

infectious disease researchers, from Masters and PhD students, to fellows and interns/residents, to new investigators. We provide mentorship sessions and skills building, with topics ranging from getting your grant funded, to publishing and working with the media. Mid-career researchers have been able to come together for two days of networking and knowledge sharing around topics such as academic leadership, career progression, effective partnerships, global engagement, and communicating effectively with decision-makers. CFID is grateful to the sponsors who help make our workshops possible, including Merck, Gilead, Innovative Medicines and the Canadian Association for Global Health.

CFID workshops (2020-22)	
	2020 Professional Development for Mid-Career ID Researchers
<	2021 New Investigator Workshop
x	2022 Roderick Ross Research Day

Situation analysis: The landscape for CFID

CFID’s creation and its growing activities are a testament to the determination of a small group of dedicated volunteers to give back to their community and enhance Canada’s capacity in infectious disease and medical microbiology research. CFID has built critical partnerships, addressed pressing research problems, and helped young clinicians integrate research careers into their work.

A Board self-assessment exercise identified CFID’s accomplishments to date, including not only research contributions but critical strengthening of its governance, operations and fundraising. These successes have well-positioned CFID to enhance its role and impact going forward.

At the same time, CFID has identified the need to carefully focus both its volunteer Board’s efforts and its donors’ contributions, in order to maximize its effectiveness in fulfilling its mandate.

CFID has established a role and funding approach that balances its ambitious goals with its small but powerful resources. It now has the opportunity to build on this strengthened foundation. Looking to the future, CFID can formalize and stabilize these positive trajectories, by further expanding key partnerships, increasing donor support, and targeting its growing resources to those key research gaps where we can make the most significant difference to health outcomes in Canada and worldwide.

Strengths	Weaknesses
<ul style="list-style-type: none"> • Dedicated board/ leadership • Enhanced financial situation • Strengthened governance, operations • Valued awards and pandemic webinars • Partnerships with AMMI, CAHR • Tightened focus, increased impact • Growing profile in ID community • Bug Run which engages community 	<ul style="list-style-type: none"> • Financial constraints, limited staff • High board workload • Precarious fundraising, dependent on volunteer skills and contacts • Ambitious goals, limited reach/ impact • In past, awareness has been limited in ID and donor communities

Opportunities	Threats
<ul style="list-style-type: none"> • ID now key public/ policy priority • Synergistic partner goals, especially AMMI/ Clinical Research Networks • Address the need for trusted voices • Expanding global ID networks • Societal interest in COVID-19 impact on workforce 	<ul style="list-style-type: none"> • Waning attention to ID, COVID-19 fatigue • Fundraising increasingly difficult, competition growing • Fewer sponsors, more limitations • Other organizations set the ID agenda • Overwhelming demands on ID expertise

2. Where do we want to go?

CFID Vision

Our vision is a world where infectious diseases are prevented, controlled, diagnosed and treated effectively, with CFID contributing to the creation and sharing of knowledge to ensure people have access to the information, resources, and care they need to protect their health and well-being.

CFID Mission

The Canadian Foundation for Infectious Diseases is a charitable organization committed to improving the health of Canadians and people worldwide through the support of research and dissemination of knowledge pertaining to the prevention, diagnosis, control and treatment of infectious diseases.

CFID Core Values

- Integrity
- Partnering and collaboration
- Transparency and accountability

CFID Goals

1. Provide opportunities for trainees, clinicians and emerging investigators to experience a career development path that integrates research in medical microbiology and infectious disease.
2. Address critical knowledge gaps in infectious disease and medical microbiology.
3. Increase knowledge translation by sharing findings and challenges among researchers, trainees and clinicians

3. How do we get there?

Goal 1: Provide opportunities for trainees, clinicians and emerging investigators to experience a career development path that integrates research in medical microbiology and infectious disease

Opportunities

CFID will build research capacity by encouraging people to enter into the research space at key moments in their careers, where clinical problems meet research challenges. The pandemic has underscored both the scope of our health needs and enormous gaps in the availability of scientific experts to address them. CFID will focus on intervening at two key junctures: catalyzing careers by attracting trainees and early career scientists to infectious disease research; and reducing the barriers to clinicians who would like to expand their roles into research.

