
ELECTION OF THE BOARD OF DIRECTORS AND EXECUTIVE COMMITTEE

Dear RNA CANADA ARN Members,

We are thrilled to announce the results of the recent RNA CANADA ARN election. Your voices have been heard.

With the slot for a director representing Northern Canada remaining open, we had 14 Directors positions to fill to cover representatives from Atlantic, Quebec, Ontario, Prairies, Alberta and British Columbia. In addition to one Director representing each region, a maximum of 5 Directors from individual regions is possible.

Pr. Pavan Kumar Kakumani from Memorial University, Newfoundland (Atlantic), and Pr. Nehalkumar Thakor from University of Lethbridge, Alberta (Alberta) were elected by acclamation.

Elected Directors for the regions were candidates that received the most votes. They are:

- Pr. Sherif Abou Elela, Université de Sherbrooke, Sherbrooke, Quebec
- Pr. Julie Claycomb, University of Toronto, Ontario
- Pr. Sean McKenna, University of Manitoba, Manitoba
- Pr. Poul Sorensen, University of British Columbia, British Columbia

In addition, 8 at-large Directors have been elected. They are:

- Pr. Ly Vu, University of British Columbia, British Columbia
- Pr. Hans-Joachim Wieden, University of Manitoba, Manitoba
- Pr. Anne-Claude Gingras, University of Toronto, Ontario
- Pr. Howard Lipshitz, University of Toronto, Ontario
- Pr. Thomas Duchaine, McGill University, Montréal, Quebec
- Pr. Pascale Legault, Université de Montréal, Montréal, Quebec
- Pr. Jonathan Perreault, INRS, Laval, Quebec
- Pr. Martin Simard, Université Laval, Québec

In this issue

1 - Election of the Board of Directors and Executive Committee

3 - Researcher profile : Dr David Sabatino

5- Publication Highlight

6- RiboClub 2023

9- In Memoriam: Jerry Pelletier

10- Upcoming meetings

11- Awards and grants

12- News

14- RNA Salons



We would like to warmly congratulate the winners of the election. We thank all candidates and RNA CANADA ARN members who participated in this process. Your engagement and commitment are deeply appreciated.

Thank you for your continued support and dedication to RNA CANADA ARN.

Sincerely,

The Nomination & Election Committee

Benoit Chabot (Québec), Chair
Jocelyn Côté (Ontario), Vice Chair
Chantal Autexier (Québec)
Ethan Greenblatt (British Columbia)
Haissi Cui (Ontario)
Ute Kothe (Prairie)
Andrew MacMillan (Alberta)
Gilles Robichaud (Atlantic Canada)

In addition, the newly elected Board of Directors has recently elected the new RNA Canada ARN Executive Committee. They are:

President: Sherif Abou Elela (U. de Sherbrooke)
Chair: Howard Lipshitz (U. of Toronto)
Vice Chair: Sean McKenna (U. of Manitoba)
Secretary: Julie Claycomb (U. Of Toronto)
Treasurer: Nehal Thakor (U. of Lethbridge)

Congratulations to the new Executive Committee members! More information on the new Board of Directors and Executive Committee can be found at: <https://www.rnacanada.ca/about-us/>



DR DAVID SABATINO



Dr. David Sabatino, Carleton University, Dep. of Chemistry and Institute of Biochemistry

Dr. Sabatino completed his PhD work in 2007, in the lab of Prof. Masad Damha, in the Department of Chemistry at McGill University, and his academic career spans the USA and Canada. Overall, Dr. Sabatino's training in synthetic RNA chemistry has led to the development of new RNA scaffolds for therapeutic applications. Research in the Sabatino lab is focused on RNA chemical biology for anti-cancer applications. They develop synthetic methods, based on solid phase RNA synthesis, bioconjugation and bio-orthogonal chemistry, to improve the structure-function properties of RNA, including the self-assembly of

novel supramolecular RNA nanostructures that can be used for the diagnosis and treatment of cancer. In simpler terms, research in the Sabatino lab builds synthetic RNA in various shapes and sizes that can be used in the diagnosis and treatment of human diseases, such as cancer. These studies aim to improve the therapeutic properties of RNA, for clinical cancer treatment applications. One of the lab's recent contributions in RNA chemical biology describes the use of gold nanoparticles for delivering siRNA within prostate cancer cells as a gene therapy <https://pubmed.ncbi.nlm.nih.gov/32096520/>.

