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April 28, 2022

Dear Minister Jean-Yves Duclos,

As Canada prepares for the upcoming 2022 G7 ministerial meetings and summit, we are writing to urge the Government of Canada to take an active role in discussions involving strategies to address antimicrobial resistance (AMR), as reflected in your current mandate letter.¹ We are writing as academics, medical professionals, patient advocates, researchers, and members from Canada's domestic and global biomedical industries. Collectively, we support a comprehensive, One Health approach that includes prevention, surveillance, stewardship, research & development (R&D), and innovation.

Globally, AMR kills over 1.2 million people per year and plays a part in nearly 5 million deaths.² By 2050, these "superbugs" are expected to kill more than 10 million people annually – which is nearly double the death toll from COVID-19 since the beginning of the pandemic. In Canada, resistant bacterial infections were responsible for the deaths of over 14,000 people in 2018 (about 1 in 19 deaths).³ Of these deaths, 5,400 (or almost 15 a day) could be considered directly attributable to AMR itself.⁴ Furthermore, bacterial infections due to resistant organisms exacerbate public health emergencies. Any event involving mass hospitalizations or high levels of ventilator use carries a significant risk of secondary bacterial infections, particularly for patients with weakened immune systems. While the COVID-19 pandemic stemmed from a viral pathogen, the next pandemic could result from a bacterial or fungal pathogen.^{5,6}

As we have seen with COVID-19, health emergencies know no borders and can easily have global implications, requiring the need for a national and global approach to addressing AMR. While COVID-19 caught the world by surprise, AMR is a predictable and preventable crisis, and we need to get ahead of it today before it becomes the next pandemic.

¹ Minister of Health Mandate Letter (December 16, 2021): Work with partners to take increased and expedited action to monitor, prevent and mitigate the serious and growing threat of antimicrobial resistance and preserve the effectiveness of the antimicrobials Canadians rely upon every day. <https://pm.gc.ca/en/mandate-letters/2021/12/16/minister-health-mandate-letter>

² The Lancet. Global burden of bacterial antimicrobial resistance in 2019: a systematic analysis. [https://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(21\)02724-0/fulltext#%20](https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(21)02724-0/fulltext#%20)

³ Council of Canadian Academies. When Antibiotics Fail, pg. 34. <https://cca-reports.ca/wp-content/uploads/2018/10/When-Antibiotics-Fail-1.pdf>

⁴ *Ibid*

⁵ Louis Metzger IV, Could Drug-Resistant Bacteria Cause The Next Pandemic?, Forbes. <https://www.forbes.com/sites/louismetzgeriv/2020/08/04/could-drug-resistant-bacteria-cause-the-next-pandemic/?sh=3bb0aa5427d8>

⁶ Maryn McKenna, Deadly Fungi Are the Newest Emerging Microbe Threat All Over the World, Scientific American. <https://www.scientificamerican.com/article/deadly-fungi-are-the-newest-emerging-microbe-threat-all-over-the-world/>

We applaud past G7 commitments to address AMR and appreciate global gains as many countries have developed action plans and increased surveillance. Last year, G7 Finance Ministers committed to work with health colleagues to expedite the implementation of strategies to “address the antibiotic market failure and create the right economic conditions to preserve essential existing antibiotics and ensure their access, strengthen AMR antibiotic research and development, and bring new drugs to market where they meet identified public health needs.”⁷

We commend the Government of Canada and the Public Health Agency of Canada on the creation of the Antimicrobial Resistance Task Force and its mandate to shape, deliver, support, and measure the progress of actions to address AMR. We welcome continued collaboration with the Task Force as it determines and accelerates federal priorities to address AMR in Canada. Additionally, we commend the Government of Canada for organizing a Best of Brains Exchange on *Challenges in the Antimicrobial Business Model and Potential Incentives to Increase Access and Promote Innovation* in 2021, in which a broad range of stakeholders came together to discuss Canada’s current AMR ecosystem and recommendations to tackle identified barriers. We would welcome an opportunity to consult with the government on market pull incentive models that are suited to improving and sustaining the Canadian health system.

As highlighted in the Best Brains Exchange meeting, economic pull incentives can encourage the production and supply of urgently needed novel antimicrobial products. Unfortunately, patient needs outweigh the current pipeline of new and innovative antimicrobials in development worldwide. The need to use antimicrobials sparingly is unique to this class of pharmaceuticals, creating significant challenges for companies to earn a reasonable return on investment. As a result, many companies struggle to maintain operations, and have either closed their operations or declared bankruptcy in recent years. Targeted incentives that address post-market challenges through guaranteed revenue are urgently needed to provide Canadian patients with access to new/newer antimicrobials and revitalize the innovation pipeline for the future. We strongly support incentive programs accompanied by stewardship programs that ensure we are achieving consistent appropriate access to new/newer antimicrobials across our provinces and regions.

While the Government of Canada has made steps to identify the appropriate tools and tactics to adopt in Canada, significant work remains. This momentum should not be lost as Canada has an opportunity to work with its G7 counterparts to develop actionable plans that reflect Canadian stakeholders’ positions on incentives, stewardship, and surveillance and bringing new innovations to market that can help address the AMR threat.

The German presidency of the G7 in 2022 presents a significant opportunity to advance AMR solutions as countries come together to discuss national and global plans and programs focused on creating appropriate policy and incentive mechanisms. While Canada is working to finalize the AMR Action Plan, we encourage Canadian representatives to use the tools available now, including the AMR Task Force and Best of Brain Exchange, which reflects the experience and expertise of Canadian stakeholders.

We urge G7 countries to reinforce the importance of well-resourced national action plans and establish metrics that track progress against AMR to guide future G7 actions. These metrics should include implementing incentives for antibiotic, diagnostic, vaccines, and alternatives R&D—an aspect of the global

⁷ G7 Finance Ministers’ Statement on Actions to Support Antibiotic Development.

<https://www.gov.uk/government/publications/g7-finance-ministers-statement-on-actions-to-support-antibiotic-development>

AMR response in which very little progress has been made. Antibiotics must be used judiciously to preserve their effectiveness, making it very difficult for antibiotic innovators to earn the reasonable return on investment necessary to sustain the antibiotic pipeline. Nearly all large pharmaceutical companies have been driven away from antibiotic R&D, and small companies in this space struggle to stay in business. Since 2010, only two of the 15 new antibiotics approved by the U.S. FDA have been introduced in Canada. Federal investments and global cooperation paired with new policies to provide returns on investments are critical to ensure a renewable antibiotic pipeline that meets current and future patient and public health needs.

The G7 is an essential mechanism through which Canada can encourage continued action and advancement in the space of AMR, demonstrating that Canada and its industry, researchers, and healthcare professionals can be leaders in the global efforts to combat AMR.

Thank you for your leadership on this critical issue. Please know that the Canadian Antimicrobial Innovation Coalition and its network are here as a resource to you, your department, and the government. We look forward to continued engagement on this issue with you or your team.

Sincerely,

Canadian Antimicrobial Innovation Coalition

Adapsyn	Merck Canada Inc.
BD Canada	Microbion Pharma Corp.
bioMérieux Canada inc.	Nobelex Biotech Inc.
Bright Angel Therapeutics	Red Leaf Medical
DeNovaMed Inc	Roche
DynaLife	Paladin Labs
Fedora Pharmaceuticals	SaNOtize Inc.
GSK Inc.	SterileCare
Innovative Medicines Canada (IMC)	Verity Pharma
Johnson & Johnson	

Dr. Rainer Engelhardt, Assistant Deputy Minister (retired), Public Health Agency of Canada.

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