

**Restoring Trust:
COVID-19 and The Future of Long-Term Care**
June 2020



An RSC Policy Briefing

**COVID-19 and Indigenous Health and Well-Being:
Our Strength is in our Stories**
November 2020



An RSC Policy Briefing

**Easing the Disruption of COVID-19:
Supporting the Mental Health of the
People of Canada**
October 2020



An RSC Policy Briefing

**A Federal Basic Income Within the Post
COVID-19 Economic Recovery Plan**
October 2020



An RSC Policy Briefing

SHARING EXPERTISE
FOR A BETTER FUTURE
TOGETHER



THE 2020 RSC
ANNUAL REPORT

**Let's Do Better:
Public Representations of COVID-19 Science**
October 2020



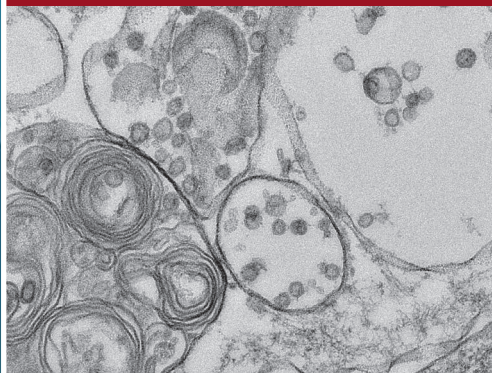
An RSC Policy Briefing

**Reconciling Civil Liberties and Public
Health in the Response to COVID-19**
September 2020



An RSC Policy Briefing

**Open Drug Discovery of Anti-Virals Critical
for Canada's Pandemic Strategy**
October 2020



An RSC Policy Briefing

**End-of-Life Decision Making:
Policy and Statutory Progress (2011-2020)**
October 2020



An RSC Policy Briefing

The Enduring Mission of the RSC

In order to establish the foundation for multiple initiatives, the Royal Society of Canada elects Fellows and Members while also presenting awards to highlight specific exceptional achievements. After rigorous evaluation and review of their accomplishments, leading individuals may be elected to one of the Society's three Academies—the Academy of Arts and Humanities; the Academy of Social Sciences; and the Academy of Science. There are currently 2444 RSC Fellows. As a complement to the Academies, the RSC established The College of New Scholars, Scientists and Artists in 2014. The College recognizes individuals who have begun demonstrating leading scholarly, research or artistic excellence within 15 years of having completed their post-doctoral program or its equivalent. Members of the College are elected for a period of seven years. There are currently 376 Members of the College.

In addition to Fellows and Members of the College, the RSC includes Institutional Members from throughout Canada that play key roles in advancing inclusive excellence for the benefit of Canada and the world. The RSC administers over 20 prestigious awards, most of which are awarded to those at various career stages in recognition of outstanding achievement.

As emphasized in our By-Laws, the RSC recognizes leaders in order to help them build a better future in Canada and around the world. For this reason, the RSC fulfills its mandate successfully to the extent that it recognizes excellence and then mobilizes the membership to make significant and substantial contributions of knowledge, understanding, and insight through engagement with the larger society.

MESSAGE FROM THE PRESIDENT



Dear RSC Colleagues and Friends,

The Latin motto of the RSC is "*Studiis Eodem Diversis Nitimur*": "*Different paths, one vision*" which is an appropriate summary of our 2020 Annual Report.

These pages are the result of contributions from hundreds of volunteers. Our excellent Board, Council, Academy and College committees require the continual engagement of 50 individuals. There was a champion for each of the 700 dossiers considered for membership and awards. Over 150 RSC Members are involved in the processes of adjudicating files as part of the nomination and selection process. To date, over 230 scholars, many of whom had not previously participated in RSC activities, have helped us to provide informed perspectives and Policy Briefings through the RSC Task Force on COVID-19.

To everyone whose contributions have, despite the extraordinary times we are experiencing, made this an exceptional year I extend a most heartfelt *Thank you*.

I must also underline the outstanding work of the Walter House team: our community owes these colleagues a debt of gratitude for their tireless efforts to ensure that everything has run smoothly.

As you read the 2020 annual report, I hope you will share my sense of pride in our collective efforts, and my optimism that they have not only helped as the country faces the challenges of the pandemic, but will hasten the arrival of a better future for all, especially society's most vulnerable.

Sincerely,

A handwritten signature in dark ink, appearing to read 'Jeremy McNeil'. The signature is fluid and cursive, with a large loop at the end.

Jeremy McNeil, C.M., FRSC
President

MESSAGE FROM THE EXECUTIVE DIRECTOR

Dear RSC Friends and Colleagues,

The elements of this annual report span a year of considerable societal disruption that was met with resilience by the RSC community and the Walter House team.

As we turned our attention from 2019 toward 2020 last fall, the opportunities for leveraging recent advancements were clear: to expand our impact in the lives of Canadians from coast to coast to coast through key partnerships; to establish the Committee on Membership in keeping with our core mission of embracing inclusive excellence; and to increase the provision of focused, independent, evidence-based policy briefings. The forecast for 2020 included the continuance of an emerging tradition of convening G7 Research Summits on urgent themes for Canada and the world.



As we all know, on March 12, 2020, the WHO declared the worldwide outbreak of the novel coronavirus, by then known as COVID-19, a pandemic. The next day, on March 13, the RSC suspended all activities or transitioned them to virtual gatherings.

From there, it would have been reasonable to assume that our aspirations were disrupted by COVID-19. Instead, as you will see in these pages, the RSC's dual focus on the *sine qua non* of inclusive excellence and an organizational response to COVID-19 produced a remarkable mobilization across disciplines and across generations. As new partnerships emerged during 2020—with the Globe and Mail, Le Devoir, FACETS, and others—our collective impact has increased.

The Walter House team has stood tall and I am proud to stand with them in support of the work of this community.

Onwards.

Sincerely,

A handwritten signature in black ink that reads "Darren Gilmour". The script is fluid and cursive.

Darren Gilmour
Executive Director

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Board of Directors | November 2019 – November 2020

President | Jeremy McNeil
Past-President | Chad Gaffield
Vice-President (Academy of Arts and Humanities) | Julia M. Wright
Vice-President (Academy of Social Sciences) | Janine Brodie
Vice-President (Academy of Science) | John Smol
Vice-President (RSC College) | Joanna Quinn
Secretary | Sheila Embleton
Treasurer | Jean-Marie Toulouse
Institutional Member Representative | Ralph Nilson
External Members | Jennifer Brennan, Christina Tessier

COMMITTEE ON MEMBERSHIP

The RSC Membership Committee examines and recommends policies and procedures related to the manner in which the RSC recognizes excellence through the election of Members.

The work is inspired by the RSC By-laws, which note that "The Council of the Society shall convene a Committee on Fellowship and College Membership at least once every five years, beginning in 1981, for the purpose of ensuring that the Divisional structure and the numbers and distribution of new Fellows of the Society and Members of the College by discipline, geography and gender reflect the current state of scholarship in Canada."



Marie D'Iorio's research focuses on nanotechnology and the design of strategic initiatives at the University of Ottawa. She leads NanoCanada, creating community through collaboration and a passion for excellence in innovation and entrepreneurship.



Constance Backhouse's research focuses on Canadian legal history. She writes about legal discrimination on the basis of gender, race, religion, class, and disability. She is now working on a book about the history of race bias within the judiciary.



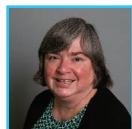
Marie Battiste's research focuses on decolonizing conventional education and promoting cognitive justice through the advocacy, revitalization, and protection of Indigenous knowledge systems and languages.



Gwendolyn Davies' research focuses on 18th and 19th Century Canadian literature with an emphasis on Atlantic Canada (particularly the history of the book and writing by and about women).



Jacques Derome's research focuses on the physical mechanisms leading to the observed year-to-year variability in the earth's climate. Of special interest is the interaction between the atmosphere and the global oceans.



Sheila Embleton's research focuses on mathematical and statistical methods in linguistics, historical linguistics, dialectology, sociolinguistics, onomastics, higher education policy, and internationalization of higher education.



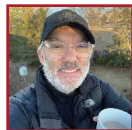
Bryan Kolb's research focuses on how perinatal factors such as tactile stimulation, psychoactive drugs, stress, perinatal brain injury and enriched housing modify the development of the cerebral cortex and how this is related to behaviour in laboratory animals and children.



Cynthia Milton's research focuses on the history of rights and obligations, inclusive modes of truth-telling and cultural interventions in the construction of historical narratives after state violence.



Vijaya Raghavan's research focuses on development and implementation of post-harvest technologies for storage, drying, and thermal and non-thermal treatments of crops and produce. He has studied the use of electro-technologies in this work and for microwave-assisted extraction, retting, and valorization of organic wastes by pyrolysis and hydrothermal carbonization.



Alan Steele's research focuses on precision measurement and primary standards. As Chief Metrologist for Canada at the National Research Council, Alan is responsible for ensuring that our nation has an appropriate and credible implementation of the International System of Units (the SI, also known as the Metric System).

RESPONSE TO COVID-19

In April, three initiatives were launched by the RSC in response to COVID-19. To date, these efforts have engaged over 200 experts. In keeping with longstanding RSC practices, participants do not have to be Members in order to lead or engage in these initiatives.

1. On April 2, the RSC launched a time series survey of its membership.
2. On April 8, the RSC President struck a Task Force of clinical and academic experts specializing in fields related to COVID-19 to equip Canadians with accurate information about our response and recovery.
3. On April 25, the RSC announced a partnership with The Globe and Mail called The Ø Canada Project, which aims to provide resources to support Canadians as we all work toward Canada's first day with zero new COVID-19 infections. In the fall of 2020 a similar partnership was established with Le Devoir.

At the invitation of the President, Dr. Tom Marrie leads these initiatives on behalf of the RSC.

RSC Task Force on COVID-19

Members of the task force are:

Tabia Bubela	Simon Fraser University	Chris McCabe	University of Alberta
Sean Caulfield	University of Alberta	Patrick McGrath	Izaak Walton Killam Hospital
Tim Caulfield	University of Alberta	Rosemary Ricciardelli	Memorial University of Newfoundland
Vicki Esses	Western University	Chantelle Richmond	Western University
Fay Faraday	York University	Wendy Sligl	University of Alberta
Colleen Flood	University of Ottawa	Sharon Straus	University of Toronto
Laura Huey	Western University	Jeff Turnbull	Ottawa Inner City Health
Carl James	York University	Tracy Vaillancourt	University of Ottawa
Esyllt Jones	University of Manitoba	Janet Werker	The University of British Columbia
Tom Marrie (Chair)	Dalhousie University	Julia Wright	Dalhousie University

Partnerships

On April 8, the RSC announced a partnership with the Globe and Mail in establishing The Ø Canada Project. The role of the RSC is to develop resources to support the thinking and actions of Canadians. The RSC COVID-19 resources page is linked from The Ø Canada Project web hub.

In September, a partnership was established with Le Devoir similar in spirit to the partnership with the Globe and Mail. As a component of these partnerships, The Globe and Mail and Le Devoir receive an embargoed copy of Policy Briefings and the opportunity to publish Informed Perspectives produced by the RSC.

In the fall of 2020, FACETS launched a special collection initiative of RSC Policy Briefings, noting "Given the extreme nature of the COVID-19 pandemic and the importance of broadly disseminating timely and relevant information to the public, FACETS and the RSC have agreed to publish papers that result from the RSC Task Force working groups, some of which might fall outside the normal scope of FACETS. The papers have gone through a rigorous peer-review process. Each paper is jointly handled by a FACETS Subject Editor and an RSC Subject Editor."

**The
Ø Canada
Project**

Surveys to Members

The RSC invited Members to share their views on the most pressing challenges facing Canada. Data were collected between April 2-12, April 25-May 5, and June 8-18. There were 293, 252, and 302 usable responses, for a total of 847 entries. An analysis of the survey data was published on the RSC website on August 7.

Table 1. Top 10 Themes and Thematic Categories Across Three Surveys

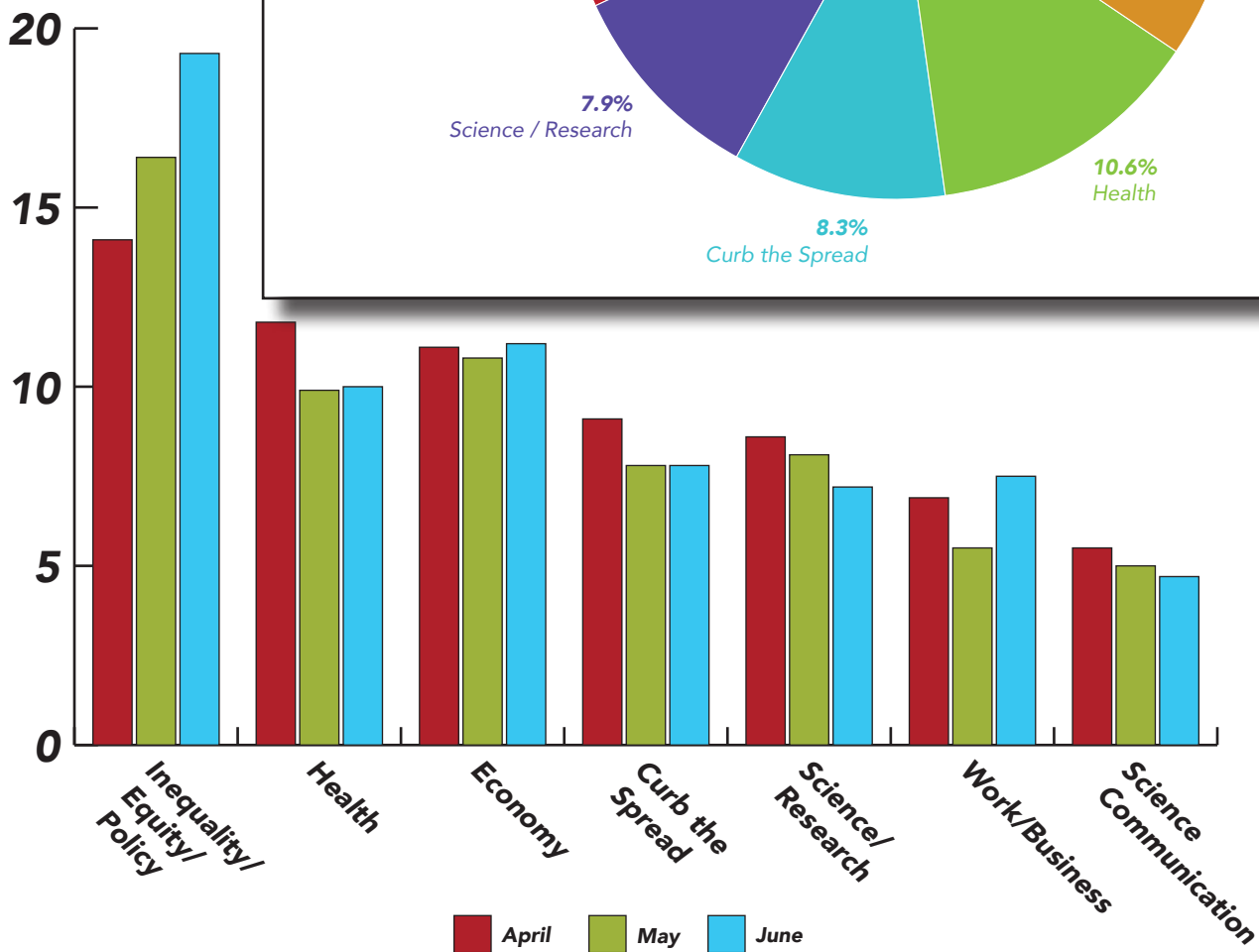
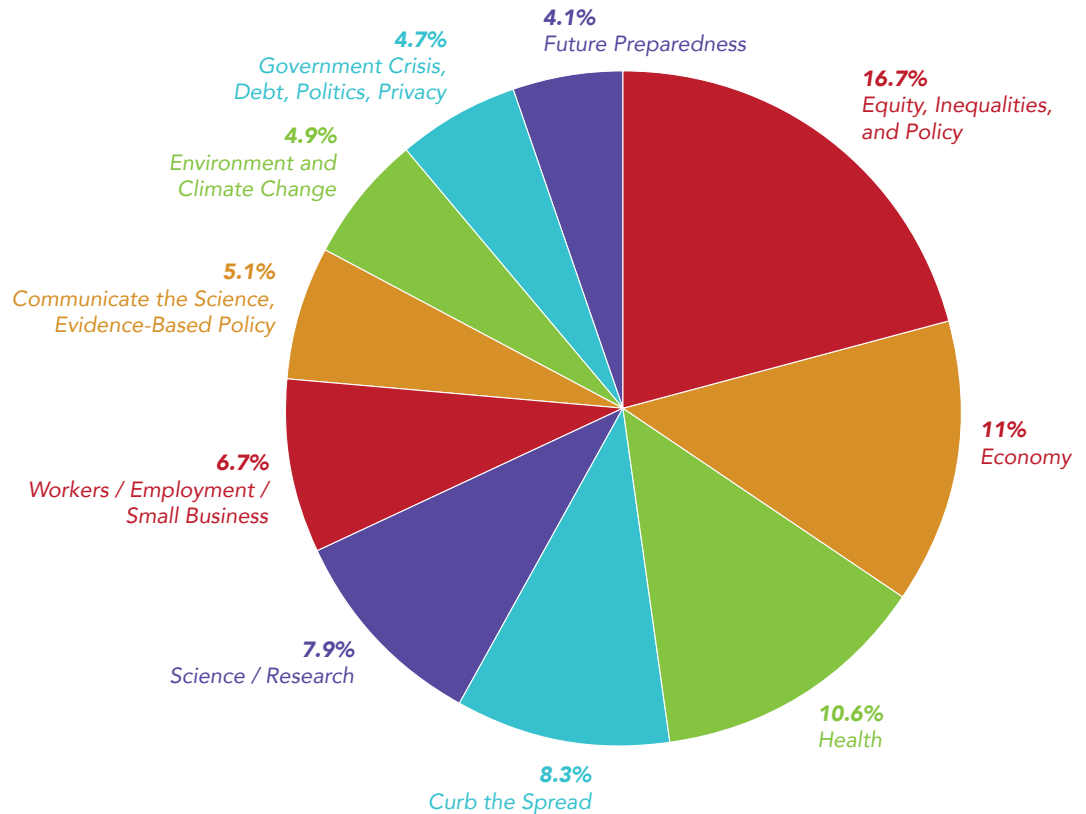


Table 2. Ranked Top 10 Themes in April, May, and June, compared

Published Articles

Over 230 experts are engaged in preparing Policy Briefings and informed perspectives for The Ø Canada Project to ensure that Canadians have access to independent, evidence-based science. Over 40 articles have been written by members of the RSC community, more than 20 of which have been published in the Globe and Mail. All articles facilitated by the RSC are also published in English and French on the COVID-19 page of the RSC.

The following articles have been published as of October 8:

The First Pandemic of the Digital Age
April 19 | Chad Gaffield

Public Perception of Risk
April 23 | Don Redelmeier

Bats, SARS CoV Viruses, and Humans
April 27 | Brock Fenton

Return to a New Normal
May 6 | Janice Graham

Helping Canada's Most Vulnerable Communities
May 7 | Jeff Turnbull

Hidden Risks of Pre-Traumatic Stress
May 7 | Judy Illes

Narratives of the Crisis
May 8 | Caroyln Tuohy

Economic Recovery
May 11 | Peter Dietsch

Research Investments
May 12 | Lorne Babiuk

Long-Term Impact of Stress
May 19 | Michael Ungar

Nursing Homes and Skills
May 21 | Pat Armstrong

Unintended Consequences
May 22 | Sharon Straus

Vaccine Development
May 25 | Bob Brunham

Family Mental Health
May 26 | Patrick McGrath

Supply Chains
May 27 | Saibal Ray

Mathematical Modeling
May 28 | Mark Lewis

Protesting State Power
May 29 | Stuart Murray

Communication
June 1 | Monica Heller

Impossible Choices
June 3 | Nadine Wathen

Disproportional Impact on Indigenous Women
June 4 | Pam Palmater

Choices in LTC
June 10 | Colleen Flood

Intimate Partner Violence
June 11 | Patricia O'Campo

All Hands on Deck
June 14 | Steve Hrudehy

Wastewater-based epidemiology
June 15 | Steve Hrudehy, et al.