Dr. Sabatino has held a longtime fondness for RNA. He describes his excitement the first time he made synthetic RNA in the lab (one of his favourite experiments to perform!): when he recovered that tiny, solid, white pellet in a tube, his thoughts turned to what exciting biochemical and biological applications it might hold. In particular, Dr. Sabatino is fascinated by the vast cellular functions of RNA, and the structural and functional properties that can provide important clues about its roles in human health and disease. Using this information, Dr. Sabatino says we can produce novel RNA motifs using synthetic chemistry, with new functional properties, to enhance the application of RNA in understanding human health and preventing disease.



When asked about his advice for members of the RNA Canada ARN community, Dr. Sabatino responded, “Please participate and contribute! The field is rich with opportunities for new RNA researchers. There is a sprawling hub in Canada that will continue to grow with the new generation of RNA enthusiasts.” Related to this new generation of RNA enthusiasts, Dr. Sabatino finds his interaction with students to be “by far and away the most delightful part” of his work, and wanted to share with trainees a reminder that while every scientific career is marked by failures of various scales, ultimately, it is learning from them that leads to success! When Dr. Sabatino is not busy synthesizing RNA or mentoring students, he enjoys all kinds of sports and activities with his two young children. You can find more information about this rising star mentor and his lab at: <https://carleton.ca/sabatinolab/>.



Scan me !



RNA Canada ARN Publication Highlight: [On the origin of life: an RNA-focused synthesis and narrative](#), by Jacob Fine and Ron Pearlman, York University, Toronto.

RNA Canada ARN recently spoke with Jacob Fine about his recent review article discussing RNA and the origin of life, recently published in the journal **RNA**:

Could you summarize your paper for us?

We synthesize decades of origin of life research, emphasizing key biomolecular and computational models, to present a comprehensive and up-to-date description of science's understanding of life's origins. This synthesis informs the timeline of major evolutionary events that we propose, which we argue is a useful theoretical framework through which to view the origin of life. More specifically, we solidify the consensus that RNA evolved before coded proteins and DNA genomes, and that translation is older than DNA replication and RNA transcription. Altogether, our work supports the view that the origin of life was a gradual evolutionary process, during which many events are now known.



Jacob Fine

Why is your paper so cool? What are the important implications?

Our paper proposes solutions to one of biology's most fundamental questions: how did life begin? We argue that sufficient evidence exists for the view that RNA was key to life's origins, such that it evolved before coded proteins and DNA genomes. This supports the RNA world hypothesis beyond reasonable doubt. The model that life began with RNA, rather than protein or DNA, has important implications for how scientists think about the contemporary biosphere. Our proposed timeline, which depicts events from inanimate matter to the first cells, is a useful theoretical framework through which to view the origin of life.



Dr. Ron Pearlman

Jacob's and Dr. Pearlman's manuscript can be accessed [here](#). [Jacob Fine](#) is currently a graduate student studying bioinformatics and RNA biology in the laboratory of Dr. Benjamin Blencowe at the University of Toronto, Department of Molecular Genetics. [Ron Pearlman](#) is a University Professor Emeritus in the Department of Biology at York University.



Riboclub 2023, Sept 24th – 28th



The annual meeting/opening session of the RiboClub has been Canada's largest annual meeting of RNA scientists for more than twenty years. For four days, more than 200 RNA scientists from Canada and from all over the world gathered in Orford, QC to present their most recent work and to promote the mission of advancing RNA research.

The theme of this year's meeting was RNA vs pathogens: biology, medicine and technology, and was convened in collaboration with RNA scientists from Harvard University. In keeping with the theme of the conference, there were a number of sessions dedicated to the interface of human pathogens and RNA biology, including Viral RNA (chaired by Aaron Schmidt, Ragon Institute of MGH, MIT and Harvard), Immunology and Host Response (chaired by Gaya Amarasinghe, Washington University), and RNA Therapeutics (sponsored by Moderna and chaired by Ryan Flynn, Harvard University).





Other sessions included Machine Learning, Computational biology, and Databases, chaired by Yoseph Barash, University of Pennsylvania; RNA Visualization and Probing, chaired by Éric Lécuyer, Montréal Clinical Research Institute; Ribosomes and Translation, chaired by Haribabu Arthanari, Harvard Medical School; RNA Binding Proteins (Sponsored by adMare BioInnovations) and chaired by Jinwei Zhang, NIH; and RNA Modifications and Non-coding RNA, chaired by Richard Gregory, Harvard Medical School.

