



Medicines for Malaria Venture

2019 Pre-Budget Submission

Submitted by:

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Submitted to:

House of Commons Standing Committee on Finance
Parliament of Canada

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Recommendation:

We respectfully recommend that Canada create a new global health partnership with Medicines for Malaria Venture by committing \$20 million over the next four years towards R & D and deployment of new, effective and affordable antimalarials, especially for women and girls in fragile environments. This will help advance the global drive towards malaria elimination.

Introduction

Medicines for Malaria Venture (MMV) is pleased to contribute to the pre-budget consultation process of the Parliament of Canada's House of Commons Standing Committee on Finance for the 2019 Federal Budget.

MMV is the world's leading non-profit product development partnership (PDP) in the field of antimalarial drug research and development. Its mission is to reduce the burden of malaria in disease-endemic countries by discovering, developing and delivering effective and affordable antimalarial drugs.

Since its foundation in 1999, MMV and partners have developed and brought forward seven new medicines that have helped save over 1.5 million lives. MMV and partners manage a portfolio of 65 projects, the largest portfolio of antimalarial research and development (R&D), and access projects ever assembled. The portfolio includes nine new drugs in clinical development addressing unmet medical needs in malaria, including medicines for children, pregnant women and relapsing malaria, and next-generation drugs that could support the global eradication agenda. MMV's success in R&D and access to medicines comes from its 160 committed global partnerships. To date, MMV has built an extensive network of over 400 pharmaceutical, academic and endemic-country partners in more than 55 countries.

MMV's envisions a world where innovative medicines will cure and protect vulnerable populations at risk of malaria, and ultimately help to eradicate this terrible disease.

The burden of malaria on women and girls

Malaria disproportionately impacts pregnant women and young children. Malaria infection during pregnancy is a particularly significant public health problem in Africa. When pregnant women contract malaria, their newborns are destined for a life of unrealized potential; the consequences of malaria carry over into slower child development. It is a tragic cycle of poverty and disempowerment for women as they carry a disproportionate weight of malaria on their shoulders.

Within the context of Canada's *Feminist International Assistance Policy* (FIAP), we believe that it is timely for Canada to partner in a new global health research partnership with MMV to fight malaria, especially because of its devastating impact on women and girls in fragile environments. Such a partnership would be grounded in Canada's strengths in R&D, in-country health research, science and medicine, and assist Canada in becoming more globally competitive in strengthening these capacities. It could also help catalyze innovation as a driver of economic growth in the health and biosciences sector – one of the focus areas of the federal government's Innovation Strategy.

1. Empowering scientists, researchers & aid community workers in global R&D

Canada is a global leader in promoting gender equality and the empowerment of women and girls globally. This is clearly expressed in the FIAP and reinforced in the 2018 budget, which allocated an additional commitment of \$2 billion over five years for international development. The federal government is making new strides to advance gender equality, with various announcements and initiatives to support the empowerment of women and girls in Canada and around the world, in connection with Canada's hosting of the G7 Leaders' Summit in June 2018.

It is now time to build on these commitments with a new global health partnership for R&D and access to medicines to help fight malaria, and in so doing provide new, targeted antimalarials to meet the unmet needs of under-served populations such as women and girls in fragile environments.

In 2016, there were an estimated 216 million cases of malaria (90% in Africa), an increase of about 5 million cases compared to 2015. There was a total of 445,000 deaths from malaria, two thirds (~290,000) of whom were children below 5 years of age. Malaria remains one of the top three killers in the context of maternal, newborn, and child health, and the associated risks are lifelong for those in endemic regions, leading to 75,000–200,000 malaria-related infant deaths annually. Malaria hinders women from participating in the economic development of their communities as they are preoccupied with caring for their sick children.

Underpinned by its Budget 2018 commitment, the Government of Canada's FIAP makes unprecedented progress towards the UN's Agenda for Sustainable Development, which includes a goal to end the malaria epidemic by 2030. After almost two decades of success in reversing malaria occurrences, the malaria community is now however concerned by the news from the World Health Organization (WHO) that progress is stalling. WHO targets of 40% reduction in malaria mortality and case incidence by 2020,¹ established to ensure adequate progress towards elimination by 2030, already looks unfeasible. International and national action is required to continue the progress towards achieving these global objectives.

Canada could be part of a solution that will not only contribute to the international fight against malaria but also advance its international assistance objectives and strengthen its global leadership in R&D, innovation and health. The Canadian global health community has recognized the importance of fighting malaria as indicated by the acceptance of MMV's abstract for a full panelists' discussion at the Canadian Conference on Global Health in Toronto in late November 2018. With innovative research, access and delivery programs targeting women and children, and a pre-existing network of Canadian partners, MMV is well positioned to support Canada in this endeavor to help underpin and supplement the country's commitment to the Global Fund.

Canadian scientists are vital stakeholders in global R&D, but despite Canada's world-class medical research capabilities, federal R&D involvement in the fight against malaria is limited. However, with direct Canadian investment in MMV, the government would be in a strong position to advocate for deepening relationships with the Canadian NGO and research communities.