Activities

Summer/ term research grants for trainees

CFID will foster growth and interconnections across the infectious disease research community by funding outstanding **undergraduates and medical students** to undertake research projects in infectious diseases, microbiology, and infection control. Medical students will be supported through expanding partnerships with AMMI Canada, Altona Diagnostics Canada, and other organizations. Together CFID and AMMI Canada will promote research findings on their websites as well as encourage students to submit a poster or oral presentation on their work at the next annual AMMI Canada/CACMID meeting.

At the AMMI Conference, grantees will also participate in annual networking events that connect current and recently CFID-funded trainees and investigators with appropriate AMMI members, as potential knowledge users, and future mentors and collaborators. Past recipients will highlight CFID-funding outcomes, while current grantees will overview their research goals and challenges in progress.

Travel grants

CFID will enable clinical trainees to gain and exchange research knowledge, by providing competitive travel grants for them to participate in and present their research at the annual AMMI Canada meeting. These travel grants will be provided through expanding partnerships with Verity Pharmaceuticals and other organizations with shared interests in infectious disease research dissemination.

Catalyst grants

CFID will provide grants designed to reduce the barriers for clinicians to start engaging in research. These grants will fund projects to support and incentivize clinicians to engage in scholarly activity, enabling them to pursue career focus and pursue research goals in infectious disease and microbiology.

Prizes

More than ever, the infectious disease community has been working tirelessly to protect the health of Canadians and solve the complex challenges of these extraordinary times. CFID prizes will recognize and demonstrate appreciation for those outstanding contributions and the exceptional people who have made them possible. These include: trainees, new investigators and established mentors who have broken ground in research, strengthened knowledge exchange, and fostered the next generation of

scientists. CFID will build on our long-standing Mentorship and Trainee prizes supported by the generosity of the Embil family.

Goal 2: Address critical knowledge gaps in infectious disease and medical microbiology

Opportunities

CFID has identified three priority challenges for infectious disease that require increased attention and connections across the clinical and research community. CFID's thematic priorities are:

- i. Developing novel diagnostics/ innovation and therapeutics
- ii. Enhancing care for vulnerable and under-served populations
- iii. Knowledge translation and exchange

In addition to enhancing the pipeline of new infectious disease investigators, CFID seeks to better address these priority challenges by strengthening the interactions among partner, research and clinical communities. Our thematic activities will engage researchers at all stages of their careers with AMMI's broad membership, aiming to strengthen research and mentoring as well as knowledge exchange.

Activities

Seed grants

CFID will provide pilot grants to enable grassroots research efforts and help launch projects addressing new scientific and health challenges in our priority areas. Seed grants will support activities such as pre-RCT systematic reviews, and pilot projects to help build new teams, networks and preliminary data. We will work with partners to connect their evidence needs to the expertise available in the medical microbiology and infectious disease community. Seed grants could thus be used to catalyze a variety of teams and projects, such as to build the foundations of an RCT proposal for AMMI's Clinical Research Networks; or to de-risk the assessment of phage therapy, novel diagnostics or other first-in-Canada innovations. They could help connect a team and partners addressing global health challenges; or build relationships with Indigenous community partners, in order to draw on CFID's previously-supported research in the area of safe water to address current needs in their communities.

Targeted awards

Working with our partners and donors, CFID will seek opportunities to expand its training, travel and catalyst grants to enhance support in our thematic priority areas. Our aim is to attract and reduce barriers that hinder the participation of clinicians, emerging investigators, and partners from under-represented groups, while increasing research focus on the needs of under-served populations. Indigenous health studentship awards, for example, could promote and facilitate research that addresses priority questions identified by Indigenous partners and communities.

Partnership and innovation prizes

CFID will work with AMMI and other emerging key partners and sponsors to develop prizes that recognize major contributions in our thematic priority areas. We aim to recognize outstanding collaborations between researchers and underserved communities, as well as the risk-taking and boundary-pushing that leads to groundbreaking innovations.