The conference also welcomed a number of outstanding keynote and special speakers. Roy Parker (University of Colorado, Boulder) gave the opening keynote address, discussing his most recent work investigating fundamental principles in stress granule formation.



The student choice lectures were given by Drs. Hanah Margalit (Hebrew University, Israel) and Maria Carmo-Fonseca (University of Lisbon),

who spoke about bacterial small RNAs and regulation of splicing, respectively. The attendees were also treated to very entertaining talks about careers in science by Eric Westhof (U. de Strasbourg) and Gabriel Lander (Scripps), to open and close the meeting.



RNA Canada ARN also had a major presence at the conference! After an RNA Canada ARN Outreach open house on the first day, attendees were able to attend special RNA Canada ARN activities including a session on Equity, Diversity and Inclusion featuring Kristina Song (Université de Sherbrooke), Britt A. Glaunsinger (UC Berkeley), Aaron Schmidt (Ragon Institute of MGH, MIT and Harvard), Julie Claycomb (University of Toronto) and Mark Bayfield (York University).



The EDI activity was introduced and moderated by Samer Hussein (Université Laval) with help from Muhammad Riaz Khan and Michelle Scott (Université de Sherbrooke). There was also an RNA from academia to industry session which included presentations from adMare, RNA technologies and therapeutics, NMX solutions and Nanovation therapeutics, moderated by Jonathan Perreault (INRS), as well as an RNA Quebec funding session with presentations from CQDM, Génome Québec, Mitacs and Axelys, moderated by Benoit Chabot (Université de Sherbrooke). A Science Social Media presentation was also prepared by the RNA Canada ARN Outreach committee and was led by Farnaz Mansouri-Noori (York University). Finally, the Chair of the Board of Directors, Dr. Howard Lipshitz, gave a presentation detailing the future planning and outlook of RNA Canada ARN, in advance of the ratification of the inaugural RNA Canada ARN bylaws by members. The video of the presentation can be accessed [here](#). The effort of RNA Canada ARN at the 2023 meeting was evident with the record increase in the number of attendees and the many activities of RNA Canada that enhanced the overall meeting to all trainees and principal investigators in Canada.

Trainees were also well represented at the meeting, with a number of prizes awarded to the top posters. The 1st prize for posters (\$1000) was awarded to Kasimir Kienbeck (University of Zurich), 2nd prize (\$750) to Elsa Hien (Université de Sherbrooke), and 3rd prize (\$500) to Al Rohet Hossain (UBC).



The best RNA Cancer Poster (\$500) was awarded to Laurence Faucher-Giguère (Université de Sherbrooke). The public choice prize was awarded to Duale Ahmed (Carleton University), and the micro-talk prize (\$350) was awarded to Roman Sarrazin-Gendron (McGill University).

And among Canada's principal investigators, Julie Claycomb (University of Toronto) was presented with the Riboclub Blue Jacket Award for exceptional service to the Canadian RNA Community.

Looking ahead, the 2024 Riboclub meeting will be combined with the RiboWest and TRENd conferences into the [RNA Canada ARN 2024 conference in Ottawa, ON \(Sept 30th - Oct 4th\)](#). Save the date!

IN MEMORIAM: JERRY PELLETIER



The Canadian RNA community received the very sad news of the passing of one of its most distinguished colleagues. Dr. Jerry Pelletier was a brilliant scientist and a recognized world leader in the field of translational control. Jerry was a Distinguished James McGill Professor in the Departments of Biochemistry and Oncology at McGill University, and a member of the Rosalind and Morris Goodman Cancer Institute.

In addition to his landmark work studying mRNA translation and internal ribosome entry sites in (+) sense RNA viruses, Jerry and his team at McGill had recently made critical advances in the study of the translational initiation factor eIF4A, including work that explored the therapeutic potential of new classes of natural and synthetic molecules targeting this factor.

In 2017, Prof. Pelletier was honoured as a fellow of the Royal Society of Canada, and in 2019 he was the recipient of the Robert L. Noble Prize from the Canadian Cancer Society for his groundbreaking work in elucidating the molecular mechanisms surrounding the initiation and control of protein synthesis.

