

COVID-19 Report

**AHS COVID-19**

**Scientific Advisory**

**Group**



Liam Sturgess

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## Executive Summary

The **COVID-19 Scientific Advisory Group** that advises **Alberta Health Services** on its COVID-19 response is primarily made up of members with strong historical and current relationships to pharmaceutical companies and supra-national organizations. This has resulted in what is likely a fundamentally biased process of evaluating data and evidence in order to implement policies that are of personal or professional gain, whether or not this was the intention of the members of the group.

The blocking of the use of **Ivermectin** as an early treatment option for COVID-19 and the universal application of vaccine products as the solution to the pandemic is a clear result of policies that favour the pharmaceutical companies these individuals receive money from and otherwise work with, and the public statements arguing against early treatment and on behalf of vaccine mandates are based on false premises and very flimsy arguments.

1. The Chairs of the group are the most conflicted, with one specializing in reducing costs for healthcare providers/selecting which drugs should be funded publicly, and the other making overtly political statements including while dismissing contrary medical perspectives;
2. Members of the group have received direct payments from the following pharmaceutical companies: **AllerGen, Astellas, Baxter, Bristol-Myers Squibb, Janssen, Pfizer, Roche, and Sanofi**;
3. They have further received funding directly or indirectly through their institutions and associated organizations from the following pharmaceutical and medical equipment/supply/analytics/retail companies: **Abbott, Actelion, Alexion, Almirall, Amgen, Aniera Diagnostica, Ansell, Aspen Pharmacare, AstraZeneca, Avir Pharma, Baxter, Bayer, Belco, Biodextris, Biogen, bioMérieux, Boehringer Ingelheim, Boston Scientific, Cardinal Health, CardioMed Supplies, Charles River, Chief Medical Supplies, Chinook Therapeutics, Daiichi Sankyo, DiaSorin, Eli Lilly, Fresenius, Gambro, GlaxoSmithKline, Gilead Sciences, Grifols, Hologic, IMV, InterMune, Janssen, Johnson & Johnson, LEO Pharma, London Drugs, McArthur Medical Sales, Medexus, Medicago, Medtronic, Merck, Moderna, NeuMeDx, Novartis, Novo Nordisk, NxStage, Nycomed, Otsuka, Pfizer, Pharmaceutical Partners of Canada, ProResp, R-Biopharm AG, Roche, Sanofi, Seqirus, Servier, Takeda, Theratechnologies, Trudell Medical, Valneva, VBI Vaccines, Virica Biotech, and VIDO-Intervac**;
4. The funding organizations and associated companies with which the membership engages include **Aecon, Bell Media, the Bill & Melinda Gates Foundation, Campbell Collaboration, CN Railway, Cochrane, Corus Entertainment, CTV News, Deloitte, Edmonton Journal, Fidelity, Global News, KPMG, the United States National Institutes of Health, Postmedia, PricewaterhouseCoopers, RBC (Royal Bank of Canada), the Rockefeller Foundation, Scotiabank, Shell, SickKids, TELUS, UNICEF, the University of Oxford, Volvo, WestJet, Wikipedia, and the World Health Organization.**

*The AHS COVID-19 Scientific Advisory Group must be immediately disbanded, and an investigation undertaken to determine the extent to which public health recommendations were guided by conflicted interests.*

## Background

**Alberta Health Services** is the public health authority for the Province of Alberta. It is headquartered in Edmonton, Alberta and reports to the Alberta **Ministry of Health**.<sup>1</sup>

On March 11, 2020, the **World Health Organization** (WHO) declared a pandemic due to **COVID-19**, the disease believed to be caused by the **SARS-CoV-2** virus.<sup>2</sup> Alberta Premier **Jason Kenney** followed suit by declaring a state of public health emergency on March 17, 2020.<sup>3</sup>

The **COVID-19 Scientific Advisory Group** was created to provide recommendations to support policy and operational decision-making to the **AHS Emergency Coordination Centre**. The group reports to the Operations Section Chief at the Emergency Coordination Centre. It answers questions “related to any aspect of COVID-19 including risk for transmission, personal protective equipment, strategies for isolation, treatment strategies, and management of patients in hospitals.”<sup>4</sup>

The primary membership is the following:

- SAG Co-chairs – Dr. **Braden Manns**; Dr. **Lynora Saxinger**
- Public Health representative – Dr. **Alexander Doroshenko**
- Infectious Disease / IPC Experts – Dr. **John Conly**
- Critical care representative – Dr. **Shelley Duggan**
- General Internal Medicine – Dr. **Elizabeth Mackay**
- Respiratory representative – Dr. **Brandie Walker**
- Emergency department representative – Dr. **Andrew McRae**
- Pharmacy representative - **Jeremy Slobodan**
- Provincial Laboratory – Dr. **Nathan Zelyas**
- Alberta Health Medical Office of Health representative – Dr. **Andre Corriveau**

Additional contributors are frequently included in the reports generated by the SAG - this report will focus on the core membership.

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<sup>1</sup> Wikipedia Contributors. (2019, November 2). *Alberta Health Services*. Wikipedia; Wikimedia Foundation. <https://archive.ph/SJG40>

<sup>2</sup> Cucinotta, D., & Vanelli, M. (2020). *WHO Declares COVID-19 a Pandemic*. *Acta bio-medica : Atenei Parmensis*, 91(1), 157–160. <https://doi.org/10.23750/abm.v91i1.9397>

<sup>3</sup> “This is a serious moment in our history”: Alberta Premier Jason Kenney declares public health emergency. (2020, March 17). CBC News; CBC/Radio-Canada. <https://archive.ph/1lfrj>

<sup>4</sup> 2019-nCoV Scientific Advisory Group. (2021, May 27). Alberta Health Services. <https://www.albertahealthservices.ca/assets/info/ppih/if-ppih-covid-19-sag-terms-of-reference.pdf>

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## Braden Manns

Dr. **Braden Manns**, MD, MSc, FRCPC, is Associate Chief Medical Officer for the Strategic Clinical Networks (SCNs) within **Alberta Health Services**.<sup>5</sup> He is also Co-Chair of the AHS Scientific Advisory Group alongside **Lynora Saxinger**.

### Education

Manns began his post-secondary education with his Bachelor of Science degree with Honours in Biochemistry from the **University of Saskatchewan**, graduating in 1990.

He received his Doctor of Medicine from the **University of Toronto** in May 1994, graduating with Honours Standing. He completed a General Internal Medicine Residency at the **University of Calgary** in 1997, where he was named a Fellow of the **Royal College of Physicians and Surgeons of Canada**, Internal Medicine the following year. He repeated the process with a Nephrology fellowship in 1999. Manns got his Masters in Health Economics at **University of York**, England, in October 2000.

He returned to complete a post-doctoral fellowship in Health Economics at the University of Calgary in June 2001.<sup>6</sup>

### Suppression of Ivermectin

In his role as Co-Chair of the SAG, Manns co-authored an article insisting that **Ivermectin** not be used to treat COVID-19. He and his colleagues falsely claimed that “there is no evidence that ivermectin benefits COVID-19 patients, but there are known harms. Ivermectin use has been associated with rash, nausea, vomiting, low blood pressure, abdominal pain, tremors, seizures and severe hepatitis (liver disease) requiring hospitalization.” The conclusion they reach is “Vaccination remains our best means of preventing COVID-19. Our vaccines are safe, fully approved and have been studied in high quality trials of tens of thousands of people.”<sup>7</sup>

The comments left by readers overwhelmingly objected to the authors' statements and accused them of negligence, supporting their criticism with references to the **British Ivermectin**

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<sup>5</sup> Manns, B. (2018). *Introducing Braden Manns*. Alberta Health Services.

<https://www.albertahealthservices.ca/assets/about/scn/ahs-scn-pfe-newsletter-braden-manns.pdf>

<sup>6</sup> Manns, B. (2015, July). *BRADEN MANNNS, MD, MSc, FRCPC - CV*.

<https://contacts.ucalgary.ca/info/chs/profiles/1-4840509/braden-j-manns-cv.pdf>

<sup>7</sup> Manns, B., Saxinger, L., & Joffe, M. (2021, October 12). *Alberta Health Services: Ivermectin is a useful drug, but not a treatment for COVID-19*. MSN News; Calgary Herald. <https://archive.ph/11Xqr>

**Recommendation Development** (BIRD) Group, **Pierre Kory**, and **Sanjay Gupta**'s heated exchange with **Joe Rogan** after **CNN** levelled the same propagandistic claims at him.<sup>8,9</sup>

Members of the public have described Manns as “corrupt”. Dr. **William Makis** called for his resignation from the Advisory Group and an investigation into why he and his colleagues blocked Ivermectin.<sup>10</sup>

## Affiliations

### Alberta Kidney Disease Network

Manns was a member of the **Alberta Kidney Disease Network** (AKDN), funded by an unrestricted grant from **Amgen**.<sup>11</sup>

Amgen is a pharmaceutical company associated with the Accelerating COVID-19 Therapeutic Interventions and Vaccines (ACTIV) public-private partnership, funded by the United States **National Institutes of Health** (NIH), the **Bill & Melinda Gates Foundation**, the **Biomedical Advanced Research and Development Authority** (BARDA), the U.S. **Centres for Disease Control and Prevention** (CDC), the US **Food and Drug Administration** (FDA), the U.S. **Department of Defense** (DOD), the **European Medicines Agency** (EMA) and a plethora of major pharmaceutical companies, among others.<sup>12, 13</sup>

The AKDN website appears to have been discontinued and is available in archived form on the Wayback Machine.

### Alberta SPOR Unit

Manns serves on the Steering Committee for the **Alberta Strategy for Patient-Oriented Research (SPOR) Unit** (AbSPORU).<sup>14</sup> AbSPORU is co-funded by **Alberta Innovates**, which is partnered with **Pfizer**.<sup>15</sup>

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<sup>8</sup> Heine, D. (2021, October 14). *Joe Rogan Confronts CNN's Dr. Sanjay Gupta on Network's COVID Lies*. American Greatness.

<https://archive.ph/mKmiP>

<sup>9</sup> Manns, B., Saxinger, L., & Joffe, M. (2021, October 12). *Alberta Health Services: Ivermectin is a useful drug, but not a treatment for COVID-19*. Calgary Herald; Postmedia Network Inc.