Indigenous Responses
June 17 | Chantelle Richmond

Resilience of Institutions
June 20 | Michael Ungar

Decarceration
June 23 | Rose Ricciardelli

Masks
July 1 | Mark Loeb

Syndemics
July 2 | Neil Orford

Immune response
July 6 | Charu Kaushic

Regional Universities
July 7 | Mike Mahon

The Kids are Going to be Okay
July 9 | Tracy Vaillancourt

Paths to Benefits
July 9 | Noralou Roos

Harsh Realities and New Opportunities
August 5 | Tracey Adams

Breaking Through Anxiety Barriers
August 6 | Darrell Bricker

Opportunities to Strengthen Health Research
August 6 | Bev Holmes

Institutional Racism
August 10 | Mike DeGagne

Aerosol versus Droplets
August 12 | Mark Loeb

Educational Technologies
September 2 | Susanne Lajoie

Mental Health of Children
September 10 | Tracy Vaillancourt

Vaccine Legacy
September 14 | Christopher Ruttly

Resilient, but not Invulnerable
October 5 | Karine Duhamel

21st Century's Forgotten Pandemic
October 6 | Esiyllt Jones

The Journey to Literacy
October 8 | Janet Werker

Working Groups

The Task Force has established a series of Working Groups mandated to develop Policy Briefings. Policy Briefings are intended (i) to contribute to framing public discourse on urgent issues and, (ii) to ensure that decision makers have peer-reviewed evidence bases to inform their work. Working Groups normally have between five and ten members and Working Group Chairs have latitude to identify members of the Working Group.



Restoring Trust: COVID-19 and The Future of Long-Term Care | July 3

Pat Armstrong (FRSC), Véronique Boscart, Gail Donner, Francine Ducharme, Carole Estabrooks (Chair), Colleen Flood (FRSC), Janice Keefe, James Silvius, Sharon Straus, Michael Wolfson

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Reconciling Civil Liberties and Public Health in the Response to COVID-19 | September 25

Colleen M. Flood, (FRSC, Chair), Vanessa MacDonnell, Bryan Thomas, Kumanan Wilson

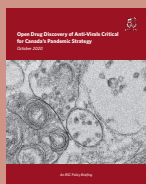
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Easing the Disruption of COVID-19: Supporting the Mental Health of the People of Canada | October 9

Gordon J.G. Asmundson (FRSC), Cindy Blackstock (FRSC), Marie Claire Bourque, Glenn Brimacombe, Allison Crawford, S. Hélène Deacon, Ken McMullen, Patrick J. McGrath (FRSC, Chair), Christopher Mushquash, Sherry H. Stewart (FRSC), Jennifer Stinson, Steven Taylor, Marsha Campbell-Yeo

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Open Drug Discovery of Anti-Virals Critical for Canada's Pandemic Strategy | October 16

Tania Bubela (FRSC, Chair), Aled Edwards, E. Richard Gold, Vivek Goel, Max Morgan, Karen Mossman, Jason Nickerson, David Patrick

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A Federal Basic Income within the Post COVID-19 Economic Recovery Plan | October 23

Keith Banting (FRSC), Evelyn Forget, Hugh Segal

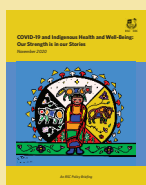
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Let's Do Better: Public Representations of COVID-19 Science | October 30

Tania Bubela (FRSC), Tim Caulfield (FRSC, Chair), Jonathan Kimmelman, Vardit Ravitsky

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COVID-19 and Indigenous Health and Well-Being: Our Strength is in our Stories | Forthcoming

Carrie Bourassa, Aimée Craft, Karine Duhamel, Malcolm King, Christopher Mushquash, Chantelle Richmond (Chair), Jennifer Walker, Debbie Martin

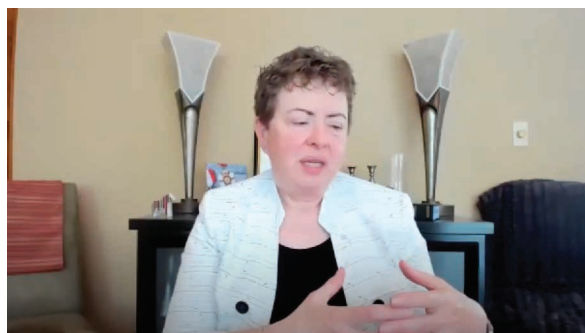
Additional Working Groups will be publishing reports in the coming months, on the following topics: *Racialized Communities; Economic Recovery; Homelessness; Policing; The Future of Higher Education; Artistic Responses to COVID-19; The History of Public Health; Children and Schools; Syndemics Thinking; Immigration; Epidemiology; Migrant Workers; Archiving Research; and Literacy*

YEAR IN PICTURES

COVID-19 and the Future of Long-Term Care Webinar

July 16 | Carole Estabrooks (pictured), was joined by Sharon Straus, Janice Keefe, and Tim Caulfield

An overview of the key findings of the report on the Future of Long-Term Care, principles for action and urgent recommendations, and a Q&A with authors of the report.



The Second Wave?

June 29 | Clockwise from top left: Christopher Rutty, David Pantalony, Doug Manuel, Esyllt Jones

An interdisciplinary panel discussion on COVID-19 featuring RSC COVID-19 Task Force Member and pandemic historian Dr. Esyllt Jones, along with public health physician and scientist, Dr. Doug Manuel, and historian Dr. Christopher Rutty.

Nomination Workshop at York University

March 3, York University

College Member George Zhu and RSC Secretary Sheila Embleton organized a workshop to discuss the RSC nomination process.



College Winter Planning Meeting

February 20-21, Concordia University | L to R: Damon Matthews, Cynthia Milton, Fuyuki Kurasawa, Peter Dietsch, Rebecca Pillai Riddell, Patrick Leroux, Karly Kehoe, Fanie Pelletier, Beth Greene, Frank Deer, Philip Jackson, Stuart Murray, George Zhu, Joanna Quinn, Muthukumaran Packirisamy, Cheryl Suzack, Kim Lavoie, Fiorenzo Vetrone

The 2020 RSC College Winter Planning Meeting was hosted by Concordia University.

The Honourable Leonard Braithwaite: Black Canadians and Civic Belonging in Postwar Ontario

February 20, University of New Brunswick | L to R: Lisa Todd, Barrington Walker, Wendy Churchill, Funké Aladejebi

Dr. Barrington Walker discussed the life of Honourable Leonard Braithwaite and his influence not only on Black Canadian communities, but also Canadian politics at an RSC Atlantic event.



Navigating Party Discipline

February 6, Memorial University | L to R: Paul Lane, Jody Wilson-Raybould, Jane Philpott, Ryan Cleary

Jody Wilson-Raybould and Jane Philpott led a panel discussion about the challenges of party discipline in the Canadian parliamentary system of government.

Daniel Levitin Book Launch

January 30, Walter House | Daniel Levitin

RSC Fellow Daniel Levitin launches his book *Successful Aging: A Neuroscientist Explores the Power and Potential of Our Lives* at an event at Walter House.



Santa Claus at Walter House

December 10, Walter House

The RSC invited its community and their families to celebrate the holidays with a special guest at Walter House.



Acadia University Reception

December 4, Walter House

Acadia University held a holiday reception at Walter House.

Margaret Atwood @ Massey

December 3, Massey College

Margaret Atwood was presented with the RSC's Lorne Peirce Medal at a reception at Massey College.



CARA Conference

November 28, Banff

The RSC presented at the Canadian Association of Research Administrators conference in Banff discussing the RSC nomination process.

Wabano Centre for Aboriginal Health

November 20, Wabano Centre | L to R: Constance Backhouse, Sákéj Henderson, Carole Gerson, Christl Verduyn, Jane Bailey, Cynthia Milton, Maggie Kovach, Jeremy McNeil, James Walker, Joanna Quinn

The RSC TRC Committee visited the Wabano Centre for Aboriginal Health ahead of the 2019 COEE.



Sustaining Marine Biodiversity in Canada

November 20, Château Laurier

Dr. Jeffrey Hutchings presents the findings of the policy briefing committee on *Sustaining Marine Biodiversity in Canada*.

People's School on Climate Change

November 15, St. Francis Xavier University | Featuring Simon Addisson, Jolene Anrew, Romeo Bertolini, and Kerry Prosper

This RSC Atlantic event articulated climate science in a “non-academic” manner, explained what international agreements mean for Canada, discussed how climate migration and adaptation are paid for, and showed how some communities are implementing an Asset-Based Community Development approach to deal with the impacts of climate change.



Small Spaces Pack a Big Punch for Biodiversity

November 5, Ontario Science Centre

Dr. Lenore Fahrig delivered a presentation as part of the 2019 Romanowski Lecture Series at the Ontario Science Centre in Toronto.

COEE 2019

The 2019 Celebration of Excellence & Engagement was held in Ottawa at the Château Laurier, November 21-24. The weekend saw the induction of 77 Fellows and 41 Members of the College, and the RSC honoured 18 medal and award winners. Highlights from the weekend were:

2019 RSC Symposium – Science, Trust and Society: Inclusive Culture Under Siege

The 2019 RSC Ottawa Symposium will brought together researchers, government and business leaders and artists, among others, to demonstrate the ways in which they are working together to re-establish and expand a relationship of trust with citizens and protect aspirations of inclusive culture threatened by populism.



New Members Presentation Café

From start to finish, "Lightning Talks" were no more than six minutes, with slides rotating automatically. Presentations included new Fellows from all Academies and new Members of the RSC College. This year, the festivities began with a duet featuring Ben Butterfield and Laura Loewen.

Academy Meetings

Meetings of the Academies and the College provide the opportunity for Members to engage with one another and to discuss activities from the previous year and programming for the year ahead. This year each meeting featured a breakfast presentation to begin the day.

Annual Gala Dinner & After-Party

The RSC's Annual Gala celebrated a successful year and the incoming members of 2019. Dancing and music followed to wrap up the evening.

Sponsors

The RSC would like to thank all of the institutions whose support made the 2019 Celebration of Excellence & Engagement possible. In particular, special thanks to the COEE 2019 Presenting Sponsors the University of Ottawa, Carleton University, and the National Research Council.



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TORONTO



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recherches Canada



COEE 2020

RSC Goes Virtual for COEE2020

On May 19, 1920, the Royal Society of Canada convened in Ottawa for its 39th Annual Meeting. The general public was cordially welcomed to attend an evening lecture by Dr A.S. Eve that evening titled "Some Great War Inventions." At the evening's presentation, Dr. Eve also demonstrated the advances made in the radio-telephone. At 9.44pm, the Society fellows and members of the public heard the words "Hello Ottawa—Hello Montreal" over a large loudspeaker called a "Magnavox," set up in the Château Laurier's ball room. The first public wireless conversation in Canada had begun.

COVID-19 has postponed the Celebrations of the 100th anniversary of the invention of radio broadcasting. It has also changed the course of our Annual meetings, which for the first time in RSC's history will gather its membership and the general public together, over Internet broadcasting.

HIGHLIGHTS OF THIS YEAR'S PROGRAMMING

The G7 Research Summit: The Future of Digital Health | Wednesday, November 25

The symposium will examine the implications of the G7 Science Academies' Statement on Centrality of Digital Health Collaboration to Health Progress that embraces many disciplines, generations, and geographies.

The Legacy of Insulin Discovery: Origins, Access and Translation | Thursday, November 26

The University of Toronto presents a symposium celebrating the anniversary of the discovery of insulin, exploring the legacy of this discover, and examining its intersections with Covid-19 research.

Medal and Awards Ceremony | Friday, November 27

This ceremony presents a series of awards and medals to honour individuals selected for their exceptional contributions.

Presentation of New Members of the College | Friday, November 27

This ceremony welcomes new Members of the College in a format that showcases the interdisciplinary character of the College.

Induction of New Fellows | Friday, November 27

This ceremony welcomes new RSC Fellows into the Academies of the Society. During this event, new Fellows sign their names into RSC's original and historic Charter Book and are presented with a Diploma and a RSC lapel pin.



Sponsors

The RSC would like to thank all of the institutions whose support make the 2020 Celebration of Excellence & Engagement possible. In particular, special thanks to the COEE 2020 Presenting Sponsor the University of Toronto.



UNIVERSITY OF
TORONTO



COEE PROGRAMMING

*Visit www.rsc-src.ca/en/events/coee2020 for the latest schedule.

Monday, November 23

Leading scholars, artists and scientists will provide updates and next steps resulting from the RSC's organizational response to COVID-19 on topics such as homelessness, vaccine development, long-term care, mental health, Indigenous health and well-being, and civil liberties.

10:00am-11:00am	RSC 101: The Example of the Task Force on COVID-19	
11:15am-12:15pm	COVID-19 and the Future of Long-Term Care	COVID-19, Children and Schools
12:30pm-1:30pm	COVID-19 and Civil Liberties	COVID-19 and Artists
1:45pm-2:45pm	COVID-19 and Mental Health	COVID-19 and Homelessness
3:00pm-4:00pm	Indigenous Responses to COVID-19	History in the Time of COVID-19
4:15pm-5:15pm	Impact of COVID-19 on Racialized Communities	
5:30pm-6:30pm	COVID-19 and Economic Recovery	COVID-19 and Representations of Science
7:00pm-8:30pm	Meetings of the Divisions Fellows	Meeting of the College College Members

Tuesday, November 24

The lens will broaden from initiatives launched in response to the pandemic to key themes of the RSC's 2018-2022 Strategic Plan. Panel discussions on Tuesday will address the latest thinking and action to advance inclusive excellence; sustainability; science engagement around the world; the Future of Higher Education in Canada; and many more.

10:00am-11:15am	Science Engagement Around the World	
11:30am-12:30pm	End-of-Life Decision Making	Missing and Murdered Indigenous Women and Girls: Next Steps
12:00pm-1:00pm	Workshop on RSC Nomination Dossiers	
1:00pm-2:00pm	The Past, Present, and Future of Higher Education in Canada	
2:15pm-3:15pm	RSC Members Spotlight	
3:30pm-4:30pm	Romanowski Lecture	Sustainable Oceans <-> Sustainable Diets
4:45pm-5:45pm	Who are you? (Re)defining Individuals and Collectives	Thinking Outside the Eurocentric Box
6:00pm-7:00pm	Inclusive Excellence Around the World	Infoveillance: Data, Privacy, Equality, and Surveillance
7:30pm-8:30pm	Meetings of the Academies Fellows	Meeting of the College College Members

Wednesday, November 25

In partnership with the scholarly, cultural, research and diplomatic communities of the G7, the RSC will present the G7 Academy Research Summit on The Future of Digital Health. The international programme will examine the implications of the G7 Science Academies' Statement on Centrality of Digital Health Collaboration to Health Progress that embraces the many disciplines, generations, and geographies required to address this urgent global issue.

7:00am-8:30am	G-Science Breakfast: Basic Research
9:00am-4:30pm	G7 Research Summit The Future of Digital Health
5:00pm-6:00pm	G7: Decline of Insect Colonies
6:15pm-7:15pm	S20 2020: Academies of Science of the G20

Thursday, November 26

The University of Toronto will present a symposium celebrating the 100th anniversary of the discovery of insulin, exploring the legacy of this discovery, and examining its intersections with COVID-19 research.

1:00pm-6:00pm	The Legacy of Insulin Discovery: Origins, Access, and Translations
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Friday, November 27

Thanks to the selection work of over 150 volunteer RSC members each year, an annual roster of truly remarkable individuals will be invited to accept membership in the RSC. On Day 5 of the COEE, the RSC will welcome 87 new RSC Fellows, 50 Members of the RSC College, and also present 16 awards for outstanding achievement. The ceremonies will be uniquely adapted this year to ensure all new members will participate—whether from home or on campus. The result will be a stunning landscape of talent, imagination, discipline and discovery.

12:00pm-1:30pm	Medal & Awards Ceremony
2:00pm-4:00pm	Presentation of the New Members of the College
4:30pm-7:00pm	Induction of New Fellows

Saturday, November 28

We invite you to get to know the Class of 2020. Each new member is invited to tell non-specialists about their work and why it is so important. The most common format on Saturday will be a lightning talk of six minutes. The schedule of presentations will stretch throughout the day.

10:00am-2:00pm	RSC Café: New Member Lightning Talks
3:00pm-4:00pm	RSC Annual Business Meeting
5:00pm-7:00pm	Art and Humanity

Sunday, November 29

The 2020 COEE culminates with a series of open discussions about an area of urgency for the Canadian scholarly and scientific community: open science and open access publishing.

11:00am-12:00pm	Open Science: Next Steps
1:00pm-2:30pm	Open Access Publishing in Canada: Next Steps
3:00pm-5:00pm	Meeting of the College College AGM

Congratulations 2020 RSC winners!

As the proud sponsor of the Royal Society of Canada's Celebration of Excellence and Engagement, the University of Toronto warmly congratulates this year's new fellows, members of the College and medal and award winners.

Although we cannot be together, we are thrilled to recognize your research and innovative thinking. You are part of a grand tradition that includes the discovery of insulin a century ago. Over the coming year, we hope you will join us in celebrating 100 years of innovation and impact at U of T and imagining where research might take us next.

To learn more, visit insulin100.utoronto.ca



UNIVERSITY OF
TORONTO



CLASS OF 2020 • NEW FELLOWS

The Academy of Arts and Humanities

Division of Humanities**ARCHIBALD, John Alexander – Department of Linguistics, University of Victoria**

Internationally renowned in the field of bilingual phonology, John Alexander Archibald has been a pioneer in revealing the complex mental representations and computations which underlie second language speech. His research has also provided practical advice to educators, information for parents, and guidance to policy makers across the country. Archibald's research program over the years has truly deepened our understanding of the nature of what it means to be bilingual.

**BOWKER, Lynne – School of Translation and Interpretation, University of Ottawa**

In the rapidly evolving field of translation technologies, Lynne Bowker has consistently shaped the global research agenda by introducing innovative approaches to studying these technologies within and beyond translator education. The transformative influence of her ground-breaking work on technology use by linguistic minorities extends outside academia and Canada to international social and political spheres, where it has engendered a critical rethinking of how language technologies are meaningfully integrated into society.

**CHEN, Jinhua – Department of Asian Studies, The University of British Columbia**

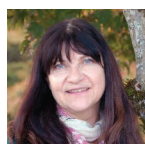
Jinhua Chen works on trans-national narratives of Buddhism, church-state relationships, Buddhist monasticism, translations of Buddhist texts, and manuscript cultures. His use of extra-canonical, epigraphical, and manuscript sources alongside the study of artefacts in China, Japan and Korea, has contributed to new insights to the field of Buddhist Studies. He established several international training programs and academic networks to foster multidisciplinary and collaborative exchange between scholars.

**DIEPEVEEN, Leonard – Department of English, Dalhousie University**

Leonard Diepeveen's work has transformed scholarly understanding of how the modernist canon came to be, particularly how it was shaped by skeptical reactions to modernist claims for cultural prominence. Working with an unexplored archive of daily and weekly journalism, Diepeveen's research examines the rise of difficulty as an aesthetic value and the place of parody, scandal, fraud, and intent in aesthetic experience.

**GRABOWSKI, Jan – Department of History, University of Ottawa**

Jan Grabowski is an internationally renowned historian of the Holocaust, whose research on destruction of the Polish-Jewish community and on relations between Jews and Poles under the occupation have made crucial contributions to our understanding of the Shoah. His award-winning studies had a significant impact on the transformation of our perception of the "bystander" phenomenon, or the attitudes of mainstream societies toward the German policies of extermination.

**IGNACE, Marianne – Departments of Linguistics & Indigenous Studies, Simon Fraser University**

Marianne Ignace is known for her innovative and transdisciplinary approaches to Indigenous language revitalization and documentation, the study of oral traditions and ethnoecology, and what they can teach us if we interweave our understandings of traditional knowledges with western science. As director of the Indigenous Languages Program at Simon Fraser University, she has built multiple successful research and educational partnerships in and with Indigenous communities throughout northwestern North America.



KORINEK, Valerie – Department of History, University of Saskatchewan

Valerie Korinek is one of Canada's leading historians of cultural and gender history. A Professor of History at the University of Saskatchewan, Dr. Korinek is the author of award-winning books on queer communities, women's cultural history, and food history. In *Prairie Fairies* she provides an inclusive, accessible history of queer people, communities and activism in the west. Dr. Korinek's ambitious and innovative studies have fundamentally shaped how Canadian historians understand feminist and sexualities histories.



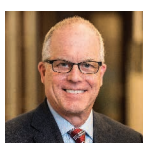
LADD-TAYLOR, Molly – Department of History, York University

Molly Ladd-Taylor, author of *Mother-Work* and *Fixing the Poor*, is a prominent historian of gender and social policy, particularly for the United States. Her groundbreaking research places impoverished mothers, dependent children, and institutionalized people at the centre of analysis, joining their most private experiences with the public worlds of politics and policy. Her ambitious, engaged and canonical scholarship has reshaped historical understanding of welfare, eugenics, and the state.



LIVAK, Leonid – Department of Slavic Languages and Literatures, University of Toronto

Leonid Livak's pioneering comparative research in the history of Russian-French and Russian-Jewish cultural interaction has made a lasting contribution to modern European cultural historiography. His studies of exilic communities, ethno-religious stereotyping, and transnational modernism have opened new methodological vistas and paths of scholarly inquiry, stimulating innovative research in several academic fields in the humanities and social sciences.



