

RNA Canada ARN

Brief history

2021: RNA Medicine —> RiboCare

2022: Canadian Consortium for RNA Research (C2R2)

2023: RNA Canada ARN (incorporated as not-for-profit, May 2023)



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Healthcare



Agriculture Biopesticide



Livestock Food Industry



What we are

A Pan-Canadian not-for-profit organization, established by Canadian RNA scientists and stakeholders, to promote RNA research and innovation in all sectors of life sciences for the benefits of Canadians.



What we are not

An independent funding body for RNA research.



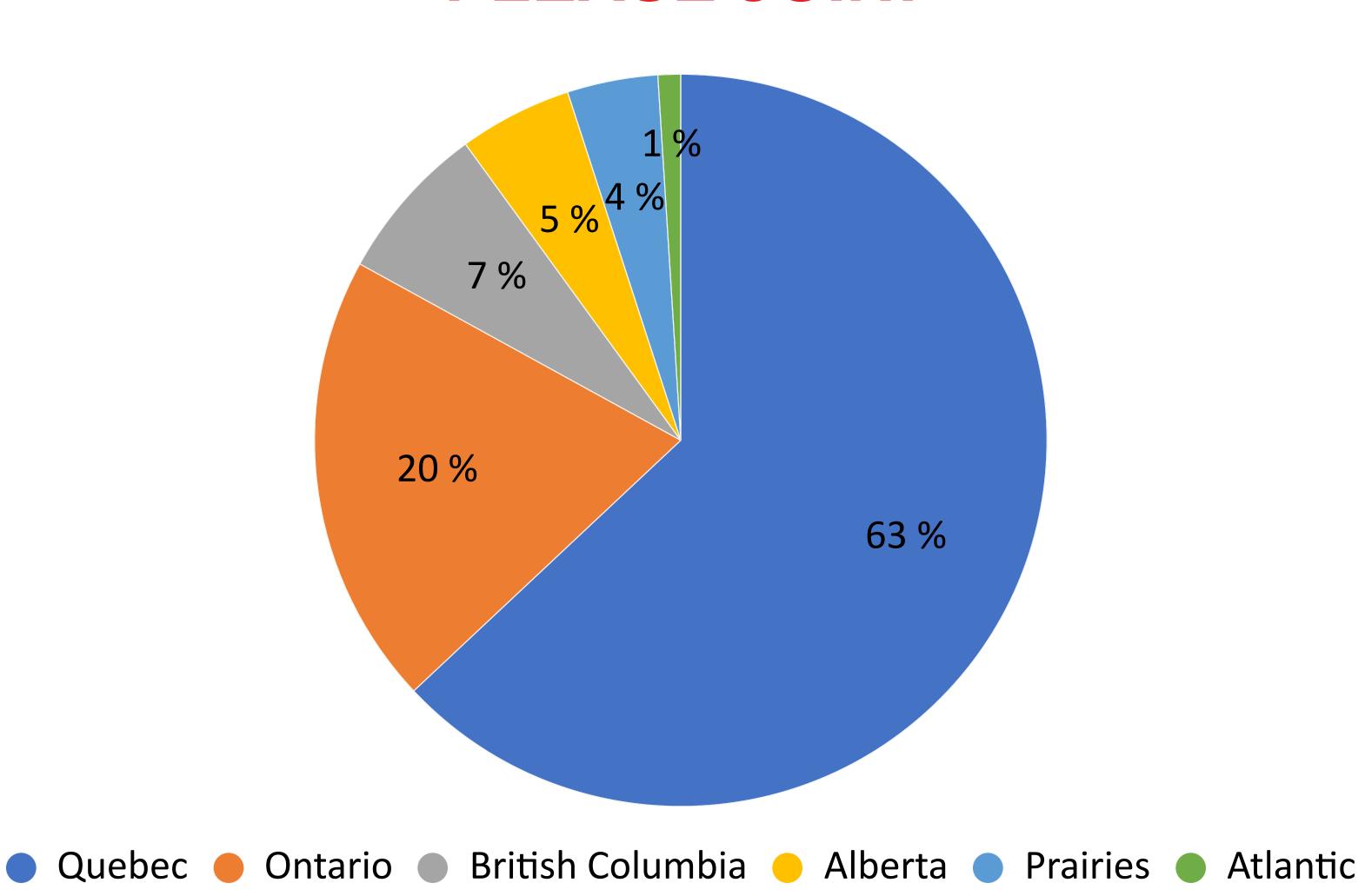
Members

More than 300 self-identified RNA research laboratories from academia and industry from across Canada.



Current Membership by Region

PLEASE JOIN!





- facilitate interactions and collaborations among RNA researchers
- facilitate development of academia-industry partnerships
- encourage the recruitment and training of highly qualified personnel
- improve public awareness of RNA research and technologies
- articulate a Pan-Canadian strategy for RNA to public office holders
- advise and support funding agencies regarding RNA research