<https://calgaryherald.com/opinion/columnists/alberta-health-services-ivermectin-is-a-useful-drug-but-not-a-treatment-for-covid-19>

<sup>10</sup> @MakisMD. (2021, June 15). *We first need a full Investigation of the AHS COVID-19 Scientific Advisory Group lead by NDP/AHS Executive Braden Manns and his associates like @AntibioticDoc and @drslmd*. Twitter. <https://archive.ph/IFAhb>

<sup>11</sup> *Our Team*. (2017, October 23). Alberta Kidney Disease Network.

<https://web.archive.org/web/20171023095419/https://www.akdn.info/our-team>

<sup>12</sup> ACTIV. National Institutes of Health (NIH). Retrieved January 10, 2022, from <https://archive.ph/8eMTV>

<sup>13</sup> *Our Response to Covid-19*. Amgen. Retrieved January 10, 2022, from <https://archive.ph/NHHFE>

<sup>14</sup> *About Us*. Alberta Strategy for Patient Oriented Research SUPPORT Unit (AbSPORU). Retrieved January 8, 2022, from <https://archive.ph/3eRHR>

<sup>15</sup> Brunner, D. (2018, November 26). *Alberta Government and Pfizer Canada boosts provincial collaborative health innovation partnership with Alberta Innovates*. Alberta Innovates. <https://archive.ph/1ppaw>



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## BC Renal Agency

Manns was a speaker at **BC Kidney Days** on October 24, 2013. The event was hosted by the **BC Renal Agency** and **BC Transplant**, and accredited by the **Canadian Society of Nephrology**. It was sponsored by **Amgen, Baxter, Janssen, Alexion, Bellco, Fresenius, Takeda, Gambro, Roche, Abbott Nutrition, Ansell, CardioMed Supplies, Charles River, Chief Medical Supplies, NxStage, Otsuka, Pfizer, Pharmaceutical Partners of Canada (PPC), and Sanofi**.<sup>16</sup>

## Can-SOLVE CKD Network

Manns served as a co-lead for the **Canadians Seeking Solutions and Innovations to Overcome Chronic Kidney Disease** (Can-SOLVE CKD Network). The initiative is funded by **Amgen, Bayer, Chinook Therapeutics, Janssen, Otsuka**, and others.<sup>17</sup>

## Canadian Expert Drug Advisory Committee

Manns served a term as Chair of the **Canadian Expert Drug Advisory Committee**, a committee that recommends which new drugs should be paid for within publicly funded drug formularies.<sup>18</sup>

## Canadian Society of Nephrology

Manns served as President of the **Canadian Society of Nephrology**, funded by **Alexion, Amgen, AstraZeneca, Bayer, Boehringer Ingelheim, Eli Lilly, Fresenius, Horizon Therapeutics, Janssen**, and **Otsuka**.<sup>19, 20</sup>

## Kidney Foundation of Canada

Manns received the 2017 Medal for Research Excellence from the **Kidney Foundation of Canada**, stating “his expertise in applied health economics, health outcomes, pharmaceutical review and priority setting has directly informed health policy and decision-making.”<sup>21</sup> The Foundation receives significant funding from **Otsuka**.<sup>22</sup>

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<sup>16</sup> *Compassion in Kidney Care: From Patients to Providers*. BC Renal Agency. Retrieved January 8, 2022, from [http://www.bcrenal.ca/resource-gallery/Documents/Final\\_program\\_design\\_web.pdf](http://www.bcrenal.ca/resource-gallery/Documents/Final_program_design_web.pdf)

<sup>17</sup> *Funding Partners*. Can-SOLVE CKD Network. Retrieved January 8, 2022, from <https://cansolveckd.ca/about/funding-partners/>

<sup>18</sup> Manns, B. (2007, April 25). *Dr. Braden Manns (Chair, Canadian Expert Drug Advisory Committee, Canadian Agency for Drugs and Technologies in Health) at the Health Committee*. Open Parliament. <https://openparliament.ca/committees/health/39-1/50/dr-braden-manns-1/only/>

<sup>19</sup> *Our Partners*. CSN/SCN. Retrieved January 8, 2022, from <https://archive.ph/Omio2>

<sup>20</sup> *HE Braden Manns*. O'Brien Institute for Public Health. Retrieved January 8, 2022, from <https://obrieniph.ucalgary.ca/research/centres-programs-research-groups-and-units/health-economics/meet-our-team/dr-braden-manns-0>

<sup>21</sup> *Dr. Braden Manns*. Kidney Foundation of Canada. Retrieved January 8, 2022, from <https://archive.ph/yLyCY>

<sup>22</sup> *Virtual Forum 2022*. Kidney Foundation of Canada. Retrieved January 8, 2022, from <https://archive.ph/lbb0R>

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## Network of Alberta Health Economists

Manns is a member of the **Network of Alberta Health Economists**.<sup>23</sup>

## Reformulary

Mann serves as a Special Consultant to **Reformulary**, a privately-held company that provides drug recommendations.<sup>24</sup>

## University of Calgary

Manns is a Professor in Health Economics and a Kidney Specialist at the **University of Calgary**. In this role, Manns has advocated for increased Federal spending to pay for high cost pharmaceutical drugs in Canada.<sup>25</sup>

He also served as co-lead for the University's Interdisciplinary Chronic Disease Collaboration, which was funded by the **Pfizer-funded Alberta Innovates**.

## Funding

### Government

Manns has received funding from the **Canadian Institutes of Health Research Foundation**.<sup>26</sup>

Manns has also had publications funded by **Alberta Innovates**, which (once again) is partnered with **Pfizer**.<sup>27</sup>

One such study is “COVID-19 Vaccine-Related Attitudes and Beliefs in Canada: National Cross-sectional Survey and Cluster Analysis”, which concluded “*Messaging related to preventing COVID among friends and family, highlighting the benefits, emphasizing safety and efficacy of COVID-19 vaccination, and ensuring that health care workers are knowledgeable and supported in their vaccination counselling may be effective for vaccine-hesitant populations.*”<sup>28</sup>

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<sup>23</sup> *Our Members*. Network of Alberta Health Economists. Retrieved January 8, 2022, from <https://noahe.ca/members#>

<sup>24</sup> *About Us*. Reformulary. Retrieved January 8, 2022, from <https://archive.ph/KktHK>

<sup>25</sup> Manns, B., & Clement, F. (2017, November 1). *A Different Prescription-Pharmacare isn't the only solution to high drug costs*. Alberta Views - the Magazine for Engaged Citizens. <https://archive.ph/znmix>

<sup>26</sup> Trachtenberg, A. J., Quinn, A. E., Ma, Z., Klarenbach, S., Hemmelgarn, B., Tonelli, M., Faris, P., Weaver, R., Au, F., Zhang, J., & Manns, B. (2020). *Association between change in physician remuneration and use of peritoneal dialysis: a population-based cohort analysis*. CMAJ Open, 8(1), E96–E104. <https://doi.org/10.9778/cmajo.20190132>

<sup>27</sup> *Partnerships and Alliances*. (2019, December 3). Pfizer Canada. <https://archive.ph/W6hj7>

<sup>28</sup> Benham, J. L., Atabati, O., Oxoby, R. J., Mourali, M., Shaffer, B., Sheikh, H., Boucher, J.-C., Constantinescu, C., Parsons Leigh, J., Ivers, N. M., Ratzan, S. C., Fullerton, M. M., Tang, T., Manns, B. J., Marshall, D. A., Hu, J., & Lang, R. (2021). *COVID-19 Vaccine-Related Attitudes and Beliefs in Canada: National Cross-sectional Survey and Cluster Analysis*. JMIR Public Health and Surveillance, 7(12), e30424. <https://doi.org/10.2196/30424>

Another is “Characterization of non-adopters of COVID-19 non-pharmaceutical interventions through a national cross-sectional survey to assess attitudes and behaviours”.<sup>29</sup>

Yet another is “Attitudes, behaviours and barriers to public health measures for COVID-19: a survey to inform public health messaging”.<sup>30</sup>

### Pharmaceutical Companies

Manns has received funding via an unrestricted grant from **Baxter**.<sup>31</sup>



<sup>29</sup> Lang, R., Atabati, O., Oxoby, R. J., Mourali, M., Shaffer, B., Sheikh, H., Fullerton, M. M., Tang, T., Leigh, J. P., Manns, B. J., Marshall, D. A., Ivers, N. M., Ratzan, S. C., Hu, J., & Benham, J. L. (2021). *Characterization of non-adopters of COVID-19 non-pharmaceutical interventions through a national cross-sectional survey to assess attitudes and behaviours*. *Scientific Reports*, 11(1). <https://doi.org/10.1038/s41598-021-01279-2>

<sup>30</sup> Lang, R., Benham, J. L., Atabati, O., Hollis, A., Tombe, T., Shaffer, B., Burns, K. K., MacKean, G., Léveillé, T., McCormack, B., Sheikh, H., Fullerton, M. M., Tang, T., Boucher, J.-C., Constantinescu, C., Mourali, M., Manns, B. J., Marshall, D. A., Hu, J., & Oxoby, R. J. (2021). *Attitudes, behaviours and barriers to public health measures for COVID-19: a survey to inform public health messaging*. *BMC Public Health*, 21(1). <https://doi.org/10.1186/s12889-021-10790-0>

<sup>31</sup> Trachtenberg, A. J., Quinn, A. E., Ma, Z., Klarenbach, S., Hemmelgarn, B., Tonelli, M., Faris, P., Weaver, R., Au, F., Zhang, J., & Manns, B. (2020). *Association between change in physician remuneration and use of peritoneal dialysis: a population-based cohort analysis*. *CMAJ Open*, 8(1), E96–E104. <https://doi.org/10.9778/cmajo.20190132>

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## Lynora Saxinger

Dr. **Lynora Saxinger**, CTropMed, MD, FRCPC, is an academic infectious diseases specialist, whose professional career outside patient care is focused on antimicrobial stewardship and antimicrobial resistance, with involvement in hospital, health system and national collaborations to improve antibiotic stewardship practice, and resistance and utilization surveillance.<sup>32</sup>

### Education

Saxinger completed her Bachelor of Science at the **University of Saskatchewan** in 1992, then her MD in 1996. She became a Fellow of the **Royal College of Physicians and Surgeons of Canada** in 2000.

### Suppression of Ivermectin

Saxinger was an additional author alongside **Braden Manns** and **Mark Joffe** insisting **Ivermectin** not be used to prevent or treat COVID-19.