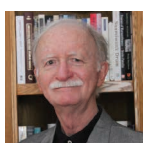
MESLIN, Eric – Council of Canadian Academies

Eric Meslin has contributed to influential bioethics and science policy debates in Canada and internationally for more than three decades as both a scholar on ethical, legal, and social issues arising from research, genomics, public health and international health, and as a leader of academic research centres, advisory commissions, and interdisciplinary organizations. He continues to influence public policy at all levels as President and CEO of the Council of Canadian Academies.



MURPHY, Michelle – Department of History, University of Toronto

Michelle Murphy is a leading scholar in the field of science and technology studies. She has contributed to critical understandings of the role of science and technology in feminism, environmental justice, reproductive justice, and data studies, as well as the relationships between pollution, colonialism, and science in Canada. She is Métis from Winnipeg.



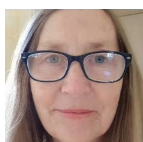
NESMITH, Thomas – Department of History, University of Manitoba

Thomas Nesmith has made a significant new contribution to scholarship by leading the transformation of the study of archives from a marginal academic subject into a body of complex theoretical conceptualizations that forms a new basis for university-level professional education for archivists. In so doing, he has had a major influence on international archival scholarship and shown how society's central concerns are being shaped by archives as never before.



SZEMAN, Imre – Department of Communication Arts, University of Waterloo

Imre Szeman is an internationally-acclaimed cultural theorist. His landmark research establishes the shaping influence of fossil-fuel dependency on modern society. Szeman's work propelled a new discipline—'energy humanities'—which grapples with the cultural transformations required for a global shift to sustainable and renewable forms of energy. A highly collaborative, interdisciplinary and public-facing scholar, he is the co-founder of the Petrocultures Research Group and numerous initiatives advocating for energy transition.



van DEUSEN, Nancy E. – Department of History, Queen's University

Nancy E. van Deusen's pioneering scholarship in women and gender history, the histories of African and Indigenous slavery, and early modern Catholicism have earned her a place as one of the most distinguished colonial Latin Americanists and Atlantic World historians in North America today. Her meticulous research and thought-provoking analyses have led to innovations in the classroom and in scholarship, providing a more nuanced portrayal of previously under-represented groups.


WAITE, Gary – Department of History, University of New Brunswick

Gary Waite is an internationally renowned historian of early-modern Netherlandic and European religion and culture. His numerous publications have shaped scholarly discourse on the Reformation's radical reformers, on demonizing polemics, demonology and witchcraft, on dissident ideas, and on relations between Muslims, Jews, and Christians. He is currently leading an international team exploring how ideas were formed, contested, and reshaped in the polemical atmosphere of early-modern Europe.


WEISMAN, Karen – Department of English, University of Toronto

Karen Weisman is a renowned scholar of both English Romanticism and Jewish culture. She is a leading thinker on form and genre and an acclaimed authority on the relationship between Romanticism and such excluded minorities as Jews in nineteenth-century England. Her recent work on Anglo-Jewish poetry's engagement with canonical cultural authority has circumscribed a new field in the study of English literature.


WICKEN, William – Department of History, York University

William Wicken's prize-winning scholarship, alongside his substantial contributions as an expert witness, have profoundly affected how scholars, government policymakers and Canada's legal community understand and interpret the history and legal position of Indigenous peoples in Canada. His book-length studies of the Mi'kmaw's multi-generational interpretation of its 18th-century treaty with the British Crown have been transformative. As a consultant to Indigenous communities and advisor to government, he works to advance Reconciliation.


WRIGHT, David – Department of History and Classical Studies, McGill University

David Wright is Professor of History and Canada Research Chair in the History of Health Policy at McGill University. A specialist in the social history of Modern medicine, he has published extensively on the history of psychiatry, children's health and disability, the development of hospitals, medical migration, and the evolution of Canadian Medicare.

Division des lettres et des sciences humaines

LAFLEUR, Claude – Faculté de philosophie, Université Laval

Claude Lafleur is an internationally recognized expert in medieval studies and in history of philosophy in the Middle Ages. His numerous books and articles on 13th-century Latin didactic texts have been authoritative in the field for more than thirty years, as have his other publications where he studied, edited or translated leading Latin thinkers such as Boethius, Abaelard, Thomas Aquinas, William of Ockham and Petrarch.

Division of Arts

FITZPATRICK, Blake – School of Image Arts, Ryerson University

Blake Fitzpatrick is a documentary media expert who utilizes photography and text to investigate the dynamic relationship between place and history. His interpretation of the legacies of nuclear production, cultures of militarization, and the post-Cold War histories of the Berlin Wall has consistently highlighted the importance of the inherited landscape. His work raises timely questions regarding the physical and cultural meaning of the aftermath of conflict.



GREYSON, John – Department of Cinema and Media Arts, York University

John Greyson is video/film artist and a pioneer of the new Queer cinema. Since 1984, his many features, shorts and installations have explored such queer activist issues as police violence, prison, AIDS, solidarity and apartheid (both South African and Israeli). Titles such as *Fig Trees* (2009), *Lilies* (1996) and *Zero Patience* (1993) have received over 60 best film awards at such festivals as TIFF, Berlin, Vancouver, Locarno and Hong Kong.



MARTINI, Clem – School of Creative and Performing Arts, University of Calgary

Over the course of a celebrated career, Clem Martini has moved minds and hearts as a playwright, librettist, novelist and essayist. His innovative, comedic and social justice-oriented body of work has been shaping Canadian theatre for over thirty years. His award-winning and internationally acclaimed works range in form, breaking conventions and displaying unique artistry, encouraging audiences and readers to broach the most challenging and pressing social and environmental issues.



NORLEN, Alison – Department of Art and Art History, University of Saskatchewan

Alison Norlen is an artist/scholar internationally renowned for architectonic, symbolic large-scale drawings and complex sculptural installations. She investigates cultural spectacle interrogating the historical and geographical dynamics embodied in place, conceptually contributing to the understanding of the role utopia and fantasy take in shaping real/imagined, mundane/fantastic vernacular landscapes. Her work has been showcased in 28 solo, 14 international, and more than 55 group exhibitions, throughout North America, China, South Korea, the Netherlands, Mexico and Brazil.



TERRY, Mark – Faculty of Environmental and Urban Change, York University; Department of English & Film Studies, Wilfrid Laurier University

Mark Terry is an internationally-recognized digital media innovator. His remediation of the documentary film known as the Geo-Doc is currently being used within various divisions of the United Nations as a data delivery system, a new communications tool that bridges the gap between science and policy. His pioneering work with multilinear, non-fiction narratives has been recognized by the Academy of Canadian Cinema and Television with their Humanitarian Award in 2011. His work in documenting polar research has also been recognized by decorations with the Queen's Diamond Jubilee Medal (2013) and The Explorers Club's Stefansson Medal (2010).

The Academy of Social Sciences

Division of Social Sciences



BAUM, Joel – Rotman School of Management, University of Toronto

Joel Baum has made multiple pioneering contributions to the understanding of competition and cooperation among organizations. His 100-plus peer-reviewed articles and chapters have reinvigorated research trajectories on organizational survival, organizational learning, and inter-organizational network formation, among others. Through all of this, Professor Baum has been a leader in incorporating managerial agency into the study of organizations, and thus in integrating the strategic management and organization theory fields more broadly.



BLACKETT, Adelle – Faculty of Law, McGill University

Adelle Blackett is a world-class scholar in labour law, trade regulation and critical approaches to law. A key thinker behind the idea of transnational labour law, she has centred a pluralist, emancipation-focused approach to redressing historical marginalization in the world of work. She has also been recognized for her expert leadership on international treaty making on decent work for domestic workers, human rights monitoring, and labour law reform.



CARROLL, William – Department of Sociology, University of Victoria

Bill Carroll is a critical sociologist whose scholarship has illuminated structures of inequity and movements for change. His award-winning books and articles have mapped the elite networks through which large corporations and their owners and executives wield power, while also exploring how movements for social justice and ecological wellbeing organize efforts at reform and socio-political transformation. His issues-oriented music-videos have brought these concerns to the general public and activist communities.



DURRANT, Joan – Department of Community Health Sciences, University of Manitoba

Joan Durrant is a world-renowned scholar in child maltreatment prevention, whose research has revolutionized professional practice and public policy, while also supporting families in their local communities. Her transformative research and engagement has promoted children's well-being on six continents; has been cited by the United Nations, the Senate and the Supreme Court of Canada; and has influenced law, policy, education and social norms around the world.



ESTABROOKS, Carole – Faculty of Nursing, University of Alberta

Carole Estabrooks, a Member of the Order of Canada, is internationally recognized for her work in the translation of knowledge to action in the care of older adults living in nursing homes. She has advanced implementation and improvement science methods to address challenges in the areas of care and life quality for older adults with dementia and work life quality for their caregivers. Her research informs a transformative change agenda.



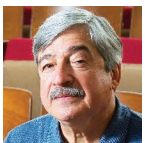
HORTON, Susan – School of Public Health and Health Systems, University of Waterloo

Sue Horton is known internationally for her work on global health economics. Her work on economics of nutrition contributed significantly to successful efforts to emphasize nutrition investments in international policy. Her current work on economics of cancer and of diagnostics aims to increase attention to these topics within the Sustainable Development Goal for Universal Health Coverage. She is a Fellow of the Canadian Academy of Health Sciences.



HOWLETT, Michael – Department of Political Science, Simon Fraser University

Michael Howlett is known for his work in public policy studies, especially related to the analysis and improvement of policy design. This research mobilizes insights from public administration, law, political science, public management and political economy to help better understand policy processes and resolve policy problems and issues. He has received many awards and citations for these efforts, including a Canada Research Chair (Tier 1). He is currently Editor-in-Chief of the leading international journal in policy studies, *Policy Sciences*, and was instrumental in the creation of the International Public Policy Association and the Canadian Public Policy Network, as well as similar organizations dedicated to policy studies in Singapore, the Philippines and India.



JAFFE, Peter – Faculty of Education, Western University

Peter Jaffe is a psychologist, Professor in the Faculty of Education at Western University and the Academic Director of the Centre for Research and Education on Violence Against Women & Children. From his research and clinical work over the past four decades, he has become one of the foremost international experts on the impact of domestic violence on victims and children and domestic homicide prevention. He is an Officer of the Order of Canada.



LEADBEATER, Bonnie – Department of Psychology, University of Victoria

Bonnie Leadbeater's research on resilience, health, and well-being has advanced a life-span perspective of adolescent and young adult mental and physical health and well-being that bridges disciplines and impacts psychology, education, health service, public health, and social policy. Her renowned research on preventing bullying and peer victimization led her to develop the internationally recognized WITS (DIRE, DIGA) Programs, which are used in elementary schools across North and South America.



LEE, Kelley – Faculty of Health Sciences, Simon Fraser University

Kelley Lee is a world class scholar focused on the intersections between political economy and population health arising from globalization. From the reform of the World Health Organization to advancing collective action on a range of shared health risks spanning communicable and non-communicable diseases, her conceptual thinking and empirical research established the foundations of global health governance scholarship. Her writing has helped shape the agendas of governments and international organizations.



LLEWELLYN, Jennifer – Schulich School of Law, Dalhousie University

Jennifer Llewellyn is a leading public intellectual on justice transformation and a world leader in restorative justice. Her scholarship and practice have been ground-breaking for justice systems and other social institutions. She is the Yogis & Keddy Chair in Human Rights Law and the Donald R. Sobey Foundation Chair in Restorative Justice and founded the first Restorative Research, Innovation and Education Lab. She won the SSHRC Impact Award in 2018.



NORENZAYAN, Ara – Department of Psychology, The University of British Columbia

Ara Norenzayan, a social psychologist, has made ground-breaking contributions to the study of the origins of religion, and the psychological impact of religious and cultural diversity in today's globalized world. His research appears in some of the most influential scientific journals and he is among the most highly cited social psychologists in the country. He is the author of the acclaimed book, *Big Gods: How Religion Transformed Cooperation and Conflict*.



SANDERCOCK, Leonie – School of Community and Regional Planning, The University of British Columbia

Innovative, visionary and audacious, Leonie Sandercock's community-based scholarship and practice in the fields of urban planning and community development have engaged some of the most intractable issues of our time—inequality, discrimination, and racism. Through award-winning books and films, she has influenced the planning field to become more culturally-fluent, addressing diversity and difference through structural change, and her partnerships with Indigenous communities model reconciliation in practice.



SCARDAMALIA, Marlene – Ontario Institute for Studies in Education, University of Toronto

Marlene Scardamalia's theoretical, pedagogical and technological innovations have helped to create and shape a new field of inquiry: Knowledge Building. Knowledge Building engages students directly in the means by which knowledge in the world is advanced. Scardamalia's award-winning research and development spanning a global network of hubs of innovation is making knowledge creation, previously reserved for a few, central to education for all students at all levels.



SMITH, Stephen – Faculty of Law, McGill University

Stephen Smith is one of the world's leading private-law scholars. Through his ground-breaking and influential publications (including *Contract Theory* and *Rights, Wrongs, and Injustices*) on the theory of contract law, concept of unjust enrichment, methodology of legal scholarship, and nature of judicial remedies, he has transformed our understanding of the law governing private interactions and of the courts' role in resolving disputes arising from those interactions.



WELDON, S. Laurel – Department of Political Science, Simon Fraser University

S. Laurel Weldon, Distinguished Full Professor of Political Science at Simon Fraser University, is internationally acclaimed for her work on gender politics and policy, with expertise in cross-national analyses of women's rights, social movements and violence against women. She has acted as a consultant for the United Nations and the World Bank. Her books and articles have won many awards and she served as Vice Provost at Purdue University (USA).

Division des sciences sociales

BEAULIEU, Paul-Alain – Département of Near and Middle Eastern Civilizations, University of Toronto

Paul-Alain Beaulieu's multi-disciplinarian approach to Assyriology and close attention to primary sources has led to ground-breaking results in the study of ancient Near Eastern civilizations. His publications have touched on science, intellectual life, sociolinguistics, and the history of the Neo-Babylonian Empire of the 6th century BCE. He is also the author of monographs that have set a standard in the study of ancient religion and the history of Mesopotamia.



d'ASTOUS, Alain – Département de Marketing, HEC Montréal

Alain d'Astous is an internationally recognized scholar in three main fields: consumer behavior (compulsive buying, consumption desires), marketing communication (product placement, sponsorship, celebrity endorsement), and international marketing (country image, country of origin). He has received numerous awards for the excellence of his research. Two of his books, *Le projet de recherche en marketing* (2019) and *Comportement du consommateur* (2018), are used in many universities and Cégeps.



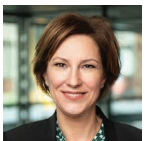
GÉRIN-LAJOIE, Diane – Ontario Institute for Studies in Education, University of Toronto

Diane Gérin-Lajoie is recognized for her scholarship on official language minorities in Canada and their schools. Her expertise in the areas of identity and youth in minority language schools, as well as teacher identity in those schools make her a pioneer in the comparative analysis of Canada's two official linguistic minority groups. Recipient of multiple research funds, Diane Gérin-Lajoie makes a significant contribution to the study of official language minorities in Canada.



NOREAU, Pierre – Faculté de droit, Université de Montréal

Pierre Noreau is both a legal practitioner and a jurist. He has made remarkable contributions to the field of sociology of law. Drawing on the theory of norms, his work paved the way for the renewal of research on the institutionalization and deinstitutionalization processes taking place in most every society today. Head of several major interdisciplinary research consortiums, he is the founder of the Institut québécois de réforme du droit et de la justice.



RINFRET, Natalie – Direction enseignement et recherche, École nationale d'administration publique

Natalie Rinfret holds a La Capitale research chair in public sector leadership. Her research focuses on leadership development as a strategy for improving government performance, women's position in non-traditional fields, and the transfer of knowledge. Drawing on her practical experience, she created a research and development program to prepare the next generation of high-potential government officials in Quebec. Her many achievements have been recognized by more than thirty awards.

The Academy of Science

Division of Applied Sciences and Engineering



AMABILI, Marco – Department of Mechanical Engineering, McGill University

Marco Amabili has made exceptional contributions to research in mechanical vibrations and nonlinear mechanics through his highly-cited books and journal publications. His specialties are nonlinear vibrations, shell structures and vascular biomechanics. He holds editorial positions in scholarly journals with long history, is fellow of all the three pan-European Academies and of the Canadian Academy of Engineering, and was recognized by prestigious awards internationally and at his home institution.



CHEBEN, Pavel – Advanced Electronics and Photonics Research Centre, National Research Council Canada

Pavel Cheben is internationally known as a global leader in integrated photonics, with several groundbreaking contributions in silicon photonics fueling fundamental advances in multiple technologies, including optical communications, biomolecular sensing and on-chip spectrometry. His invention of metamaterial waveguide has revolutionized integrated photonics and launched the new research field now followed by many academic groups and adopted by leading industry players. He is the most published NRC scientist of the last decade.



CHEN, Zhangxing – Schulich School of Engineering, University of Calgary

Internationally renowned in chemical and petroleum engineering research, Zhangxing Chen holds the NSERC/Alberta Innovates/Energi Simulation Senior Industrial Research Chair. His exceptional work has led to the establishment of the most prominent collaborative consortium and a spin-off company. Among his numerous accolades, he is a Fellow of the Canadian Academy of Engineering and the Engineering Institute of Canada and has received NSERC's Synergy Award for Innovation and the Fields-CAIMS Prize.



EL SADDIK, Abdulmotaleb – School of Electrical Engineering and Computer Science, University of Ottawa

Abdulmotaleb El Saddik (Fellow IEEE, EIC & CAE), University Research Chair and Distinguished University Professor, is an award-winning internationally recognized leader in computer science and engineering research, having made seminal contributions to the field of multimedia computing and communications. His research in haptic-audio-visual environments, together with his pioneering work in digital twins and haptics biometrics, have reinvigorated multimedia research worldwide and significantly impacted the way human-machine interactions are performed.



JIANG, Jing (Jin) – Departement of Electrical and Computer Engineering, Western University

Jing Jiang, a Distinguished University Professor and NSERC Senior Industrial Research Chair, is an internationally renowned Canadian expert in fault-tolerant control, instrumentation/control systems for nuclear power plants, and renewable energy microgrids. His pioneering works have fundamentally revolutionized approaches to achieving high reliability in safety-critical systems, safer nuclear power plants, and more effective utilization of renewable energy. His seminal contributions have made impacts in both academic communities and industries worldwide.



MOHANTY, Amar – Department of Plant Agriculture and School of Engineering, University of Guelph

Amar Mohanty is a pioneer in advanced biomaterial science and engineering. His lifelong dedication to developing biobased materials that reduce the environmental impacts of plastics has catalyzed changes across major industries. His award-winning compostable packaging and 'green' automotive parts are commercially adopted in global markets. They have lower greenhouse gas emissions, reduce waste and represent a model for realizing the Circular Economy concept for the next generation of materials.



SIMONOVIC, Slobodan P. – Department of Civil and Environmental Engineering, Western University

Slobodan P. Simonovic has made seminal contributions to the development of systems engineering approaches to the planning, designing and managing of complex water resources systems in the search for sustainable and robust physical and societal solutions, based on stakeholders' value systems and ethical principles. He has utilized multiple approaches for addressing subjective and objective uncertainties in managing water resources systems.



ZHANG, David – School of Data Science, the Chinese University of Hong Kong (Shenzhen)

David Zhang is a world leading expert and pioneer in the field of Biometrics. He has received international recognition for his brilliant accomplishments and significant contributions. His work has been widely cited in Google Scholar: 65,000+; H-index of 115. Dr. Zhang is a "Clarivate Analytics Highly Cited Researcher" in Engineering from 2014 to 2019. He is also a Croucher Senior Research Fellow and a Fellow of IEEE Life and IAPR.

Division of Earth, Ocean and Atmospheric Sciences**BARNES, Sarah-Jane – Département des Sciences Appliquées, Université du Québec à Chicoutimi**

Sarah-Jane Barnes is a geologist specializing in the study of the composition of rocks and minerals in and around ore deposits. For her work she been awarded; a Canada Research Chair (Tier I), the Mineralogical Association Canada's top medal and the Geological Association Canada's medal for the study of ore deposits. In order to carry out this work she has developed a top-flight geochemical laboratory (LabMaTer) which host visiting researchers from around the world.

**del GIORGIO, Paul – Département des sciences biologiques, Université du Québec à Montréal**

Paul del Giorgio is an aquatic ecologist and biogeochemist who is recognized for his seminal contributions to the understanding of aquatic microbial food webs, and of energy and carbon fluxes in freshwater and marine ecosystems. His integrative research in the boreal biome has contributed to a radical re-evaluation of aquatic / terrestrial links and of the role of inland waters, including hydroelectric reservoirs, in the global C cycle.

