5 months. Of those who had at least 1 maintenance treatment, average time in maintenance treatment was 5.1 months. 5/10 patients elected to stop treatment at some point due to perceived nonresponse.



Katie Dinelle, MSc, Administrative Director, integrated Brain Imaging Centre

Brain Imaging Centre

Overview

Growth was the key theme for the Brain Imaging Centre (BIC) in FY23. The department focused on increasing our research impact and expanding service for our research community, research participants and Royal clients. This included growth in the areas of:

- BIC user base
- Staffing and staff learning and development
- Research infrastructure (including the PET Radiochemistry Program and Cardio-Neuro-Mind Data Platform)
- Clinical capacity
- Training
- Partnerships (especially those supporting joint grant applications)

Looking forward, the foundation we have developed will support the BIC as it becomes an integral part of the Clinical Brain Research Centre, integrating our IMHR research technologies to provide improved care for our clients through research.

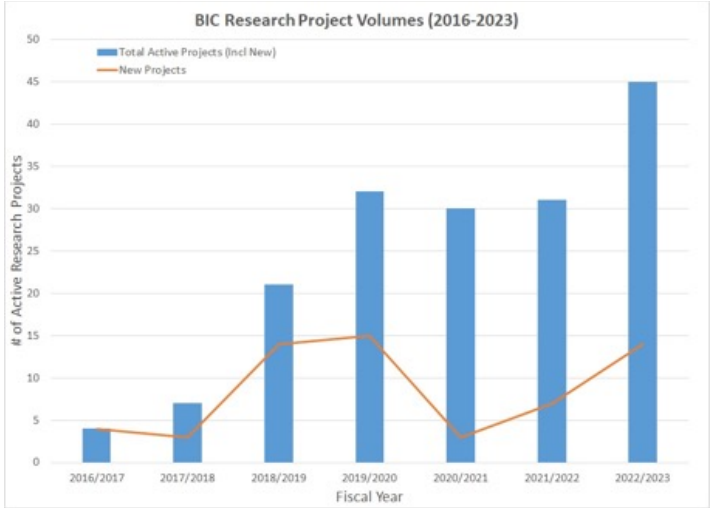
Highlights

BIC usage continues to grow – bringing in new scientists, institutions and research projects.

In FY23 the BIC supported:
• 45 Active Projects (14 New) • 31 Research Teams (3 New) • 9 Institutions (1 New)

Usage Statistics

BIC usage continued to grow in FY23, recovering from extended research shut-downs during the height of the COVID-19 pandemic. As of March 31st, 2023 the BIC supported 31 research teams, running 45 different research imaging projects. In FY23, 14 new research projects were launched; three new Principal Investigators joined the BIC community and we initiated our first collaborations with the Bruyère Research Institute. In March 2023, the BIC had an occupancy rate of 87%, representing the highest usage since operations began. Average occupancy over the FY23 was 56%, which included a major staff turnover and associated downtime in December through March.



Highlights

Industry sponsored clinical trials continue to be a major revenue source for the BIC.

BIC PET Radiochemist has implemented one new brain PET tracer, and a second is expected by November 2023. These will support novel brain research in cognition and synaptic density.

BIC PET Steering Committee continues to meet regularly to guide PET tracer selection and develop pilot studies to support grant applications.

PET Program Development

PET research studies occupied 20% of the BIC's available scan time in FY23. Due to the large number of PET-based industry sponsored clinical trials (primarily through the Ottawa Memory Clinic), the PET imaging program brought in 45% of the total department revenue in the same time period. These clinical trials are a significant revenue source and we must continue to provide a high level of service, including stable staffing resources, to ensure future contracts.

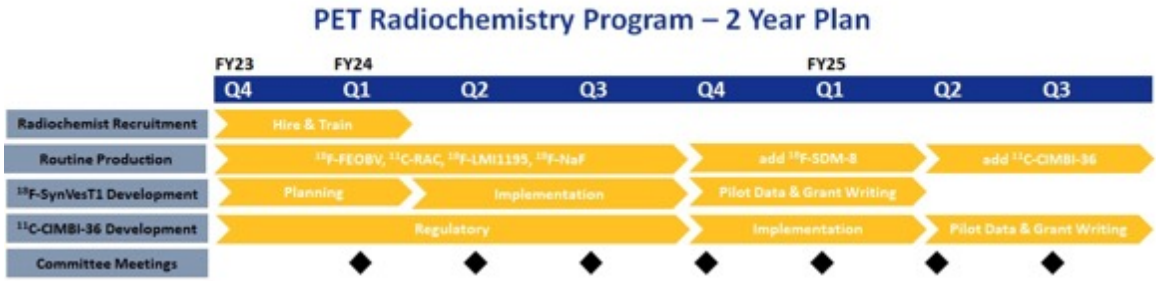
In December 2022, the BIC conducted its first 18F-FEOBV PET scan with tracer supplied from the Heart Institute. This tracer was the first product of our PET Radiochemistry Program and is now available to our Users for research projects looking to better understand the cholinergic system which plays an important role in cognition. IMHR scientists Drs. Synthia Guimond and Lauri Tuominen secured a $311,000 CIHR grant to study cognitive difficulties in schizophrenia using this PET imaging tracer.

Through our PET Radiochemistry Steering Committee (lead by Dr. Lauri Tuominen), our Users have selected the PET tracers 18F-SynVesT1 and 11C-CIMBI-36 for implementation in 2023/24. 18F-SynVesT1 allows measurements of synaptic density with proposed projects focused on understanding how synaptic density is impacted by interventions like psilocybin, rTMS and exercise. 11C-CIMBI-36 allows measurements of serotonin release with proposed projects investigating serotonin release in response to interventions including rTMS and psilocybin.

A PET tracer specific working group (sub-group of PET Steering Committee) will be formed for each tracer development project. The working group will be tasked with:

- Designing and running a pilot data collection with the PET tracer to support future grant applications
- Developing one large grant project utilizing the PET tracer
- Supporting individual PIs with grant applications using this tracer.

This sub-group has already been formed for 18F-SynVesT1 and the members are currently deciding on a pilot study protocol (N=8) that will support the greatest number of future grant applications using this tracer.



Highlights

Clinical MRI services for Royal patients used steadily through FY23 (32 total patients), providing a needed service for clients who are unable to travel to partner hospitals for diagnostic imaging.

New opportunity to provide PET diagnostic imaging for Alzheimer's disease at The Royal further improving client access to specialized care.

Clinical Imaging – Advancing Specialized Care

The BIC continued to provide clinical MRI services, in collaboration with The Ottawa Hospital (TOH), to patients of The Royal. Booking volumes for clinical imaging of Royal patients has been constant at ~2-4 patients/month. Given the current OHIP-funded indications for the use of imaging in the area of mental health we do not expect a large increase in patient flow. The availability of this service in-house, negating the requirement for travel to TOH, continues to positively impact our clients.