In an email thread published by **Rebel News** it was revealed Saxinger was particularly agitated at the notion of recommending the use of Ivermectin, dismissing the suggestion as being based on “misinformation” pushed by **Danielle Smith** and **Fox News**.<sup>33</sup>

### Censorship of Opposing Voices

In disturbing irony, Saxinger opined that “more academics and people in medicine should consider what they can contribute to public discussions. If you can step in, it really is an asset to be able to do it. And it might take a bit of practice before you're comfortable, but it really demonstrates and applies our skills in a public way.”<sup>34</sup>

This is perhaps an example of gaslighting, or an indication that she was ignorant to the widespread censorship of opposing medical voices taking place across Canada and the world during the COVID-19 pandemic.

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<sup>32</sup> Faculty of Medicine & Dentistry. DR. LYNORA SAXINGER. University of Alberta. Retrieved January 8, 2022, from <https://archive.ph/Hm7d4>

<sup>33</sup> Gunn Reid, S. (2021, October 28). EXCLUSIVE: Internal emails show Alberta doctor had Ivermectin use request denied by AHS. Rebel News. <https://archive.ph/8EgIC>

<sup>34</sup> Bauer, K. (2020, September 16). Pandemic Perspectives: Lynora Saxinger. University of Alberta. <https://archive.ph/qHWYd>

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## Affiliations

### Alberta Health Services

Saxinger is Co-Chair of COVID-19 Scientific Advisory Group under **Alberta Health Services** alongside **Braden Manns**.<sup>35</sup> She is also tasked with “engagement in social media and media based scientific communication and knowledge translation for public education around COVID-19.”<sup>36</sup> She is Medical Lead of Antimicrobial Stewardship for Northern Alberta for AHS.<sup>37</sup>

### Association of Medical Microbiology and Infectious Diseases Canada

Saxinger is a founding member and past chair of the Antimicrobial Resistance and Stewardship Committee of the **Association of Medical Microbiology and Infectious Diseases Canada**. She was a speaker at AMMI's 2021 Annual Conference, for a presentation titled “Strategic Deployment of COVID-19 Treatment Options: Who, What, Where and How?”

AMMIDC is partnered with the **Canadian College of Microbiologists (CCM)**, the **Canadian Foundation for Infectious Diseases (CFID)**, the **Canadian Medical Association, Choosing Wisely Canada**, the **European Society of Clinical Microbiology and Infectious Diseases (ESCMID)**, the **International Society of Antimicrobial Chemotherapy**, and the **Pan American Society for Clinical Virology (PASCV)**.<sup>38</sup>

The organization receives sponsorship funds from **Merck, Gilead Sciences, Seqirus, DiaSorin, Hologic, Roche, Pfizer, Avir Pharma, Moderna, and R-Biopharm AG**.<sup>39, 40</sup>

### National Collaborating Centre for Infectious Diseases

Saxinger is a partner at the **National Collaborating Centre for Infectious Diseases (NCCID)** where she was a Principal Investigator of a commissioned 2012 report titled “Antimicrobial Resistance and Utilization Surveillance in Canada”.<sup>41</sup>

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<sup>35</sup> 2019-nCoV Scientific Advisory Group. (2021, May 27). Alberta Health Services.

<https://www.albertahealthservices.ca/assets/info/ppih/if-ppih-covid-19-saq-terms-of-reference.pdf>

<sup>36</sup> Final Program - 2021 Annual Conference. AMMI. Retrieved January 8, 2022, from

[https://www.ammi.ca/Content/2021%20Final%20Program\\_FINAL.pdf](https://www.ammi.ca/Content/2021%20Final%20Program_FINAL.pdf)

<sup>37</sup> ASC Terms of Reference. (2019, February). Alberta Health Services.

<https://www.albertahealthservices.ca/assets/info/hp/as/if-hp-antimicrobial-stewardship-tor.pdf>

<sup>38</sup> Partnerships. Association of Medical Microbiology and Infectious Disease Canada. Retrieved January 8, 2022, from

<https://archive.ph/Uzsmx>

<sup>39</sup> Sponsorship & Exhibitor Prospectus. (2021, December). Association of Medical Microbiology and Infectious Diseases Canada.

<https://ammi.ca/wp-content/uploads/2021/12/2022-Sponsorship-Exhibitor-ProspectusFINAL.pdf>

<sup>40</sup> 2021 Annual Conference. AMMI. Retrieved January 8, 2022, from <https://archive.ph/PLAHX>

<sup>41</sup> Lynora Saxinger. (2015, March 30). National Collaborating Centre for Infectious Diseases. <https://archive.ph/TKd0U>

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## Public Health Agency of Canada

Saxinger has worked as an advisor with the Canadian Hospital Epidemiology Committee/Canadian Nosocomial Infection Surveillance Program (CNISP) collaboration with the **Public Health Agency of Canada**, as well as with the **Canadian Integrated Program for Antimicrobial Resistance** in utilization reporting of human antimicrobial use data.<sup>42</sup>

## University of Alberta

Saxinger is an Associate Professor in the Department of Medicine, Division of Infectious Diseases at the **University of Alberta**.

## Funding

Saxinger received a grant under the **COVID-19 Evidence Network to support Decision-making** (COVID-END) program from the **Canadian Institutes of Health Research** (CIHR) in 2020. COVID-END is partnered with the **Campbell Collaboration, Cochrane, UNICEF**, and others, with funds sourced from the **Rockefeller Foundation, the World Health Organization, Wikipedia**, and others.<sup>43, 44, 45</sup>



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<sup>42</sup> Haworth-Brockman, M., Saxinger, L. M., Miazga-Rodriguez, M., Wierzbowski, A., & Otto, S. J. G. (2021). *One Health Evaluation of Antimicrobial Use and Resistance Surveillance: A Novel Tool for Evaluating Integrated, One Health Antimicrobial Resistance and Antimicrobial Use Surveillance Programs*. *Frontiers in Public Health*, 9. <https://doi.org/10.3389/fpubh.2021.693703>

<sup>43</sup> *Our sponsors*. Campbell Collaboration. Retrieved January 8, 2022, from <https://archive.ph/eY8az>

<sup>44</sup> *Partners*. McMaster Health Forum. Retrieved January 8, 2022, from <https://www.mcmasterforum.org/networks/covid-end/about-covid-end/partners>

<sup>45</sup> *Our funders and partners*. Cochrane. Retrieved January 8, 2022, from <https://archive.ph/ldMAG>

## Alexander Doroshenko

Dr. **Alexander Doroshenko** is an infectious disease epidemiologist and public health specialist in Alberta, Canada. His interests include evaluation of public health interventions and evidence-based public health policies.

### Affiliations

#### Alberta Health Services

Doroshenko is the Public Health representative for the COVID-19 Scientific Advisory Group under **Alberta Health Services**.<sup>46</sup>

#### University of Alberta

Doroshenko is an Assistant Professor in the Department of Medicine, Faculty of Medicine and Dentistry at the **University of Alberta**.<sup>47</sup>

He has received funding for research through the University of Alberta from the **University Hospital Foundation**, which is funded by **Takeda, Biogen, Boehringer Ingelheim, Novartis, Merck, Volvo, Edmonton Journal, Canadian National Railway** (part owned by **Bill Gates**), **RBC (Royal Bank of Canada), TELUS, KPMG, Medtronic, Scotia Capital (Scotiabank), Postmedia, Deloitte, Fidelity, London Drugs, WestJet, Aecon, PricewaterhouseCoopers, Janssen, CTV News, Bell Media, Global News, Corus Entertainment, Astellas, Novo Nordisk, Servier, and Roche**.<sup>48, 49, 50</sup>

### Publications

- *Public health implications of SARS-CoV-2 variants of concern: a rapid scoping review*<sup>51</sup>
  - Funded by the **SPOR Evidence Alliance, Canadian Institutes of Health Research (CIHR), and COVID-END**.

<sup>46</sup> 2019-nCoV Scientific Advisory Group. (2021, May 27). Alberta Health Services.

<https://www.albertahealthservices.ca/assets/info/ppih/if-ppih-covid-19-sag-terms-of-reference.pdf>

<sup>47</sup> Alexander Doroshenko | Public Health. University of Alberta. Retrieved January 8, 2022, from <https://www.ualberta.ca/public-health/about/faculty-staff/adjunct-emeritus-faculty/doroshenko.html>

<sup>48</sup> Abbott, J. (2021). *Thank you to our donors*. University Hospital Foundation (pp. 2–23).

<https://givetouhf.ca/app/uploads/2021/12/UHF-2021-HonouringDonors-WEB-v2.pdf>

<sup>49</sup> *Annual Report 2019-2020*. University Hospital Foundation. Retrieved January 8, 2022, from

[https://givetouhf.ca/app/uploads/2021/08/UHF\\_Annual-Report-2019-2020-Revised\\_19412\\_F-pages-smaller.pdf](https://givetouhf.ca/app/uploads/2021/08/UHF_Annual-Report-2019-2020-Revised_19412_F-pages-smaller.pdf)

<sup>50</sup> *Annual Report 2018-2019*. University Hospital Foundation. Retrieved January 8, 2022, from

<https://givetouhf.ca/app/uploads/2020/10/UHF-Annual-Report-2018-19-lowres.pdf>

<sup>51</sup> Somerville, M., Curran, J. A., Dol, J., Boulos, L., Saxinger, L., Doroshenko, A., Hastings, S., Reynolds, B., Gallant, A. J., Shin, H. D., Wong, H., Crowther, D., Macdonald, M., Martin-Misener, R., Comeau, J., McCulloch, H., & Tricco, A. C. (2021). *Public health implications of SARS-CoV-2 variants of concern: a rapid scoping review*. *BMJ Open*, 11(12), e055781. <https://doi.org/10.1136/bmjopen-2021-055781>