**MANN, Ian – Department of Physics, University of Alberta**

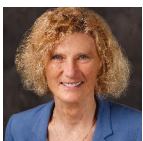
Ian Mann is an influential and world-renowned expert in space science and space weather research. His research has delivered transformative new understanding of extreme space radiation and the dynamics of the near-Earth space environment. Mann's leadership at the United Nations promotes the translation of research to policy excellence, steering international efforts to mitigate extreme space weather impacts. From leading cubesat missions to issuing auroral alerts, he tirelessly promotes lifelong learning.

**VINCENT, Amanda – Institute for the Oceans and Fisheries, The University of British Columbia**

Amanda Vincent is a driving force for ocean conservation, anchored in her speciality of seahorses. She was the first biologist to study these extraordinary animals underwater. Her Project Seahorse team finds solutions for coastal marine ecosystems, linking research and management to create protected areas, fisheries regulations and global wildlife trade policy. Amanda was the first ocean person to win the world's top award in animal conservation, the Indianapolis Prize.

**WALLACE, Douglas – Department of Oceanography, Dalhousie University**

Doug Wallace is an oceanographer who uses observations of chemical distributions to unravel the complex biogeochemical processes that connect the ocean and the atmosphere. He introduced several approaches and tools that have had long-lasting impact on our understanding of marine biogeochemistry and its connection with climate, especially with respect to the uptake of carbon dioxide and oxygen by the oceans.

Division of Life Sciences**ADDINGTON, Jean – Department of Psychiatry, University of Calgary**

Jean Addington is an internationally recognized researcher in the areas of schizophrenia, early psychosis and early prevention of serious mental illness. Her work has made significant contributions to the understanding and development of preventative strategies and early intervention in psychiatry, especially for young people at risk of developing psychosis and other serious mental illnesses. Her innovative and internationally recognized research program seeks to transform the lives of these at-risk youth.



ARROWSMITH, Cheryl – Princess Margaret Cancer Centre, Department of Medical Biophysics, University of Toronto

Cheryl Arrowsmith is biomedical scientist internationally recognized for her pioneering contributions to the multidisciplinary field of structure-guided drug discovery. As cofounder of a unique international public-private-partnership, the Structural Genomics Consortium, she leads its transformative Open Science program that is catalyzing the discovery of new medicines. Her research has developed, exploited and distributed thousands of unencumbered ‘chemical probes’ that are revolutionizing the creation of precision medicines for multiple diseases, especially cancer.



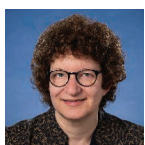
BOIVIN, Guy – Département de microbiologie-infectiologie et immunologie, Université Laval

Guy Boivin’s laboratory at Université Laval focuses on the pathogenesis, treatment and prevention of viral diseases. He has performed landmark studies on the incidence, virulence and transmission of drug-resistant viruses. He was the first to describe the clinical manifestations of human metapneumovirus, for which he developed several vaccines and antivirals. He holds the Canada research chair on influenza and is co-founders of Signia Therapeutics (drug-discovery) and Vaxxel (vaccines) companies.



CÔTÉ, Jacques – Département de biologie moléculaire, biochimie médicale et pathologie, Université Laval

Jacques Côté, Canada Research Chair and Director of Oncology Research at CHU de Québec-Université Laval, is an international leader on chromatin structure and function, histone modifications and molecular epigenetics. He made hallmark discoveries on the molecular mechanisms regulating gene expression and genome integrity. His innovative work dissected how the cell remodels nucleosomes, the basic structure of chromosomes, to control access to DNA and performs epigenetic signaling.



DAVIS, Karen – Department of Surgery and Institute of Medical Science, University of Toronto

Karen Davis is internationally recognized for her pioneering and influential neuroscientific research using electrophysiology, psychophysics, and brain imaging approaches that has improved our understanding of the mechanisms that underlie pain and its modulation. Through mentorships and leadership roles, and as president of the Canadian Pain Society she has advanced the pain and neuroscience fields and advocated for strategies and neuroethics policies that impact people who are living with chronic pain.



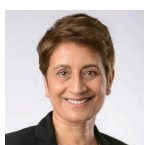
GONZALEZ, Andrew – Department of Biology, McGill University

Andrew Gonzalez is recognized for his research on the causes and consequences of biodiversity change. He combines theoretical and experimental approaches to reveal how human impacts—such as habitat loss, climate change, and pollution—drive rapid biodiversity loss and ecosystem degradation, but also how these impacts can be mitigated. He has shown that habitat networks are a solution for conserving biodiversity and is working to support their implementation at large scales.



HINCH, Scott – Department of Forest and Conservation Sciences, The University of British Columbia

Scott Hinch is an international renowned scientist and award-winning educator who uniquely integrates physiology, ecology, behaviour, genomics, and social sciences in the study and conservation of Pacific salmon. His pioneering work combining large-scale telemetry tracking with biopsy sampling has transformed our understanding of how climate change, fisheries, and land/water management affects sustainability of salmon populations. His collaborations and leadership with social scientists, stakeholders and First Nations have benefitted fisheries management.



KHOKHA, Rama – Department of Medical Biophysics, University of Toronto

Rama Khokha is an internationally recognized leader in tissue homeostasis and stem cell niches. Her preclinical models and integrative molecular approaches continue to elucidate integral pathways in tissue development and remodeling. Her basic discoveries have revolutionized our understanding of cancer biology, allowed development of new strategies to block aggressive disease, and fueled breast cancer chemoprevention trials.


LOEB, Mark – Faculty of Health Sciences, McMaster University

Mark Loeb is internationally recognized in the field of infectious diseases clinical trials and epidemiological studies. He is distinguished for his work on influenza vaccination and herd immunity in Canadian Hutterite communities and for a pivotal trial on respiratory mask protection against influenza. He has conducted influential clinical trials on prevention and management of infections in nursing home residents.


McCANN, Kevin – Department of Integrative Biology, University of Guelph

Kevin McCann is a leading theoretical ecologist that studies the role of biological structure in mediating the sustainability and functioning of whole ecosystems. His research has played a leading role in understanding the role species interaction strengths play in mediating the stable functioning of food webs. McCann is recently focusing his attention on sustainability under global change, working in fisheries, agro-ecosystems, human microbiome, and food production.


MOHER, David – Faculty of Medicine, Ottawa Hospital Research Institute

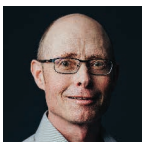
David Moher, one of the most highly cited researchers in the world, has spent most of his career helping to improve publication science from different perspectives: authors; editors; and peer reviewers. As part of this effort he established international standards used by hundreds of academic journals for the complete and transparent reporting of biomedical research, particularly randomized trials (CONSORT) and systematic reviews (PRISMA).


REYNOLDS, John – Department of Biological Sciences, Simon Fraser University

John Reynolds is distinguished for his world-leading research linking ecology and evolution with conservation biology. He has used a combination of theoretical analyses, phylogenetically-based comparative analyses, and extensive field research to understand variation among species in extinction risk, including links to sustainable exploitation. His scientific leadership on numerous national and international bodies has been complemented by award-winning achievements in media engagement.


SAKSIDA, Lisa – Department of Physiology & Pharmacology, Western University

Lisa Saksida has made important theoretical and experimental contributions to understanding the neurobiological basis of cognition. Her collaborative and interdisciplinary approach allows her to span multiple levels of analysis—from molecule to behaviour—to answer fundamental questions about the brain in health and disease, and how the answers to these questions can best be translated, eventually, to the clinic.


STROUS, Marc – Department of Geosciences, University of Calgary

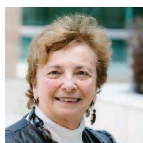
Marc Strous has made many groundbreaking contributions to microbial ecology, biogeochemistry and environmental biotechnology, and sparked a major revision of the global biogeochemical nitrogen cycle concept. His career has been marked by the discovery of new pathways in biochemistry and microbial symbiosis. Strous is currently building on his ecology and engineering expertise to create a feasible, sustainable net-negative-carbon-dioxide-emissions biotechnology, for counteracting climate change.


TSAO, Ming-Sound – Princess Margaret Cancer Centre, University Health Network, University of Toronto

Ming-Sound Tsao is an internationally recognized leader in lung cancer translational and biomarker research. His work contributed to the establishment of molecular prognostic and predictive biomarkers in personalized medicine and precision cancer therapy. He is a recognized authority in the standardization of biomarker assays in lung cancer and their clinical implementation. He also pioneered the development of novel experimental models using patient tumours to study cancer biology and new therapies.


WANG, Rui – Department of Biology, York University

Rui Wang is a pioneer in the field of H₂S biology and medicine who has discovered the endogenous production of H₂S in the cardiovascular system and its widespread physiological functions. He identified H₂S as an endothelium-derived relaxing and hyperpolarizing factor that dilates resistance arteries and control blood pressure. He has established the critical roles that H₂S plays in the pathogenesis of hypertension, angiogenesis, atherosclerosis, diabetes, and asthma.



WERB, Zena – Department of Anatomy, University of California San Francisco

Zena Werb's original and paradigm-changing discoveries about the molecular and cellular basis of extracellular matrix microenvironmental roles in tissue regulation led to new mechanistic understanding of normal and pathologic tissue function. She pioneered the concept that extracellular proteolysis is a central mechanism of altering signaling in stem cell biology and in the inflammatory response during cancer progression and metastasis with a particular focus on breast development with breast cancer.

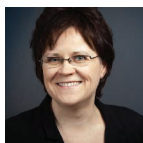
* Zena Werb passed away following her election to the Society.

Division of Mathematical and Physical Sciences



BRYCE, David – Department of Chemistry and Biomolecular Sciences, University of Ottawa

One of Canada's most creative and prolific physical chemists, David Bryce is an internationally renowned authority on nuclear magnetic resonance spectroscopy and electrophilic interactions in solids. His paradigm-shifting discoveries in the analysis and interpretation of spectral data have led to breakthroughs in our understanding of solid materials, pharmaceuticals, and biomolecules. An inspirational mentor, Prof. Bryce is also known for bringing a passionate voice to the national discussion on science funding priorities.



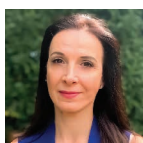
CRUDDEN, Cathleen – Department of Chemistry, Queen's University

Cathleen Crudden, Queen's University and Nagoya University, has made lasting contributions to organic chemistry and materials science. She has employed the principles of organometallic chemistry to develop catalytic transformations of importance to pharmaceutical research and to develop novel techniques for the formation of organic monolayers on metal surfaces. The latter work has resulted in the most robust organic monolayers to date, high stability nanoparticles and novel metal nanoclusters.



DOYON, René – Département de physique, Université de Montréal

René Doyon is one of the world's foremost experts on exoplanetary research and an internationally renowned leader in astronomical instrumentation. His development of numerous instruments on space- and ground-based telescopes has led to revolutionary discoveries in the field of exoplanets and brown dwarfs, including the first ever direct image taken of an exoplanetary system, and positioned Canada as a key player in the search for life beyond our Solar System.



FERRARESE, Laura – Herzberg Astronomy and Astrophysics Research Centre, National Research Council Canada

Laura Ferrarese is an internationally recognized astrophysicist known for her original and ground-breaking research on supermassive black holes, the age of the universe, and the evolution of galaxies. Her observations, using the world's leading ground- and space-based telescopes, have transformed our understanding of galaxy structure and evolution, and have paved the way for the exploration of today's key cosmic mysteries, notably the nature of the dark energy and dark matter.



GALE, Charles – Department of Physics, McGill University

Charles Gale is world-renowned for his theoretical studies of strongly interacting matter under extreme conditions of temperature and of density. His seminal work has contributed to lay the theoretical foundations of the research on high-energy heavy-ion collisions, and his contributions on the electromagnetic emission from hot and dense matter has motivated and guided several generations of experiments worldwide.


HALPERN, Mark – Department of Physics & Astronomy, The University of British Columbia

Mark Halpern makes measurements which have sharpened our understanding of the contents and dynamics of the Universe. Measurements showing little distortion of the cosmic microwave background spectrum established that the Universe was in thermal equilibrium when it was 10 days old. Measurements of the anisotropy of the CMB with WMAP, ACT and Bicep establish that the Universe is spatially flat, comprised of 70% dark energy with dark (invisible) matter substantially outweighing baryonic matter.


KHOVANSKII, Askold – Department of Mathematics, University of Toronto

Askold Khovanskii is an internationally recognized scientist whose research has had a great impact on the mathematical and computer sciences communities. His solutions of deep and complex problems seem simple and natural. He created topological Galois theory (a totally new branch of classical Galois theory) and the highly original theory of fewnomials (in complexity theory). He is one of the creators of the theories of Newton polyhedra and of Newton-Okounkov bodies.


LOWARY, Todd – Department of Chemistry, University of Alberta

Todd Lowary is Canada's leading carbohydrate chemist and an international leader in the synthesis of molecules to probe the biological role of carbohydrates. Pioneering contributions include novel methods for assembling some of the most complex carbohydrates ever synthesized. These molecules, access to which would be impossible without his work, have enabled understanding of the role of carbohydrates in diseases such as tuberculosis with applications in new drugs, vaccines and diagnostics.


MOHAR, Bojan – Department of Mathematics, Simon Fraser University

Bojan Mohar is a world-leading graph theorist who has deeply contributed to central areas in discrete mathematics. His deep and fundamental results advanced algebraic, structural, and topological graph theory and influenced theoretical computing, mathematical chemistry and other fields. His transformative contributions to graph theory have been recognized with ICA's Euler medal and RSC's John L. Synge Award; he was distinguished as an AMS Fellow, a SIAM Fellow and a Canada Research Chair.


RIVEST, Louis-Paul – Département de mathématiques et de statistique, Université Laval

Louis-Paul Rivest is an applied statistician holding a Canada Research Chair in Statistical Sampling and Data Analysis. He is a pioneer of the mathematical theory of copulas for modeling stochastic dependence. His works in multivariate analysis, in directional statistics, on capture-recapture models and in survey sampling have had a fundamental impact on the applications of statistical sciences in finance, in actuarial sciences, in social statistics, in environmental science, and in biomechanics.


SHEFFER, Alla – Department of Computer Science, The University of British Columbia

Alla Sheffer is a world leader in computer graphics and geometry processing. Dr. Sheffer develops innovative methods for modeling shapes that facilitate computational fabrication, garment design, computer animation, and mechanical engineering. Her methods, some of which had been incorporated into major modelling software packages, enable computer animators, designers, and artists to easily generate and manipulate computer models of complex real-world and imaginary shapes.

Specially Elected Fellow

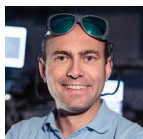

PATRY, Gilles – Executive Director, The U15 and President Emeritus, University of Ottawa

Gilles Patry is professor and president emeriti at the University of Ottawa. His pioneering research in environmental engineering led, among other things, to the development of GPS-X™, the industry standard in wastewater treatment modelling and simulation. Dr. Patry was dean of the Faculty of Engineering, Vice-president, Academic and President and vice-chancellor of the University of Ottawa. He was also President and CEO of the Canada Foundation for Innovation. He is currently Executive Director of the U15 – Group of Canadian Research Universities.

CLASS OF 2020 • RSC COLLEGE

**ANDERSON, Kim – Department of Family Relations & Applied Nutrition, University of Guelph**

Kim Anderson's scholarship builds on 20 years of community experience focused on rebuilding healthy Indigenous societies. With particular attention to gender and Indigeneity in urban settings, her work is instrumental in efforts to Indigenize the academy and advance Indigenous methodologies. Recognized internationally for her community based work, Anderson is affecting how scholars, governments, policymakers, and publics understand and support Indigenous cultural resurgence, wellness, and reconciliation.

**ANTICI, Patrizio – Énergie Matériaux Télécommunications Research Centre, Institut national de la recherche scientifique**

Patrizio Antici, a scientist working in the field of applied photonics, is recognized internationally for major contributions in new particle acceleration technologies using high power lasers. He has pioneered the concept of laser-driven particle beamlines and utilizes these compact accelerators for improving applications in fundamental science, cultural heritage diagnostic, advanced materials, radiobiology and fusion. His outcomes have driven the development of new large-scale infrastructures investigating this acceleration technique.

**ARCHAMBAULT, Isabelle – École de psychoéducation, Université de Montréal**

Isabelle Archambault holds the Canada Research Chair on school, child well-being, and educational success and is co-holder of the Myriagone McConnell-UdM Chair in youth knowledge mobilization. Anchored in a social justice perspective, her work is recognized for its impact on the development of best practices supporting different populations of children, like those from low-socio-economic families, with an immigration background, or presenting mental health difficulties.

**BAZYLAK, Aimy – Department of Mechanical Engineering, University of Toronto**

As the Canada Research Chair in Thermofluidics for Clean Energy, Aimy Bazylak is advancing fuel cells, electrolyzers and batteries for clean power and energy storage in the absence of greenhouse gas emissions. Her research is focused on modelling and real-time imaging to design new materials for high efficiency and performance. She and her group are the first in North America to visualize operating fuel cells using synchrotron X-ray radiography.

**BERGER, Benjamin L. – Osgoode Hall Law School, York University**

Benjamin L. Berger holds the York Research Chair in Pluralism and Public Law at Osgoode Hall Law School, York University. He is internationally recognized for his interdisciplinary scholarship exposing the complex nature of secularism, the limits of state law, and the implications of both for religious pluralism, equality, and constitutionalism. Among Canada's foremost scholars of constitutional and criminal law, his work has shaped debates on the role of public law in deeply diverse societies.

**BERNHEIM, Emmanuelle – Faculté de droit, Université d'Ottawa**

Emmanuelle Bernheim leads an innovative empirical and critical research program on access to justice and the role of law in the (re)production of inequalities. Her research, which combine interdisciplinarity, partnership and action research, documents and analyzes exercise of rights in mental health, child protection and self-representation. Her work has supported the development of new practices both in community, judicial and hospital settings.

**BOWDISH, Dawn – Department of Pathology and Molecular Medicine, McMaster University**

Dawn Bowdish studies how the immune system changes with age and how these changes impact healthy/unhealthy aging and susceptibility to infections. She and her team work to uncover how the aging immune system and the microbes that live in and on us ("the microbiota") interact in order to prevent infections and give older adults more years of healthy, independent living. She is the Canada Research Chair in Aging and Immunity.


CADOTTE, Marc – Department of Biological Sciences, University of Toronto Scarborough

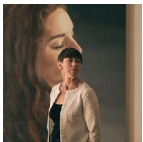
Marc Cadotte is an internationally recognized ecologist who examines fundamental questions about biological diversity in ecosystems and how human activities impact ecosystem health. He has pioneered biodiversity measures that quantify species differences using genetic and trait-based information to better understand the links between biodiversity and ecosystem function, predict and control invasive species, and how environmental changes influence the delivery of ecosystem services, especially in the places where we live.


CAI, Lin – Department of Electrical and Computer Engineering, University of Victoria

Lin Cai is an outstanding and internationally renowned researcher for her ground-breaking work on the development and analysis of wireless technologies supporting Internet-of-Things and multimedia applications. Her contributions have assisted the industry partners for product and standard development. She has been recognized by many national and international prizes, most recently an NSERC E.W.R. Steacie Memorial Fellowship (2019), and by her elevation to IEEE Fellow (2020).


CARSON, Valerie – Faculty of Kinesiology, Sport, and Recreation, University of Alberta

Valerie Carson is a behavioural epidemiologist in the Faculty of Kinesiology, Sport, and Recreation at the University of Alberta. Her research focuses on healthy development, measurement, and determinants related to physical activity and sedentary behaviour among young children. She works with governments, public health agencies, pediatricians, child care providers, and parents to promote healthy physical activity and sedentary behaviour habits. Her work supports optimal health throughout life.


CHANDLER, Eliza – School of Disability Studies, Ryerson University

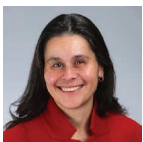
Eliza Chandler is a leading scholar who is advancing the emerging field of disability arts and accessible curatorial practices. Asserting that disabled people must have access to creating, participating, and being represented in arts and culture, she has influenced the introduction of disability arts within national and international arts bodies, built open-access knowledge platforms, and founded disability arts organizations, such as Tangled Art Gallery, Canada's first disability art gallery.


CYR, Chantal – Département de psychologie, Université du Québec à Montréal

Chantal Cyr is Canada Research Chair in Child Attachment and Development. She is internationally known for her work on child maltreatment, attachment disorganization and the parent-child Attachment Video-feedback Intervention (AVI). She has shown the effectiveness of the AVI for improving parental sensitivity, child development and placement decisions in child protection cases. Her trainings influence many practitioners working with vulnerable families. Her work has led to the implementation of the AVI in several countries around the world.