Goal 3: Increase knowledge translation by sharing findings and challenges among researchers, trainees and clinicians

Opportunities

CFID's ultimate aim is to improve health, which means we prioritize getting research used, as well as supporting research that is useable. Our priority is to focus on funding projects and linking people at the interface of science and health care.

Our partnerships, both long-standing and emerging, are critical to increase knowledge sharing among investigators and with practitioners, especially AMMI-members who are the key user-community for CFID-funded research. CFID will seek opportunities to build on and extend our own and our partners' knowledge exchange activities, to increase the development and flow of high-quality, balanced and trusted evidence in infectious disease. Topics will be chosen judiciously to maximize their relevance and timeliness for knowledge users and partners, and their complementarity with ongoing activities across the medical microbiology and infectious disease community.

Activities

Conference-based knowledge exchange

CFID will work with AMMI, CAHR, NCCID and other partners to connect, coordinate and co-sponsor thematic-funded CFID researchers with theme-relevant Conference sessions and annual-meeting-based networking events. These sessions will aim to share outcomes of CFID-funded research, as well as enable forward planning that addresses continuing needs for research, networks and strategy.

Workshops, webinars, podcasts for knowledge exchange

CFID will work with AMMI, CAHR, NCCID and other partners to connect, coordinate and co-sponsor workshops and webinars for infectious disease-focused trainees and new investigators, as well as thematic-funded CFID researchers. These sessions will aim to share outcomes of CFID-funded research, as well as enhance uptake and skills development related to implementation.

CFID aims to build effectively on partner efforts and infrastructure, as well as make the best possible use of the time that researchers and clinicians have already-committed to knowledge exchange activities. In consequence, we will prioritize coordinating with, and adding value to, ongoing activities across the medical microbiology and infectious disease community. To that end, CFID will expand partnerships - as well as seek new venues - in which we can contribute research expertise and clinical connections that enhance knowledge exchange (for example, via ongoing webinar series, research rounds, podcast series, journal clubs, etc.).

4. Supporting our goals

Enhance partnerships and collaboration

CFID is a small volunteer organization in Canada's extensive health research ecosystem. We benefit from a rich variety of collaborations across Canada's infectious disease and medical microbiology research ecosystem, with research funders, professional associations, research networks and centres, industry and business. To achieve our ambitious goals, we will systematically identify, expand and strengthen activities and supports that are complementary to those of our partners.

CFID will nourish and extend its partnerships both long-standing and emerging. Complementarity, synergy and reciprocity will be the core values shaping our approach. We will seek to formalize and deepen our most critical relationship, that with AMMI. Approaches will include mutual representation on boards, and linking key activities in ways that boost our achievement of shared goals. Examples include developing robust trial proposals for AMMI's Clinical Research Networks, and enhancing knowledge exchange between AMMI members and the scientific community.

To advance our thematic priorities, CFID will offer its platform as an honest broker of research and exchange between investigators and knowledge users. For example, to increase research activity addressing the needs of under-served populations, CFID could help build connections and share needs and findings among AMMI members, the broader research community, and leading expert networks such as the National Collaborating Centres for Indigenous Health (NCCIH) and the Network Environments for Indigenous Health Research (NEIHR).

CFID will similarly work to build and sustain systematic ties with ongoing partners such as the Canadian Association for HIV Research (CAHR), as well as newer and emerging partners such as The National Collaborating Centre for Infectious Diseases (NCCID). To increase research interest and capacity in its thematic priority areas, CFID will engage organizations such as the Canadian College of Microbiologists (CCM), Cap-Net, Canadian Association for Global Health (CAGH), the International Development Research Centre (IDRC), Global Affairs, the National Microbiology Laboratory of the Public Health Agency of Canada (PHAC-NML), and Genome Canada. As infectious disease increasingly spills beyond our traditional domains, we will also explore shared interests with new potential collaborators, for example in pediatrics.