- *Trivalent MDCK cell culture-derived influenza vaccine Optaflu® (Novartis Vaccines)*<sup>52</sup>
  - Co-authored with **Scott Halperin**, who has an extensive catalogue of vaccine-related publications and was funded by **Novartis** for this study
  - In collaboration with the **Canadian Center for Vaccinology**
- *What We Know Now: An Economic Evaluation of Chickenpox Vaccination and Dose Timing Using an Agent-Based Model*<sup>53</sup>
  - Funded by **Alberta Health Services** and the **University of Alberta**
- *Decline of Influenza and Respiratory Viruses With COVID-19 Public Health Measures: Alberta, Canada*<sup>54</sup>
  - Doroshenko reported receiving personal fees from **Sanofi** for an advisory role
  - He also reported that his employer, the **University of Alberta**, was paid additional funds in research grants from the **Canadian Institutes of Health Research (CIHR)**, **Public Health Agency of Canada**, **Alberta Health Services**, and the **University Hospital Foundation** (also listed as “University of Alberta Hospital Foundation”).
  - The study found that the public health measures Doroshenko helped put in place were “associated with a substantial reduction in influenza and NIRV infections in Alberta.”
- *The Combined Effect of Vaccination and Nonpharmaceutical Public Health Interventions-Ending the COVID-19 Pandemic*<sup>55</sup>
  - Same funding details as previous study



<sup>52</sup> Doroshenko, A., & Halperin, S. A. (2009). *Trivalent MDCK cell culture-derived influenza vaccine Optaflu® (Novartis Vaccines)*. *Expert Review of Vaccines*, 8(6), 679–688. <https://doi.org/10.1586/erv.09.31>

<sup>53</sup> Rafferty, E. R. S., McDonald, W., Osgood, N. D., Doroshenko, A., & Farag, M. (2021). *What We Know Now: An Economic Evaluation of Chickenpox Vaccination and Dose Timing Using an Agent-Based Model*. *Value in Health*, 24(1), 50–60. <https://doi.org/10.1016/j.jval.2020.10.004>

<sup>54</sup> Doroshenko, A., Lee, N., MacDonald, C., Zelyas, N., Asadi, L., & Kanji, J. N. (2021). *Decline of Influenza and Respiratory Viruses With COVID-19 Public Health Measures*. *Mayo Clinic Proceedings*, 96(12), 3042–3052. <https://doi.org/10.1016/j.mayocp.2021.09.004>

<sup>55</sup> Doroshenko, A. (2021). *The Combined Effect of Vaccination and Nonpharmaceutical Public Health Interventions—Ending the COVID-19 Pandemic*. *JAMA Network Open*, 4(6), e2111675. <https://doi.org/10.1001/jamanetworkopen.2021.11675>



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## John Conly

Dr. **John Conly**, MD, CM, CCFP, FRCPC, FCAHS, FAMMI, FACP, FSHEA, FIDSA, is a specialist in infectious diseases in Alberta, Canada.

### Affiliations

#### Alberta Health Services

Conly is an Infectious Disease / IPC Expert for the COVID-19 Scientific Advisory Group under **Alberta Health Services**.<sup>56</sup>

#### Alberta Medical Association

Conly received the Medal for Distinguished Service from the **Alberta Medical Association** for “outstanding personal contributions to the medical profession”.

#### AMR One Health Consortium

Conly is a Work Package Lead, Principal Investigator, and Executive Committee member of the **Antimicrobial Resistance (AMR) One Health Consortium**.

#### Canadian Committee on Antibiotic Resistance

Conly served as Chairman of the Board for the **Canadian Committee on Antibiotic Resistance (CCAR)**.

#### Canadian Expert Advisory Group on Antimicrobial Resistance

Conly is a member of the **Canadian Expert Advisory Group on Antimicrobial Resistance (CEAGAR)**.

#### Canadian Expert Drug Advisory Committee

Conly served as Vice Chair of the **Canadian Expert Drug Advisory Committee (CEDAC)**.

#### Canadian Infectious Disease Society

Conly formerly served as President of the **Canadian Infectious Disease Society (CIDS)**.

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<sup>56</sup> 2019-nCoV Scientific Advisory Group. (2021, May 27). Alberta Health Services. <https://www.albertahealthservices.ca/assets/info/ppih/if-ppih-covid-19-sag-terms-of-reference.pdf>

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## University of Calgary

Conly is a Professor of Medicine, Microbiology, Immunology & Infectious Diseases, Pathology & Laboratory Medicine in the Department of Medicine (Infectious Diseases), Cumming School of Medicine, **University of Calgary**, where he is also the former Head of the Department of Medicine, and the Co-Director for the Snyder Institute for Chronic Diseases.<sup>57</sup>

## W21C

Conly is the Medical Director of **W21C**, a research and innovation initiative based in the University of Calgary and the Calgary Zone of Alberta Health Services (AHS).<sup>58, 59</sup>

It is funded by the **Government of Canada** through a Western Economic Partnership Agreement (WEPA), and later received funding from **Alberta Health and Wellness (AH&W)**, **Alberta Innovates**, **Alberta Ministry of Jobs, Economy, and Innovation**, **Western Economic Diversification Canada**, and **Innovate Calgary**.

## World Health Organization

Conly is a member of the World Health Organization **Advisory Group on Integrated Surveillance of Antimicrobial Resistance**. He is overseeing the Calgary study site of the WHO's "Case-control study to assess risk factors for SARS-CoV-2 infection among healthcare workers" under the UNITY Studies project.<sup>60</sup>

## Relationships with Pharmaceutical Companies

Conly has received funding from **Pfizer** via the University of Calgary to conduct its STRIVE *S. aureus* vaccine randomized clinical trial.<sup>61</sup> He previously received speaker's fees from **Janssen**, **Pfizer**, and **Astellas**.<sup>62</sup>

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<sup>57</sup> John Conly. University of Calgary. Retrieved January 8, 2022, from <https://research.ucalgary.ca/amr/people/investigators/john-conly>

<sup>58</sup> Dr. John Conly, CM, MD. W21C. Retrieved January 8, 2022, from <https://archive.ph/Go60B>

<sup>59</sup> About. W21C. Retrieved January 8, 2022, from <https://archive.ph/1DFCp>

<sup>60</sup> Early investigations protocols. World Health Organization. Retrieved January 9, 2022, from <https://archive.ph/5vFGC>

<sup>61</sup> McCubbin, K. D., Anholt, R. M., de Jong, E., Ida, J. A., Nóbrega, D. B., Kastelic, J. P., Conly, J. M., Götte, M., McAllister, T. A., Orsel, K., Lewis, I., Jackson, L., Plastow, G., Wieden, H.-J., McCoy, K., Leslie, M., Robinson, J. L., Hardcastle, L., Hollis, A., & Ashbolt, N. J. (2021). *Knowledge Gaps in the Understanding of Antimicrobial Resistance in Canada*. *Frontiers in Public Health*, 9. <https://doi.org/10.3389/fpubh.2021.726484>

<sup>62</sup> Conly, J. M. (2012). *Antimicrobial resistance programs in Canada 1995-2010: a critical evaluation*. *Antimicrobial Resistance and Infection Control*, 1(1), 10. <https://doi.org/10.1186/2047-2994-1-10>

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## Shelley Duggan

### Affiliations

#### Alberta Health Services

Duggan is a critical care representative in the COVID-19 Scientific Advisory Group under Alberta Health Services.<sup>63</sup>

#### Alberta Medical Association

Duggan sits on the Board of Directors at the Alberta Medical Association.<sup>64</sup> She has been an AMA member since 2002. She is an AMA Representative Forum delegate, president of the Edmonton Zone Medical Staff Association and is treasurer for the AMA Section of Nephrology. In the past she was president of the AMA Section of Nephrology.

#### Covenant Health

Duggan is a staff physician in Critical Care and Nephrology at the **Grey Nuns Community Hospital** under Covenant Health.

#### University of Alberta

Duggan is a clinical professor in the Department of Medicine at the University of Alberta.<sup>65</sup>

### Media Appearances

Dr. Duggan “enjoys educating the public in her role as Ask the Doctor” on **Global News**.

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<sup>63</sup> 2019-nCoV Scientific Advisory Group. (2021, May 27). Alberta Health Services.

<https://www.albertahealthservices.ca/assets/info/ppih/if-ppih-covid-19-sag-terms-of-reference.pdf>

<sup>64</sup> Dr. Shelley L. Duggan. (2016, November 17). Alberta Medical Association. <https://archive.ph/g0mRa>

<sup>65</sup> Shelly Duggan | Department of Critical Care. University of Alberta. Retrieved January 9, 2022, from <https://archive.ph/XkhrC>

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## Elizabeth MacKay

### Affiliations

#### Alberta Health Services

MacKay is a General Internal Medicine representative on the COVID-19 Scientific Advisory Group under Alberta Health Services.<sup>66</sup>

### Relationships with Pharmaceutical Companies

MacKay has received personal fees from **Pfizer** and **Bristol-Myers Squibb**.<sup>67</sup>

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## Brandie Walker

### Affiliations

#### Alberta Health Services

Walker is the respiratory representative on the COVID-19 Scientific Advisory Group under Alberta Health Services.<sup>66</sup>

#### Canadian Lung Association

Walker is a researcher for the **Canadian Lung Association**. She received the Clinician-Scientist Asthma Award, which provided her with \$115,000.00 in funding from **AllerGen**, the Canadian Lung Association and the **Canadian Thoracic Society**.<sup>68</sup>

The CLA is partnered with **Actelion** (now a **Johnson & Johnson** company), **AstraZeneca**, **Bayer**, **Boehringer Ingelheim**, **GlaxoSmithKline**, **Grifols**, **InterMune**, **McArthur Medical Sales**,

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<sup>66</sup> 2019-nCoV Scientific Advisory Group. (2021, May 27). Alberta Health Services.

<https://www.albertahealthservices.ca/assets/info/ppih/if-ppih-covid-19-sag-terms-of-reference.pdf>

<sup>67</sup> Douketis, J. D., Spyropoulos, A. C., Duncan, J., Carrier, M., Le Gal, G., Tafur, A. J., Vanassche, T., Verhamme, P., Shivakumar, S., Gross, P. L., Lee, A. Y. Y., Yeo, E., Solymoss, S., Kassis, J., Le Templier, G., Kowalski, S., Blostein, M., Shah, V., MacKay, E., & Wu, C. (2019). *Perioperative Management of Patients With Atrial Fibrillation Receiving a Direct Oral Anticoagulant*. *JAMA Internal Medicine*. <https://doi.org/10.1001/jamainternmed.2019.2431>

<sup>68</sup> Dr. Brandie Walker. (2014, July 25). Canadian Lung Association. <https://archive.ph/DDQud>

**Pediapharm** (now called **Medexus**), **Merck**, **Novartis**, **Pfizer**, **ProResp**, **RBC (Royal Bank of Canada)**, **Roche**, **Takeda**, and **Trudell Medical**.<sup>69, 70, 71, 72, 73, 74</sup>

## University of Calgary

Walker is a Clinical Associate Professor of Medicine at the University of Calgary's Snyder Institute for Chronic Diseases (in partnership with Alberta Health Services).<sup>75</sup> Her research focus is in the field of airways diseases with a focus on COPD and asthma.