His colleague, friend, and mentor, Dr. Nahum Sonenberg, paid tribute to Jerry at the recently held annual meeting of the RiboClub society, with members of RNA Canada ARN in attendance. RNA Canada ARN wishes to extend their deepest condolences to Jerry's family, friends, trainees, and colleagues. More information about Jerry's scientific legacy and outstanding contributions to RNA biology can be found [here](#).



'RNA Canada 2024: The Future of RNA Technology'

September 30 – October 4, 2024, Ottawa, ON, Canada

<https://home.riboclub.org/annual-meeting/#upcoming>

Mark your calendars for our first ever pan-Canadian meeting of RNA Canada ARN members: RNA Canada ARN 2024: The future of RNA technology, to be held Sept. 30-Oct. 4, 2024 at the Shaw Centre in Ottawa, ON, Canada. This conference will bring together researchers at all stages in academic and industry sectors, along with government officials and the public to hear about Canadian RNA research strategy, cutting edge RNA research topics, and the latest applications of RNA technologies. There will be engagements with Members of Parliament, networking events to form new connections among various RNA-focused sectors, trainee-centered mentorship and career development activities, and much more. We hope to see you at this premier RNA Conference next fall!

RNA Canada ARN
2024
THE FUTURE OF RNA TECHNOLOGY
L'AVENIR DES TECHNOLOGIES ARN

An inaugural event bridging the gap between discovery and innovation

Ottawa, Canada
September 30 - October 4, 2024

Featuring over 100 speakers representing multiple facets of RNA research. Including sessions open to the public.

Nobel Laureates - Tom Cech, Phillip Sharp, Jack Szostak
Gairdner Awardees - Lynne Maquat, Pieter Cullis, Nahum Sonenberg
Lurie Prize Awardee - Jeannie Lee

Registration opens March 1st and ends May 30th, 2024

Parliamentary Engagement	Explore the RNA Innovation Ecosystem	Find Partners
Special event on the Hill – meet Members of Parliament and Senators	Presentations and panels uniting leading academic researchers, pioneering industrial partners, and end users	Explore networking opportunities, career prospects, and current technology

For details and registration visit www.RiboClub.org

Organized by RNA Canada ARN in association with the RiboClub, RiboWest, and TREnD to celebrate 25 years of connecting the Canadian and international RNA research communities

RNA Canada ARN congratulates for their recent success :

Nehal Thakor, U. of Lethbridge



Discovery Grant, American Brain Tumour Association (ABTA) for his project entitled “To Assess Eukaryotic Initiation Factor 5B as Therapeutic Target in Glioblastoma”.
More information about the award can be found [here](#) and [here](#). Congrats !

Fabian Rohden, Hans Joachim Wieden’s lab, U. of Manitoba



Vanier Graduate Scholarship
More information about the award can be found [here](#) and about Fabian’s research [here](#). Congrats Fabian!

Dany S. Sibai, Tom Moss’ lab, Université Laval



Kate Hannan Memorial Travel Award to participate in OddPols 2023: an international conference on transcription mechanism and regulation by archaeal RNA polymerases and eukaryotic RNA polymerases I, III, IV and V.
More information about the award and OddPols can be found [here](#) and about the Moss lab research [here](#). Congrats Dany!

Jennifer Porat, Mark Bayfield’s lab, York University



RNA Society Scaringe Young Scientist Award: Graduate Student.
The RNA Society/Scaringe Young Scientist Award recognizes outstanding research achievements in any area of RNA by junior Society members.
Winners appear in the 2024 RNA Society Meeting abstract book and have their expenses paid for attending the conference.
More information about the award can be found [here](#). Congrats Jennifer !



DNA TO RNA: AN INCLUSIVE CANADIAN APPROACH TO GENOMIC-BASED RNA THERAPEUTICS (D2R)

McGill University received a Canada First Research Excellence Fund (CFREF) grant to create an international hub for “next generation” medicines. McGill University is the recipient of a landmark \$165 million grant to launch DNA to RNA: An Inclusive Canadian Approach to Genomic-based RNA Therapeutics (D2R), a first-of-its-kind global research effort specializing in the development and delivery of more inclusive genomic-based RNA therapeutics. D2R will receive support from academia and industry, who have all pledged to invest in the research, which brings the total amount invested in D2R to \$353 million. Canadian academic partnering institutions include the University of Ottawa, the University of British Columbia (UBC), McMaster University, Université de Sherbrooke and and the Montreal Clinical Research Institute (IRCM).