In spring 2023, Cancer Care Ontario (CCO), through their PET Scans Ontario Program, announced the creation of a PET/MRI registry in Amyloid PET imaging, with Ottawa being one of three sites in Ontario participating in the program. PET Scans Ontario uses the PET Registry format to gather evidence to recommend future inclusion as an OHIP-covered service. Amyloid PET imaging is the gold standard in the diagnosis of Alzheimer's Disease. Through this program brain PET amyloid will be available to patients with clear, measurable cognitive deficits when Alzheimer's disease is a consideration and in whom knowledge of amyloid status is expected to change management. The BIC is currently working with CCO, TOH (to support radiological interpretation of the scans), and geriatric physicians at Bruyère and The Royal to ensure that patients of The Royal have the opportunity to access this important imaging technology. We expect the registry to launch at the BIC in summer 2023.

Partnerships And Funding

Through FY23 the BIC and IMHR contributed to the development of a number of major grant applications that include acquisition of new infrastructure for the facility and support for operations. In addition to new funding announced in this fiscal year, we continue to implement projects funded by CFI-2020 (Drs. Liu and Slack) and look forward to announcements this FY on three other infrastructure grants.

Outlook

In the coming year, the BIC will build on the capacity we have developed over the previous 6-years of operations. We look forward to the go-live of the Cardio-Neuro-Mind Data Platform, our first PET studies with 18F-SynVesT1, and the potential to develop a major infrastructure grant to expand our imaging capacity with the University of Ottawa.

Table 3: BIC Involvement in Major Infrastructure Grants

Status	Competition	PI (Institution)	Amount*	Infrastructure
Funded Work in Progress	CFI-IF-2020	Dr. Peter Liu (UOHI), Dr. Ruth Slack (uOMBRI)	$3.44mil	Data platform, imaging equipment, PET wet lab
Funded	CFI-JELF-2022	Dr. Lauri Tuominen (IMHR)	$1.3mil	PET radiochemistry equipment
Funded	CFI-JELF-2022	Dr. Avery Berman (Carleton, IMHR)	$29k	MRI room renovations to support expanded research equipment
Decision Pending	CFI-IF 2023	Dr. Katalin Tóth (uOttawa), Dr. Baptise Lacoste (uOttawa)	$1.29mil	MRI compatible rTMS, PET radiochemistry equipment, scanner service contract
Decision Pending	CFI-IF 2023	Dr. Shawn Rhind (CAMH)	$1mil	Computing infrastructure
Decision Pending	CFI-JELF 2023	Dr. Natalia Jaworska (IMHR)	$1mil	Peripheral infrastructure for whole body health measures

*Represents the portion of grant funds designated for BIC/IMHR infrastructure.

Talent & Culture

Great research naturally relies on attracting and retaining the right talent, and providing them with a research environment that allows them to do their best work. That includes ensuring all research meets or exceeds regulatory and ethical standards, that all of our work provides training opportunities, and that we create a work environment that encourages rigorous but always respectful debate.

We face a particular systemic talent challenge. In Canada, researchers salaries generally cannot be paid with research grants. In universities, research is generally led by professors paid through university base funding or Canada Research Chairs (but there are only 2,285 total for the whole country, and even that salary scale has not been increased in 20 years.) By contrast, research hospitals rely significantly on charitable giving through foundations to pay salaries. Wages for graduate students and postdoctoral fellows, which are paid through academic grants, have not increased in 10 years, and for many people it is simply not enough to live on.

At the IMHR we have created a patchwork of strategies to pay our researchers, and will conduct a pay scale review in FY2024, as we face another challenge from south of the border. U.S. companies, universities and research institutes are attracted to Canadian talent, and because research grants there can and do cover salaries, are able currently to provide higher and more securing funding. While there are many non-monetary aspects of working in Canada, there is an undeniable pull from the U.S.

Our aspiration to be Top 20 is in direct response to this challenge. As you will read in the section on funding, we are actively working to diversify our revenue so that we can be more competitive as well as grow the team.

Our talent strategy includes the following:

- Build our Strategic Research Plan, which nests within The Royal's integrated Strategy. Already underway, we plan for completion by December 2023. Having this plan in place will both help shape our employee brand proposition, as candidates will be able to see where we are directing our focus, and where our expertise will grow, and it will help identify the roles that we will add to our team if/as we can fund new roles. A more defined talent plan will be developed in line with the Strategic Research Plan, including transition and succession planning.

- Develop tailored plans for early, mid- and senior career stages. Such plans must be in place and evergreen for all team members so that they can see a growth path for themselves here at The Royal/IMHR. This including mentorship and coaching as well as feedback frameworks and leadership development.

- The first of its kind in Canada, the Emerging Research Innovators in Mental Health (eRIMh) initiative was created to allow young researchers to get established in the field of mental health research, and enhance and broaden the mental health research capacity by supporting projects that involve and especially high degree of innovation and novelty, i.e. high risk/high reward research.

  The initiative was made possible thanks to the generous support of an anonymous donor. Four years into the program, we provided the donor with an interim report that detailed the successes of the program to date, including the leverage of their funding.

  It is already clear that the eRIMh program:

  - Enables young researchers to establish themselves in the field of mental health research, and to conduct high-risk/high-reward research by removing the angst and uncertainty of funding. This was a primary goal of the program.

  - Provides an innovative platform and a nimble highway for capacity building in mental health research.

  The eRIMh program has been transformative for the organization as a whole, in terms of productivity, dynamism, research capacity, impact, integration of research and care, academic networks, sustainability for scientists in academic hospital settings (vs. university settings) etc. Early career researchers now represent more than 60% of our scientists – informing our direction for the future in the context of our new strategy.

- This year, we created the inaugural Institute of Mental Health Research (IMHR) Culture and Gender Mental Health Graduate Student Research Award to support capacity and engagement of Indigenous youth in graduate research in mental health and wellness. Inaugural recipient Karen Aglukark is pursuing her master's degree in neuroscience at Carleton University under Dr. Kim Matheson's supervision.

- In FY2022, we developed a Prizes and Awards portfolio to which we mindfully submit nominations, ensuring that our team members know that we value their work, and that their work gets the recognition it deserves. As of FY2023, two Fellowships of The Royal Society of Canada have been awarded and one has been submitted with results pending. We also made submissions for Governor General's awards and to the College of New Scholars of The Royal Society of Canada.

Equity, Diversity & Inclusion

Data collection & Education

October 2022 - December 2023

- Pilot & soft launch EDI Data Collection Initiative
- Review EDI questions in Engagement Survey
- Seek funding for EDI education conference
- Targeted education sessions & consultations with different units
- Support creation of ERGs
- 3-5 year EDI Workplan developed, approved & initiated.

Communication & Reporting

January - April 2024

- Organize & analyze data collected during Needs Assessment
- Design & implement communication strategy
- Draft & finalize reporting documents
- Present to senior leadership
- Disseminate to the organization & community.

Education Plan Development

May 2024 - February 2025

- Collaborate with Learning & Development to identify strengths, growth areas & needs
- Draft, finalize & seek approval of Education Plan with Senior Leaders
- Develop communication strategy in alignment with strategy launch.
- 3-5 year EDI Workplan developed, approved & initiated.