DAY, Trevor – Department of Biology, Faculty of Science and Technology, Mount Royal University

Trevor Day is an integrative cardiorespiratory, cerebrovascular and acid-base physiologist committed to physiology education through his teaching, laboratory and field-based research in basic and applied human physiology. His research interests include the integrated physiological responses to acute and chronic blood gas challenges, and he is a leader in organizing high altitude research expeditions. His current scholarly and outreach work includes research in basic and applied human physiology, physiology education and science communication.


DEACON, Hélène – Department of Psychology & Neuroscience, Dalhousie University

Hélène Deacon, Professor in Psychology and Neuroscience at Dalhousie University, is a world-leading researcher into reading development. Her work's ground-breaking impact is recognised with awards across multiple disciplines, including from Speech-Language & Audiology Canada, the March of Dimes Foundation, and the US National Academy of Education. In Canada, she is co-Director of a new Partnership Grant: *Ensuring Full Literacy in a Multicultural and Digital World*.



DELAGE, Erick – Department of Decision Sciences, HEC Montréal

Erick Delage is recognized worldwide in the field of Operations Research with high-impact contributions to his credit. He holds the Canada Research Chair in Decision Making Under Uncertainty and is known for having pioneered distributionally robust optimization, a dominant mathematical modeling paradigm with vast applications in transportation, healthcare, finance, etc. He is also a leader in the development of numerical methods for treating limited information about the decision maker's preferences.



DIVANGAHI, Maziar – Department of Medicine, McGill University

Maziar Divangahi is an internationally renowned pulmonary immunologist who has made major contributions to our understanding of both innate and adaptive immunity to pulmonary infectious diseases. His pioneer work on innate immune memory has identified hematopoietic stem cells as potential target for the development of novel vaccine against pulmonary infections, such as tuberculosis (*M. tuberculosis*), influenza (H1N1), and coronaviruses (SARS-CoV2). He is currently holding the Strauss Chair in Respiratory Diseases.



DOLMAGE, Jay – Department of English Language & Literature, University of Waterloo

Jay Dolmage is the Founding Editor of the highly impactful *Canadian Journal of Disability Studies*. Winner of the 2015 PROSE award, Dolmage's work brings together rhetoric, disability studies, and critical pedagogy, in an accessible yet ground-breaking body of articles, talks, and workshops. A fierce advocate for disability rights, Dolmage is committed to publishing Open Access and accessible material and helped to author the international guidelines for accessible electronic books.



FINZI, Andrés – Département de microbiologie, infectiologie et immunologie, Université de Montréal

Andrés Finzi is a Canada Research Chair and director of the Retroviral Entry laboratory at the Centre de Recherche du CHUM. He is an internationally recognized leader in HIV replication and antibody effector functions, and his work identified new evasion mechanisms put in place by HIV to avoid immune responses. His work has signification translational implications on the development of new therapeutic strategies to fight HIV.



FU, Diana Xuan – Department of Political Science, University of Toronto

Diana Fu is a leading political scientist studying contemporary Chinese politics. Her award-winning research on activism in China has had a cross-disciplinary impact on the study of social movements. She has provided expert commentary for the BBC, Bloomberg, CBC, Foreign Policy, and The New York Times, among others. She is a Public Intellectuals Fellow with the National Committee on US-China Relations and is National Co-Secretary of the Rhodes Scholarship for China.



GRAHN, Jessica – Department of Psychology, Western University

Jessica Grahn is a world leader in Cognitive Neuroscience of Music. She investigates why we move to rhythm, and how movement and rhythm are connected in the brain. In addition to using brain scanning to understand how motor areas in the brain respond to different types of rhythm, she also examines how rhythm and music affect those with dysfunction in movement areas, such as Parkinson's disease and stroke.



HAINES, Jess – Department of Family Relations & Applied Nutrition, University of Guelph

Jess Haines's research bridges epidemiologic research on the determinants of child health behaviour with effective and scalable family-based health promotion interventions. She prioritizes an integrated knowledge translation (iKT) approach that engages key knowledge users in the research process and works to mobilize results to effect real, lasting change to benefit the health of children and families.



HERSHCOVIS, M. Sandy – Haskayne School of Business, University of Calgary

Sandy Hershcovis is an internationally leading scholar known for her contributions to the study of workplace harassment. Her research advances our understanding of the social context of workplace harassment, focusing on how targets cope with harassment and the role of bystanders in the dynamics of harassment. Her research program on constructive bystander interventions aims to identify strategies for preventing harassment or mitigating its negative consequences.



HOUDE, Magali – Division de la recherche sur les contaminants aquatiques, Environnement et Changement climatique Canada

Magali Houde is a research scientist with Environment and Climate Change Canada and adjunct professor at the Université du Québec à Montréal. Her research advances the understanding of the fate of contaminants in aquatic environments and their effects on organisms. Her active involvement in contaminants research across the Canadian Arctic is creating bridges with Indigenous communities. Her work is supporting the human and environmental risk assessment in Canada and beyond.



KARIMI, Ebrahim – Department of Physics, University of Ottawa

Ebrahim Karimi, Canada Research Chair at the University of Ottawa, is an international leader in the field of structured quantum waves. He explores how photons, the tiniest particles of light, and electrons can be shaped to carry specific quantum properties. These quantum features were employed in quantum communication demonstrations over the city of Ottawa and in the Ottawa river, ground-breaking techniques in microscopy, and answering fundamental questions in physics.



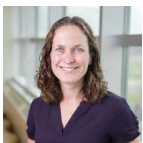
LATIMER-CHEUNG, Amy – School of Kinesiology and Health Studies, Queen's University

Amy Latimer-Cheung is a Full Professor and Tier 2 Canada Research Chair in Physical Activity Promotion and Disability. Her research aims to encourage people to be more physically active. She is particularly interested in increasing participation among people with a disability by creating positive activity experiences. A direct translation of her research into practice, Amy is the Executive Co-Director of Revved Up, an exercise program for people with a disability.



LeBARON, Genevieve – Department of Politics and International Relations, University of Sheffield

Genevieve LeBaron is an internationally renowned expert on modern slavery, known for her research on the business dynamics of forced labour in global supply chains. She advises leading national governments and international organizations combatting forced labour, has held ten research grants to investigate forced labour, and has won awards for her role in pioneering a rigorous and comparable empirical evidence base on forced labour in the contemporary global economy.



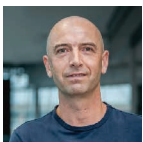
LEBEL, Catherine – Department of Radiology, University of Calgary

Catherine Lebel is a Tier 2 Canada Research Chair in Pediatric Neuroimaging who conducts interdisciplinary research using advanced magnetic resonance imaging (MRI) techniques to study brain maturation and how it is related to cognitive, behavioural, and environmental factors. She is recognized for her foundational contributions to the understanding of brain development in typically-developing children and those with neurodevelopmental disorders such as fetal alcohol spectrum disorder.



LECKEY, Robert – Faculty of Law, McGill University

Robert Leckey is Samuel Gale Professor and dean of the McGill Faculty of Law. An award-winning, internationally recognized scholar and teacher in constitutional law, family law, and comparative law, he has advanced knowledge on matters such as law's recognition of traditionally unrecognized family forms, including LGBTQ couples, and judges techniques in human-rights cases. His frequent media appearances enhance contribute to public knowledge and debates on legal issues.



LEPAWSKY, Josh – Department of Geography, Memorial University of Newfoundland

Josh Lepawsky's work on the social, economic, and environmental consequences of manufacturing, and the practice of using and discarding digital technologies, has been transformative. His research bridges disciplines and enhances the scholarly and societal understanding of global electronic waste management and its implications for Canadians in an increasingly digitized world.



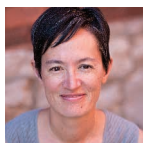
LESLIE, Sabrina – Department of Physics, McGill University

Sabrina Leslie works at the interface of physics and biology with a particular interest in quantifying the dynamics of individual molecules. She is a scientist and technology developer who uses existing tools for new applications, and who invents novel tools where they do not exist. Her research provides insights into the biophysical properties of molecules, including therapeutics with the ultimate goal of propelling quantitative health sciences.



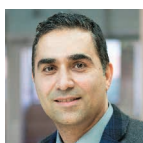
LOVELESS, Natalie – Department of Art & Design, University of Alberta

Natalie Loveless is an internationally recognized scholar of contemporary feminist art and theory and an acknowledged leader in the area of research-creation. She is the founder and Director of the University of Alberta's Research-Creation and Social Justice CoLABoratory, a site for experimental research-creation focused on social and ecological justice, through which she fosters intersectional, interdisciplinary, and collaborative research-creation practices across the arts, humanities, sciences, and social sciences.



MADOKORO, Laura – Department of History, Carleton University

Laura Madokoro is an award-winning historian whose work explores the history of migration, refuge and humanitarianism, with a particular focus on the history of race and exclusion among white settler societies. Bridging the fields of social and political history, her research reflects upon the entangled past that has shaped both local communities and global phenomena, while her public outreach highlights the dynamic connections between archives, narratives and the historical craft.



MILANI, Abbas S. – Materials and Manufacturing Research Institute, The University of British Columbia

Abbas S. Milani is a leading expert in modeling, simulation, and multicriteria optimization of advanced composite/biocomposite materials and their manufacturing processes. His interdisciplinary work links theoretical concepts to real-world applications, thereby enabling innovations for industry across Canada in manufacturing high-quality and cost-effective products. He is a Killam Laureate and the founding Director of the Materials and Manufacturing Research Institute at UBC. He has authored over 300 publications, including five books.



MOORES, Audrey – Department of Chemistry, McGill University

Audrey Moores is an Associate Professor at McGill University. She studies green chemistry and develops syntheses and chemical processes which are more respectful of the environment and our health. In particular, she has developed sustainable methods of manufacturing nanoparticles for green energies and biodegradable bioplastics from waste from biomass.



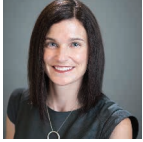
MORRISSEY, Christy – Department of Biology and School of Environment and Sustainability, University of Saskatchewan

Christy Morrissey is a recognized international leader in the fields of avian and aquatic ecotoxicology. Her innovative integrated approaches have revealed new insights into the root causes of migratory bird and insect declines from agricultural pesticides and other environmental threats. She is dedicated to engaging and communicating her discoveries with the public and is leading transformative efforts to conserve and restore biodiversity through policy-relevant science.



NEUFELD, Josh – Department of Biology, University of Waterloo

As an ecologist, Josh Neufeld characterizes microbial communities in terrestrial, aquatic, and host-associated habitats. By developing and combining cultivation-dependent and molecular techniques, his lab explores the "microbes that matter" to connect these novel microorganisms with the important roles that they play in their communities. His passion for microbiology and its communication has resulted in authorship of a microbiology textbook, multiple teaching awards, and service as Chief Editor for The ISME Journal.


O'BRIEN, Kelly – Department of Physical Therapy, University of Toronto

Kelly O'Brien is a Canada Research Chair in Episodic Disability and Rehabilitation and Associate Professor in the Department of Physical Therapy, University of Toronto. Using HIV as an exemplar, the goal of her research is to characterize the episodic nature of disability experienced by adults aging with chronic disease and evaluate the translation of novel rehabilitation interventions to advance practice, programs, and policy. Kelly also co-founded the Canada-International HIV and Rehabilitation Research Collaborative.


ORJI, Rita – Department of Computer Science, Dalhousie University

Rita Orji is an internationally recognized expert in Persuasive Technology and Behaviour Change Systems. Her innovative and award-winning work on Personalizing Persuasive Technology and Behaviour Change Systems contribute significantly to advancing the field. Her transformative interdisciplinary work at the intersection of technology and human behaviour explores how interactive systems can be designed to assist, empower, and motivate people for actions and causes that are beneficial for them and their communities. She applies her research to tackle real-life problems in various domains including improving a wide range of health and wellness objectives, promoting safety, security, and environmental sustainability.


PENNYCOOK, Gordon – Department of Psychology, University of Regina

Gordon Pennycook is an award-winning expert on the psychology of reasoning and decision-making. His research focuses on the deep cognitive roots of our beliefs and behaviours. His work has helped improve our understanding of things as diverse as why people hold religious beliefs, to the nature of human creativity, to the sharing of misinformation on social media, to why people reject science and are hesitant to get vaccinations, among others.


ROCHMAN, Chelsea – Department of Ecology & Evolutionary Biology, University of Toronto

Chelsea Rochman is a pioneering researcher on the topic of microplastic pollution. She has published dozens of scientific papers in respected journals and has led international working groups about the sources, sinks and ecological implications of plastic debris in the environment. Chelsea also works to translate her science beyond academia. For example, Chelsea presented her work to the United Nations General Assembly, the US State Department, and to the Canadian Council of Ministers of the Environment. Moreover, she co-founded a community outreach organization called the U of T Trash Team.


SAMESHIMA, Pauline – Faculty of Education, Lakehead University

Pauline Sameshima pioneered Parallaxic Praxis, an award-winning interdisciplinary multimodal research methodology. She has been internationally recognized for her innovative work in curriculum theory, poetic inquiry, teaching, research dissemination and civic engagement development. She is Canada Research Chair in Arts Integrated Studies (2012-2022) and Editor-in-Chief of the *Journal of the Canadian Association for Curriculum Studies*.


SAYED, Asma – Department of English, Kwantlen Polytechnic University

Asma Sayed is a Tier II Canada Research Chair (2020-24) in South Asian Literary and Cultural Studies at Kwantlen Polytechnic University. She is an internationally recognized scholar and public intellectual known for her ground-breaking research on heritage language literature in Canada; her interdisciplinary, transnational approach to cultural production; and her engagement with issues of equity, diversity and inclusion. Her current research focuses on the contributions of South Asian Canadian artists.


STRACK, Maria – Department of Geography and Environmental Management, University of Waterloo

Maria Strack, Canada Research Chair in Ecosystems and Climate, leads an internationally recognized research program investigating greenhouse gas exchange in peatland ecosystems - the world's largest natural terrestrial carbon stores. This work includes participation in some of the first peatland reclamation projects in Alberta's oil sands. She works closely with industry, government and non-governmental organizations to translate her findings into improved land management in the face of climate change.



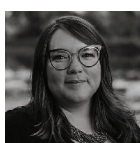
SUN, Shuhui – Énergie Matériaux Télécommunications Research Centre, Institut national de la recherche scientifique

Shuhui Sun is a full professor of Energy Materials and Telecommunications centre at INRS. He has made outstanding contributions to the development of advanced nanomaterials for next-generation fuel cell, battery and hydrogen production technologies. He authored more than 190 publications with over 12,000 citations and holds two patents. He serves as the Executive Editor-in-Chief of *Electrochemical Energy Reviews* (Springer-Nature), and editorial board member of 8 journals. He has established a world-class research laboratory and is a leader in his field, with a strong reputation, both nationally and internationally, for outstanding research, scholarship, and mentoring.



TENKORANG, Eric Y. – Department of Sociology, Memorial University of Newfoundland

Eric Y. Tenkorang is a Sociologist at Memorial University and a distinguished Africanist scholar whose work on HIV/AIDS and Gender-Based Violence is trailblazing. His research has highlighted the vulnerabilities of marginalized populations to HIV risks and violence in sub-Saharan Africa, offering innovative solutions to both academics and policy makers to initiate change. As a leading expert in his field, Dr. Tenkorang's scholarship has impacted local and global communities.



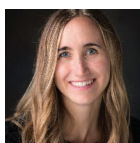
TODD, Zoe – Department of Sociology and Anthropology, Carleton University

Zoe Todd is a transdisciplinary scholar whose work engages science, art, social sciences, and Indigenous knowledge to tackle the diverse, interconnected challenges of protecting fish in rapidly changing watersheds and landscapes across the prairies. Through engagements with Indigenous environmental studies, she is helping to build Indigenous science studies in Canada. Her work focuses explicitly on applying Métis philosophy, art, and law to re-assert reciprocal relations with fish, water, and aquatic species.



URQUIA, Marcelo – Rady Faculty of Health Sciences, University of Manitoba

Marcelo Urquia holds a Canada Research Chair in Applied Population Health. He is internationally recognized for his contributions to the reproductive health and the social determinants of health of immigrant families and ethnic minorities. His innovative research uses large linked multi-sectoral databases at the population level. His current work with immigrant communities focuses on the health consequences of female discrimination and child marriage.



VILJOEN, Jodi – Department of Psychology, Simon Fraser University

Jodi Viljoen is a leading researcher in the area of youth violence and offending. Her research has created new avenues by which to assess and treat adolescents in the justice system, particularly adolescents at risk of engaging in violence. She has developed research-supported assessment and treatment-planning approaches that have been adopted in many countries. Her research has helped guide youth justice system reforms.



WELDEMICHAEL, Awet – Department of History, Queen's University

Awet Weldemichael is a scholar of Northeast Africa and island Southeast Asia with a focus on contemporary history and political economy. He is a former refugee goatherd turned professor and award-winning author of several books. Ranging from 20th century colonialism to 21st century maritime piracy, his multidisciplinary scholarship challenges conventional wisdom by amplifying the voices of the unheard, the weak, and the unrepresented.



WINSTANLEY, Catharine – Department of Psychology, The University of British Columbia

Catharine Winstanley explores the neurobiology underlying impulsivity and decision making, in order to improve treatments for addiction and compulsive disorders. Her work shows that pairing wins with casino-inspired sounds and lights during gambling simulations increases risky choice in rats and humans, and also alters the sensitivity of the dopamine system. This research may help explain why electronic gambling games are so addictive, and why drug and gambling addictions often co-occur.

2020 MEDAL & AWARD WINNERS

LORNE PIERCE MEDAL

**BIRON, Michel – McGill University**

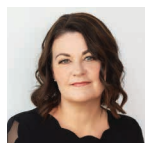
Michel Biron is an internationally recognized expert in the history of Quebec literature. He has co-authored, with François Dumont (Université Laval) and Élisabeth Nardout-Lafarge (Université de Montréal), *Histoire de la littérature québécoise* (2007), which is currently regarded as one of the most important reference books on the subject. His works *L'Absence du maître* (2000) and *La Conscience du désert* (2010) have played a major role in the renewal of Quebec studies.

URSULA FRANKLIN AWARD IN GENDER STUDIES

**BOON, Sonja – Memorial University of Newfoundland**

An inter- and multidisciplinary, Sonja Boon focuses on gender, identity, and embodiment. Her several books have contributed substantively to a broad range of disciplines, as well as to non-specialist audiences around the globe. Currently her work brings gender, race, bodies and colonial encounters into conversation with weather, erosion and water, offering significant contributions to understanding the ways that gender interacts with social, cultural, political, natural and built environments.

BANCROFT AWARD

**CREED, Irena – University of Saskatchewan**

Irena Creed is an internationally recognized scientist whose work has led to a deeper understanding of global climate change and pollution effects on watershed functions and services they provide such as drinking water. Integrating hydrology, biogeochemistry, and ecology, she has transformed understanding of how water controls the alternative fates of nutrients as a greenhouse gas or as a trigger for algal blooms. She has translated her science into policy and practice, both within Canada and internationally.

MIROSLAW ROMANOWSKI MEDAL

**DALAI, Ajay – University of Saskatchewan**

Ajay Dalai is Canada Research Chair in Bioenergy and Environmentally Chemical Processing and a leading international expert on renewable energy, heavy oil and gas processing and catalytic reaction engineering. His innovative research has resulted in numerous publications and patents for processes and catalysts he has developed and had significant impact on the Canadian petroleum and bioenergy industry. Professor Dalai is a Fulbright Fellow (2012).

RUTHERFORD MEMORIAL MEDAL IN PHYSICS

**DILLING, Jens – TRIUMF**

Jens Dilling has made breakthrough discoveries in the field of experimental nuclear physics studying the fine details of the interactions of the atomic building blocks, the nucleons. He developed and built a mass spectrometer that is the fastest and one of the most precise in the world for studies of some of the shortest-lived isotopes produced with accelerators. Using mass spectrometry of unprecedented precision in tandem with the Einstein equivalent principle of energy and mass ($E=mc^2$), Prof. Dilling has identified and probed novel mechanisms in the dynamics that hold atoms together, elucidating the inner workings of matter and broadening our understanding of nuclear physics.

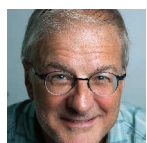
JOHN L. SYNGE AWARD



GENEST, Christian – McGill University

Christian Genest, FRSC, is a world-renowned statistician whose seminal work in copula modeling, extreme-value theory, and collaborative decision-making led to a transformative understanding of the impact of dependence in risk assessment. He designed multivariate data analysis and nonparametric inference methods which improved risk management practices in insurance, finance, hydrology and other fields. His contributions have earned him several awards, including a research prize from the Alexander von Humboldt Foundation.

J.B. TYRRELL MEDAL



GREER, Allan – McGill University

Allan Greer is an international leader in the study of the early centuries of Canada's history. His work bridges the gap between English- and French-language approaches to the past, while examining Canadian history within a larger hemispheric context, and drawing deeply on the insights of other fields, such as anthropology and sociology. His books have won numerous national and international prizes. A Killam and a Guggenheim fellow, Greer has been a resident at both Cambridge University and the Institut d'études avancées in Paris.