## Relationships with Pharmaceutical Companies

Through her participation in the **CanCOLD** study, Walker has received funding from **Almirall**, **AstraZeneca**, **Boehringer Ingelheim**, **GlaxoSmithKline**, **Merck**, **NeuMedX**, **Novartis**, **Nycomed**, **Pfizer**, **Takeda**, and **Theratechnologies**.<sup>76</sup>

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## Andrew McRae

### Affiliations

#### Alberta Health Services

McRae is the emergency department representative for the COVID-19 Scientific Advisory Group under Alberta Health Services.<sup>66</sup>

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<sup>69</sup> *About Us*. (2014, August 21). Canadian Lung Association. <https://archive.ph/XNGx1>

<sup>70</sup> *2020/2021 Annual Report*. Lung Association of Canada. Retrieved January 10, 2022, from [https://www.lung.ca/sites/default/files/LungAssociation\\_AnnualReport\\_2020\\_2021\\_EN\\_FIN.pdf](https://www.lung.ca/sites/default/files/LungAssociation_AnnualReport_2020_2021_EN_FIN.pdf)

<sup>71</sup> *2019/2020 Annual Report*. Canadian Lung Association. Retrieved January 10, 2022, from [https://www.lung.ca/sites/default/files/LungAssociation\\_AnnualReport\\_2019\\_2020\\_EN.pdf](https://www.lung.ca/sites/default/files/LungAssociation_AnnualReport_2019_2020_EN.pdf)

<sup>72</sup> *2017/2018 Annual Report*. Canadian Lung Association. Retrieved January 10, 2022, from [https://www.lung.ca/sites/default/files/CLA\\_AnnualReport2017\\_2018\\_EN\\_FINALSEPT21.pdf](https://www.lung.ca/sites/default/files/CLA_AnnualReport2017_2018_EN_FINALSEPT21.pdf)

<sup>73</sup> *2016/2017 Annual Report*. Canadian Lung Association. Retrieved January 10, 2022, from [https://www.lung.ca/sites/default/files/LungAssociation\\_AnnualReport\\_2016\\_2017\\_ENGLISHOCTOBER.pdf](https://www.lung.ca/sites/default/files/LungAssociation_AnnualReport_2016_2017_ENGLISHOCTOBER.pdf)

<sup>74</sup> *2015/2016 Annual Report*. Canadian Lung Association. Retrieved January 10, 2022, from [https://www.lung.ca/sites/default/files/LungAssociation\\_AnnualReport\\_2015\\_2016\\_EN.pdf](https://www.lung.ca/sites/default/files/LungAssociation_AnnualReport_2015_2016_EN.pdf)

<sup>75</sup> *Brandie Walker*. (2021, February 25). Snyder Institute for Chronic Diseases. <https://archive.ph/pOhJW>

<sup>76</sup> *Home*. CanCOLD. Retrieved January 9, 2022, from <https://archive.ph/Bp2Fc>

## Canadian Medical Association

McRae is an Editorial Fellow at the **Canadian Medical Association Journal**.<sup>77, 78</sup> In this capacity, McRae co-authored an editorial titled “SARS-CoV-2 vaccination should be required to practise medicine in Canada”.<sup>79</sup>

## Ottawa Hospital

McRae is a collaborator on a project that addresses ethical and policy challenges posed by cluster randomized trials, in partnership with the **Rotman Institute of Philosophy** and the **Ottawa Hospital Research Institute**, funded by the **Canadian Institutes of Health Research**.<sup>80</sup>

The OHRI has received funding for research from **Pfizer** for research on drugs for advanced lung cancer,<sup>81</sup> kidney transplant patients,<sup>82, 83</sup> and blood clots in cancer patients.<sup>84, 85</sup>

**Bristol-Myers Squibb** also funded the latter study, as did **CanVECTOR**, which is funded by **Alexion, Aniera Diagnostica, Aspen Pharmacare, Bayer, bioMérieux, Boston Scientific, Bristol-Myers Squibb, Cardinal Health, Daiichi Sankyo, LEO Pharma, Pfizer, and Sanofi**.<sup>86</sup>

Another study looking at blood thinners in pregnancy was also funded by **Pfizer**, as well as **Eli Lilly**.<sup>87, 88</sup>

<sup>77</sup> McRae, A. @Andrew\_McRae\_EM. Twitter. Retrieved January 10, 2022, from <https://archive.ph/muMc0>

<sup>78</sup> Staff | CMAJ. Canadian Medical Association Journal. Retrieved January 10, 2022, from <https://archive.ph/Y3t9z>

<sup>79</sup> McRae, A. D., & Laupacis, A. (2021). SARS-CoV-2 vaccination should be required to practise medicine in Canada. Canadian Medical Association Journal, cmaj.211839. <https://doi.org/10.1503/cmaj.211839>

<sup>80</sup> Andrew McRae. The Rotman Institute of Philosophy. Retrieved January 10, 2022, from

<https://www.rotman.uwo.ca/portfolio-items/mcrae-andrew/#tab-5d6239302fa152c2ec9>

<sup>81</sup> Early phase clinical trials shows promising results in advanced lung cancer. (2011, October 12). Ottawa Hospital Research Institute. <https://archive.ph/QMO7a>

<sup>82</sup> Knoll, G. A., Kokolo, M. B., Mallick, R., Beck, A., Buenaventura, C. D., Ducharme, R., Barsoum, R., Bernasconi, C., Blydt-Hansen, T. D., Ekberg, H., Felipe, C. R., Firth, J., Gallon, L., Gelens, M., Glotz, D., Gossmann, J., Guba, M., Morsy, A. A., Salgo, R., & Scheuermann, E. H. (2014). Effect of sirolimus on malignancy and survival after kidney transplantation: systematic review and meta-analysis of individual patient data. BMJ, 349(nov24 1), g6679–g6679. <https://doi.org/10.1136/bmi.g6679>

<sup>83</sup> Ganton, J. (2015, October 22). Drugs commonly used in kidney transplant patients not as effective as previously thought. Ottawa Hospital Research Institute. <https://archive.ph/SGtWQ>

<sup>84</sup> Ganton, J., & Pulkinghorn, I. M. (2018, December 4). Drug dramatically reduces risk of dangerous blood clots in cancer patients. Ottawa Hospital Research Institute. <https://archive.ph/n6N5h>

<sup>85</sup> Carrier, M., Abou-Nassar, K., Mallick, R., Tagalakis, V., Shivakumar, S., Schattner, A., Kuruvilla, P., Hill, D., Spadafora, S., Marquis, K., Trinkaus, M., Tomiak, A., Lee, A. Y. Y., Gross, P. L., Lazo-Langner, A., El-Maraghi, R., Goss, G., Le Gal, G., Stewart, D., & Ramsay, T. (2019). Apixaban to Prevent Venous Thromboembolism in Patients with Cancer. The New England Journal of Medicine, 380(8), 711–719. <https://doi.org/10.1056/NEJMoa1814468>

<sup>86</sup> Partners. CanVECTOR. Retrieved January 10, 2022, from <https://archive.ph/9TdRm>

<sup>87</sup> Ganton, J. (2016, October 18). “Invaluable” study confirms blood thinners don’t prevent recurrent pregnancy complications. Ottawa Hospital Research Institute. <https://archive.ph/vTkEU>

<sup>88</sup> Rodger, M. A., Gris, J.-C., de Vries, J. I. P., Martinelli, I., Rey, É., Schleussner, E., Middeldorp, S., Kaaja, R., Langlois, N. J., Ramsay, T., Mallick, R., Bates, S. M., Abheiden, C. N. H., Perna, A., Petroff, D., de Jong, P., van Hoorn, M. E., Bezemer, P. D., & Mayhew, A. D. (2016). Low-molecular-weight heparin and recurrent placenta-mediated pregnancy complications: a meta-analysis of individual patient data from randomised controlled trials. The Lancet, 388(10060), 2629–2641. <https://archive.ph/oithf>

Other pharmaceutical research funders are **AstraZeneca**,<sup>89</sup> **Janssen**,<sup>90</sup> and **GlaxoSmithKline**.<sup>91</sup>

## University of Calgary

McRae is a Researcher and Assistant Professor at the University of Calgary's Department of Emergency Medicine, a partnership between **Alberta Health Services** and the **Cumming School of Medicine**.<sup>92</sup> He has a cross-appointment to the **Department of Community Health Sciences**. In addition to active research interests in emergency department crowding and operations, his primary interest is in health services dimensions of the diagnosis and treatment of cardiovascular emergencies (myocardial infarction, arrhythmias, stroke).

## Western University

McRae was a Postdoctoral Fellow at the **Rotman Institute of Philosophy** at Western University from 2009 – 2011.<sup>93</sup>

## Relationships with Pharmaceutical Companies

McRae received an unrestricted research grant from **Roche** for 2021-2022.<sup>94</sup>

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# Jeremy Slobodan

## Affiliations

### Alberta Health Services

Slobodan is a pharmacy representative in the COVID-19 Scientific Advisory Group under Alberta Health Services.<sup>95</sup> He is also the Director of Drug Utilization, Information & Stewardship.<sup>95</sup>

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<sup>89</sup> Ganton, J. (2016, November 2). *Lung cancer breakthrough: 70% of patients with specific mutation respond to new therapy*. Ottawa Hospital Research Institute. <https://archive.ph/Hm6x5>

<sup>90</sup> Buchanan, A. (2016, March 30). *When cancer comes back: Drug for mantle-cell lymphoma gives patients more time*. Ottawa Hospital Research Institute. <https://archive.ph/qwg6g>

<sup>91</sup> Buchanan, A. (2019, January 30). *Flu vaccination keeps people with COPD out of the hospital*. Ottawa Hospital Research Institute. <https://archive.ph/nu0ol>

<sup>92</sup> Andrew McRae. (2019, November 26). Cumming School of Medicine. <https://archive.ph/oi8C8>

<sup>93</sup> Andrew McRae. The Rotman Institute of Philosophy. Retrieved January 10, 2022, from <https://archive.ph/9RMci>

<sup>94</sup> McRae, A. (2021). *Declaration of competing interests*. Canadian Medical Association Journal. <https://archive.ph/AphOI>