D2R-led research has the potential to provide breakthrough treatments for a wide spectrum of diseases, such as those caused by emerging viruses that threaten our society with pandemics, rare genetic disorders and cancer, which is the number one cause of death in Canada.

The D2R initiative builds upon the legacy of great RNA researchers as McGill’s ground-breaking RNA research efforts began with biochemistry professor Nahum Sonenberg back in 1979 where he first identified the cap-binding protein eIF4E, a key component in RNA’s ability to regulate the replication of cells. McGill Genome Center for RNA research brings together several researchers from the field who wish to apply RNA-based therapeutics to treat complex conditions and their associated catastrophic health and economic consequences more effectively. The team of seventy researchers from five academic institutions, will work collaboratively with Canada’s Indigenous and immigrant populations to ensure the promise of RNA therapeutics is made widely available in a manner that is inclusive and beneficial to all Canadians.

Related link :

- <https://dossiers.mcgill.ca/d2r/>
- <https://www.mcgill.ca/newsroom/channels/news/165-million-mcgill-universitys-world-leading-inclusive-genomics-and-rna-research-program-348071>



NOBEL PRIZE

Messenger RNA was likely the most common term used in 2022 as it is the base of the mRNA vaccine that millions of us received to combat the COVID19 pandemic. The development of messenger RNA vaccine has been possible thanks to over 60 years of intense RNA research initiated by the two Nobel Prize in Physiology or Medicine laureats Jacob and Monod who first defined messenger RNA, followed by seminal discoveries in RNA research awarded Nobel Prize in physiology, medicine or chemistry.

This year, Nobel prize in Physiology or Medicine goes to Professor Katalin Karikó and Professor Drew Weissman for their discovery of mRNA modifications that enable the development of effective and safe RNA vaccine. This is an extraordinary contribution to medicine and human health, critically allowing pharmaceutical companies to develop mRNA vaccines against COVID-19 in a minimal time, protecting millions of human from this deadly pandemic. This is an enormous transitional step from basic RNA research to clinical application, with a promising future for RNA therapeutics as many applications of the mRNA platform are now in development, including for vaccines against infections and cancer.

The Nobel Prize in Physiology or Medicine 2023
“for their discoveries concerning nucleoside base modifications that enabled the development of effective mRNA vaccines against COVID-19”



Katalin Karikó

Born: 17 January 1955,
Szolnok, Hungary
Affiliation at the time
of the award: Szeged
University, Szeged,
Hungary; University of
Pennsylvania,
Philadelphia, PA, USA

Niklas Elmehed ©
Nobel Prize
Outreach



Drew Weissman

Born: 7 September
1959, Lexington, MA,
USA
Affiliation at the time
of the award: Penn
Institute for RNA
Innovations, University
of Pennsylvania,
Philadelphia, PA, USA

Niklas Elmehed ©
Nobel Prize
Outreach

Pictures from <https://www.nobelprize.org/prizes/medicine/2023/kariko/facts/>

**RiboClub**

<https://home.riboclub.org/schedule/>
4:30pm first or second Monday of each month.

Montreal RNA Salon

<https://www.mtlrna.org/>
4pm, first Thursday of each month

Toronto RNA Club

<https://torontornaclub.com/>
4pm, first Wednesday of each month

ARRTI at ULeithbridge (Alberta RNA Research and Training Institute)

<https://www.ulethbridge.ca/research/centres-institutes/alberta-rna-research-and-training-institute>

Vancouver RNA Club

<https://www.vanrnaclub.com/>

RNA Collaborative Seminars Series (RNA society)

<https://www.rnasociety.org/rna-collaborative-seminar-series>

[Youtube channel](#)

BECOME A MEMBER OF RNA CANADA ARN !

Join us to support RNA research in Canada !

Click here to register as an [academic researcher](#), [trainee](#) or [industry partner](#).

Please visit our website for more information (www.RNACanada.ca)

[SIGN UP](#) to join our mailing list to receive RNA Canada ARN updates and our newsletter.

Follow us [LinkedIn](#) , [Instagram](#) and [X](#) (formerly Twitter)