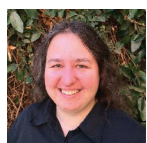
ALICE WILSON AWARD (NSERC)



IVY, Catherine – Western University

Catherine Ivy is an enthusiastic researcher studying respiratory biology and oxygen sensing in high-altitude environments. Her doctoral studies at McMaster University focused on identifying respiratory adaptations in high-altitude deer mice and the genetic factors underlying their respiratory phenotype. As a postdoctoral fellow at Western University, she will be using innovative techniques to investigate the mechanisms responsible for the high-altitude migration of shorebirds and songbirds.

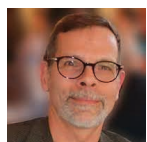
RUTHERFORD MEMORIAL MEDAL IN CHEMISTRY



JOHNSON, Erin – Dalhousie University

Erin Johnson is a world leader in the theoretical modeling of London dispersion, the weakest intermolecular interaction. Her work has enabled extension of density-functional theory from intramolecular to intermolecular chemistry, with a particular focus on solid-state materials. Johnson received the World Association of Theoretical and Computational Chemists' Dirac Medal in 2018 and an NSERC E.W.R. Steacie Memorial Fellowship in 2019.

WILLET G. MILLER MEDAL



MUCCI, Alfonso – McGill University

Alfonso Mucci is an internationally renowned geochemist who has made numerous contributions in geochemistry and biogeochemistry. He has revolutionized the application of spectroscopy in understanding crystal growth mechanisms in solution, developed models of metal behaviour in marine sediments, documented and identified the causes of bottom-water hypoxia in the St. Lawrence Estuary, a likely trigger to the demise of the Eastern Canada fish stocks, as well as predicted the deep-sea sediment response to the uptake of anthropogenic CO₂ by the oceans.

ALICE WILSON AWARD (CIHR)



SHAPIRO, Gilla – University Health Network

Gilla Shapiro's innovative research lies in the intersection of psychology, health equity, and health policy. During her doctoral studies at McGill University she identified psychosocial and policy factors that influence vaccine uptake. As a postdoctoral fellow at the Princess Margaret Cancer Centre and the University of Toronto, she is exploring the impact of psychosocial factors on end-of-life care. This research will inform the development of supportive interventions and provide evidence that can inform legislation and policy decisions.

WILLET G. MILLER MEDAL**SHERWOOD LOLLAR, Barbara – University of Toronto**

Barbara Sherwood Lollar's discoveries have provided new insights and understanding of how to effectively remediate contaminated water resources, and the role of chemical water-rock reactions sustaining subsurface microbiology deep within the Earth's crust. Her discoveries of the fundamental principles at the intersection of the water cycle and the carbon cycle have implications not only for our understanding of the Earth's habitability, but for the exploration for life elsewhere in the solar system, and for the practical remediation of contaminated environments.

FLAVELLE MEDAL**SOKOLOWSKI, Marla – University of Toronto**

Marla Sokolowski, a University Professor at the University of Toronto, is an award-winning, internationally-renowned behaviour geneticist whose groundbreaking research has permanently changed the way we frame questions about individual differences in behaviour. Her comprehensive, multidisciplinary analyses of gene-environment interactions have been instrumental in refuting longstanding ideas of genetic determinism. Professor Sokolowski's foundational discoveries in the fruit fly and other diverse animal systems—including humans—continue to shape fundamental concepts in behavioural evolution, genetic pleiotropy, and plasticity.

ALICE WILSON AWARD (SSHRC)**SONDARJEE, Maïka – Université de Montréal**

Maïka Sondarjee is a Banting Postdoctoral Fellow in political science at the Université de Montréal. Her research focuses on feminist movements and emancipatory practices of women in the Gujarat (India). She is renowned for her research on feminist development practices and policies. After her postdoctoral research, she will be an assistant professor at the School of International Development and Global Studies at the University of Ottawa.

INNIS GÉRIN MEDAL**TURNER, Nancy – University of Victoria**

Nancy Jean Turner, School of Environmental Studies, University of Victoria, is an internationally acclaimed pioneer in ethnobotany. Her specialty is the study of plants as known and used by Indigenous Peoples; she is the leading expert on the temperate climate ethnobotany of the First Nations in British Columbia. She has contributed to anthropological and archeological knowledge of native culture, medicine, nutrition, technology, language, and classification. Her collaborative work with Indigenous experts and her documentation of the richness and importance of traditional ecological knowledge make significant contributions to environmental planning and management.

McLAUGHLIN MEDAL**YUSUF, Salim – McMaster University**

Salim Yusuf is a leader in the field of cardiology and epidemiology whose research has made a huge impact on our understanding of the treatment of heart disease. He has led many landmark studies which have helped develop better treatment and preventive strategies for patients with cardiovascular disease globally. His pioneering work has been recognized by many awards and prizes, from both national and international organizations.

INSTITUTIONAL MEMBERS

As a member-based organization, the RSC has relied historically on the annual support of individual members elected for their achievements and commitment to contribute to a better future. Since 2004, a membership category for institutions has enabled the RSC to significantly expand its structure as well as its scope of activities. This expansion now includes the RSC College; our fully renovated head offices at Walter House; and a major role with the collaborating academies of the G7 and G20 countries. Today the following organizations are Institutional Members of the Society.



IN MEMORIAM

To view the 2020 "Lives Lived" Publication, please visit our website.

Academy of Arts and Humanities

John Francis Bosher, Elected 1976, Division of Humanities

John Bumsted, Elected 2003, Division of Humanities

Mario Bunge, Elected 1992, Division of Humanities

Ernie Ingles, Elected 2001, Division of Humanities

Benoît Lacroix, Elected 1971, Division des lettres et sciences humaines (Died 2016)

Roland Le Huenen, Elected 2003, Division des lettres et sciences humaines

Daniel David Moses, Elected 2016, Division of Arts

Fernande Saint-Martin, Elected 1982, Division des lettres et sciences humaines (Died 2019)

Curt Wittlin, Elected 1988, Division of Humanities (Died 2019)

Academy of Social Sciences

Jean-Charles Chébat, Elected 1996, Division des sciences sociales (Died 2019)

Jean-Claude Cosset, Elected 2006, Division des sciences sociales (Died 2016)

Louis-Edmond Hamelin, Elected 1962, Division des sciences sociales

Peter Hogg, Elected 1988, Division of Social Sciences

John Loxley, Elected 2005, Division of Social Sciences

Desmond Morton, Elected 1985, Division of Social Sciences (Died 2019)

Marnie Rice, Elected 2003, Division of Social Sciences

Denis Szabo, Elected 1973, Division des sciences sociales (Died 2018)

Paul Yvon Villeneuve, Elected 1996, Division des sciences sociales (Died 2019)

Ellen Wood, Elected 1996, Division of Social Sciences (Died 2016)

Academy of Science

David Lawrence Atherton, Elected 1995, Division of Applied Sciences and Engineering

Thomas Brzustowski, Elected 2001, Division of Applied Sciences and Engineering

Gilles Fontaine, Elected 1992, Division of Mathematical and Physical Sciences (Died 2019)

Lorne Gold, Elected 1979, Division of Earth, Ocean, and Atmospheric Sciences (Died 2019)

Ralph Haas, Elected 2001, Division of Applied Sciences and Engineering

Stanley John Hughes, Elected 1974, Division of Life Sciences (Died 2019)

Kenneth Andrew Kershaw, Elected 1980, Division of Life Sciences (Died 2019)

Paul H. LeBlond, Elected 1982, Division of Earth, Ocean, and Atmospheric Sciences

David MacLennan, Elected 1985, Division of Life Sciences

Gordon Murray MacNabb, Elected 2000, Division of Applied Sciences and Engineering

Larry Milligan, Elected 1989, Division of Life Sciences

Anthony Naldrett, Elected 1980, Division of Earth, Ocean, and Atmospheric Sciences

Marian Packham, Elected 1991, Division of Life Sciences

Frank Plummer, Elected 2006, Division of Life Sciences

John Simpson, Elected 1987, Division of Mathematical and Physical Sciences (Died 2016)

Ross Stewart, Elected 1971, Division of Mathematical and Physical Sciences

Suning Wang, Elected 2015, Division of Mathematical and Physical Sciences

Gerard R. Wyatt, Elected 1981, Division of Life Sciences (Died 2019)

College of New Scholars

Cynthia Ross Friedman, Elected 2014 (Died 2018)

THE FUTURE OF LONG-TERM CARE



Why do we need urgent action to reform and redesign long-term care in Canada?

For 50 years, Canada and many other countries have generated inquiries, panels, task forces, commissioned reports, media reporting and clarion calls for action to reform conditions in nursing homes and create a higher standard of care. We have ample sound evidence produced by social and health scientists globally on how to achieve this.

But Canada is experiencing a far higher proportion of total country COVID-19 deaths in nursing homes than other comparable countries—81% in Canada, compared to 28% in Australia, 31% in the US and 66% in Spain, based on current reports. Many of those older Canadians in nursing homes are dying without family, anxious and afraid, surrounded by people in frightening protective equipment. Why?

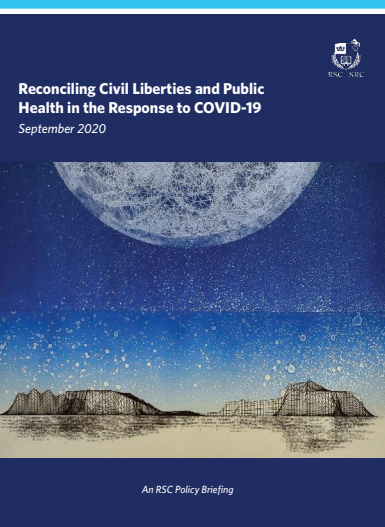
Our long-term care sector, particularly nursing homes, is in crisis now from far more than COVID-19. The pandemic just exposed long-standing, wide-spread and pervasive deficiencies in the sector.

Recommendations

1. The federal government must immediately commission and act on a comprehensive, pan-Canadian, data-based assessment of national standards for necessary staffing and staffing mix in nursing homes. National standards must encompass the care team that is needed to deliver quality care and should be achieved by tying new federal dollars to those national standards.
2. The federal government must establish and implement national standards for nursing homes that ensure (a) training and resources for infectious disease control, including optimal use of personal protective equipment and (b) protocols for expanding staff and restricting visitors during outbreaks.
3. The provincial and territorial governments, with the support of new funding from the federal government, must immediately implement appropriate pay and benefits, including sick leave, for the large and critical unregulated workforce of direct care aides and personal support workers. Appropriate pay and benefits must be permanent and not limited to the timespan of COVID-19. Pay and benefits must be equitable across the country and equitable both across the LTC sector and between the LTC and acute care sectors for regulated and unregulated staff.
4. Provincial and territorial governments must make available full-time employment with benefits to all unregulated staff and regulated nursing staff. They should also evaluate the impact on nursing homes of “one workplace” policies now in effect in many nursing homes and the further impact on adequate care in other LTC setting such as retirement homes, hospitals and home care. Provincial and territorial governments must assess the mechanisms of infection spread from multi-site work practices and implement a robust tracking system.
5. Provincial and territorial governments must establish and implement (a) minimum education standards for the unregulated direct care workforce in nursing homes, (b) continuing education for both the unregulated and regulated direct care workforce in nursing homes and (c) proper training and orientation for anyone assigned to work at nursing homes through external, private staffing agencies.
6. To achieve these education and training objectives, provincial and territorial governments must support educational reforms for specializations in LTC for all providers of direct care in nursing homes, care aides, health and social care professionals, managers and directors of care.

7. Provincial and territorial governments, with the support of federal funds, must provide mental health supports for all nursing home staff. In addition to extraordinarily stressful pandemic working conditions, these staff are experiencing significant deaths among the older adults they have known for months and years, and among colleagues. They are grieving now, and this will continue.
8. Federal support of the LTC sector must be tied to requirements for data collection in all appropriate spheres that are needed to effectively manage and support nursing homes and their staff. Data collected must include resident quality of care, resident quality of life, resident and family experiences, and quality of work life for staff. Data must be collected using validated, appropriate tools, such as tools suitable for residents with moderate to severe dementia. Captured data must address disparities and compounding vulnerabilities among both residents and staff, such as race, ethnicity, language, gender identity, guardianship status, socioeconomic status, religion, physical or intellectual disability status, and trauma history screening.
9. Data collection must be transparent and at arm's length from the LTC sector and governments. Provincial and territorial governments must evaluate and use data to appropriately revisit regulation and accreditation in nursing homes. They must take an evidence-based and balanced approach to mandatory accreditation, as well as to regulation and inspection of nursing homes. They must engage the LTC sector in this process, particularly the people receiving care, their families, managers and care providers.

CIVIL LIBERTIES AND PUBLIC HEALTH



The COVID-19 pandemic has highlighted the challenges governments face in balancing civil liberties against the exigencies of public health amid the chaos of a public health emergency. Current and emerging pandemic response strategies may engage diverse rights grounded in civil liberties, including mobility rights, freedom of assembly, freedom of religion, and the right to liberty and security of the person. As traditionally conceived, the discourses of civil rights and public health rest on opposite assumptions about the burden of proof. In the discourse of civil and political rights of the sort guaranteed under the Canadian Charter of Rights and Freedoms, the onus rests on government to show that any limitation on rights is justified. By contrast, public health discourse centers on the precautionary principle, which holds that intrusive measures may be taken—lockdowns, for example—even in the absence of complete evidence of the benefits of the intervention or of the nature of the risk. In this report, we argue that the two principles are not so oppositional in practice. In testing for proportionality, courts recognize the need to defer to governments on complex policy matters, especially where the interests of vulnerable populations are at stake. For their part, public health experts have incorporated ideas of proportionality in their evolving understanding of the precautionary principle. Synthesizing

these perspectives, we emphasize the importance of policy agility in the COVID-19 response, ensuring that measures taken are continually supported by the best evidence and continually recalibrated to avoid unnecessary interference with civil liberties.

Analysis and Conclusions

First, the *Charter* rights analysis and the precautionary principle in public health have more in common than first meets the eye. Both require governmental decision-makers to adopt means of controlling outbreaks that are least rights-infringing, and to revisit their decisions as new evidence and responses emerge. This is very important, as it means governments and public health officials cannot be complacent. For example, if evidence emerges that COVID-19 can be controlled without restricting movement across provincial borders, or that outbreaks can be contained without strict lockdowns as infection rates fall, then governments must recalibrate their precautionary measures to both protect against the virus and be respectful of civil liberties. At the same time, governments are entitled to take public health objectives seriously. It is evident that the decision to rapidly restore civil liberties in other countries, most notably the US, has actually harmed rights *and* the fight against COVID-19 in the long run, since it has necessitated the re-introduction of restrictive measures as cases re-emerge in even higher numbers than at the outset of the pandemic.

Second, public health officials need to understand that the burden of proof will be upon them in a *Charter* case to justify any rights infringement. They must be able to point to some evidence for their choices. This means staying on top of the evidence and being responsive.

Third, notwithstanding debates about courts' effectiveness in an emergency, it is essential that courts remain capable of hearing challenges to executive and legislative overreach during the pandemic. Majoritarian political processes are not particularly effective at ensuring that differential impacts of policies on vulnerable groups are considered and addressed. Courts play an important role in hearing these types of challenges—it is a core component of their mandate under the *Charter*. While courts at all levels have done a remarkable job of adapting to the new environment—moving a largely paper-based justice system online in a matter of weeks in the midst of a pandemic—they need to continue to prioritize and expedite the hearing of challenges to executive overreach and the constitutionality of legislation while also making progress on cases that were stalled as a result of COVID-19.

Fourth, in a more pragmatic vein, we should acknowledge that sound public health policy will be respectful as possible of civil liberties, not just because that is what the law requires but because that is the best way to get 'buy-in' from the public. By the same token, civil libertarians must be candid about the fact that rights and freedoms have limits—the *Charter* does not commit us to "dying with our rights on" in the face of a deadly pandemic. We advocate

for the continued effort of public health officials to strive for least restrictive measures, protecting public health while ensuring maximum freedom.

Fifth, and relatedly, any assessment of our COVID-19 response must attend to how these laws are enforced on the ground—and specifically, whether marginalized populations are disproportionately burdened, whether through discriminatory enforcement, or the sheer impossibility of complying with regulations that assume individuals can afford protective equipment, and have a home where they can safely shelter. It is unlikely that the courts will be an effective buttress against these concerns, given the cost and the difficulty of proving discriminatory enforcement, and so it will likely fall to civil society to track these issues and press for solutions. At the same time, it is important to recognize that marginalized populations have also been disproportionately affected by the pandemic, with substantially higher mortality rates amongst specific demographic groups. As such, those who argue that their rights are being infringed are creating risks for these vulnerable populations.

In conclusion, rights are not trumps against collective goal of public health; what rights demand of government, instead, is reasoned justification—evidence showing that interferences with civil liberties are proportionate to government aims. In this sense, the vigilant defense of civil liberties can encourage the timely revisiting of precautionary measures—something that has been a challenge in its application to public health. As such, a dynamic, evidence-based policy approach can achieve be fully respectful of both civil liberties and the goals of public health.

SUPPORTING MENTAL HEALTH



The COVID-19 pandemic has had a significant impact on the mental health of the people of Canada. Most have found it challenging to cope with social distancing, isolation, anxiety about infection, financial security and the future and balancing demands of work and home life. For some, especially those who have had to face pre-existing challenges such as structural racism, poverty and discrimination and those with prior mental health problems, the pandemic has been a major impact.

The Policy Briefing Report focuses on the current situation, how the COVID-19 pandemic has exacerbated significant long standing weaknesses in the mental health system, and makes specific recommendations to meet these challenges to improve the well-being of the people of Canada.

The COVID-19 pandemic has had a detrimental effect on mental health of people in Canada but the impact has been variable, impacting those facing pre-existing structural inequities hardest. Those living in poverty, and in some socially stratified groups facing greater economic and social disadvantage, such as some racialized, and some Indigenous groups and those with preexisting mental health problems, have suffered the most. Some

occupational groups have been more exposed to the virus and to psychological stress with the pandemic. The mental health care system was already overextended and under resourced. The pandemic has exacerbated the problems. The care system responded by a massive move to virtual care. The future challenge is for Canada to strengthen our knowledge base in mental health, to learn from the pandemic and provide all in Canada the support they need to fully participate in and contribute to Canada's recovery from the pandemic.

Recommendations

Recommendation 1: That the Federal Government, in conjunction with Provincial and Territorial Governments, increase the funding for mental health services to at least 12% of the health services budget to respond to the longstanding unmet need that has been exacerbated by the COVID-19 pandemic.

Recommendation 2: That the Federal Government, in conjunction with Provincial and Territorial Governments, establish national standards of access and quality of mental health services by the introduction of a Mental Health Parity Act.

Recommendation 3: That the Canadian Institute of Health Information (CIHI) should receive adequate resources to work collaboratively with the provinces and territories, and other stakeholders, to develop an up-to-date national public and private health expenditure series in mental health. CIHI should also accelerate the development of health system performance indicators for mental health (including wait times).

Recommendation 4: That the Federal, Provincial and Territorial Governments fund and develop a program similar to the UK's Improving Access to Psychological Therapies. The program should cover adults, children and youth. Considering the vast geography, consideration should be given to a virtual service.

Recommendation 5: That the self-management portal, Wellness Together Canada <https://ca.portal.gs/>, be rigorously, externally-evaluated and self-management options should be improved.

Recommendation 6: That the Federal Government provide additional long-term funding to the Canadian Institutes of Health Research (CIHR) and to the Social Sciences and Humanities Research Council (SSHRC) and the Natural Sciences and Engineering Council (NSERC) to ensure mental health research funding that is proportionate to mental health's burden of disease, and its impacts on specific communities. Particular attention should be paid to research that can directly improve care and meet the needs of communities that have not been well served.

Recommendation 7: That the Federal Government work closely with Indigenous governance structures to find exemplar Indigenous communities, Indigenous-specific programs, and Indigenous-governed organizations that are leading the way in mental health and in Indigenous communities. These culturally- and contextually-appropriate services need to be funded for expansion to other communities.

Recommendation 8: That in consultation with First Nations, Metis, and Inuit communities, the federal, provincial, and territorial governments implement solutions to remedy the across the board public services inequities and structural discrimination that contributes to over-represented rates of mental illness.

Recommendation 9: That the Federal Government facilitate and resource connected and holistic approaches to mental health care, inclusive of child welfare, housing/social services, education, justice, and other overlapping domains that often exist in silos and are sometimes at odds in terms of approach.

Recommendation 10: That the Federal Government, in conjunction with Provincial and Territorial Governments, track digital health equity and improve funding and infrastructure to create virtually connected communities.