Federal support to groups like MMV would direct vital Canadian funding to an innovative scientific organization with technical expertise to build upon Canada's traditional development partnerships. The government could leverage such financial contributions to further cement these ties and help ensure that Canada's global prowess in fundamental scientific research and innovation is utilized to advance new life-saving medicines for a disease that affects the most vulnerable women and children, in addition to helping enhance the country's scientific knowledge pool.

¹ Global Technical Strategy for Malaria 2016-2020: <http://www.who.int/malaria/publications/atoz/9789241564991/en/>; www.who.int/malaria/publications/world-malaria-report-2017/en/

2. Empowering Canadian institutions to be more competitive

With its three-year, \$785 million commitment to the Global Fund to Fight AIDS, TB and malaria in 2016, Canada is already contributing to the global fight against malaria. Hosting the Global Fund Replenishment Conference further demonstrated Canada's commitment to fighting the three diseases. Though an important step in the right direction, there remains more to be done. Global Fund contributions go towards the purchase and distribution of existing tools, and not to the discovery and development of new medicines, which require continuous innovation to counter emerging challenges, such as the drug resistance currently reported in South East Asia. To close these critical gaps, pledges to the Global Fund need to be augmented with additional financial support to R&D.

To maintain a robust pipeline capable of meeting these demands, an additional amount of approximately \$673 million per year is needed until 2030 to fund malaria research and development for all entities engaged. While a large market exists for these new tools, it is not very profitable, hence why the PDP financing models works well as an alternative. The estimated resource needs for global malaria elimination and eradication far outstrip their availability. In an era when traditional overseas assistance levels are stagnating, it will prove very difficult to meet funding requirements through existing traditional development channels. The bulk of the burden for raising new funds will fall to developing countries, but they cannot meet those targets alone.

Over the last eight years, MMV has invested over \$1,700,000 CAD in more than a dozen research institutions, including several Canadian institutions and pharma partners. It has been working with Canadian NGOs on field-based initiatives designed to build and strengthen local health systems to facilitate R&D and the adoption of new innovative medicines. Developing new medicines is no guarantee that they will reach the hands of the families, women and children who most in need.

In 2018, together with Aga Khan Foundation Canada (AKFC) and Global Affairs Canada, MMV has conducted qualitative research in the Mopti region of Mali to understand gaps in the management of malaria for women and children under the age of five. The research findings will serve to strengthen malaria prevention and treatment practices in the regions informed by WHO policies and ultimately reduce malaria mortality among women of reproductive age and children under the age of five.

In 2018, MMV also entered into a Memorandum of Understanding with Canada's Centre for Drug Research and Development to collaborate on a numerous R&D activities focused not only on malaria but also on a wide variety of pandemics and diseases. MMV is also currently exploring options for co-funding collaborative projects with Grand Challenges Canada.

Proven innovative funding models, like MMV's, that raise funding and in-kind contributions from public, private and philanthropic sectors, will be increasingly necessary to develop and deliver new medicines in the drive towards malaria elimination. Since 2012, MMV has received \$USD 480M from forward thinking and committed donors. In addition, MMV has been able to leverage an additional USD 2.50 for every US dollar of donor funding in matched funding and in-kind support from academic and industry partners. This model aligns with Canada's desire, outlined in the FIAP, for further collaboration with private sector and non-traditional aid partners and for increased investments in research.

By sharing its cutting-edge scientific expertise and facilities with PDPs focused on developing new interventions for poverty-related infectious diseases, the Canadian research community has much to gain. For instance, through MMV's open innovation model, which is taking drug discovery to the next level, Canadian scientists will have free access to promising compounds to test against other diseases. The open innovation model relies on sharing the risk, cost and effort amongst a select global research community, helping to catalyze research and allowing key partners to potentially generate intellectual property. This

early knowledge sharing not only forms a strong basis for the identification of exciting compounds but also for future partnerships and growth. Canada's support of PDPs such as MMV would significantly contribute to and strengthen the storehouse of Canadian science and R&D.

The federal government should harness the use of non-traditional funding mechanisms, such as MMV, to improve the efficiency of its development assistance resources, foster research and innovation, and catalyze additional resources from the global business sector, all of which could support Canada's economic growth and international image as a leader in global health.

We respectfully recommend that Canada create a new global health partnership with Medicines for Malaria Venture by committing \$20 million over the next four years towards research & development and access to medicines programmes for innovative, effective and affordable antimalarials, especially for women and girls in fragile environments. This will help advance the global drive towards malaria elimination.

Conclusion

To give full expression to its *Feminist International Assistance Policy* and its Budget 2018 commitments, Canada now needs to underpin its commitment to the Global Fund by ensuring that next-generation treatments for women and children suffering or at risk of malaria are discovered and developed before they can be delivered to those most in need. A decision to provide funding to support R&D to advance this fight would simultaneously catalyze and support the development of Canadian scientists, researchers, development community workers and institutions to become more globally competitive.