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Achievements to date

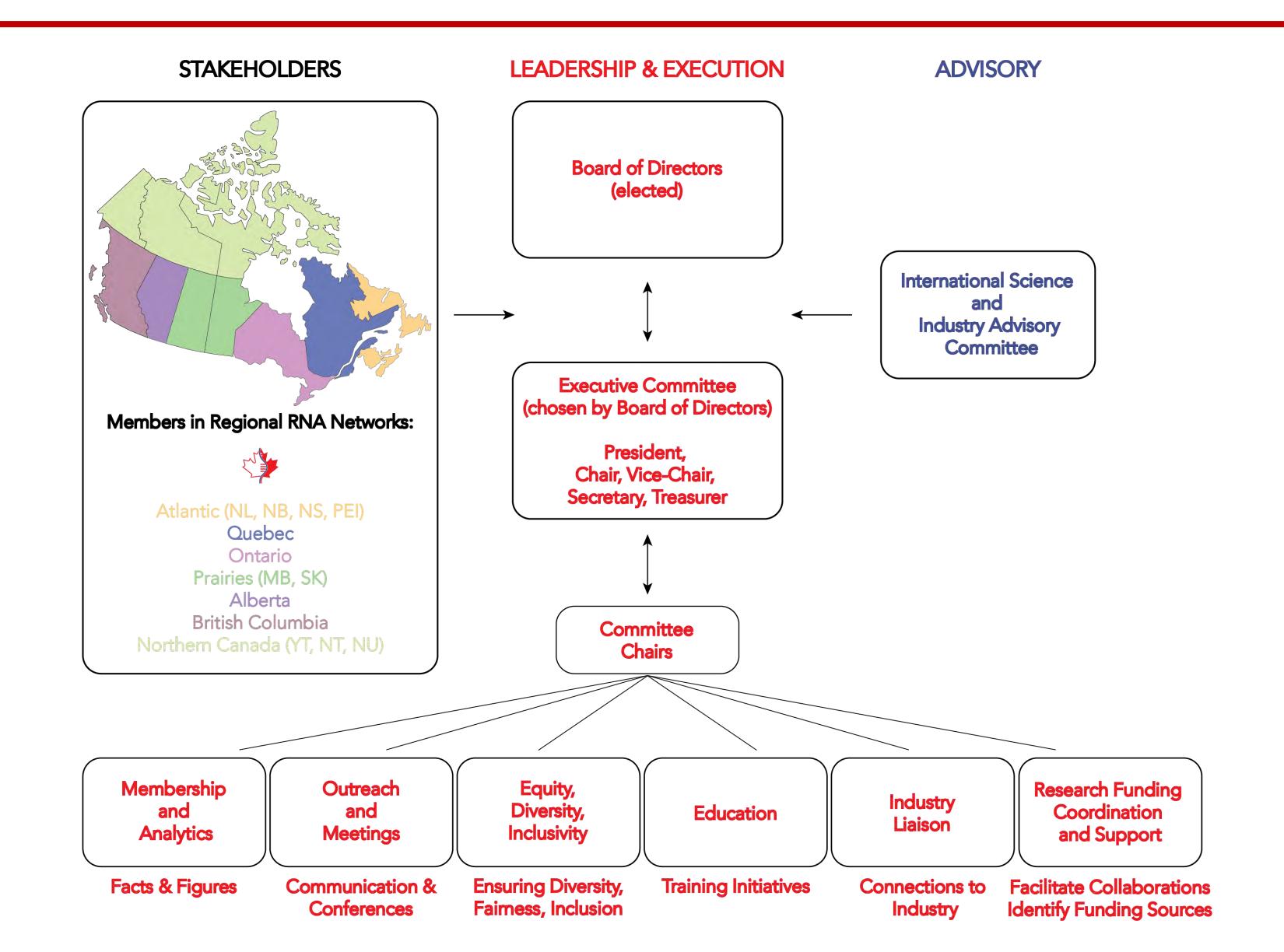
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Board of Directors: Current

Sherif Abou Elela, President, non-voting (U. Sherbrooke)

Howard Lipshitz, Chair (U. Toronto)

Peter Unrau, Vice-Chair (Simon Fraser U.)

Julie Claycomb, Secretary (U. Toronto)

Eric Lécuyer, Treasurer (IRCM)

Mark Bayfield (York U.)

Anna Blakney (UBC)

Thomas Duchaine (McGill U.)

Eric Jan (UBC)

Pascale Legault (U. Montreal)

Barbara Papadopoulou (U. Laval)

Jonathan Perreault (INRS)

Michelle Scott (U. Sherbrooke)

Hans-Joachim Wieden (U. Manitoba)

Athanasios Zovoilis (U. Lethbridge)



Officers & Executive Committee: Current

Elected by current Board:

Howard Lipshitz, Chair (U. Toronto)

Peter Unrau, Vice-Chair (Simon Fraser U.)

Sherif Abou Elela, President (U. Sherbrooke)

Julie Claycomb, Secretary (U. Toronto)

Eric Lécuyer, Treasurer (IRCM)



International Science and Industry Advisory Committee

Chair:

John Mattick (U. New South Wales, Australia)

Members:

Lorne Babiuk (U. Saskatchewan)

Cindy Bell (Former Vice President, Genome Canada)

Melanie Bourassa Forcier (U. Sherbrooke)

Thomas Preiss (Australian National U.)

Nahum Sonenberg (McGill U.)

Sandra Wolin (NIH, USA)

Keith Williams (First Nations Technical Institute, Ontario)

Pending (Industry Representative)



Bylaws unanimously approved by the Board on September 17th

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RNA CANADA ARN

GENERAL BY-LAWS

BY-LAW ONE

1. INTERPRETATION

In the present By-laws, words importing the singular number only shall include the plural and vice versa; words importing the masculine gender shall include the feminine gender; and words importing persons shall include an individual, firms, associations, companies, corporations, partnerships, trust and unincorporated organizations when the context allows such interpretation.

Other than as specified above, words and expressions defined in the Act have the same meanings when used in these by-laws.

In the present by-laws, and all other by-laws of the Corporation, unless the context otherwise requires:

- "Act" means the Canada Not-for-profit Corporations Act, S.C. 2009, c. 23 including the Regulations made pursuant to the Act, and any statute or regulations that may be substituted, as amended from time to time;
- (b) "Articles" means the original or restated articles of incorporation or articles of amendment, amalgamation, continuance, reorganization, arrangement or revival of the Corporation;
- (c) "Board" or "Board of Directors" means the Board of Directors of the Corporation;
- "By-law" means these general by-laws and any other by-law of the Corporation as amended and which are, from time to time, in force and effect;
- (e) "Director" means a member of the Board of Directors of the Corporation
- "Meeting of Members" includes an annual meeting of members of the Corporation or a Special Meeting of Members;
- (g) "Ordinary resolution" means a resolution passed by a simple majority of not less than fifty percent (50%) plus one (1) of the votes cast on that resolution;
- (h) "Regulations" means the regulations made under the Act, as amended, restated or in effect from time to time;

- (i) "Special Meeting of Members" includes a meeting of any class or classes of members of the Corporation and a special meeting of all members entitled to vote at an annual meeting of members of the Corporation; and
- (j) "Special resolution" means a resolution passed by a majority of not less than two-thirds (2/3) of the votes cast on that resolution.