Finally, we will work with our donors and sponsors to explore areas where we share interest in pursuing more substantive, long-term objectives. Where appropriate, we will aim to build from current one-off supports towards more sustainable future partnerships that are ongoing and mutually-beneficial.

Enhance fundraising structures

Over recent years, CFID has diversified and strengthened its donor base, increasing its stability in the face of the fluctuating revenues that typically arise from fundraising. Going forward, CFID will continue to build on these successes, expanding both scope and type of its supports in order to maintain and expand its robust financial situation. For example, to further priorities such as enhancing care for vulnerable and under-served populations, CFID will seek out additional funding sources, including other foundations and philanthropic organizations.

CFID will continue to prioritize the shift of its funding sources and agreements towards becoming more recurrent and predictable. With expanded research supports and knowledge translation activities that are, themselves, more recurrent and predictable, CFID is making its impact more visible across the infectious disease and microbiology community and its stakeholders. CFID is committed to ensuring that all donors can easily see where their money went, and what their support has helped achieve. We are thus building a virtuous cycle of enhanced impacts, attracting enhanced support, that enables further increasing impact.

The COVID-19 pandemic has made clear that reducing the impacts of infectious disease is a top priority for all business, not only the pharmaceutical companies who have traditionally been active in sponsoring knowledge dissemination. CFID will gradually expand the reach of its sponsorship discussions to identify private-sector organizations with a strong interest in preventing and mitigating the impacts of infectious disease, from the wider healthcare industry such as diagnostics, to the wellness industry, and ultimately to broader Canadian businesses concerned about workforce impacts.

To reduce the fundraising burden on CFID's volunteer leadership, it will develop packages of supportive resources that enable all Board members to provide appropriate information to potential donors and sponsors, and make the workload more systemic and centralized. For example, with industry partners, CFID will systematically identify gaps, opportunities, and next steps in relationships, while supporting all board members in addressing these opportunities with agreed-upon priorities, and standardized letters, how to's and approaches developed with expert external advice. These approaches will also mitigate CFID's dependency on individual Board-member relationships with sponsors, reducing its financial vulnerability from Board turnover.

Through the Bug Run as well as through individual donations, CFID *alma mater* and AMMI members have always been the core of the foundation's donor group. CFID's expanded and enhanced research and knowledge exchange activities are designed to engage and provide value to the broader research and clinical communities, providing them with a clear stake in CFID research and strengthening accountability for outcomes back to those contributors. Going forward, CFID will make it more effortless to both access its activities and also contribute back through donations on an ongoing basis, as well as through legacies in the long term. It will also seek opportunities to leverage the generous support of AMMI members and private sector donors, for instance through "donor matching challenges."

Support governance

CFID has effectively strengthened its governance by creating a range of goal-focused Board committees which have enhanced its efficiency and effectiveness. It has diversified its board to encompass a broad range of expertise and skills in fundraising and financial management, as well as community outreach. CFID will continue to emphasize diversity across its membership, as well as ensuring a wide scope of scientific and clinical expertise and regional representation.

Going forward, CFID will build on these successes by continuing to increase the resource materials available to board members, to increase engagement, reduce the learning curve, and mitigate leadership transition risks. Orientation materials will be enhanced to include current CFID status reports, partnerships, financial goals and plans, and to define the expectations and obligations of Board members with respect to time and expertise contributed to fundraising, activity development and committee work.

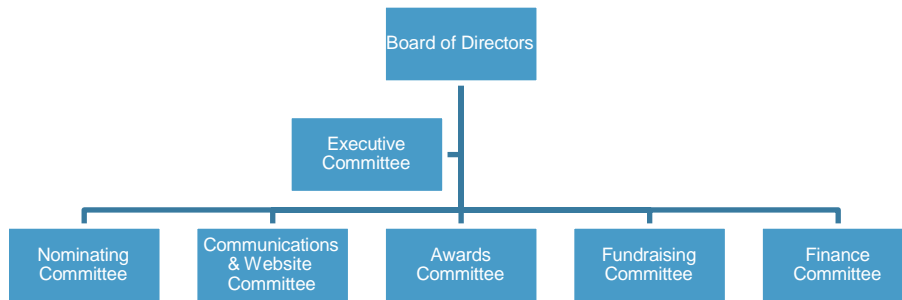


Figure 1: CFID governance structure (as of 2022)