Evaluate EDI Resourcing & Staffing Needs

May - December 2025

- Review & evaluate staffing & resource needs to support EDI Strategy & Education Plan
- Draft, finalize & report to Senior Management & Foundation
- Initiate approved restructuring, including development & launch of a Health Equity Office.

EDI Initiation

September - December 2022

- EDI Specialist hired & oriented
- EDI LEADS & other training
- EDI informal consultation
- EDI Committee re-initiated
- Review of RESPECT training & other materials.

EDI Needs Assessment

March - December 2023

- Design in consultation with Senior Leaders, EDI Committee, Client & Family Councils
- Organize launch event alongside hard launch of EDI Data Collection Initiative
- Hold focus groups, listening sessions, interviews, etc.
- Review additional materials, communications & data.
- 3-5 year EDI Workplan developed, approved & initiated.

EDI strategy Design

April 2024 - January 2025

- Research & review other relevant organizational strategies
- Identify key strengths & growth areas from Needs Assessment to incorporate
- Draft, review & approval of strategy by Senior Leaders;
- Conduct policy revision to ensure alignment
- Develop communication plan.

Launch of EDI Strategy & Education Plan

February - June 2025

- Initiate communication plan for EDI Strategy & Education Plan
- Organize & hold launch event
- Collect ongoing feedback from across the organization for effective implementation.

Author: Beth Robertson, EDI Specialist

Given the difficult funding ecosystem for salaries, each role we add must be strategic. Pending the establishment of the Strategic Research Plan and the accompanying Talent Plan, we are currently prioritizing subject matter experts in PET imaging, computational psychiatry, Transitional Age Youth, mental health in aging and those with a technology expertise overlay. One of the priority roles will be a permanent Scientific Director, but that role is contingent on the upcoming campaign by The Royal Ottawa Foundation for Mental Health. The role will be filled in partnership with uOttawa.

With the growth in the number of scientists, the IMHR will also require more unrestricted funding sources to cover salaries, including administrative and support staff. Having the right support is a key but underappreciated element of working conditions. Having the right resource for the right task allows us to optimize research resources.

We are seeking about $25 million in support from the Foundation campaign to support the Clinical Brain Research Centre, Chairs, and renewals for the Emerging Research Innovators in Mental Health incubator.

A recruitment and retention strategy will need to be established in partnership with the incoming Chief of Staff for Physician Scientists, and the incoming CEO and Professional Practice for Clinician Scientists.

As with any organization, we need to create a workplace that allows everyone to feel included and able to perform to the best of their capabilities. That means that we place a premium on creating a sense of team with group activities, foster equity, diversity, inclusion and indigeneity through formal approaches and groups such as Women in Science, which launched in May 2023. We know that the dynamics of power in research can be abused, and so we seek to ensure that all have the avenues and support to advocate for themselves if in difficult situations. Our goals is to create psychological safety such that everyone feels free to speak up, debate ideas and learn from each other without fear.

Collaboration with our partners is one means of scaling our team. We work with uOttawa to make joint appointments and chairs, as well as other Academic Health Sciences Centres. Dr. Rébecca Robillard's FY2023 tenure with the Faculty of Social Sciences is one example of a joint recruitment and appointment (see page 23), as is this year's renewal of Dr. Georg Northoff's position, which is jointly funded with the Department of Psychiatry. These partnerships are critical for retention, as they provide the stability and predictability that Scientists seek.

The Neuroscience and Mental Health Trainee Network (NeuMe-TN), a network comprising junior researchers at The Royal, is one example of joint talent development. This year's co-chairs are already planning for NeuMe-TN's signature annual conference in October 2023, in collaboration with Invest Ottawa and Sonya Schorey's team, with the theme of "The Future of Mental Health Research." Additionally, NeuMe-TN has partnered with the University of Ottawa Journal of Medicine to bring a 3-Minute Thesis competition to the IMHR in 2023.

What to watch for in FY24:

- Development of a tailored talent plan in line with the strategic research plan

Transforming Scientific Evidence of Sleep into Novel Treatments for Better Health

For many in the sleep research community, Dr. Rébecca Robillard exemplifies innovation and collaboration. This past year, a team of researchers, led by Dr. Robillard and Dr. Charles Morin of Laval University, was awarded a $3.8 million grant by the Canadian Institutes of Health Research to advance sleep research in Canada. This grant underscored the important need to address the widespread health, social and economic consequences of sleep problems such as insomnia and sleep deprivation that impact the physical and mental health of Canadians.

As Co-Chair of the newly established Canadian Sleep Research Consortium, Dr. Robillard is amplifying the meaning of collaboration. The Consortium is set to become a national hub of sleep scientists and clinicians paving the way to a better understanding of sleep as a pillar of health and improving access to sleep treatments for Canadians to enjoy quality in sleep and quality in life.

To reach this ambitious goal, Dr. Robillard is spearheading a national knowledge mobilization strategy to catalyze the translation of scientific evidence and technology of three research themes into clinical practice and novel treatments. Over the next few years, two research teams will drive research to improve treatments for insomnia and sleep deprivation impacting a person's mental health, tailor interventions for healthy development of children and youth and address sleep issues related to aging. The third research team will lead an equity, diversity and inclusion framework in sleep research and foster the co-development of sleep health programs health with Indigenous communities and other populations.

With her passionate, creative and collaborative spirit, there is no doubt Dr. Robillard will elevate sleep as a national priority in fostering wellbeing and health prevention.

Dr. Rébecca Robillard

Dr. Rébecca Robillard is Head Scientist of the Clinical Sleep Research Platform and Unit at the University of Ottawa Institute of Mental Health Research. She is also an Associate Professor in the School of Psychology at the University of Ottawa (tenure awarded in 2023.)

Partnerships

Forging strong partnerships in the community is a tenet of our commitment to socially accountable research. With the input of other people and organizations in the health care continuum, we can better understand what the most pressing research needs are, build on the lived experience of others, and look at research questions from new and multiple angles.

Partnering with other organizations inevitably makes us smarter, builds awareness of the work that we are doing, gives us access to expertise we don't have ourselves and to engage in interdisciplanary initiatives, and allows us to scale our efforts. While valuable partnerships can arise from chance encounters, as we mature our partnership strategy, we need to map the ecosystem of stakeholders implicated by our Strategic Research Plan, and then identify synergies and gaps to complement our existing partners (e.g., can a gap be filled by expanding a relationship with an existing partner, or is more effective to engage a new organization.)

Since 2020, and in line with an 2019 external review, the IMHR has developed cross-sectoral partnerships, with The Royal Hospital and the University of Ottawa as priorities. This work has been sometimes challenging – smart, passionate people understandably have different views on ways of working and how best to provide care and drive innovation.

At the same time, we have also made more effort to partner with specialized foundations, such as Brain Canada in FY23, to co-design strategic opportunities and/or respond to requests for proposals. There are more organizations that we see opportunity with to explore in FY24.

With that context, we are proud of the advances we have made in the last year to increase our impact from bench to society.