BY-LAW TWO ADDITIONAL POWERS OF THE CORPORATION

The Corporation shall enjoy, inter alia, the following powers in addition to the powers generally granted to corporations under the Act:

- (a) to collect funds by the obtaining of subsidies, donations, contributions, fees or by any other means;
- (b) to enter into contracts or make contributions to any researchers, research centres, organizations, corporations or in favour of any cause it may deem appropriate in furtherance of its purpose.

BY-LAW THREE NAME AND REGISTERED OFFICE

1. NAME

The name of the Corporation is RNA Canada ARN

2. REGISTERED OFFICE

The registered office and principal place of business of the Corporation is located in Quebec City, Province of Quebec, Canada.

The Corporation may establish and maintain, in addition to its registered office and principal place of business, such other offices, places of business, branch offices and agencies elsewhere, within or outside Canada, as the Board of Directors may determine, from time to time, by resolution.

BY-LAW FOUR MEMBERS

. MEMBERSHIP CONDITIONS

Subject to the Articles, there shall be two classes of members in the Corporation, namely, Class A members and Class B members. The Directors may recommend for adoption the creation of other classes of members at a Special Meeting of

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- (ii) The number of mediators may be reduced from three to one or two upon agreement of the parties.
- (iii) If the parties are not successful in resolving the dispute through mediation, then the parties agree that the dispute shall be settled by arbitration before a single arbitrator, who shall not be any one of the mediators referred to above, in accordance with the provincial or territorial legislation governing domestic arbitrations in force in the province or territory where the registered office of the Corporation is situated or as otherwise agreed upon by the parties to the dispute. The parties agree that all proceedings relating to arbitration shall be kept confidential and there shall be no disclosure of any kind. The decision of the arbitrator shall be final and binding and shall not be subject to appeal on a question of fact, law or mixed fact and law.

All costs of the mediators appointed in accordance with this Article shall be borne equally by the parties to the dispute or the controversy. All costs of the arbitrators appointed in accordance with this Article shall be borne by such parties as may be determined by the arbitrators.

BY-LAW SEVENTEEN BY-LAWS AMENDMENT OR REPEAL AND EFFECTIVE DATE

Subject to the Articles, the Board of Directors may, by resolution, make, amend or repeal any By-laws that regulate the activities or affairs of the Corporation. Any such By-law, amendment or repeal shall be effective from the date of the resolution of Directors until the next Meeting of Members where it may be confirmed, rejected or amended by the members by Ordinary resolution. If the By-law, amendment or repeal is confirmed or confirmed as amended by the Class A members it remains effective in the form in which it was confirmed. The By-law, amendment or repeal ceases to have effect if it is not submitted to the members at the next Meeting of Members or if it is rejected by the members at the meeting.

This Article does not apply to a By-law that requires a Special resolution of the members according to subsection 197(1) (fundamental change) of the Act because such By-law amendments or repeals are only effective when confirmed by members.

BY-LAW EIGHTEEN INDEMNIFICATION OF DIRECTORS AND OFFICERS

The Corporation may indemnify a present or former Director or officer of the Corporation, or another individual who acts or acted at the Corporation's request as a Director or an officer or in a similar capacity of another entity, against all costs, charges and expenses, including an amount paid to settle an action or satisfy a judgment, reasonably incurred by the individual in respect of any civil, criminal,

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administrative, investigative or other proceeding in which the individual is involved because of that association with the corporation or other entity, if such individual:

- acted honestly and in good faith with a view to the best interests of the Corporation or, as the case may be, to the best interests of the other entity for which the individual acted as Director or officer or in a similar capacity at the Corporation's request; and
- (ii) in the case of a criminal or administrative action or proceeding that is enforced by a monetary penalty, had reasonable grounds for believing that their conduct was lawful.

except such costs, charges and expenses as are occasioned by such individual's own wilful neglect or default.

Furthermore, but subject to the limitations contained in the applicable laws, as the case may be, no Director or officer for the time being of the Corporation shall be liable for the acts, discharges, neglect or defaults of any other Director or officer or employee or for joining in any receipt or act for conformity or for any loss, damage or expense incurred by the Corporation through the insufficiency or deficiency of title to any property acquired by order of the Board of Directors for or on behalf of the Corporation or for the insufficiency or deficiency of any security in or upon which any of the moneys of or belonging to the Corporation shall be deposited or invested or for any loss or damage arising from the bankruptcy, insolvency or tortuous act of any individual or person with whom or which any moneys, securities or effects shall be lodged or deposited or for any loss, conversion, misapplication or misappropriation of or any damage resulting from any dealings with any moneys, securities or other assets belonging to the Corporation, or for any other loss, damage or misfortune whatever which may happen in the execution of the duties of his office or trust or in relation thereto, unless the same shall happen by or through his own willful neglect or default

The Corporation may purchase and maintain insurance for the benefit of an individual referred to hereabove against any liability incurred by the individual:

- (i) in the individual's capacity as a Director or an officer of the Corporation; or
- (ii) in the individual's capacity as a Director or an officer, or in a similar capacity, of another entity, if the individual acts or acted in that capacity at the Corporation's request.