Recommendation 11: That the Federal, Provincial and Territorial Governments ensure that systems, including technology, records, professional licensure and funding are harmonized and interoperable to support integration across points of care and across the health system in Canada.

Recommendation 12: That the Provincial and Territorial governments develop stable funding models for virtual mental health care with remuneration aligned to in-person care, including funding for collaborative, indirect care and intervention models that employ peers and paraprofessionals.

Recommendation 13: That training in the implementation of virtual care become standard for all mental health professionals in their education and via continuing education.

Recommendation 14: That the Federal Government undertake a National Task Force on the prevention of mental illness and the promotion of mental health and wellness with special reference to pandemics and similar national emergencies.

Recommendation 15: That Provinces and Territories should attempt to keep children in school and carefully weigh the cost/benefit ratio of closing schools in the event of another wave of COVID-19.

Recommendation 16: That the Federal, Provincial and Territorial Governments adequately fund efforts to minimize viral transmission within schools to reduce the chances that children will become ill and/or spread the virus to their teachers, school support staff, and family members.

Recommendation 17: That, should schools need to close again due to second or more wave(s) of the virus, parents be better supported in the education of their children at home. This includes supporting the increased mental health service needs of parents during mandatory homeschooling.

Recommendation 18: That if schools close again, Provincial and Territorial governments have mental health and substance use supports ready to stabilize family wellbeing using the vehicles used to deliver school curriculum to families.

Recommendation 19: That Provinces should attempt to keep high risk families of vulnerable neonates together and carefully weigh the cost/benefit ratio of restricting family presence during neonatal intensive care admission in the event of another wave of COVID-19.

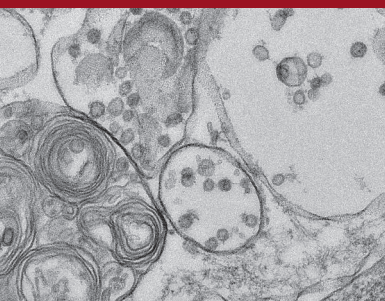
Recommendation 20: That the Provincial and Federal Governments adequately fund efforts to determine the impact of family presence restriction on family and infant mental wellbeing and health outcomes.

Recommendation 21: That if hospital family restrictions are implemented again, Provincial governments have mental health supports ready to stabilize family wellbeing using virtual care delivery similar to school curriculum to families.

OPEN DRUG DISCOVERY



Open Drug Discovery of Anti-Virals Critical
for Canada's Pandemic Strategy
October 2020



An RSC Policy Briefing

Canada needs a proactive innovation strategy to address current COVID-19 needs and to anticipate future pandemics. Canada and governments around the world made a tactical error in failing to build public capacity to develop novel anti-virals, preferring instead to hand off drug discovery and development to the private sector. In contrast, open science can support mission-oriented research and development (R&D), as well as commercialization. Open science shares skills and resources across sectors; avoids duplication; and provides the basis for rapid and effective validation due to full transparency. It is a strategy that can adjust quickly to reflect changing incentives and priorities, because it does not rely on any one actor or sector. While eschewing patents, it can ensure high quality drugs, low pricing and access through existing regulatory mechanisms. Open science practices and partnerships decrease transaction costs, increase diversity of actors, reduce overall costs, open new, higher-risk/higher-impact approaches to research and provide entrepreneurs freedom to operate and freedom to innovate. We argue that it is time to re-open science, not only in its now restricted arena of fundamental research, but throughout clinical translation. Our model and attendant recommendations map onto a strategy to accelerate discovery of novel broad-spectrum anti-viral drugs and clinical trials of those

drugs, from first-in-human safety-focused trials to late stage trials for efficacy. The goal is to ensure low-cost and rapid access, globally, and to ensure that Canadians do not pay a premium for drugs developed from Canadian science.

Recommendations

1. In addition to the Public Health Agency of Canada (PHAC) and financial support to individuals and firms, Canada ought to build a third pillar to its pandemic responsiveness: a flexible, open and stable non-profit, virtual drug discovery entity that coordinates and invests in a pipeline for the proactive development of anti-viral drugs (and possibly vaccines) for viruses with pandemic potential.
2. The independent, non-profit should be provided with long-term, stable funding to insulate it from day-to-day politics. The non-profit will inevitably invest in anti-virals and other interventions that fail, as failure is part of innovation. Tolerance for failure requires an arms-length entity (Kenney and Patton, 2009).
3. The non-profit and Canada's pandemic innovation preparedness ought to be embedded in an international, open, effort to coordinate R&D of new products, such as the international environments in which the SGC and DNDi operate. The broader the collaborative network, the more efficient the discovery efforts will be. By participating in R&D international efforts, Canada increases its ability to access and to afford interventions developed elsewhere.
4. To establish an equilibrium between open and proprietary R&D for drug discovery, funding councils and other funding bodies ought to establish specific open science calls, with significant funding, for those research projects that agree, upfront, to the following: 1) open and free availability to all data on an ongoing basis during the research endeavour; 2) publication in a journal complying with FAIR principles; 3) no patenting on any research results, even if achieved through collaboration with outside partners. Such funding should include support for data standardization, entry, etc.
5. Governments, granting councils and philanthropies ought to establish funding to collect data on and analyse open science partnerships both in Canada and internationally to assess their impact, costs and barriers to use. This will require data infrastructure, such as Canada's New Digital Research Infrastructure Organization, which should provide data storage and collection for open data, develop and maintain open data storage standards and requirements, establish rules and norms around data use (including privacy and security), and provide financial support for data entry.
6. All government or quasi-government grants or contracts supporting pandemic-related research ought to impose requirement of no patenting of research results and rapid dissemination of data and results in accordance with FAIR principles.

7. Philanthropies ought to prioritize pandemic-related research projects that are open and eschew patents.
8. Canada ought to take a leadership role in advancing open science partnerships that comply with best practices recommended by international governmental bodies, such as the World Intellectual Property Office (WIPO), the World Health Organization (WHO), and the Organization for Economic Co-operation and Development (OECD).
9. Canada ought to lead the world in open science policymaking, for example, by supporting Health Canada (and/or other regulators) to implement regulatory mechanisms that encourage open science drug development. Regulations might extend data protection periods for authorized products where the sponsor has made its preclinical and clinical trial data openly accessible to the research community, has not filed restrictive patents, and has agreed to make its product broadly accessible at affordable pricing.

FEDERAL BASIC INCOME



COVID-19 has shone a harsh light on the extent of poverty in Canada. The arrival of the pandemic in Canada affected the health of the population and made unprecedented demands on the healthcare system across Canada. The greatest impact fell on expressly vulnerable populations in long term healthcare facilities, amongst migrant guest worker clusters and in areas of more intense concentrations of large urban populations. That these Canadians were living in low-income, high-density areas of larger communities where space and self-isolation were more difficult, contributed to their enhanced infection rate. Their diminished health prospects affect their families, neighbourhoods, and resistance to any infection, let alone an infection as potentially life threatening as the COVID-19 Coronavirus.

When normal economic activity was interrupted by the exigencies of public health driven lockdowns, the shutdown disproportionately affected people who, before the pandemic, were living on incomes beneath the poverty line, or dependent upon low paying hourly remunerated jobs, usually part time and without appropriate benefits. Those living beneath the poverty line in Canada, three million of welfare poor and working poor,

include a disproportionately large population of Black and Indigenous people and people of colour.

This paper addresses the challenge of inclusive economic recovery considering:

- why poverty must now be effectively addressed within any coherent and inclusive economic and health strategy
- the weakness of income security frameworks as they existed before the onslaught of the pandemic.
- empirical evidence indicating more effective ways of reducing poverty
- a rational and pragmatic implementation plan for substantial poverty eradication

Recommendations

It is the authors' recommendation that, rather than an endless federal-provincial negotiation of how best to proceed, the federal government should announce its intention to:

- Introduce a Basic Income Guarantee close to the Market Basket Measure, paid monthly, to residents of Canada between the ages of 18 and 64;
- Design the Basic Income Guarantee so that those with no income would receive the full benefit, but those with other sources of income would receive a benefit reduced by a proportion of their other income;
- Deliver the benefit using the same set of on-line accounts supplemented with direct access for those without on-line accounts as was used to deliver the CERB;
- Allow the benefit to vary monthly in response to changing needs.

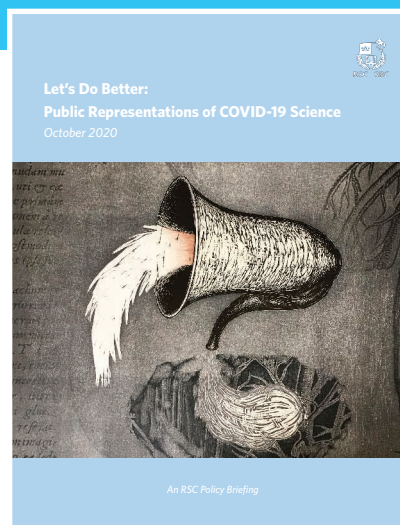
REPRESENTATIONS OF SCIENCE

COVID science is being both done and circulated at a furious pace. While it is inspiring to see the research community responding so vigorously to the pandemic crisis, all this activity has also created a churning sea of bad data, conflicting results, and exaggerated headlines. With representations of science becoming increasingly polarized, twisted and hyped, there is growing concern that the relevant science is being represented to the public in a manner that may cause confusion, inappropriate expectations, and the erosion of public trust. Here we explore some of the key issues associated with the representations of science in the context of the COVID-19 pandemic. Many of these issues are not new. But the COVID-19 pandemic has placed a spotlight on the biomedical research process and amplified the adverse ramifications of poor public communication. We need to do better. As such, we conclude with ten recommendations aimed at key actors involved in the communication of COVID-19 science, including government, funders, universities, publishers, media and the research communities.

Recommendations

We offer broad recommendations that we believe will have relevance beyond this pandemic.

- 1) *The research community—including funding agencies, research institutions, ethics review boards, researchers, and publishers—should prioritize and defend the integrity of the research process. Federal, provincial and institutional research funding agencies, as well as research institutions, should consider how their criteria, incentives and evaluation processes might influence how science is framed and communicated to the public.*
- 2) *Researchers should present their work throughout the knowledge creation and translation process in a manner that is measured, positions their conclusions in the context of the broader evidence base, and considers the limitations, strengths and weaknesses of the utilized methodologies. Relevant scientific organizations should consider embracing this recommendation as an obligation.*
- 3) *Measured and accurate public representations of science are facilitated by transparency about the evidence, data and methods. This requires researchers to deposit data and results, especially of clinical trials, in appropriate publicly accessible repositories (e.g., clinicaltrials.gov).*
- 4) *Researchers should monitor how their work (and work relevant to their area of expertise) is represented in the public sphere and, when appropriate, correct public misrepresentation using a range of mediums, including various social media platforms. Researchers should be supported, recognized and incentivized for these kinds of public engagement activities. And, when needed, have access to appropriate training.*
- 5) *The standard of peer review should remain high regardless of external pressures for speed. The research community—such as entities like the CIHR, NSERC, SSHRC, the Council of Canadian Academies, etc.—should work closely with academic publishers to develop strategies to handle peer review during times of crisis. This should be done in a manner that considers ways to improve the sustainability of the peer review process, which currently relies on the academics to volunteer time.*
- 6) *Great care should be taken in how research results that haven't been peer reviewed—such as preprints—are represented in the public domain, including emphasizing the preliminary nature of conclusions. Further consideration—by research funding entities, universities, academic journals, scientific associations, etc.—about the place of preprints and how to counter their possible harm on public discourse is required.*
- 7) *When issuing press releases or producing publications for the general public, research institutions and individual researchers should not exaggerate the benefits or implications of research, including clinical trials; should put the work in the context of available and accessible evidence, including clinical trial results; and note the limitations of the utilized methodologies. As part of the communication process, researchers and research institutions should consider creating summaries that are accessible to both the general public and audiences/communities for which the results of the research may be most relevant.*



8) *Public institutions—such as public health authorities and provincial and federal regulatory bodies—should be transparent about the evidence (and other considerations) used to inform decisions, including an honest assessment of the current state of knowledge and changing nature of science in uncertain times. Public institutions should also avoid dogmatism and be free from political interference in the interpretation and representation of science.*

9) *The news media (and popular press more broadly) should strive to represent science in as accurate and informative a manner as possible, including not hyping significance of results or the timeframe of translation and not extrapolating the results inappropriately beyond the scope of the study. Journalists should also place research in the context of the existing body of evidence and recognize, inter alia, the limits of particular methods and the limited scientific relevance of anecdotes, testimonials and of a single study.*

10) *Researchers and science communicators must be mindful of the potential of research to be interpreted in a manner that harms individuals, communities, or populations, for example, through shaming, stigma or racism. Communications should be undertaken in partnership with research participants, with their voices included throughout the research process.*

TASK FORCE ON COVID-19



Tom Marrie's research focused on community acquired pneumonia including epidemiology and pathways of care.



Sean Caulfield was named a Canada Research Chair in Fine Arts (Tier 2) from 2000-2010, and is a Centennial Professor in the Department of Art and Design at the University of Alberta, living and working in Treaty Six territory.



Victoria Esses's research focuses on immigration policy and practice, including public attitudes toward immigration and cultural diversity.



Colleen Flood's research interests are focused on the role of law in shaping health and health care systems and the appropriate roles for the public and private sectors.



Esyllt Jones is a historian of health, disease, and social movements, with expertise in the social history of influenza and the impact of the 1918-1920 pandemic.



Patrick McGrath's research focuses on the development, evaluation and implementation of e-health systems.



Sharon Straus's research focuses on advancing the science and practice of using research in clinical and policy decision making to improve patient care and strengthen our health system.



Tracy Vaillancourt's research focuses on the long-term effects of bullying on mental health and academic achievement.



Janet Werker's research focuses on the foundations of monolingual and bilingual language acquisition in infancy. In collaboration, she is now relating early foundations to later language and literacy.

Tania Bubela's research focuses on legal and social implications of novel health biotechnologies, including collective action and government challenges for data and biomaterials sharing.



Tim Caulfield's research focuses on health and science policy on a range of topics including stem cell research, genetics, public health, vaccinations, and public representations of science.



Fay Faraday's research examines law and power in intersecting dynamics of discrimination and systemic social and economic marginalization.



Carl James's research focuses on how legislation, policies, programs and practices inform societal and institutional cultures, and shape the educational, employment and social opportunities and outcomes of racialized Canadians.



Christopher McCabe's research focuses on the role of value and values in delivering efficient and financially sustainable population health care systems.



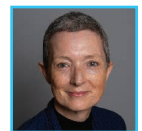
Chantelle Richmond's research is based on a community-centred model of research that explores the intersection of Indigenous people's health and knowledge systems.



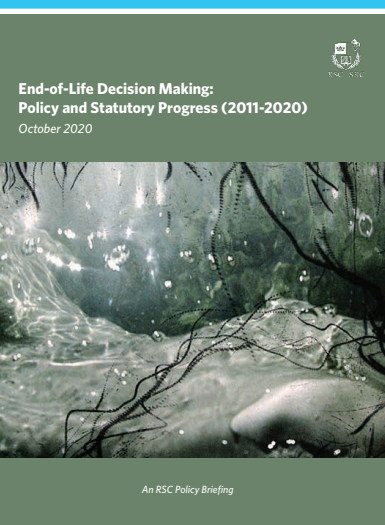
Jeffrey Turnbull's area of interest are the health effects of poverty. As Medical Director of Ottawa Inner City Health, he has worked with the homeless for 20 years in providing innovative care.



Julia Wright's research focuses on discussions of nationalism, governance, and identity in early nineteenth-century literature, including literary appropriations of medical discourse.



END-OF-LIFE DECISION MAKING



In 2009, the Royal Society of Canada (RSC) identified a series of urgent scientific and public policy questions. It established a series of five Expert Panels to study the issues and provide recommendations for next steps. It is now timely to revisit the findings of these Expert Panel Reports. What impact have they had? Have their recommendations been implemented? What are the next steps in terms of policy options?

To answer these questions, the RSC is establishing Policy Briefing Committees (PBC) to:

- describe the context, findings, and recommendations of the report;
- track policy developments in relation to the panel's findings and recommendations;
- identify future policy challenges and implementation options.

An important distinction from the work of each original expert panel is that the PBCs will not undertake reviews of the scientific literature, but instead focus on matters with respect to findings and recommendations issued by the reports and subsequent public policy developments.

This Policy Briefing Committee Report examines policy and statutory developments since publication of the RSC's 2011 Expert Panel Report on End-of-Life Decision Making.

Members of the Policy Briefing Committee on End-of-Life Decision Making:

Jocelyn Downie, FRSC, Dalhousie Health Law Institute, Faculty of Law, Dalhousie University

Mona Gupta, Centre l'Hospitalier de l'Université de Montréal, Département de Psychiatrie et d'Addictologie, l'Université de Montréal

L. Wayne Sumner, FRSC (Chair), Department of Philosophy, University of Toronto

Joshua Wales, Temmy Latner Centre for Palliative Care, Mount Sinai Hospital, Department of Family and Community Medicine, University of Toronto

Overarching Findings of the 2011 Expert Panel

- Clarification is needed of the legal, ethical, and clinical status of withholding and withdrawing potentially life-sustaining treatment, especially where mature minors are concerned, and where treatment is withheld or withdrawn unilaterally by physicians.
- Research, education, and governmental resources are needed to facilitate advance care planning (including advance directives) by members of the public.
- Initiatives are needed to ensure better access to palliative care and to expand palliative care beyond cancer care to other areas of need.
- Legal guidelines and educational programs are needed regarding the administration of potentially life-shortening symptom relief.
- Legal clarification, clinical guidelines, and public education are needed regarding the practice of terminal sedation.
- Canada should have a permissive yet carefully regulated and monitored system with respect to the provision of assisted suicide and voluntary euthanasia.

Impact of the 2011 Expert Panel Report

- The Report has been cited numerous times in the scholarly end-of-life literature, in policy documents, and in the media.
- The Report was cited by the trial judge in *Carter v Canada (Attorney General)*, the case that led to the legalization of Medical Assistance in Dying (MAiD) in Canada.

- There have been many subsequent developments in end-of-life policy and law in Canada that align with the Report's recommendations.

Policy and Statutory Developments since the 2011 Expert Panel Report

Good progress:

- Research on advance care planning
- Resources to facilitate advance care planning
- Legalization of MAiD through Bill 52 (Quebec) and Bill C-14 (federal Parliament)

Moderate progress:

- Efforts to expand access to palliative care

Limited progress:

- Some attempts to clarify the legal status of withholding and withdrawal of potentially life-sustaining treatment, the mature minor rule for end-of-life decision-making, and unilateral withholding and withdrawal of potentially life-sustaining treatment
- No attempts by governments, prosecutors, or regulators to clarify the legal status of terminal sedation, except in Quebec

No progress:

- No guidelines or educational initiatives regarding potentially life-shortening symptom relief

Tracking Policy and Statutory Progress Since 2011

Expert panel recommendations on withholding and withdrawal of potentially life-sustaining treatment

Limited progress:

There has been no clarification of the legal status of withholding and withdrawal of potentially life-sustaining treatment by statutory amendment or by prosecutorial guidelines. However, the need for such clarification is now arguably less pressing due to statements made by the courts and by the federal Justice Department counsel. Legislators and government departments did not address the need for clarification with respect to the mature minor rule for end-of-life decision making. However, other organizations have offered clarifications for their members, clients, or communities. There remains a need to resolve the differential treatment of MAiD for mature minors and other health care decision making (including decisions with the consequence of ending life) for mature minors. The Expert Panel's concerns about the confusion, conflict, and controversy surrounding unilateral withholding and withdrawal of potentially life-sustaining treatment remain valid and inadequately addressed.

Expert Panel Recommendations on Advance Directives

Good progress:

More research has been conducted into advance care planning and efforts have been made by both governmental and non-governmental actors to develop resources to foster such planning.

Expert Panel Recommendations on Palliative Care

Moderate progress:

Progress has been made by governments, health care institutions, and health care providers toward ensuring that high quality palliative care is accessible to individuals that need and want it, including expanding palliative care beyond cancer.

Expert Panel Recommendations on Potentially Life-Shortening Symptom Relief

No progress:

The concerns that motivated the Expert Panel's recommendations regarding potentially life-shortening symptom relief remain valid and have not yet been addressed.

Expert Panel Recommendations on Terminal Sedation

Limited progress:

The concerns identified in the Expert Panel Report remain valid and have not yet been addressed anywhere other than in Quebec (and, even in Quebec, only for a subset of the types of sedation identified in the Report).

Expert Panel Recommendations on Assisted Suicide and Voluntary Euthanasia

Good progress:

MAiD has been legalized in Canada, under carefully circumscribed circumstances, first by statute in Quebec (Bill 52) and then by amendments to the *Criminal Code* (Bill C-14). However, many of the concerns identified by the Expert Panel remain valid:

- Exclusion of persons not at the "end of life" (Quebec) or whose natural death is not "reasonably foreseeable" (*Criminal Code*);
- No provision for advance requests;
- Exclusion of mature minors;
- 10-day waiting period.