<sup>95</sup> Slobodan, J. (2017, May 9). *Provision of Docusate for Spinal Cord Injury (SCI) Patients*. Alberta Health Services. <https://archive.ph/pG2KD>

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## Nathan Zelyas

Dr. **Nathan Zelyas** is a medical microbiologist in Alberta, Canada. He is one of “about 20” such specialists in the province.<sup>96</sup> During the COVID-19 pandemic, Dr. Zelyas supported the implementation of molecular diagnostic testing for SARS-CoV-2 infections in Alberta.<sup>97</sup>

### Affiliations

#### Alberta Health Services

Zelyas is the Provincial Laboratory representative for the COVID-19 Scientific Advisory Group under Alberta Health Services.<sup>66</sup>

#### Alberta Precision Labs

Zelyas is a Medical Microbiologist at Alberta Precision Laboratories, and is the APL **Public Health Program** leader for Respiratory Viruses.<sup>98</sup>

#### University of Alberta

Zelyas is Program Director for the **Medical Microbiology Residency Program** at the University of Alberta.<sup>99</sup>

### Publications

- August 11, 2021: *Precision Response to the Rise of the SARS-CoV-2 B.1.1.7 Variant of Concern by Combining Novel PCR Assays and Genome Sequencing for Rapid Variant Detection and Surveillance*<sup>100</sup>
  - Funded by the **Canadian COVID-19 Genomics Network** (CanCOGeN) supported by **Genome Alberta** and **Genome Canada**.
  - The Board of Directors for Genome Canada includes representatives from **Bayer**, the **Bill & Melinda Gates Foundation**, the United States **National Institutes of Health** (NIH), **Shell**, **SickKids**, and the **University of Oxford**. They also received

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<sup>96</sup> Weltz, L. (2020, May). *Always on alert for health threats*. Alberta Doctors' Digest. <https://archive.ph/7akGj/>

<sup>97</sup> Poliquin, G., Forgie, S., Zelyas, N., & Charlton, C. (2021). *Challenges in COVID-19 Laboratory Testing*. Association of Medical Microbiology and Infectious Disease (AMMI) Canada (p. 3). Public Health Agency of Canada. <https://ammi.ca/wp-content/uploads/2021/08/CUPA-TEA-Challenges-in-COVID-19-diagnostics-FINAL.pdf>

<sup>98</sup> *Novel Coronavirus (2019-nCoV) Laboratory Update*. (2020, January 31). Alberta Health Services; Alberta Precision Laboratories. <https://archive.ph/wph4a>

<sup>99</sup> *Contact | Laboratory Medicine and Pathology*. University of Alberta. Retrieved January 10, 2022, from <https://archive.ph/NKRka>

<sup>100</sup> Zelyas, N., Pabbaraju, K., Croxson, M. A., Lynch, T., Buss, E., Murphy, S. A., Shokoples, S., Wong, A., Kanji, J. N., & Tipples, G. (2021). *Precision Response to the Rise of the SARS-CoV-2 B.1.1.7 Variant of Concern by Combining Novel PCR Assays and Genome Sequencing for Rapid Variant Detection and Surveillance*. Microbiology Spectrum. <https://doi.org/10.1128/spectrum.00315-21>



funding from **BIOTECanada (AstraZeneca, Biodextris, GlaxoSmithKline, IMV, Janssen, Medicago, Merck, Pfizer, Sanofi, Valneva, VBI Vaccines, Virica Biotech, and VIDO-Intervac**, which is conducting COVID-19 vaccine research with the **People's Republic of China)**<sup>101, 102, 103</sup>

## André Corriveau

Dr. **André Corriveau** was the Chief Medical Officer of Health (CMOH) for the Province of Alberta from 2009 until 2012.<sup>104</sup>

### Affiliations

#### Alberta Health Services

Corriveau is the Alberta Health Medical Office of Health representative in the COVID-19 Scientific Advisory Group under Alberta Health Services.<sup>66</sup> He was formerly the **Chief Medical Officer of Health** for the Province of Alberta, and was in this position during the 2009 **H1N1 Swine Flu** outbreak. He resigned in March 2012.<sup>105</sup>

#### Canadian Partnership Against Cancer

Corriveau is a member of the Board of Directors for the **Canadian Partnership Against Cancer** as a health system expert.<sup>106</sup>

The Board of Directors for the CPAC include representation from **PricewaterhouseCoopers**, the **Ontario Ministry of Health**, **Fraser Health Authority**, **Dalhousie University**, **University of Calgary**, **Health Canada**, **OntarioMD**, **Quebec Ministry of Health and Social Services**, **British Columbia Ministry of Health**, **PEI Department of Health and Wellness**, and the **Canadian Cancer Society**.<sup>107</sup>

The CPAC provided funding to **Alberta Health Services**, with whom Corriveau is also associated, in 2020 and 2021.

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<sup>101</sup> *BIOTECanada*. (2021, October 15). Canada's Vaccine Industry Committee. Retrieved December 6, 2021, from <http://www.biotech.ca/policy-matters/health/canadas-vaccine-industry-committee/>

<sup>102</sup> South China Vaccine Corporation. *ABOUT US*. Retrieved December 6, 2021, from <http://www.gdscvc.com/about>

<sup>103</sup> Vaccine and Infectious Disease Organization (VIDO). *Annual Report 2019–2020*. Retrieved December 6, 2021, from [https://www.vido.org/assets/upload/pdf/annual\\_reports/VIDO%20-%20Annual%20Report%202019-2020.pdf](https://www.vido.org/assets/upload/pdf/annual_reports/VIDO%20-%20Annual%20Report%202019-2020.pdf)

<sup>104</sup> Weber, B. (2020, December 1). *Public health must balance science and society: former top doctor*. CBC News; The Canadian Press. <https://archive.ph/UcuAi>

<sup>105</sup> CTV Calgary. (2012, March 28). *Alberta's top doc resigns*. CTV News. <https://archive.ph/GFimw>

<sup>106</sup> Williams, N. (2019, October 30). *New Board of Directors at the Canadian Partnership Against Cancer*. Canadian Partnership against Cancer. <https://archive.ph/vkv2w>

<sup>107</sup> *Annual Report 2020/2021*. Canadian Partnership Against Cancer. Retrieved January 10, 2022, from <https://s22457.pcdn.co/wp-content/uploads/2021/09/Annual-report-2020-2021-EN.pdf>

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## Canadian Water Network

Corriveau is a Health Services Delivery and Public Health consultant on the **Public Health Advisory Group** for the Canadian Water Network.<sup>108</sup>

## Government of Northwest Territories

Corriveau served as Chief Public Health Officer (CPHO) for the **Department of Health and Social Services** in the **Northwest Territories** from 1998 to 2009. He was re-appointed to the position in June 2012 following his time as the CMOH of Alberta.<sup>109</sup>

## University of Calgary

Corriveau is an Adjunct Professor in the Faculty of Medicine at the University of Calgary.<sup>108</sup>

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<sup>108</sup> COVID-19 Wastewater Coalition. Canadian Water Network. Retrieved January 10, 2022, from <https://archive.ph/BezDZ>

<sup>109</sup> Healy, D. (2012, March 29). *Appointment of New Chief Public Health Officer*. Government of Northwest Territories. <https://archive.ph/AXB2J>



## DISCLOSURE

**ANY OPINIONS SHARED IN THIS REPORT ARE THOSE OF THE AUTHOR ALONE, AND DO NOT NECESSARILY REPRESENT THOSE OF ANY ORGANIZATION WITH WHICH THE AUTHOR IS ASSOCIATED.**

**NO ORGANIZATION OR OUTSIDE INTEREST COMMISSIONED THIS REPORT.**

**THIS REPORT WAS CREATED USING OPEN-SOURCE RESEARCH AVAILABLE ON THE INTERNET.**

**UP-TO-DATE AS OF JANUARY 12, 2022**

# AHS COVID-19 Scientific Advisory Group

## Appendix A

### Summary of Companies with Interest in COVID-19

January 12, 2021

This is not an exhaustive list of the dozens of pharmaceutical companies associated with the **Alberta Health Services COVID-19 Scientific Advisory Group**, and should serve as an overview to demonstrate the conflicts of interest held by the SAG members.

#### Abbott Laboratories

- Parent company of **AbbVie**.<sup>1</sup>
- Manufacturer of rapid antigen COVID-19 tests being mandated across Canada.<sup>2,3</sup>

#### Actelion

- Acquired by **Johnson & Johnson**.<sup>4</sup>

#### Alexion

- “Rare disease” division of **AstraZeneca** after its acquisition of the company in 2021.<sup>5</sup>
- Had been running clinical trials on **ULTOMIRIS** (ravulizumab-cwvz) in hospitalized COVID-19 patients.<sup>6</sup>

<sup>1</sup> *Our Company*. AbbVie | Pharmaceutical Research & Development. Retrieved December 6, 2021, from <https://www.abbvie.com/our-company.html>

<sup>2</sup> Canadian Public Health Laboratory Network Laboratory Directors Council & Canadian Public Health Laboratory Network Respiratory Virus Infection Working Group. (2021). *Interim guidance on the use of the Abbott Panbio™ COVID-19 Antigen Rapid Test*. Canada Communicable Disease Report, 47(1), 17–22. <https://doi.org/10.14745/ccdr.v47i01a04>

<sup>3</sup> Dueck, S. (2021, December 6). *New vaccine rules take effect today for 12 to 17 year olds*. Steinbach Online. Retrieved December 6, 2021, from <https://steinbachonline.com/local/new-vaccine-rules-take-effect-today-for-12-to-17-year-olds>

<sup>4</sup> O'Donnell, C. (2021, November 12). *How Johnson & Johnson became the sprawling healthcare giant it is today*. Reuters. <https://archive.ph/7BSfF>

<sup>5</sup> Kemp, A. (2021, July 21). *Acquisition of Alexion completed*. AstraZeneca. <https://archive.ph/c5apv>

<sup>6</sup> Goulart, M. (2021, January 13). *Alexion Provides Update on Phase 3 Study of ULTOMIRIS® (ravulizumab-cwvz) in Hospitalized Patients with Severe COVID-19*. Alexion Pharmaceuticals, Inc. <https://archive.ph/u2NbV>