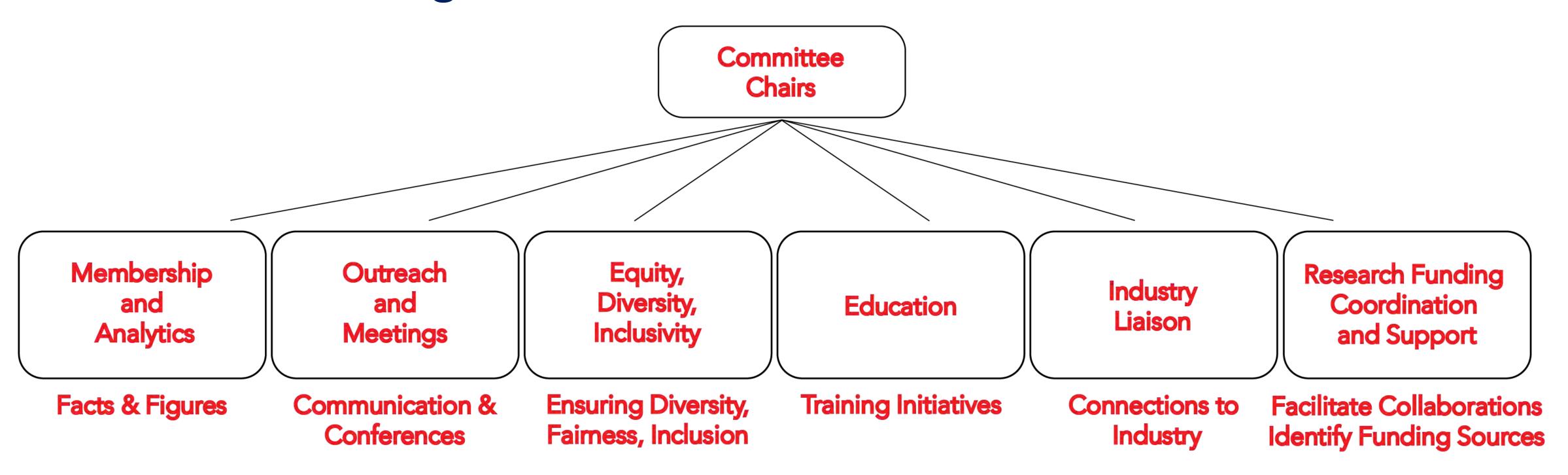


- Tim Audas & Christine Vande Velde and Administration Working Group
- Board Subcommittee





Organizational Structure: Committees



Terms of Reference for all six standing committees approved by the Board on September 20th



(edi@rnacanada.ca)

Equity,
Diversity,
Inclusivity

Ensuring Diversity, Fairness, Inclusion

Achievements to date:

- Draft EDI policy for RNA Canada ARN
- Code of conduct for conferences
- Guidelines for selecting committee members





Achievements to date

- 1. organizational structure, elections, incorporation, bylaws, committees
- 2. website, network and database of >300 RNA laboratories
- 3. white paper outlining importance of RNA research in Canada
- 4. Pan-Canadian education initiative
- 5. database of companies interested in RNA research
- 6. strategic advice for and support of funding agency leaders
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Publicize your research (outreach@rnacanada.ca)

Outreach and Meetings

Communication & Conferences

Achievements to date:

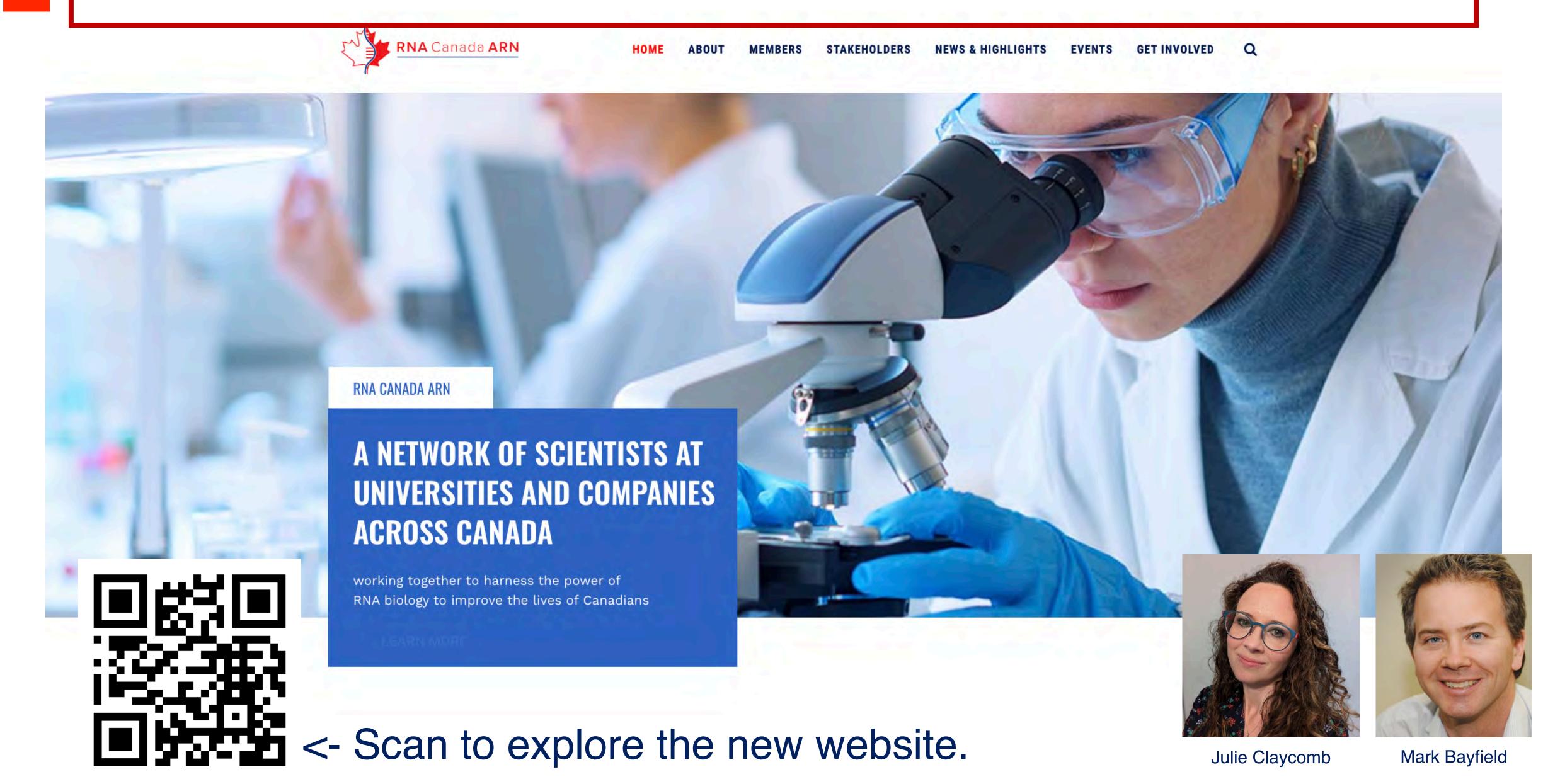
- RNA Canada ARN website
- Social media presence
- Newsletter
- Swag (grab some @RiboClub!)