University of Ottawa
Our partnership with the University of Ottawa continues to deepen. The shape of those partnerships varies – with the Faculty of Medicine we have partnered in the context of CFI/CFREF grants, while with the Faculty of Social Sciences (School of Psychology), our partnership takes shape through joint appointments for researchers such as Dr. Rébecca Robillard and Dr. Stuart Fogel, and those working with the Brain Imaging Centre. We intend to develop deeper ties with the Faculty of Health Sciences in the coming year.

The IMHR has also partnered with uOttawa in the creation of a number of institutes, including the Music and Health Research Institute, which explores the interactions between music and health, led by Dr. Gilles Comeau and the Interdisciplinary Centre for Black Health, Canada's first university-based research centre entirely dedicated to Black health, led by Dr. Jude Mary Cénat, associate professor in the School of Psychology, to assess the provision of culturally sensitive care.

Other Academic Health Science Centres in Ottawa
We have collaborative relationships across our region, including with the Heart Institute, CHEO Research Institute (children), The Ottawa Hospital Research Institute, Bruyère Research Institute (aging and vulnerable populations), and the Institut du Savoir Montfort.

Our partnership with the University of Ottawa Heart Institute is the most developed, including our PET imaging development initiative, a regional committee to select and develop new radioactive molecules (tracers) used in Positron Emission Tomography (PET), and our participation in The Brain-Heart Interconnectome, a ground-breaking interdisciplinary research program aimed at accelerating prevention, detection, treatment and care of brain-heart disorders.

The uOttawa Brain and Mind Research Institute, which coordinates interdisciplinary research and training efforts across university faculties, affiliated hospital research institutes, and other networks, partners with the IMHR to co-fund grants to study neuronal mechanisms and biomarkers for schizophrenia. IMHR President Dr. Florence Dzierszinski serves on the uOMBRI governance steering committee, and Dr. Jennifer Phillips co-leads the Institute's mental health pillar.

Centre for Addiction and Mental Health (CAMH)
We have had a long and productive relationship with our Toronto counterpart. In FY2023, we developed and executed the service agreement for the CardioNeuroMind Data Platform Development (CNMDP) at the Brain Imaging Centre in partnership with CAMH's Krembil Centre for Neuroinformatics. The work is funding through a grant from the Canada Foundation for Innovation's (CFI) Innovation Fund 2020.

This Platform and partnership in turn puts us in a key position to collaborate on and contribute to a number of larger initiatives linking research data regionally, provincially and nationally. These include a multi-million dollar University of Ottawa led Canada First Research Excellence Fund (CFREF) application to integrate research and care in the area of brain-heart health. The IMHR will contribute to this project by expanding the CNMDP to support the use of the platform at the clinic-research interface (e.g. clinician decision support). The CNMDP continues to build our partnerships with uOttawa's Heart Institute (a founding partner of the Brain Imaging Centre) and Brain and Mind Research Institute.

The CNMDP also allowed us to collaborate with CAMH on its Canada Foundation for Innovation (CFI) Innovation Fund 2023 application, which intends to create a novel platform to enable interdisciplinary research at the intersection of mental and physical health.

Clients and Families
In 2023, we had the first peer-reviewed publication (Cynthia Clark et al) for CIHR-funded 'engagecaregivers.ca', led by caregivers to identify best practices in how to build and maintain meaningful collaborative partnerships between health providers and family caregiver advisors, within the context of mental health, substance use and concurrent disorders.

We are developing a partnership with Dr. Dean Fergusson of the Ottawa Hospital Research Institute and The Ottawa Patient Engagement in Research Model (OPERA), an effort by patients, clinicians, researchers, and policymakers across disciplines and institutions to produce a harmonized strategy and infrastructure for meaningful collaboration with patients and families in health research, and capacity building in patient-oriented research.

Dr. Florence Dzierszinski, President of IMHR, VP Research, The Royal, was appointed Vice-Chair of Ontario SPOR Support Unit (OSSU), which supports such as expertise, infrastructure, training and resources to people conducting patient-oriented research.

Community Partners
With the Community Addictions Peer Support Association (CAPSA), we are developing a memorandum of understanding to be signed in FY24 to develop bilateral collaborations.

Together with Wabano Centre for Aboriginal Health, we are exploring what a productive relationship would look like, in the context of our music and mental health initiative that is in development.

With Birdsong New Music Foundation, we will co-design a music and mental health research clinic. The organization was founded by Margaret Konopacki, mother of David Martin, a former patient of The Royal who died by suicide. The foundation supports those with mental illness by supporting and sharing their original music and story through professionally recording their original songs and live performance. This relationship is part of a strategic research priority area, the use of music to promote and treat mental health.

Private Sector Organizations
This is the area in which the IMHR sees abundant opportunities for growth. Since 2020 we have supported and invested in the development of Dionysus Digital Health Inc., co-founded by IMHR scientist Dr. Zachary Kaminsky; Terran Biosciences Inc., involving the research of Dr. Clifford Cassidy, Northoff Mental Health Diagnostics, co-founded by Dr. Georg Northoff, and a few pharma-initiated clinical trials.

We are working to develop partnerships with Siemens and CAE Healthcare (start FY24) in the context of the Clinical Brain Research Centre and the upcoming CFI IF 2025 competition.

What to watch for in FY24:

- Deepening of existing partnerships
- Scoping development of private sector and governmental partnerships

Brand, Reputation & Advocacy

Performance excellence is at the core of a strong brand, but it is not enough. We must tell our stakeholders about our accomplishments, our challenges and our opportunities, building trust over time. The funding structure for research hospitals limits our ability to fund organizational functions such as public and government relations; government grants are generally restricted to non-salary research costs, as discussed elsewhere in this report. Thus, our ability to invest in our brand, and to dedicate time to government relations and policy discussions is limited.

It is more obvious to people why brand and reputation matter in a corporate setting, but these intangible assets matter for the IMHR in key operational ways. Top researchers want to work at organizations with strong brands that will help burnish their professional reputations. Donors understandably favour giving to organizations with a strong reputation. Brands strength suggests organizational maturity and creates comfort that their gifts will have maximum impact. Awareness of IMHR's mission and focus opens doors to partnerships that allow us to deliver interdisciplinary work and scale our impact.

There is a circular relationship here. In order to invest in building the brand and reputation of the IMHR, we need to invest in public and government relations support. To make that investment, we need in part to work with provincial and federal governments to better fund the indirect costs of research, including what are known in the private sector as 'corporate costs.' To do that, we in turn need access to professionals who can advocate for the IMHR and build awareness of the contributions that we are making to mental health care. Building out this function is a key element of organizational maturity.

To achieve our Top 20 ambition, we need to break this circular challenge. A strong brand and advocacy will be key to unlocking some of our other pillars, so they are priority items in our 10-year plan.

By June 2024, we aim to add a Director of Stakeholder Relationships and Reputation, with a budget for outside support, who will be responsible for telling the story of IMHR, its research and researchers, as well as leading our advocacy work together with organizations such as the Ontario Hospital Association and HealthCareCan, and independently, to shape policy that supports hospital-based research.