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## AllerGen

- Received “more than \$400,000.00” in funding from the **COVID-19 Immunity Task Force** “to study how COVID-19 is impacting individuals and families across Canada.”<sup>7</sup>
- Received “nearly \$700,000.00” from the **Government of Alberta** to measure COVID-19 antibody prevalence among Albertan children at the **University of Alberta**.<sup>8</sup>
- AllerGen investigator Dr. **Christopher Carlsten** received a portion of a \$2 million grant from the **Michael Smith Foundation for Health Research** to study long-term lung impacts of COVID-19, and testing to determine long-term quality of life.<sup>9,10</sup>
- Received \$1.7 million from the **Canadian Institutes of Health Research (CIHR)** and **Research Manitoba** to “study how individuals and families across Canada have been impacted directly by COVID-19 infection and indirectly by pandemic-related social and economic upheaval.”<sup>11</sup>

## Amgen

- Partnered with **Eli Lilly** to manufacture their COVID-19 antibody therapy products.<sup>12</sup>

## Aniara Diagnostica

- Manufacturer of **T cell assays** for COVID-19 vaccine research.<sup>13</sup>

## Ansell

- Manufacturer of **Personal Protective Equipment (PPE)** including rubber gloves that saw huge increase in demand due to COVID-19. The company “supplies all the pharmaceutical companies, including **Pfizer** and **AstraZeneca**, involved in manufacturing approved COVID-19 vaccines around the world”.<sup>14</sup>

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<sup>7</sup> Beck, M. (2020, September 16). *CITF awards CHILD Cohort Study more than \$400K to study COVID-19 impacts*. AllerGen. <https://archive.ph/HcORy>

<sup>8</sup> Beck, M. (2020, September 10). *Alberta funds COVID-19 antibody testing among Edmonton children in CHILD Cohort Study*. AllerGen. <https://archive.ph/K4JPY>

<sup>9</sup> Beck, M. (2020, June 10). *AllerGen investigator receives MSFHR grant for COVID-19 research*. AllerGen. <https://archive.ph/H5eBw>

<sup>10</sup> *COVID-19 Research Response Fund Award Recipients*. (2021, April 15). Michael Smith Foundation for Health Research. <https://archive.ph/KL0LC>

<sup>11</sup> Beck, M. (2020, June 25). *CHILD Cohort Study awarded \$1.7M to study impacts of COVID-19 on Canadian families*. AllerGen. <https://archive.ph/RasDp>

<sup>12</sup> Taylor, M., & Rowland, T. (2020, September 17). *Lilly and Amgen Announce Manufacturing Collaboration for COVID-19 Antibody Therapies*. Amgen. <https://archive.ph/pXXV5>

<sup>13</sup> Waldron, M. (2020, June 11). *Product Spotlight: Aniara Diagnostica would like to announce the availability of T cell ELISPOT assays*. Cision PRWeb; Vocus Inc. <https://archive.ph/2Rap6>

<sup>14</sup> Evans, S. (2021, February 15). *Ansell doubles production as extraordinary demand to stay*. Australian Financial Review. <https://archive.ph/BOVJK>

## Aspen Pharmacare

- Partnered with **Johnson & Johnson** to produce their COVID-19 DNA-based vaccine product in South Africa.<sup>15</sup>

## Astellas

- In clinical trials for a **gene therapy** product called **AT132**, on pause due to multiple deaths in its **ASPIRO** clinical trial.<sup>16</sup>

## AstraZeneca

- Distributing a viral vector-based COVID-19 vaccine product in Canada and other countries. Marketed in Canada as **Vaxzevria**.<sup>17</sup>

## Baxter BioPharma Solutions

- Partnered with **Moderna** to manufacture their COVID-19 mRNA vaccine product in the United States.<sup>18</sup>

## Bayer

- Part of the COVID-19 Therapeutics Accelerator funded by the **Bill & Melinda Gates Foundation**, **Wellcome Trust**, and **Mastercard** to “accelerate treatments, vaccines, and diagnostics”.<sup>19</sup>

## BioDextris

- Developing an **intranasal COVID-19 vaccine** product with **Oragenics**.<sup>20</sup>

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<sup>15</sup> Jerving, S. (2021, December 6). *Aspen's COVID-19 vaccine licensing deal a "game changer" for Africa*. Devex. <https://archive.ph/NbtMB>

<sup>16</sup> Astellas Pharma Inc. (2021, September 1). *Astellas Provides Update on ASPIRO Clinical Trial of AT132 in Patients with X-linked Myotubular Myopathy*. Cision PR Newswire. <https://archive.ph/MwQfy>

<sup>17</sup> Health Canada. (2021, November 23). *AstraZeneca Vaxzevria COVID-19 vaccine*. Government of Canada. Retrieved December 5, 2021, from <https://www.canada.ca/en/health-canada/services/drugs-health-products/covid19-industry/drugs-vaccines-treatments/vaccines/astrazeneca.html>

<sup>18</sup> *Baxter BioPharma Solutions and Moderna Announce Agreement for Fill/Finish Manufacturing of the Moderna COVID-19 Vaccine in the U.S.* (2021, March 8). Baxter. <https://archive.ph/lfoGN>

<sup>19</sup> Bill & Melinda Gates Foundation. (2020, March 25). *Life Science Companies Commit to the Fight Against COVID-19 Pandemic alongside Gates Foundation*. Retrieved December 6, 2021, from <https://www.gatesfoundation.org/Ideas/Media-Center/Press-Releases/2020/03/Life-Science-Companies-Commit-to-the-Fight-Against-COVID-19-Pandemic-alongside-Gates-Foundation>

<sup>20</sup> Sullivan, M., & Golodetz, K. (2021, March 9). *Oragenics Enters into Material Transfer Agreement with Biodextris for Mucosal Adjuvant for Intranasal COVID-19 Vaccine*. Business Wire; Berkshire Hathaway. <https://archive.ph/GrWCj>

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## bioMérieux

- Marketing a COVID-19 **RT-PCR** testing product called **COVID-19 R-GENE**.<sup>21</sup>

## Boehringer Ingelheim

- Previously running clinical trials for their **neutralizing antibody product BI 764198** in COVID-19 patients.<sup>22</sup>
- Member of **Corona Accelerated R&D in Europe (CARE)**, developing therapeutics for COVID-19.<sup>23</sup>
- Manufactures veterinary **ivermectin** products and advises against human consumption, instead advocating for COVID-19 vaccination.<sup>24</sup>

## Bristol-Myers Squibb

- Holds the exclusive license to develop, manufacture and commercialize the monoclonal antibody treatment owned by **Rockefeller University**.<sup>25</sup>
- Part of the COVID-19 Therapeutics Accelerator funded by the **Bill & Melinda Gates Foundation, Wellcome**, and **Mastercard** to “accelerate treatments, vaccines, and diagnostics”.

## Eli Lilly

- Has FDA Emergency Use Authorization for three experimental COVID-19 drugs: **Bamlanivimab, Etesevimab** and **Olumiant** (in combination with **Remdesivir**).<sup>26, 27</sup>
- Partnered with **Amgen** to manufacture their COVID-19 antibody therapy products.<sup>28</sup>
- Part of the COVID-19 Therapeutics Accelerator funded by the **Bill & Melinda Gates Foundation, Wellcome**, and **Mastercard** to “accelerate treatments, vaccines, and diagnostics”.

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<sup>21</sup> COVID-19 R-GENE®. (2021, August 23). BioMérieux Clinical Diagnostics. <https://archive.ph/JAwpr>

<sup>22</sup> Study in COVID-19 Patients with Severe Respiratory Illness Discontinued. Boehringer Ingelheim. Retrieved January 12, 2022, from <https://www.boehringer-ingelheim.com/covid-19/fighting-covid-19/research-update>

<sup>23</sup> COVID-19: CARE Consortium. Boehringer Ingelheim. Retrieved January 12, 2022, from <https://archive.ph/wiSRG>

<sup>24</sup> Ivermectin in Animal Health products and COVID-19. Boehringer Ingelheim. Retrieved January 12, 2022, from <https://archive.ph/sSaLf>

<sup>25</sup> Bristol-Myers Squibb. (2021, September 7). COVID-19 Updates. Retrieved December 6, 2021, from <https://www.bms.com/about-us/responsibility/coronavirus-updates.html>

<sup>26</sup> O'Shaughnessy, J. A., PhD. (2021, December 3). RE: Emergency Use Authorization 094. Eli Lilly. Retrieved December 6, 2021, from <http://pi.lilly.com/eua/bam-and-ete-eua-fda-authorization-letter.pdf>

<sup>27</sup> Hinton, D. M. (2021, July 28). Baricitinib EUA FDA Authorization Letter. Eli Lilly. Retrieved December 6, 2021, from <http://pi.lilly.com/eua/baricitinib-eua-fda-authorization-letter.pdf>

<sup>28</sup> Taylor, M., & Rowland, T. (2020, September 17). Lilly and Amgen Announce Manufacturing Collaboration for COVID-19 Antibody Therapies. Amgen. <https://archive.ph/pXXV5>

## Gilead

- Developer of **Remdesivir**, the only “FDA-approved” COVID-19 treatment.<sup>29</sup>
- Part of the COVID-19 Therapeutics Accelerator funded by the **Bill & Melinda Gates Foundation, Wellcome**, and **Mastercard** to “accelerate treatments, vaccines, and diagnostics”.

## Janssen

- Pharmaceutical arm of **Johnson & Johnson**. Distributing a recombinant COVID-19 vaccine product in the United States.<sup>30</sup> Approved, but not widely distributed in Canada.<sup>31</sup>
- Part of the COVID-19 Therapeutics Accelerator funded by the **Bill & Melinda Gates Foundation, Wellcome**, and **Mastercard** to “accelerate treatments, vaccines, and diagnostics”.