<- Read the Newsletter here.



Chair: Mark Bayfield (York U.)



(membership@rnacanada.ca)

Membership and Analytics

Facts & Figures

Achievements to date:

- Comprehensive database of RNA scientists in Canada
- Survey of RNA scientists in Canada (demographics, funding, etc.)



Chair: Nehal Thakor (U. Lethbridge)

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white paper outlining importance of RNA research in Canada



WHITE PAPER FOR

RNA CANADA ARN

November 2022



EXECUTIVE SUMMARY

RNA: The new frontier

The central dogma of molecular biology explains the flow of biological information, where DNA is copied into RNA and RNA is used to make proteins.

Despite the fact that mRNA was discovered over 60 years ago, exploiting this paradigm for the benefit of the human condition has focused mostly on DNA and proteins.

On the DNA side, genomics has permitted identification of mutations that disrupt gene function, while genome-editing technologies have recently given scientists the ability to modify portions of an organism's genome to correct deficiencies.

On the protein side, altering protein functions with antibodies or with small molecules has led to striking advances in the fight against human diseases.

On the RNA side, tremendous progress had been made in understanding its roles and functions, but it was the **COVID pandemic** that allowed **RNA** to move to center stage and to demonstrate its potential as a **game-changing** and disruptive technology. This timing was historic, primed by a convergence of fundamental discoveries and maturing technologies that provided unique opportunities to exploit the extraordinary power of **RNA**, both as a **tool and** as a **target**.

As a **tool**, RNA vaccines have been designed to reprogram the functional output of animal or plant cells. RNA-based technologies are now being applied against a large variety of diseases and emerging threats. In addition to the **upcoming wave** of mRNA- and **antisense-based** approaches, the RNA-based CRISPR **gene editing** technology is also expected to revolutionize our ability to **improve** many aspects of **human health**.

Because RNA is remarkably versatile and performs multiple functions, from encoding every protein in the cell to regulating nearly every cellular process, RNA molecules expand the repertoire of biological targets available to alter cellular functions. Targeting RNA molecules with antisense oligonucleotides, with CRISPR-based technologies, or with new generations of small molecules is providing exquisite specificity in a large variety of innovative applications. One critical advantage of targeting RNA relative



white paper outlining importance of RNA research in Canada

MISSION STATEMENT RNA Canada ARN > Mission Statement

Uniting Canadian RNA

Researchers

RNA Canada ARN answers an unmet need for a unifying Canadian RNA-technology strategy:

- We bring together academic and industry partners in a unified network,
 enhancing collaboration and communication.
- We train the next generation of RNA researchers, focusing on innovative programs that prepare trainees for careers in industry.
- We inform the government and funding partners about coming advances in RNA research, positioning Canada as a world leader in RNA breakthroughs.
- We teach the public about the benefits and functions of RNA, to enhance societal understanding and acceptance of RNA technologies.



The Strengths

Our Canadian RNA Research Community

- Is a nation-wide network of interactive RNA scientists
- Produces high-quality science, important discoveries and innovative training programs for our next generation of RNA researchers
- Fosters a dynamic biotechnology environment, poised to provide advances that improve the quality of life for all Canadians

The Gaps

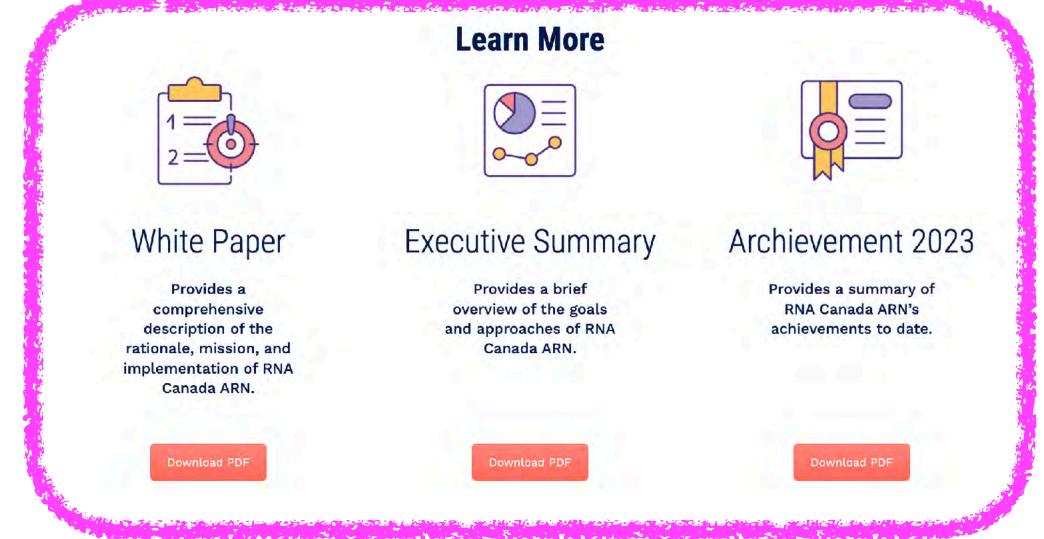
Several gaps in our current RNA Research ecosystem exist:

- Difficulty for basic RNA researchers to access funding and translational research initiatives, and to link with biotech companies
- Lack of training programs that directly prepare the next generation of RNA scientists for the specific needs of industry
- Need to inform non-experts in the public and political leaders on RNA technologies and their benefits to society
- · Lack of a national RNA innovation and application strategy











Achievements to date

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Pan-Canadian education initiative

National RNA webinar and training program (education@rnacanada.ca)

Next Online Workshop in the "What Can RNA Do?" Series is on Oct. 23, 2023 from 4-6pm EST.

Education

Training Initiatives

Achievements to date:

- Trainee experience program
- •Quarterly RNA Workshops ("What Can RNA Do?")



<- Sign up for the next

"What Can RNA Do?"

workshop here.



Chair: Eric Jan (UBC)



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database of companies interested in RNA research

Find industrial partners (ilc@rnacanada.ca)

Industry Liaison

Connections to Industry

Achievements to date:

- Database of companies interested in RNA research
- Potential industrial partners for RNA Canada ARN
- Potential industrial partners for RNA conferences



<- Join RNA Canada ARN as an Industry Member here.</p>





Chair: Jonathan Perreault (INRS)

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strategic advice for and support of funding agency leaders

Federal:

President, CIHR

President, NSERC

President, Genome Canada

Regional:

Genome Alberta

Genome Atlantic

Genome BC

Genome Quebec

Ontario Institute for Cancer Research

...and others



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platform to facilitate large-scale network grants

(grants@rnacanada.ca)

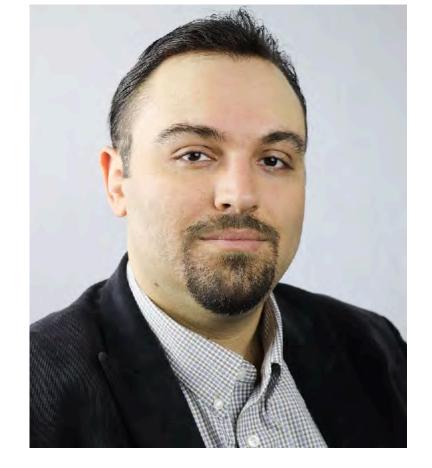
https://www.solutionsinter.net/rna-canada/services/funding-opportunities/

Research Funding
Coordination
and Support

Facilitate Collaborations Identify Funding Sources

Achievements to date:

- Database of grant opportunities
- Database of reviewer expertise for funding agencies (soon)





Short term goals

- 1. Ratification of bylaws by members (October 2023)
- 2. Members elect new Board (November/December 2023)
- 3. Board elects new Officers and Executive Committee (December 2023)



Ratification of bylaws by members (October 2023)

Invitation to vote will be emailed to members by:

Membership and Analytics

Facts & Figures

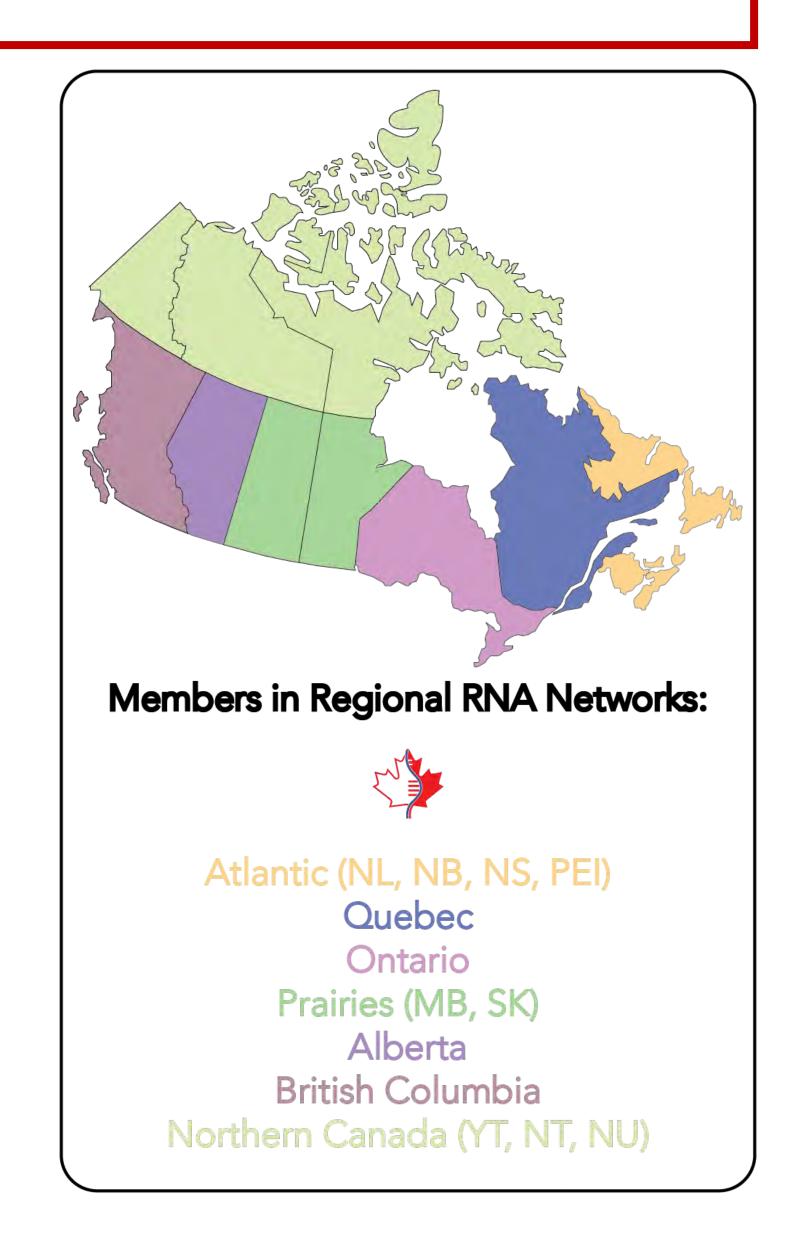
PLEASE REMEMBER TO VOTE!