Working with outside support, we will develop both an advocacy and public relations plan for implementation across FY2025.

By June 2025, we want to add a second team member, expanding the mandate of the team to support the profile development of our researchers, including speaking engagements and media relations, along with the IMHR social channels.

What to watch for in FY24:

- Branding exercise led by the Foundation
- Advocacy with HealthCareCAN

Media Coverage at a Glance

Currently, The Royal's sole communications person is also responsible for IMHR media relations. Given the significant scope of that remit, media relations on behalf of the IMHR has been driven primarily by media editorial calendars and inbound requests, generating a notable volume of coverage, including the wide array of publications shown here.

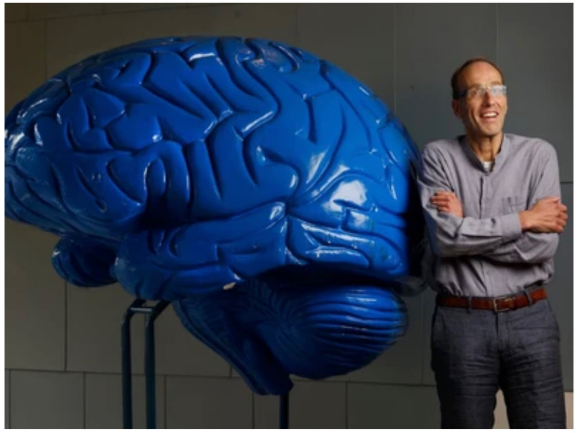
With the addition of a team member that is responsible for developing a comprehensive public relations strategy aimed at supporting the strategy of the IMHR and its research, we can deliver media coverage that highlights the unique talent and expertise, and is a tool for policy advocacy.

Groundbreaking brain research could pave the way for new non-drug treatments

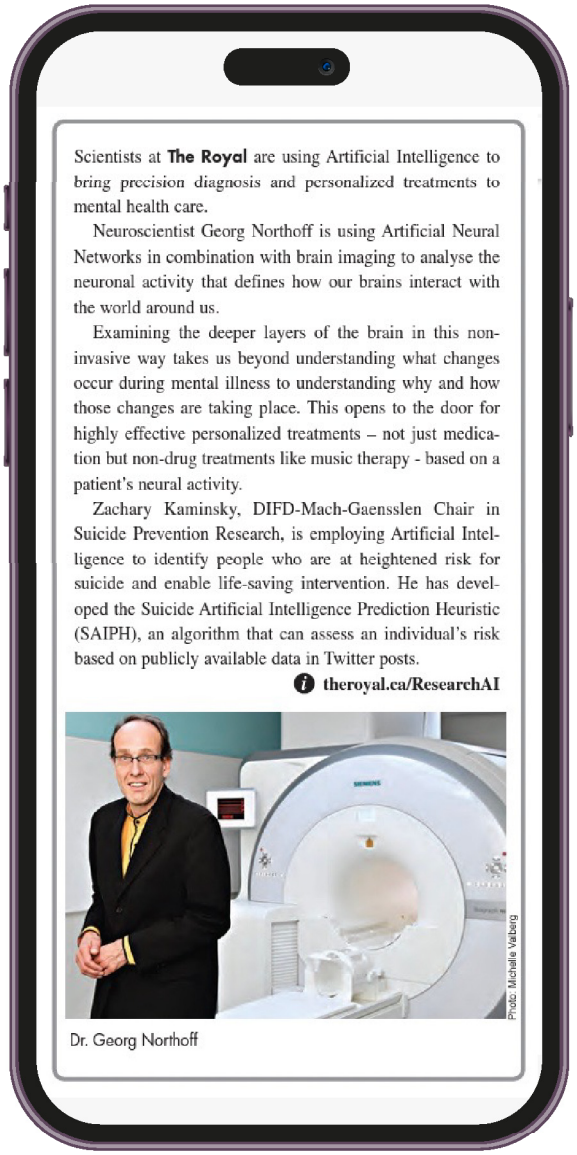
Individually tailored therapies for patients represent the culmination of research led by Dr. Georg Northoff, Canada Research Chair at the University of Ottawa's Brain and Mind Research Institute, and a clinical psychiatrist treating patients at the Royal Ottawa Mental Health Centre.

Elizabeth Payne

Published Oct 11, 2022 • Last Updated Oct 12, 2022 • 3 minute read



The Globe and Mail
Chatelaine
Psychology Today
La Presse
CBC
Time
Ottawa Business Journal
yahoo!sports
CTV News
Global News
le journal de québec
DH
Deccan Herald
SciTechDaily
itn
PsyPost
The Conversation

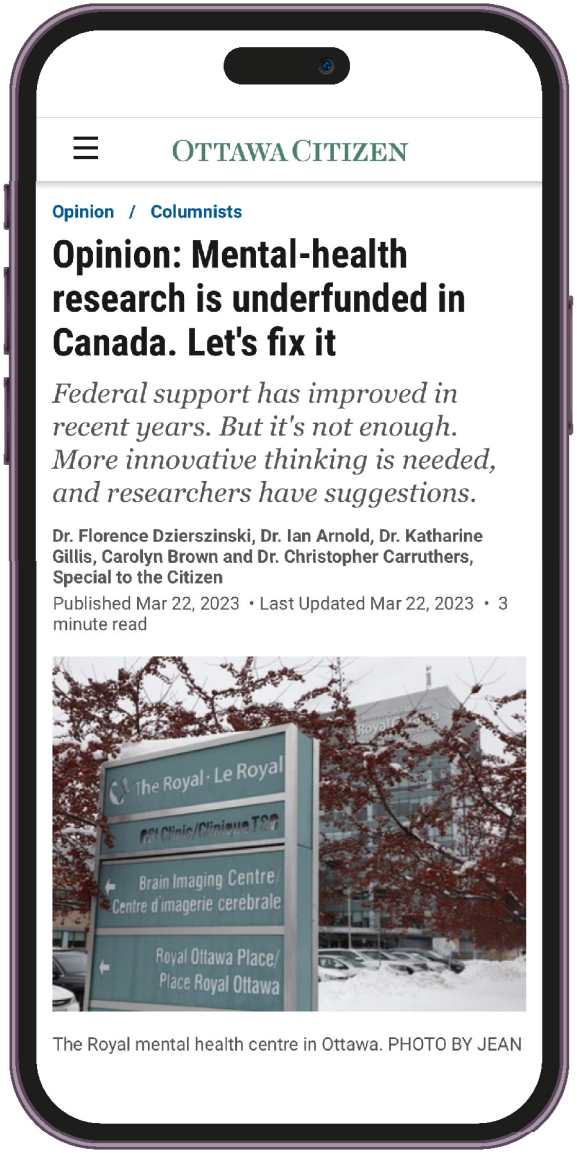


Paid Media

The Royal and IMHR partnered to buy 'pay-for-play' coverage in the annual Canadian Innovation Leaders 2022 report, a closely watched publication that includes the Top 40 Hospitals report.