Support operations

As a volunteer-run organization, CFID’s Board both governs and leads its activities. Primary operational oversight is provided by its President, and an Operations Officer now supports the work of the Board and its committees. CFID has been able to enhance its operational support over time, and will continue to carefully re-invest a judicious portion of new funds raised in order to increase CFID’s supports, outreach and effectiveness.

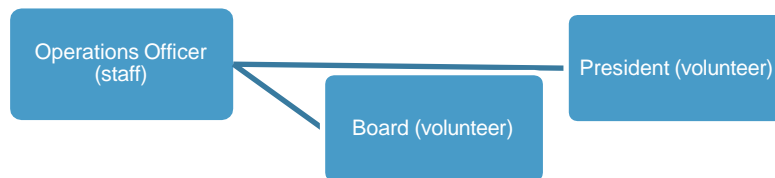


Figure 2: CFID operations support (as of 2022)

Budget

Over the course of this plan, CFID intends to make targeted incremental increases in its direct spending to support revenue generation. Early investments will include developing materials to support board members, and engaging external expertise to seek and develop grants in thematic priority areas and to support knowledge exchange. Enhancing the scope and timeliness of the CFID website is helping better connect researchers and clinicians with CFID activities, and provide visible and user-friendly links to encourage donations. Communications will be further enhanced through greater use of social media *#Infectiousdisease*, and mutually promoting events and funding opportunities with CFID partners.

Over the short term, CFID will maintain its current expenditure levels while shifting future investments to align with the priorities of this plan. As revenues increase, CFID will gradually increase its grants and awards, while ensuring continual growth of its reserves and its capacity to generate investment income over the long-term.

CFID Investment Strategy

CFID’s investment strategy seeks to achieve capital appreciation and provide risk-adjusted returns by strategically investing in a diversified and balanced offering between equities and fixed income. As of April 2023, there is a slight tactical bias towards fixed income (~55-60%), but this may be subject to change depending on market conditions. Frictionless (no costs to change) liquidity and lower volatility are deemed important for the budgetary needs of CFID.

The portfolio is professionally managed while ensuring fees are reasonable for the portfolio size. The finance sub-committee has the responsibility for monitoring and reviewing the portfolio to ensure the strategy (structure, philosophy, process) employed meets CFID’s investment objectives.

5. What will we achieve?

Over the next 10 years CFID will achieve the following impacts, as demonstrated by the indicators noted:

Key gaps in ID and MM research capacity are addressed

- More investigators are undertaking research in infectious diseases and clinical microbiology
- More research targets CFID's thematic priorities
- Larger portion of the AMMI community is engaged in research-related activities

Knowledge is translated and exchanged among researchers and clinicians

- Increase in exchange of ideas/challenges between AMMI members and CFID-funded researchers
- More practitioners are integrating research findings with their clinical practice
- Emerging investigators access a wider range of mentors, collaborators, and clinical networks

Raised profile of research increases its value and uptake

- CFID-supported people and projects are highlighted more widely and more often
- Key research users and donors are more aware of CFID, and its findings and impacts
- New donors and sponsors are attracted, while existing ones enhance their support
- AMMI members increase participation in CFID research activities and fundraising
- Application pressure and diversity are increased, leading to greater reach and impact

More accountability to donors enhances fundraising

- Donors receive direct reports on funding outcomes and see value and impact of awards
- CFID donor and sponsor bases are more diversified, predictable and strengthened
- Larger portion of the ID community is contributing back to research support

CFID is highly-sought as a partner by diverse organizations

- Partners are eager to continue and expand relationships
- Synergy is increased, while competition and fragmentation are reduced
- Partnerships create enhanced activities which are valued by the ID community