The federal government took further steps toward bringing the law closer to the Expert Panel recommendations in Bill C-7. If passed as introduced, it would allow for advance requests for MAiD by persons who have been assessed and found eligible where their natural death has become reasonably foreseeable and would eliminate the waiting period for such persons. However, other significant inconsistencies with the Expert Panel recommendations would still remain, especially the exclusion of mature minors. There is also an explicit exclusion of persons with mental illness from the eligibility criterion of serious and incurable illness. Furthermore, Bill C-7 stipulates a 90-day waiting period for those whose natural death has not become reasonably foreseeable. There also remains a need for a national oversight commission to monitor and report annually and publicly on MAiD in Canada. The federal government has undertaken to study the issues of advance requests and mature minors further in its five-year review of the legislation.

Ongoing Policy and Statutory Challenges

Withholding and withdrawal of potentially life-sustaining treatment

Meeting the Expert Panel recommendations would require the following steps:

- provision of a statutory clarification by all provincial/territorial governments that do not currently provide clarity with respect to consent and mature minors;
- the federal government making a choice between permitting MAiD for mature minors (through amendments to the *Criminal Code*) and justifying treating decision making about MAiD differently than other health care decision making (including decisions with the consequence of ending life) for mature minors;
- provincial/territorial governments clarifying when, if ever, health care professionals have the legal authority to unilaterally withhold or withdraw potentially life-sustaining treatment;
- health care professional regulators (other than Manitoba, Ontario, and Quebec) amending their policies to make it clear when, if ever, health care professionals have the legal authority to unilaterally withhold or withdraw potentially life-sustaining treatment;
- health care regulators providing clinicians with more guidance in this area;
- health care professional educational institutions providing education to trainees and practitioners in this area.

Palliative care

Efforts are still needed to ensure that high quality palliative care is accessible to individuals who need and want it and that palliative care continues to be expanded beyond cancer.

Potentially life-shortening symptom relief

Efforts are still needed to clarify the legal and clinical status of the use of potentially life-shortening symptom relief for individuals who are experiencing enduring, intolerable, and irremediable suffering but are not eligible for MAiD.

Terminal sedation

To meet the Expert Panel recommendations the federal government would need to revise the *Criminal Code* to make it clear that palliative sedation in circumstances where it *will* hasten death is MAiD for the purposes of the *Criminal Code*, and is subject to the same procedural conditions and requirements as other forms of MAiD, and that palliative sedation in circumstances where it only *may* hasten death is not MAiD for the purposes of the *Criminal Code*.

The ongoing areas of concern—which include differences in clinical and legal definitions of palliative sedation, lack of data concerning its incidence and prevalence, as well as the ambiguities concerning what does and does not hasten death—indicate the need for collaboration between government, legal bodies, health care professional regulators, and clinicians in establishing legal and clinical standards that are clear to patients, clinicians, and the courts.

Assisted suicide and voluntary euthanasia (now known as MAiD)

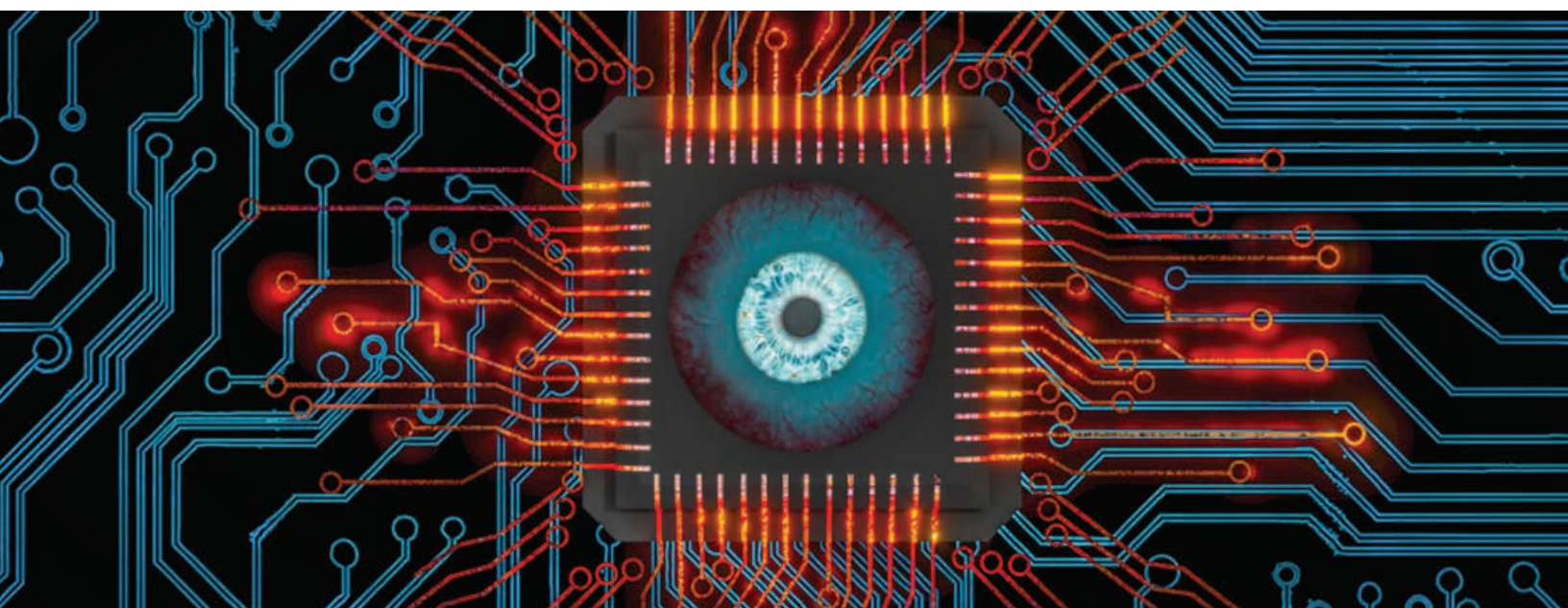
Meeting the Expert Panel recommendations would require the following steps:

- the federal Parliament amending the *Criminal Code* and the Quebec National Assembly amending their *Act respecting end of life care* to permit respecting requests for MAiD made while capable but in advance of loss of capacity;
- the federal Parliament and Quebec National Assembly each amending their legislation to allow mature minors to access MAiD;
- the federal Parliament *not* amending the MAiD legislation to exclude all persons with mental illness as their serious and incurable illness, disease, or disability;
- the federal Parliament amending the MAiD legislation to remove the 10-day waiting period for all and *not*, as proposed, adding a 90-day waiting period for patients whose natural death is not reasonably foreseeable;
- the Colleges of Physicians and Surgeons and Colleges of Nurses that have not already done so including a duty of effective referral or transfer of care in their professional standards;
- the federal Parliament establishing a national oversight commission to monitor MAiD requests, work collaboratively with the Quebec's End of Life Care Commission and report annually and publicly on MAiD in Canada.

INFOVEILLANCE

The RSC contributes to a better future by mobilizing its uniquely multidisciplinary and multigenerational membership to address broad societal issues confronting Canada and the world. To this end the Committee on Public Engagement has established a working group to consider the implications of surveillance, data, privacy and equality.

The working group has begun work in analyzing a transition from individualistic notions of 'privacy protection' to the arrival of surveillance capitalism, which refers to an economic system of accumulation based on the commodification of personal data. Surveillance capitalism has many features including datafication (social action transformed into quantified data), dataism (a naïve belief in the capacity of data to solve human problems), dataveillance (using data for surveillance of populations and individuals), and discriminatory profiling (with particular implications for people from already-marginalized communities).



Formed before the onset of COVID-19, the pandemic now provides an additional lens through which to consider the application of these concepts.

The Working Group Members are: **Jane Bailey** (University of Ottawa); **Benoît Dupont** (Université de Montréal); **Anatoliy Gruzd** (Ryerson University); and **David Lyon** (Queen's University).

Surveillance Beyond Privacy

June 17 | David Lyon

COVID-19: The Potential Abuses of Personal Data Surveillance

June 24 | Benoît Dupont

Canada's Out-of-Date Online Privacy Rules Aren't Protecting You

August 19 | Anatoliy Gruzd

AI Technologies—Like Police Facial Recognition—Discriminate Against People of Colour

September 2 | Jane Bailey, Jacquelyn Burkell and Valerie Steeves

INTERDISCIPLINARITY

Diverse Perspectives on Interdisciplinarity from Members of the College of the Royal Society of Canada

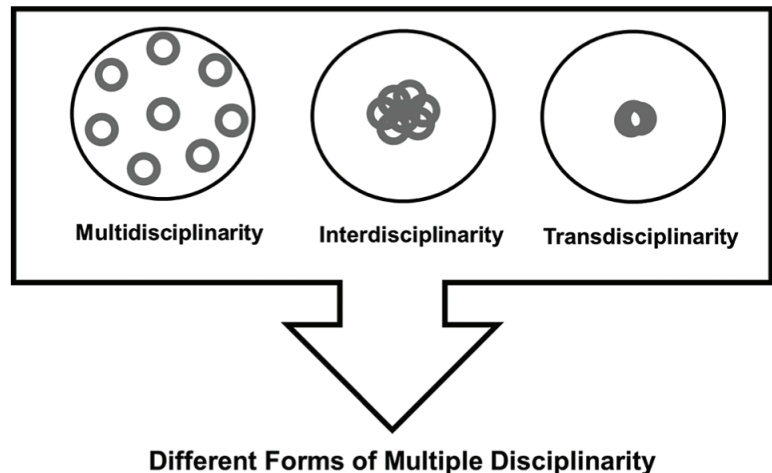
The RSC College was launched in 2014 to recognize excellence in the emerging generation of Canadian scholars, artists and scientists. The College is a single body that regroups highly diverse fields of research enterprise, scholarly practice and artistic endeavor in recognition of the fact that, increasingly, collective efforts across disciplines enhance impact in addressing the wicked global and domestic issues of our time.

But what does interdisciplinarity really mean, and how does it work? A working group was established by the College to explore these ideas. Ultimately the group grew to comprise 57 College members from 32 institutions across eight provinces, representing disciplines from music to law to microbiology. The product of this working group is a 57-member article published in *FACETS*, the official journal of the Academy of Science of the RSC. As Canada and the world confront COVID-19, scholarly work demonstrating the opportunities of interdisciplinarity are especially timely.

Abstract

Various multiple-disciplinary terms and concepts (although most commonly “interdisciplinarity,” which is used herein) are used to frame education, scholarship, research, and interactions within and outside academia. In principle, the premise of interdisciplinarity may appear to have many strengths; yet, the extent to which interdisciplinarity is embraced by the current generation of academics, the benefits and risks for doing so, and the barriers and facilitators to achieving interdisciplinarity, represent inherent challenges. Much has been written on the topic of interdisciplinarity, but to our knowledge there have been few attempts to consider and present diverse perspectives from scholars, artists, and scientists in a cohesive manner. As a team of 57 members from the Canadian College of New Scholars, Artists, and Scientists of the Royal Society of Canada (the College) who self-identify as being engaged or interested in interdisciplinarity, we provide diverse intellectual, cultural, and social perspectives. The goal of this paper is to share our collective wisdom on this topic with the broader community and to stimulate discourse and debate on the merits and challenges associated with interdisciplinarity. Perhaps the clearest message emerging from this exercise is that working across established boundaries of scholarly communities is rewarding, necessary, and is more likely to result in impact. However, there are barriers that limit the ease with which this can occur (e.g., lack of institutional structures and funding to facilitate cross-disciplinary exploration). Occasionally, there can be significant risk associated with doing interdisciplinary work (e.g., lack of adequate measurement or recognition of work by disciplinary peers). Solving many of the world’s complex and pressing problems (e.g., climate change, sustainable agriculture, the burden of chronic disease, and aging populations) demands thinking and working across long-standing, but in some ways restrictive, academic boundaries. Academic institutions and key support structures, especially funding bodies, will play an important role in helping to realize what is readily apparent to all who contributed to this paper—that interdisciplinarity is essential for solving complex problems; it is the new norm. Failure to empower and encourage those doing this research will serve as a great impediment to training, knowledge, and addressing societal issues.

Read the Full Article in FACETS



G7 RESEARCH SUMMIT

The Future of Digital Health

As a major component of the ongoing efforts of the G7 Science Academies, and with the support of a consortium of domestic and international partners, the RSC's **G7 Research Summit on The Future of Digital Health** will be held on November 25, 2020, virtually.

The objective of the virtual summit is to gather domestic and international leaders to envision a future in which citizens feel increasingly inspired by and connected to the opportunities afforded by Digital Health. The summit gives life to the 2020 G7 Science Academies' declaration entitled "The Centrality of Digital Health Collaboration to Health Progress".

The programme will focus on global perspectives and trends, highlighting steps that policymakers, scholars, scientists, and citizens can take to realize the enormous potential of the Future of Digital Health.



TIME	EVENT	SPEAKERS
8:30am-8:45am	Opening Acknowledgement of Traditional Indigenous Territory	Chad Gaffield , Past-President, Royal Society of Canada
8:45am-9:00am	Welcoming Remarks	Jeremy McNeil , President of the Royal Society of Canada Mona Nemer , Canada's Chief Science Advisor
9:00am-10:30am	<i>Ethics, Privacy & Public Engagement</i> Moderator: Rémi Quirion , Chief Scientist, Quebec	Tania Bubela , Simon Fraser University Alan Katz , University of Manitoba Catherine Régis , Université de Montréal Karine Lefevre , EHESP, CCNE Jennifer Walker , Laurentian University
10:30am-11:00am	Break	
11:00am-12:30pm	<i>Promise and Pitfalls in Data Science and Artificial Intelligence</i> Moderator: Alejandro Adem , President, NSERC	Yoshua Bengio , Université de Montréal Ryan Wiley , President, SHIFT HEALTH Elissa Strome , Executive Director, Pan-Canadian AI Strategy, CIFAR Anna Goldenberg , University of Toronto
12:30pm-1:00pm	Break	
1:00pm-2:30pm	<i>Data Governance, Scope, Reliability and Access</i> Moderator: Ed McCauley , President, University of Calgary	Yves Joanette , Université de Montréal Kimberly McGrail , University of British Columbia Raisa Deber , University of Toronto
2:30pm-2:45pm	Break	
2:45pm-4:15pm	<i>Winning Conditions for Scaling Digital Health Innovation</i> Moderator: Rob Annan , President and CEO, Genome Canada	Tim Evans , McGill University Joseph Cafazzo , University of Toronto Jane Rylett , Western University Robyn Tamblyn , McGill University
4:15pm-4:30pm	Summary and Closing	Chad Gaffield , Past-President, Royal Society of Canada

G7: DIGITAL HEALTH

**G-SCIENCE ACADEMIES STATEMENT 2020**
Digital Health and the Learning Health System**Executive Summary**

With the enormous progress in digital technologies, it is possible to envision high functioning and continuously learning health systems that can improve resource allocation and lower costs while advancing research, healthcare, and patient experience and outcomes.

Health systems positioned for continuous learning and improvement are increasingly able to gather and apply evidence routinely and systematically in real-time; ensure that care delivery is optimized for the individual, including end of life; address barriers to health equity; manage the health of populations; identify and control emerging diseases; and assess outcomes to improve processes and training. Biomedical science will soon be able to draw upon vastly larger databases to generate new scientific knowledge and reduce impediments to healthcare for individuals and populations.

While digital health technology—e.g. bioinformatics and medical informatics—already makes these advances feasible, their realization will require extensive individual, organizational, national, and international collaboration. Action is required to ensure that actors across the world develop trustworthy technologies for deployment in applications to the benefits of people at all stages of their lives. Careful stewardship is required to ensure that the benefits of these technologies are shared across society.

Priorities requiring global cooperation include:

1) cybersecurity, safety, and privacy; 2) interoperability; 3) availability of reliable data and information; 4) secure virtual data repositories; 5) integrative analytics and predictive modeling; 6) mathematics of learning; 7) knowledge representation and management; and 8) IT literacy, public understanding, and ethics.

Read the full statement online.

G7: BASIC RESEARCH



G-SCIENCE ACADEMIES STATEMENT 2020 Basic Research

Executive Summary

Expanding fundamental knowledge has made enormous contributions to solving global challenges and sustaining healthy and prosperous societies. Investment by the public in basic research creates essential human and intellectual capital and enriches society in unexpected ways, including new treatments and technologies that spawn new industries, elevating the global standard of living.

Yet, there are many current cases of inadequate or decreasing investment in basic research. And investments and policies for education, capacity building, cooperation and openness are necessary to realize the benefits of basic research and to distribute them throughout society.

- Our central recommendation is to restore and sustain long-term public funding of basic research, pursuing new frontiers of knowledge, providing the basic fuel for successfully meeting current and future challenges

It is also important to:

- Strengthen investment in cultivating inquiry and innovation through early and ongoing science, technology, engineering, and mathematics (STEM) education, integrated with the humanities and arts
- Foster global cooperation and information sharing to accelerate discovery and spread benefits and to reduce knowledge-based inequities
- Support interdisciplinary collaboration among and between fields, including engineering and social sciences
- Openly publish research, to increase scientific knowledge, foster curiosity, and benefit all publics

Read the full statement online.

G7: GLOBAL INSECT DECLINES



G-SCIENCE ACADEMIES STATEMENT 2020

Global Insect Declines and the Potential Erosion of Vital Ecosystem Services

Executive Summary

A great majority of insects provide unique and irreplaceable ecosystem services, including pollination, recycling, and nutrient provisioning. Striking declines in diversity and abundance, in some cases upwards of 75% in less than 30 years, have been documented in insect communities. Because loss and degradation of habitats and other contributing factors usually cross political boundaries, international cooperation is essential to mitigate or reverse such declines.

Human activities clearly are the major causes of declines in the abundance and diversity of animals, including insects. Insects occupy virtually all terrestrial habitats. Their spectacular diversity reflects their small size and short life cycles, which allow them to partition habitats and resources and adopt specialized lifestyles. Their specialization, however, makes insects vulnerable to changing environmental conditions. Hence, it is important to assess and ideally to predict where and how anthropic pressure affects insects, in order to support policy measures for their conservation and sustainable ecosystem services.

Joining with others who have argued for specific measures to protect insect biodiversity, our academies urge implementation and public support of actions outlined at the end of this statement.

Read the full statement online.

S2O SCIENCE ACADEMIES STATEMENT

Executive Summary

The primary conclusion of the 2020 Science 20 (S20), representing the National Academies of Science of G20 nations, is that issues of planet and people must be viewed holistically and with full appreciation of their complexity and interconnectedness. This lesson was learned from a systematic examination of emerging critical global transitions in health, environment, and technology, punctuated by a real-time example of a globally disruptive event, the COVID-19 pandemic. This viral pandemic laid bare the health, economic, social, and educational vulnerabilities of societies and exposed the lack of foresight that resulted in ill-equipped responses on multiple fronts.

The world's leading economies, represented by the G20 countries, must have the foresight to alleviate the system-level economic and social disruptions that will be brought by the next pandemic and other future Critical Transitions.

As such the G20 Academies of Sciences recommend the following actions:

1. Advance existing pandemic preparedness towards an internationally collaborative framework to monitor and respond rapidly to emerging diseases and handle future pandemics.
2. Promote advanced therapy and precision medicine research to enhance personalized care, with a view to concurrently improve technology, cost, and accessibility.
3. Deploy policies and interventions to address the challenges arising from demographic shifts.
4. Develop an integrated and efficient closed-loop systems approach to natural resource extraction, distribution, consumption, disposal, and recycling.
5. Promote circular design of materials and energy systems through advancing the 3Rs (Reduce, Reuse, Recycle) plus Renewables aimed at net zero carbon emission.
6. Bridge the emerging digital divide to ensure that all people on the planet have access and capability to use digital technologies and the internet, while ensuring privacy, resilience, and security of digital networks and devices.
7. Improve the sustainability of the digital infrastructure, including end-user devices, and improve opportunities for smart city technologies to contribute towards a cleaner environment.
8. Adopt a multi-disciplinary approach to plan for a human-centric, digitally enabled society of the future, in which the digital infrastructure is fully embedded in the entire social, educational, political, business, and cultural landscape.
9. Support foresight research that is based on robust science, repeatable methods, and open sharing, and incorporates recent advances in complex systems analysis.
10. Establish a platform upon which to implement and foster international collaboration and to build trust in foresight research and activities.



Read the full statement online.

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Walter House

The headquarters of the RSC is funded exclusively by the membership. Support for the home of the membership enables our heritage home to serve as a convening hub.

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Financial Statements

The RSC's fiscal year runs from July 1 to June 30. The Financial Statements have been prepared in accordance with Canadian accounting standards for not-for-profit organizations and audited annually by Deloitte. The financial statements are available online at www.rsc-src.ca



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