≤ 15 elected members

1 from each of 7 regions (as permitted)

8 at-large (≤ 4 from any one region)





Terms of Reference approved by the Board on September 25th

Election Committee:

- receives/solicits nominations
- evaluates nominations
- produces slate of candidates based on nominees
- facilitates and has oversight over election
- announces election results



Membership approved by the Board on September 25th

Election Committee Membership:

Benoît Chabot, Chair (Québec)

Jocelyn Cote, Vice Chair (Ontario)

Chantal Autexier (Québec)

Haissi Cui (Ontario)

Ute Kothe (Prairies)

Ethan Greenblatt (British Columbia)

Andrew MacMillan (Alberta)

Gilles Robichaud (Atlantic)



Timeline:

October 15: Call for nominations

October 30: Deadline for nominations

November 15: Nominee list finalized, election called

November 30: Deadline for votes

December 7: Results announced

Please nominate candidates!



Vote to be coordinated by:

Membership and Analytics

Facts & Figures

Remember to vote! Make your voice heard!



Board elects new Officers and Executive Committee (December 2023)

Chair of the Board Vice-Chair of the Board President Secretary Treasurer



Reminder: Key goal of RNA Canada ARN

To advise and support all partners in the decision-making ecosystem, including the federal and provincial governments, on sustainable development of RNA innovation for the benefit of all Canadians.



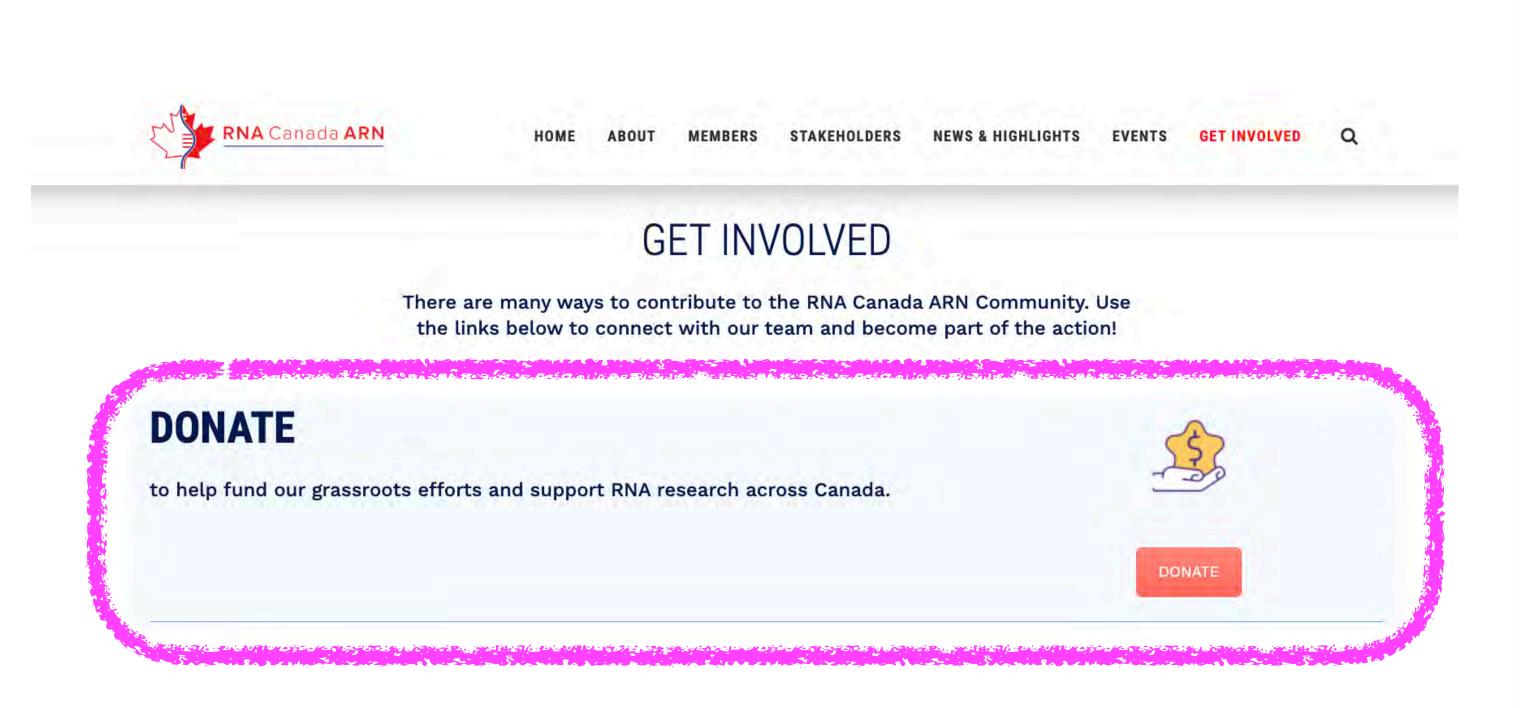
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- 2. Fund raising for RNA Canada ARN administrative support
- 3. Executive Committee renews contacts with funding agency leaders
- 4. Executive Committee initiates contacts with government/policy makers
- 5. RNA Canada 2024/RiboClub 25 Conference, October 2024, Ottawa