> "The secret sauce is really about building inter-professional teams comprised of patients and families, clinicians, progam leaders and scientists. When clients are engaged in care and research we see consistantly better outcomes."

Dr. Florence Dzierszinski
Vice-President Research, The Royal



Advocacy

Without a government relations or policy lead, the President of IMHR is leading a limited amount of advocacy work. In FY2023, we focused our efforts on our engagement and support of Ontario Hospital Association, including sitting on the integration working group; and HealthCareCAN, including participation in a panel discussion about the organization's advocacy to strengthen health research and advance health system transformation; along with supporting the efforts of Research Canada in calling on the federal government for increased health research funding.

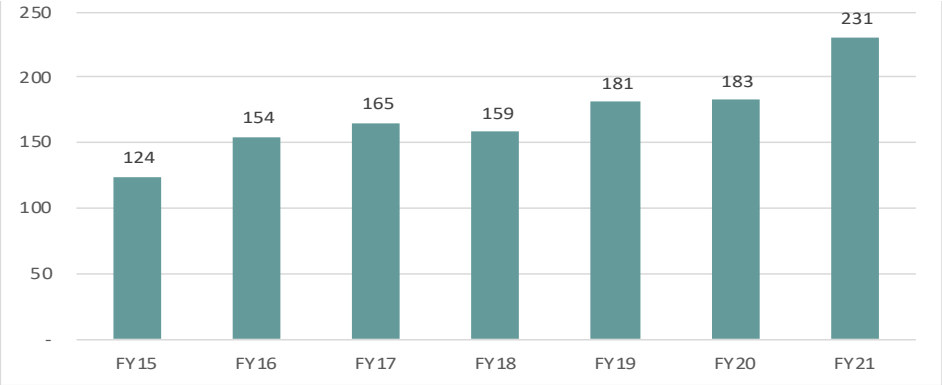
Funding

Our Top 20 aspiration is framed from a funding perspective – to be in the Top 20 in terms of research spending – because it is the single-greatest impediment to the impact that the IMHR can have on the lives of those living with mental illness.

The situation is not unique to the IMHR, of course. Mental health research is underfunded globally. In Canada there have been calls on the government to increase research funding and pay researchers better. An Advisory Panel on the Federal Research Support System made 21 recommendations on how Canada can better support research and researchers; we are awaiting news on what action the government will take.

	Rank (FY21)	Research spending (000)	Research Intensity (researchers 000)	Research Intensity (hospital, %)	Category*
CAMH	#14	$79,669	$491.8	16.0	Medium
Montreal Heart Institute	#20	$46,793	$458.8	18.5	Small
Centre de recherche de l'Institut universitaire de santé mentale de Montréal	#21	$33,117	$144.6	1.9	Large
Douglas	#25	$26,565	$442.8	2.4	Large
Baycrest	#26	$26,332	$975.3	13.4	Small
CHEO	#27	$26,278	$230.5	7.1	Small
Women's College Hospital	#32	$17,394	$334.5	9.6	Small
The Royal	#33	$15,253	$231.1	7.8	Small

Research Intensity: $ ('000) per Researcher



Research Intensity: as % of Total Hospital Spending

Doubling research intensity by 2030, (both dollar per researcher and percentage of hospital spending,) implies large institutional grant initiatives and government relations strategies.

To initiate this strategy, beginning in 2020, the IMHR has significantly and successfully engaged with universities and others that manage a CFI envelope to develop and modernize our infrastructure and secure operating funds. (CFIs cannot fund scientist salaries.) The IMHR is also a partner in the successful Canada First Research Excellence Fund (CFREF) led by uOttawa on the Brain Heart Interconnectome.

The IMHR led and collaborated on major funding initiatives to support the Brain Imaging Centre (BIC) and its research activities supporting new equipment purchases and BIC sustainability. As illustrated below, it is important to create a pipeline of projects, since there are notable gaps between receiving news of an award and receipt of cash flow.

- CFI- IF 2020 (UOHI) – $3.4 million to IMHR (awarded 2020; cash not yet flowing)
- CFI-JELF (IMHR-Tuominen) – $900,000 (awarded 2023; cash not yet flowing)
- CFI-JELF (Carleton-Berman) – $350,000 (awarded 2023; cash not yet flowing)
- CFI-IF 2023 (uOttawa FoM) – $1.3 million (results pending)
- CFI-2023 (CAMH) – $1.3 million (results pending)
- CFI-JELF (IMHR-Jaworska) – $1.1 million (submission June 2023)
- CFI- IF 2025: the IMHR entered internal uOttawa-led competition to renew and modernize infrastructure (whole PET imaging, 3/7T MRI -- co-morbidities) – $25 million
- CFREF (uOttawa) – $109 million (total contribution to uOttawa)

The projects above also require institutional matching funds, and so require a strategy developed in partnership with the Foundation in FY24. In the coming year, we will also review Tri-Agency grant holdings.

We will continue to engage in all possible large endeavors and opportunities with the mental health/addiction mandate.

IMHR resides in the National Capital Region, yet opportunities with government agencies are virtually untapped. As part of the development of our funding roadmap, we see pursuing opportunities to work with the Department of National Defence (e.g., of PTSD and other veteran mental health issues), Innovation, Science And Economic Development Canada, both with respect to research funding strategies and knowledge transfer, and the Ontario Ministry of Health.

Indeed, our benchmarking highlighted that both CAMH and Baycrest are particularly successful in securing large strategic research funding from the Province of Ontario; Baycrest was also successful in securing a line item for innovation in aging and dementia in the federal budget. Under the umbrella of the IMHR Integrative Research Committee and the upcoming Strategic Research Plan, we will initiate the design of funding roadmaps as they related to both the federal and provincial governments.

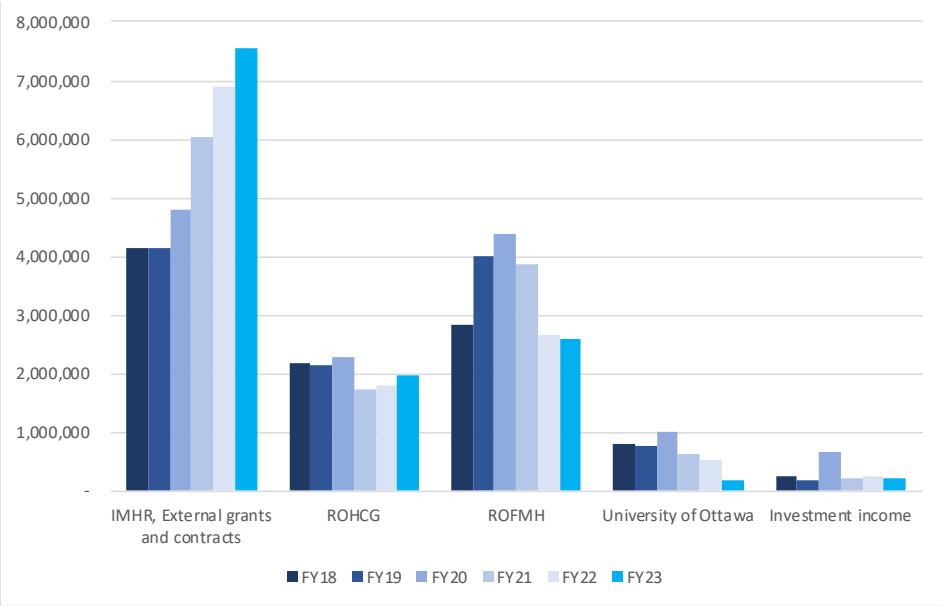
In terms of our agreement with The Royal and the Foundation for unrestricted research funds, a benchmarking exercise carried out in FY23 demonstrated that

thriving research institutes such as Ottawa Heart Research Institute, University Hospital Network, and the Centre For Addition and Mental Health are well supported by the institutional foundations, which provide predictability and in turn stability, which is critical for talent retention and attraction.

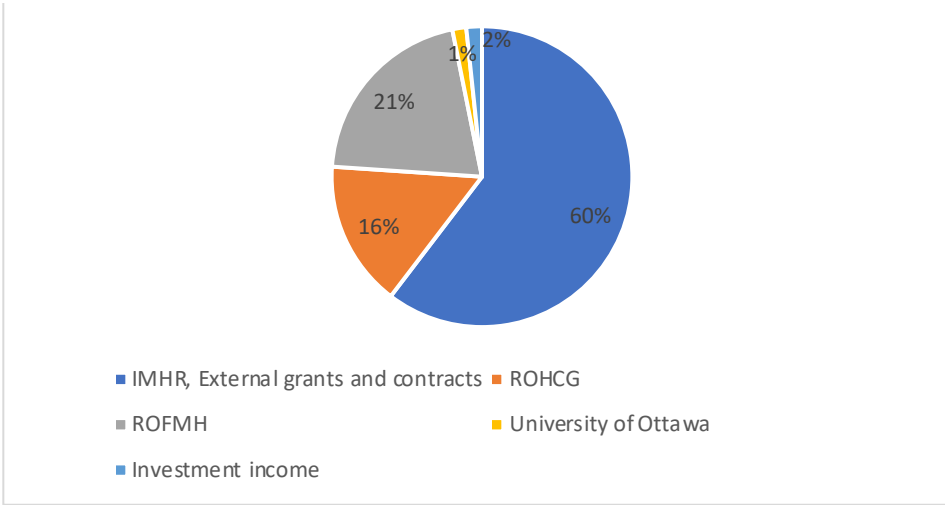
The Royal Ottawa Foundation is clearly going through great growth. Some restricted gifts to research have already coming in, but have not yet been distributed; unrestricted funding needs to be discussed in FY24 in order to better plan timelines.

The graph below on the left illustrates the general decline in funding from The Royal, the Foundation and uOttawa, with a notable growth trajectory in funding from other sources driven by IMHR. On the right you can see the relative importance of funding in FY2023.

Research Revenues per Source ($)



FY23 Revenue by source



Since 2020, we have heightened our focus on sources of funding that can be used to pay for indirect research costs and enable researchers' salary recovery. In the U.S., for example, such sources include NIH funding, U.S. foundations, private sector, clinical trials.

New funding is coming in, but lots of growth opportunities exist with private sector partnerships and clinical trials. This work currently sits with the President of IMHR, but would benefit from a business developer, which could be a shared position. Currently we fund portions of a number of our researchers salaries from U.S. sources, including Dr. Clifford Cassidy (private sector), Dr. Michael Seto (a U.S. Foundation), and Dr. Zachary Kaminsky (NIH). We see this as a strategy that we must continue, along with co-funding with uOttawa, as we do for Dr. Jennifer Phillips.

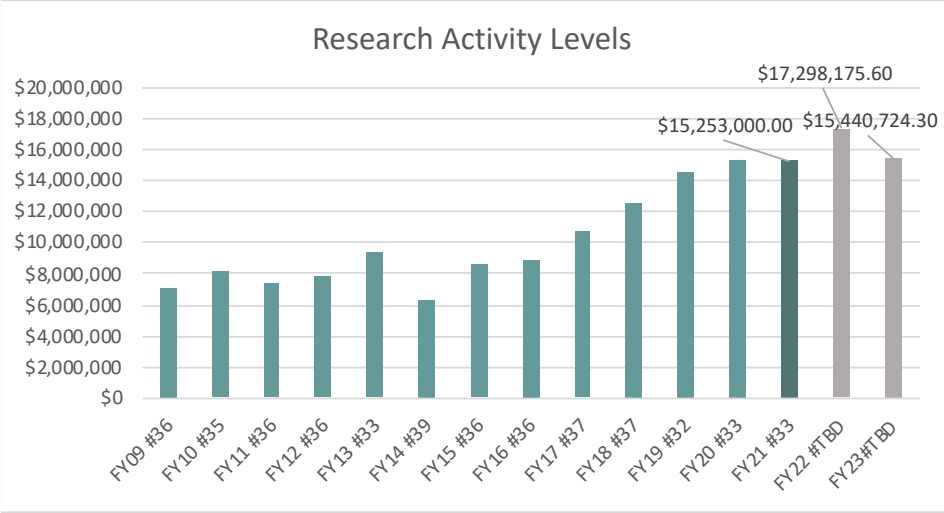
Our Office of Commercialization creates another source of funding we have not matured. At the same time, this offering helps attract scientists who are driven by the potential monetary upside of their research, potentially keeping them in the public sector.

We have initiated a commercialization strategy, with four patents to date (2 for Dr. Cassidy, 2 for Dr. Kaminsky,) and 2 spinoff start-ups (for Dr. Georg Northoff and participation in Dionysus for Dr. Kaminsky).

These developments are starting to generate revenue: 1 product in is in the FDA pipeline (Dr. Cassidy); beginning of royalties (Northoff); partial coverage of researcher salaries (Kaminsky, Cassidy) and unrestricted funding of indirect costs. Like the business development work, this work will also grow more quickly through partnership with uOttawa and/or the addition of a business developer. We note that there is a need to review our intellectual property policy (regional activity.)

In FY23, the IMHR and uOttawa partnered to host start-up company Lunella in IMHR office space generating revenue for the Brain Imaging Centre, and contributing to the regional health innovation agenda.

Research Activity Levels as expressed in Research Expenditures - FY23 Year end



* As per our initiatives to report enterprise-wide research data, FY23 includes ATLAS' research expenditures (we report ROHCG data); FY23 includes a decrease in Frayme and BIC revenues / expenditures; **FY23 expenditures will only be finalized in September (reporting exercise for Ontario Hospital Association (OHA))**.

X axis: Fiscal years and corresponding ranking (TOP 40 research hospitals).

As an academic mental health centre, it is critical to attract external grants. The ability to do so affects The Royal's success, its reputation and the development of research capacity. In the fourth quarter, our grant success rate rose to 62%, up from 31% a year earlier owing to a notable increase in submission quality. The total number of new grants awarded in FY23 was 56, almost four times the level of a year earlier. Total active grants rose to 175, up from 156 a year earlier, almost recovering to the peak of 178 in FY21.

What to watch for in FY24:

- CFI results (list on page 31) and Ontario matching portions (40%)
- Further diversification of funding portfolio, as possible
- Participation in large initiatives as opportunities arise

Scientists at the IMHR

Pierre Blier, MD, PhD, FRSC
Mood Disorders

Michael Bodnar, PhD
Schizophrenia

Clifford Cassidy, PhD
Military Mental Health
Schizophrenia

Stuart Fogel, PhD
Sleep & Mental Health Research

Synthia Guimond, PhD
Schizophrenia

Natalia Jaworska, PhD
Clinical EEG & Neuroimaging

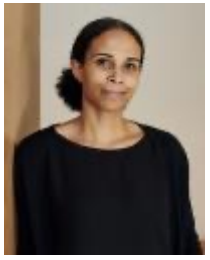
Zachary Kaminsky, PhD
Suicide Prevention Research

Kim Matheson, PhD
Culture & Gender

Robyn McQuaid, PhD
Culture & Gender

Georg Northoff, MD, PhD, FRCPC, FRSC
Mind, Brain Imaging & Neuroethics

Jennifer Phillips, PhD
Mood Disorders



Rébecca Robillard, PhD
Sleep & Mental Health Research

Michael Seto, PhD
Forensic Mental Health

Lauri Tuominen, MD, PhD
Schizophrenia
Military Mental Health

Jeanne Talbot, MD, PhD
IMHR Physician Scientist,
Depression, Suicidal Ideation, Fast-acting anti-depressants, Neuro-psychology

Reggie Taylor, PhD
Scientist – Brain Imaging Centre
Medical Physics

Sara Tremblay, PhD
Neuromodulation

Affiliate & Adjunct Scientists

Marie-Claude Audet, PhD, BA, MSc, BSc
Adjunct Scientist at IMHR
Primary: uOttawa
Nutrition Sciences, Cellular and Molecular Medicine, Neuroscience

Avery Berman, PhD
Scientist at IMHR
Primary: Carleton
MRI physics, fMRI, Magnetic Susceptibility, Modeling and Simulation, Biomedical Engineering, Magnetic Resonance, Biophysics

John Bradford, MBChB DPM FFPsych MRCPsych
DABFP FRCPC CM
Visiting Senior Scientist at IMHR
Psychological Medicine, Forensic Psychiatry

Gilles Comeau, PhD
Adjunct Scientist at IMHR
Primary: uOttawa
Learning how to read music, Physiological aspects of piano playing, Health issues related to piano playing, Motivation and learning a musical instrument

Dave Holmes, PhD, M.Sc, B.Sc.
Visiting Senior Scientist at IMHR
Primary: uOttawa
Public Health, Forensic Nursing, Critical Theory, epistemology, law, ethics, psychiatric nursing, correctional nursing, the sociopolitical aspects of nursing, sexuality, and public health nursing

Colonel Rakesh Jetly (Retd) OMM, CD, MD, FRCPC
Senior Advisor at IMHR
Post traumatic stress disorder and operational psychiatry, military mental health

Cary Kogan, M.A., PhD, M.Sc, B.Sc
Visiting Scientist at IMHR
Primary: uOttawa
Mental Health and Society, Community Health / Public Health

Verner Knott, PhD
Visiting Senior Scientist at IMHR
Clinical EEG & Neuroimaging

Martin Lalumière, PhD
Visiting Senior Scientist at IMHR
Primary: uOttawa
Forensic Mental Health

Andrew (Hyounsoo) Kim, PhD
Adjunct Scientist at IMHR
Primary: U of T
Addiction Psychology, concurrent disorders,
Addiction Substitution, Crowdsourcing, Behavioural Addictions

Affiliate and Adjunct Scientists (continued)

Patricia Pezzoli, PhD
Adjunct Scientist at IMHR
Primary: UCL
Interpersonal violence and its relation to Mental Health, elucidating factors and mechanisms that contribute to individual differences in victimization and offending

Gayatri Saraf, MD
Associate Scientist at IMHR
Primary: TOH
Bi-polar disorder

Michael Schlossmacher, MD
Adjunct Scientist at IMHR
Primary: OHRI
Parkinson's, Neuroscience

Marco Solmi, MD, PhD
Associate Scientist at IMHR
Primary: TOH
Epidemiology, Early intervention, Medical intervention, Medical comorbitities, Psychopharmacology, Meta-research

Monnica Williams, PhD, ABPP
Adjunct Scientist at IMHR
Primary: uOttawa
psychedelic-assisted psychotherapy and trauma, psychological and pharmacological treatments of OCD, PTSD, and anxiety disorders, role of culture and race on mental illness

JianLi Wang, PhD
Senior Adjunct Scientist at IMHR
Primary: Dalhousie (CRC Tier 1)
Workplace Mental Health Research

New Appointments in Fiscal 2023

Ruxandra Antochi, MD, FRCPCPhysician Scientist at the IMHR
Co-investigator in rTMS clinic, Neuromodulation Clinic

Andrew Nicholson, PhD
Assistant Professor, School of Psychology, uOttawa, Scientist, IMHR
Neuroimaging in PTSD and trauma-related disorders
Director of Clinical Research, Atlas Institute for Veterans and Families

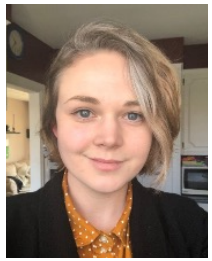
Clinical Research Administration & Development Team

Tammy Beaudoin
Director, Clinical Research Administration

Katie Dinelle
Director, Integrated Brain Imaging Centre

Owen Clarkin
Lead, Research-IT

Emma Cummings
Research Assistant



Alexis Dorland
Research Coordinator and interim Research Ethics Board Facilitator

Tram Nguyen
Research Facilitator

Shruti Patel
Senior Specialist in Inter-Professional Research and Knowledge Mobilization

Garnet Rodger
Manager, Research Operations

Lisa Stockton
Senior Research Development Specialist

Sue Walton, Executive Assistant to the President/VP-Research and Board Liaison, Board of Directors

Cross-Functional Team Members

Beth Robertson
Equity, Diversity and Inclusion Specialist

Elizabeth Kozyra
Pharmacy Professional Practice Lead

Board of Directors

Geneviève Bonin

Kevin Brousseau

Martine Lagacé

Lewis Leikin

Bill Matthews
Vice Chair
Chair, Finance & Audit Committee

Pierre Noel
Interim CEO, ROHCG

Sonya Shorey
Chair, Integrative Research Committee

Sharon Squire
Chair, ROHCG Board

Michael von Herff
Vice Chair
Chair, Board Governance Committee

Steve West
Chair, IMHR Board

Committee Members

Stephanie White

Susie Gignac

Kevin Fitzgibbons

Glenda O'Hara

Institute of Mental Health Research Organizational Chart