## Medicago

- Developing a COVID-19 vaccine product with **GlaxoSmithKline**.<sup>32, 33</sup>

## Merck

- Original patent holder for **Ivermectin** which has been available for decades and is now off-patent.<sup>34</sup> It has proven to be highly effective at preventing and treating COVID-19.<sup>35</sup>
- Producing an experimental oral “antiviral” pill for COVID-19 called **Molnupiravir**.<sup>36, 37</sup>

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<sup>29</sup> COVID-19 Treatment Guidelines Panel. *Remdesivir*. COVID-19 Treatment Guidelines. Retrieved December 6, 2021, from <https://www.covid19treatmentguidelines.nih.gov/therapies/antiviral-therapy/remdesivir/>

<sup>30</sup> National Center for Immunization and Respiratory Diseases. (2021, November 4). *Administration Overview for Johnson & Johnson's Janssen COVID-19 Vaccine*. U.S. Centers for Disease Control and Prevention (CDC). Retrieved December 5, 2021, from <https://archive.ph/sypal>

<sup>31</sup> Health Canada. (2021, March 5). *Janssen COVID-19 Vaccine*. Government of Canada. Retrieved December 5, 2021, from <https://covid-vaccine.canada.ca/janssen-covid-19-vaccine/product-details>

<sup>32</sup> Steel, S., Moore, S., Quinn, K., Elton-Farr, S., Dodwell, J., & McLaughlin, J. (2021, October 1). *Medicago to launch clinical trials for COVID-19 vaccine candidate with GSK's pandemic adjuvant in Japan*. Medicago. Retrieved December 6, 2021, from <https://medicago.com/en/press-release/medicago-to-launch-clinical-trials-for-covid-19-vaccine-candidate-with-gsk-pandemic-adjuvant-in-japan/>

<sup>33</sup> Palca, J. (2021, June 6). *A New Type Of COVID-19 Vaccine Could Debut Soon*. NPR. Retrieved December 6, 2021, from <https://www.npr.org/sections/health-shots/2021/06/06/1003328413/new-type-of-covid-vaccine-could-debut-soon>

<sup>34</sup> Speare, R., & Durrheim, D. (2004). *Mass treatment with ivermectin: an underutilized public health strategy*. Bulletin of the World Health Organization, 82(8), 562.

<sup>35</sup> <https://c19ivermectin.com/>

<sup>36</sup> Kilgore, T. (2021, December 3). *Merck to supply Government of Canada with up to 1 million courses molnupiravir, its COVID-19 pill*. MarketWatch. Retrieved December 5, 2021, from <https://www.marketwatch.com/story/merck-to-supply-government-of-canada-with-up-to-1-million-courses-molnupiravir-its-covid-19-pill-2021-12-03>

<sup>37</sup> Moody, M., Ryan, P., Dannenbaum, P., Kruper, R., & Carvalho, C. (2021, October 1). *Merck and Ridgeback's Investigational Oral Antiviral Molnupiravir Reduced the Risk of Hospitalization or Death by Approximately 50 Percent Compared to Placebo for Patients with Mild or Moderate COVID-19 in Positive Interim Analysis of Phase 3 Study*. Merck. Retrieved December 5, 2021, from <https://www.merck.com/news/merck-and-ridgebacks-investigational-oral-antiviral-molnupiravir-reduced-the-risk-of-hospitalization-or-death-by-approximately-50-percent-compared-to-placebo-for-patients-with-mild-or-moderat/>



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- Part of the COVID-19 Therapeutics Accelerator funded by the **Bill & Melinda Gates Foundation, Wellcome, and Mastercard** to “accelerate treatments, vaccines, and diagnostics”.

## Novartis

- Developing a COVID-19 therapeutic with **Molecular Partners** called **Ensovibep**.<sup>38</sup>
- Part of the COVID-19 Therapeutics Accelerator funded by the **Bill & Melinda Gates Foundation, Wellcome, and Mastercard** to “accelerate treatments, vaccines, and diagnostics”.

## Pfizer

- Distributing a gene therapy COVID-19 vaccine product developed with German company **BioNTech**. Marketed in Canada as **Comirnaty**.<sup>39</sup>
- Producing an experimental oral “antiviral” pill for COVID-19 called **Paxlovid**.<sup>40</sup>
- Part of the COVID-19 Therapeutics Accelerator funded by the **Bill & Melinda Gates Foundation, Wellcome, and Mastercard** to “accelerate treatments, vaccines, and diagnostics”.

## Roche

- Manufactures at-home rapid test products for SARS-CoV-2.<sup>41</sup>

## Sanofi

- Developing a COVID-19 vaccine product with **GlaxoSmithKline**.<sup>42</sup>
- Part of the COVID-19 Therapeutics Accelerator funded by the **Bill & Melinda Gates Foundation, Wellcome, and Mastercard** to “accelerate treatments, vaccines, and diagnostics”.

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<sup>38</sup> Meo, M., Masow, J., Ustun, A., Shah, S., Hungerbuehler, T., Zinck, I., & Simpson, S. (2021, May 27). *Novartis and Molecular Partners announce start of EMPATHY clinical trial for ensovibep for the treatment of COVID-19*. Novartis. Retrieved December 6, 2021, from <https://www.novartis.com/news/media-releases/novartis-and-molecular-partners-announce-start-empathy-clinical-trial-ensovibep-treatment-covid-19>

<sup>39</sup> Health Canada. (2021, December 3). *Pfizer-BioNTech Comirnaty COVID-19 vaccine*. Government of Canada. Retrieved December 5, 2021, from <https://www.canada.ca/en/health-canada/services/drugs-health-products/covid19-industry/drugs-vaccines-treatments/vaccines/pfizer-biontech.html>

<sup>40</sup> Pfizer. (2021, November 5). *Pfizer's Novel COVID-19 Oral Antiviral Treatment Candidate Reduced Risk of Hospitalization or Death by 89% in Interim Analysis of Phase 2/3 EPIC-HR Study*. Retrieved December 5, 2021, from <https://www.pfizer.com/news/press-release/press-release-detail/pfizers-novel-covid-19-oral-antiviral-treatment-candidate>

<sup>41</sup> Reuters. (2021, December 24). *Roche says at-home COVID-19 rapid test gets ok from FDA*. Reuters. <https://archive.ph/Jm5Kn>

<sup>42</sup> Guendoul, S., Kressmann, N., Schaefer-Jansen, E., Delépine, A., Pham, N., & Lauscher, F. (2021, September 28). *Sanofi announces positive Phase 1/2 study interim results for its first mRNA-based vaccine candidate*. Sanofi. Retrieved December 6, 2021, from <https://www.sanofi.com/en/media-room/press-releases/2021/2021-09-28-08-00-00-2304069>

# AHS COVID-19 Scientific Advisory Group

## Appendix B

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### Summary of Relevant World Economic Forum Member Organizations

January 12, 2021

The **World Economic Forum** is a Non-Governmental Organization (NGO) and lobbying group founded by German economist and mechanical engineer **Klaus Schwab** in Switzerland in 1971.

Schwab is the author of a number of books including **The Fourth Industrial Revolution, The Great Reset, Stakeholder Capitalism, Reimagining Japan: the Quest for a Future that Works, The World Economic Forum: A Partner in Shaping History, The Aftermath of the COVID-19 Pandemic** and others.<sup>1</sup>

#### Abbott Laboratories

World Economic Forum. *Abbott Laboratories*. Retrieved December 27, 2021, from <https://www.weforum.org/organizations/abbott-laboratories>

#### Aecon

*Aecon Group*. World Economic Forum. Retrieved January 11, 2022, from <https://archive.ph/AI9p5>

#### AstraZeneca

World Economic Forum. (2021, June 18). *AstraZeneca*. Retrieved December 6, 2021, from <https://www.weforum.org/organizations/astrazeneca>

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<sup>1</sup> GoodReads. *Klaus Schwab (Author of The Fourth Industrial Revolution)*. Retrieved December 6, 2021, from [https://www.goodreads.com/author/show/223124.Klaus\\_Schwab](https://www.goodreads.com/author/show/223124.Klaus_Schwab)

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## **Bayer**

World Economic Forum. (2021, July 15). *Bayer*. Retrieved December 6, 2021, from <https://www.weforum.org/organizations/bayer-d57cbbcd2e>

## **Bill & Melinda Gates Foundation**

World Economic Forum. *Bill & Melinda Gates Foundation*. Retrieved January 6, 2022, from <https://archive.ph/mNeiT>

## **Biogen**

*Biogen*. World Economic Forum. Retrieved January 11, 2022, from <https://www.weforum.org/organizations/biogen>

## **Deloitte**

*Deloitte*. World Economic Forum. Retrieved January 12, 2022, from <https://archive.ph/MLTS0>

## **Fidelity**

*Fidelity International*. World Economic Forum. Retrieved January 12, 2022, from <https://www.weforum.org/organizations/fidelity-international>

## **Hologic**

*Hologic*. World Economic Forum. Retrieved January 11, 2022, from <https://www.weforum.org/organizations/hologic>

## **Johnson & Johnson**

World Economic Forum. (2021, March 17). *Johnson & Johnson*. Retrieved December 6, 2021, from <https://www.weforum.org/organizations/johnson-johnson>

## **KPMG**

*KPMG*. World Economic Forum. Retrieved January 4, 2022, from <https://www.weforum.org/organizations/kpmg-international-cooperative>

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## **Merck**

World Economic Forum. *Merck*. Retrieved December 6, 2021, from <https://www.weforum.org/organizations/merck>

## **Moderna**

World Economic Forum. *Moderna*. Retrieved January 6, 2022, from <https://archive.ph/ENef9>

## **Novartis**

World Economic Forum. *Novartis*. Retrieved December 6, 2021, from <https://www.weforum.org/organizations/novartis-ag>

## **Novo Nordisk**

*Novo Nordisk Foundation*. World Economic Forum. Retrieved January 11, 2022, from <https://www.weforum.org/organizations/novo-nordisk-foundation>

## **Pfizer**

World Economic Forum. (2020, November 23). *Pfizer*. Retrieved December 6, 2021, from <https://www.weforum.org/organizations/pfizer>

## **PricewaterhouseCoopers**

*PwC*. World Economic Forum. Retrieved January 12, 2022, from <https://www.weforum.org/organizations/pricewaterhousecoopers-llp>

## **RBC Royal Bank of Canada**

World Economic Forum. *RBC (Royal Bank of Canada)*. Retrieved January 6, 2022, from <https://www.weforum.org/organizations/rbc-financial-group>

## **Roche**

*Roche*. World Economic Forum. Retrieved January 11, 2022, from <https://archive.ph/6QfmL>

## **Sanofi**

World Economic Forum. *Sanofi*. Retrieved December 6, 2021, from <https://www.weforum.org/organizations/sanofi>

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## Shell

Shell. World Economic Forum. Retrieved January 10, 2022, from <https://archive.ph/cLjFz>

## Takeda Pharmaceutical

World Economic Forum. *Takeda Pharmaceutical*. Retrieved January 6, 2022, from <https://archive.ph/yiMAh>

## Volvo

AB Volvo. World Economic Forum. Retrieved January 12, 2022, from <https://www.weforum.org/organizations/ab-volvo>