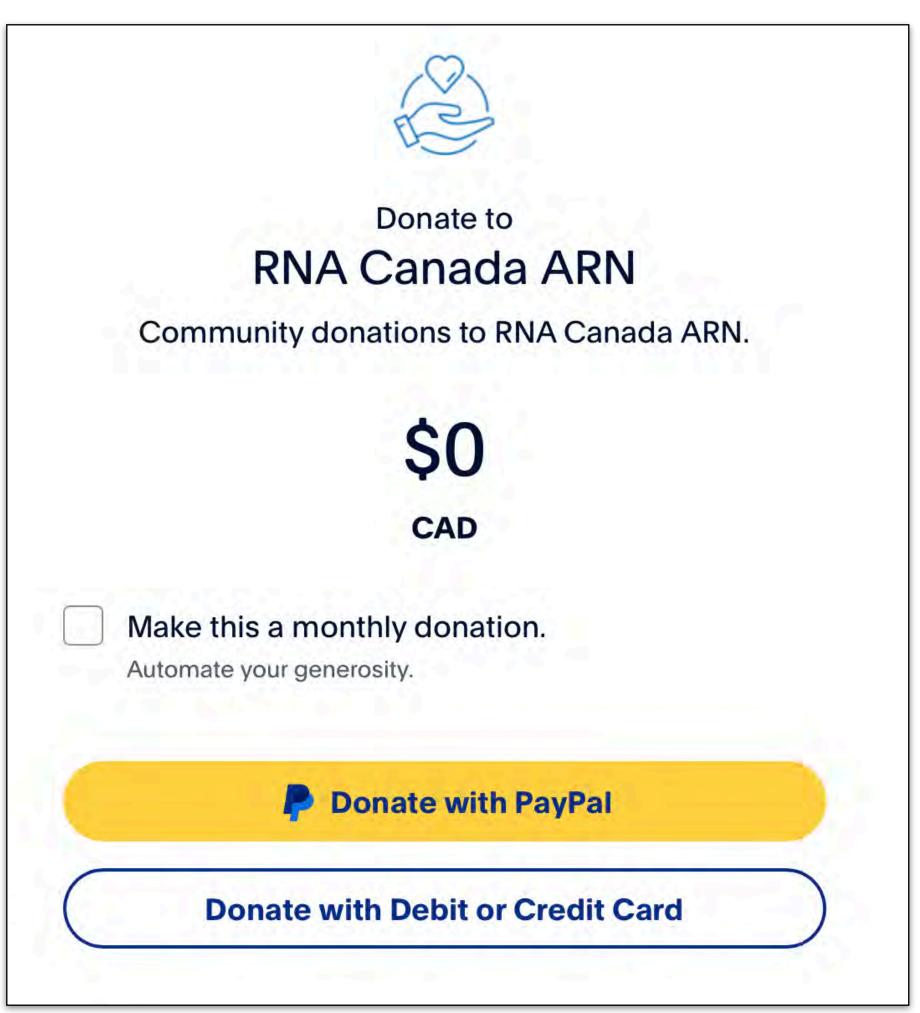


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How to help the cause of RNA Canada ARN







No amount is too little!

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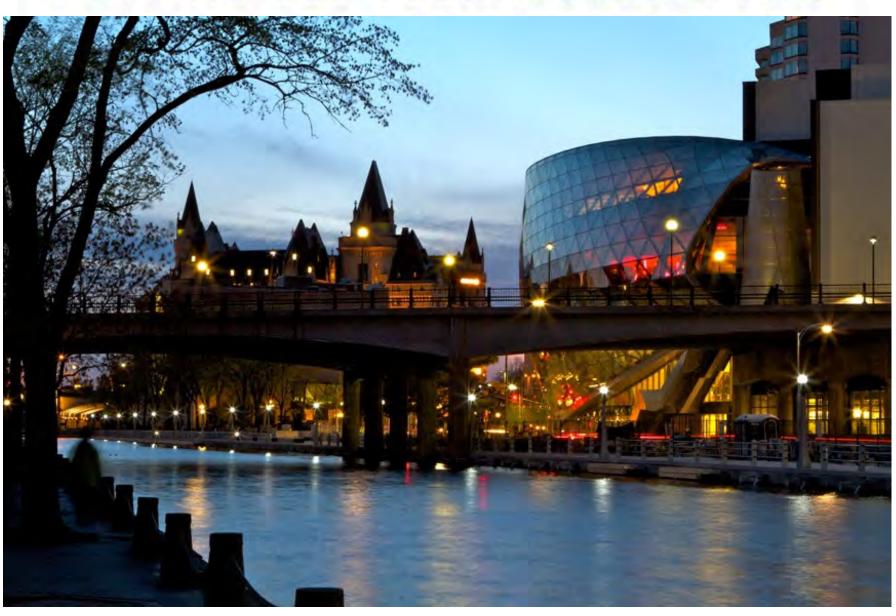


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Celebrating the 25th Anniversary of the Annual RiboClub Conference and joining forces with RiboWest and TREnD for the first Pan-Canadian RNA Conference





Ottawa, Shaw Centre September 30 – October 4, 2024

How to help the cause of RNA Canada ARN

- Become a member (www.rnacanada.ca)
- Volunteer (ec@rnacanada.ca) Sign up here ->
- Ask colleagues and trainees to join
- Attend our regular meetings (RiboClub, RiboWest, TREnD) and

'RNA Canada 2024: The Future of RNA Technology' September 30 – October 4, Ottawa

Follow us on social media for updates.
 @RNACanadaC2R2



Scan the link to become a member.

PI:



Trainee/Staff:



