



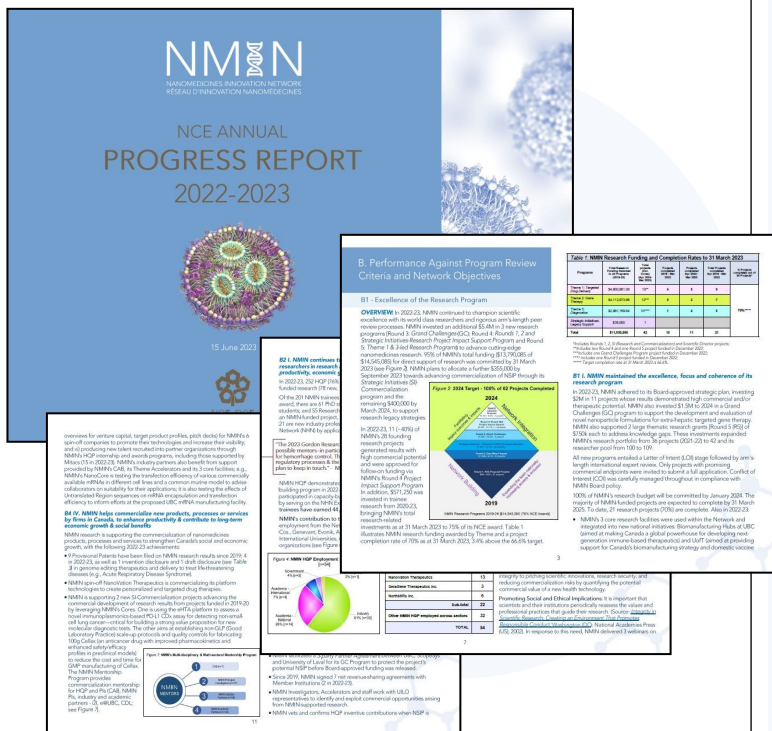
July 2023

### Another year of progress

#### NMIN's Annual NCE Progress Report highlights Network achievements

On 15 June 2023, NMIN submitted its fourth annual Progress Report to the NCE, detailing the Network's 2022-23 performance across the five NCE mandate areas: research, HQP, partnerships and networking, KTEE, and network management.

The report describes the year's activities and achievements, and enumerates the ways in which NMIN met or exceeded its targeted key performance indicators. Beyond the NCE mandate areas, it also registers progress made in legacy planning and implementation, and in Equity, Diversity and Inclusion (EDI).



Noteworthy accomplishments in 2022-23 include:

- \$5.4M invested in 3 new research programs
- 109 researchers engaged in NMIN-supported research
- 252 HQP engaged in NMIN programming and/or research (a 20% increase over the previous year); 24 structured learning opportunities offered; 54 HQP launched into employment; 14 travel and 9 studentship grants awarded to HQP
- 133 partners participated (34% increase over prior years), 58 from industry (29% increase over 2021-22) and 31% international

Continues on next page

### MESSAGE FROM THE SCIENTIFIC DIRECTOR

The conclusion of my first year as Scientific Director of NMIN has coincided with the production of the Network's fourth NCE Annual Progress Report, and what a satisfying way to look back upon the year.

In so many areas, NMIN managed to exceed its targeted key performance indicators over the past year.

In terms of HQP involvement: NMIN had 72% more post-doctoral fellows active in the Network than targeted for the year (43 active, 25 targeted), and NMIN exceeded its target of 15 trainees earning Advanced Training Certification (ATC) by 80%, with 27 ATC certificates earned.

In term of partnerships: With 35 partner/project agreements and 16 new international partners, in 2022-23 NMIN exceeded its targets by 250% and 700%, respectively. NMIN also exceeded its target for co-investing research partners by over 200% (target was 35, actual was 96) and its targeted Network leveraging ratio by 18%, attracting \$1.18 in non-NCE funds for every NCE dollar invested in research.

In terms of IP production, knowledge dissemination and economic impact: With 23 total pre-clinical technology dossiers accumulated by 2022-23, NMIN exceeded its 4-year target of 15 by 54%. With 107 jobs created since 2019 (38 in the fiscal year), NMIN exceeded its 5-year target of 100 jobs by 7%. With 10 new refereed publications in journals with an impact factor of 10 or higher, NMIN exceeded its annual target of 5 by 100%.

In terms of Network events: With 21 online webinars and 5 Network-wide events in 2022-23, NMIN exceeded its targets of 8 webinars and 2 network events by 162% and 150%, respectively.

As far as the Network's overall progress, the Report also confirms NMIN's good standing at year's end.

By 31 March 2023, NMIN had awarded 95% of its NCE research funding, and its project completion rate was above-target at 70%. In the fiscal NMIN implemented two major new "high-risk/high-reward" research programs (Grand Challenge and Round 5), funded two and approved 11 additional Round 4 projects, and approved three Commercialization Strategic Initiatives.

While this confirms that NMIN is on-track to expend 100% of its NCE research funding by the end of its NCE mandate, please note that Strategic Initiative funding is still available for potential use by researchers whose NMIN research shows commercial promise. Funding is available for six Strategic Initiatives; see details on page 3.

Continues on next page

- 200 publications (32% increase in annual production over past years), of which 13 have an impact factor of 20 or higher.
- 88% increase in research dissemination via conference posters, presentations and papers compared to 2021-22
- 9 lectures delivered by international research leaders, with 517 attendees evaluating them at an average rating of 4.75/5
- 8 capacity-building webinars delivered to 50 attendees evaluating them at an average rating of 4.5/5
- 1 Scientific Meeting with 131 attendees evaluating it with an average rating of 4.3/5

For more measures of Network progress in 2022-23, as featured in the annual report, see the Message from the Scientific Director.

In upcoming weeks NMIN's Annual Progress Report will be evaluated by the NCE Monitoring Committee and a 2022-23 "report card" will be issued to the Board of Directors.

Previous NMIN evaluations have been overwhelmingly positive, with NMIN consistently meeting or exceeding NCE expectations. NMIN will share the results of its 2022-23 report card when they are received.

A review of NMIN's accumulated research outputs since 2019 certainly merits a moment of collective pride: 9 patents, 1 invention disclosure, 1 draft invention disclosure, 6 spin-off companies (with 1 new company, NorthMiRs, spun-off in fiscal 2022-23) and 828 publications since 2019. An impressive tally!

To focus further on publications for a moment, it is remarkable to note that since 2019, NMIN research has resulted in 13 publications in journals with an impact factor of 20 or higher. In 2022-23 alone, of 33 refereed publications, 30% were featured in journals with an impact factor of 10 or higher. These numbers attest to the fact that the quality of research being conducted in this Network is truly exceptional.

On the topic of spin-off companies, it bears mentioning that Vancouver-based NanoVation Therapeutics, a gene therapy company developing next-generation LNP delivery technologies, whose CSO and CEO are both former NMIN HQP, created 13 new jobs in 2022-23 alone, has expanded operations into the UK, and has already spun-off two additional companies.

All of which illustrates clearly why NMIN's reporting at 2022-23 year's end makes for such a gratifying first-year anniversary celebration as Scientific Director.

Needless to say, these achievements owe everything to the Network as a collective: from the Board through NMIN's committees to its researchers, HQP and staff, and so I congratulate and thank my fellow Network participants *en masse*!

Even with all this under our belt, the year ahead—our final year as an NCE—promises its fair share of challenges and achievements.

I look forward to further consolidating NMIN's legacy plans in 2023-24, and to gathering with you all in January 2024 for an in-person Research Conference in Vancouver.

Dr. Gilbert Walker, Ph.D.  
Scientific Director & CEO, NMIN

## RESEARCHER NEWS

**NMIN Founding Director Dr. Pieter Cullis** was profiled in a [Globe & Mail](#) advertising feature on Innovation Excellence, was [interviewed](#) on CBC radio as a 2023 Killam prizewinner, and was elected a [Fellow of the Royal Society](#) (UK).



[READ MORE](#)

**NMIN researcher Dr. Fabio Rossi's** project *Bone targeted EP4 agonists as therapeutics for muscular dystrophy* received [funding](#) from Canada's Stem Cell Network.



[READ MORE](#)

**NMIN researcher Dr. Bruce Verchere's** project *Genetic engineering of hESC-derived insulin-producing cells to improve graft outcomes in type 1 diabetes* received [funding](#) from Canada's Stem Cell Network.



[READ MORE](#)

**NMIN PIs**  
please note:

**Final Progress Reports**  
for all Rounds 1-5 &  
SI-Comm projects

**ARE DUE:**  
**31 October 2023**



# Research & Resources

## Strategic Initiatives Funding Available

NMIN invites applications from NMIN researchers to its *Strategic Initiatives–KTEE/Commercialization Support Program*.

This program supports Network investigators ready to move forward with commercialization-related and/or knowledge mobilization-related activities. There is currently \$300,000 available.

Budgets may be requested to a maximum of \$50,000. Initiatives must be aligned with NMIN's mission and vision.

### DEADLINES:

- [Pre-application proposal](#): 11 August 2023
- [Full application](#) (if invited): 18 September 2023

### [MORE INFORMATION](#)

## Nanomedicine Expertise Database

As part of its legacy strategy, NMIN is creating an online database of Canadian nanomedicines researchers and the areas of expertise represented within their labs.

If you have not already done so, please complete the [NMIN survey](#) with details about the research & development expertise within your lab, and NMIN will include this information in the database to facilitate collaborative research opportunities Canada-wide.

To date, approximately 50 Canadian researchers from within and outside NMIN have submitted entries about their expertise through the online survey for the database.

A preliminary database is currently being developed by NMIN staff. Though only a few entries into the database have been completed, you can view the preliminary design and test its functionality on the [NMIN website](#).

Your input on the database design and content is welcome and can be sent to [info@nanomedicines.ca](mailto:info@nanomedicines.ca).

## National nanomedicine research & innovation expertise database



## Be counted!

To facilitate collaborative research among nanomedicine researchers Canada-wide...

Please take  
5 minutes  
to complete  
the online survey:

<https://www.nanomedicines.ca/expertise-survey/>

NMIN is creating an online database of Canadian nanomedicines researchers and the areas of expertise represented in their labs. To be included, please provide us with details about the R&D expertise in your lab.

NMIN

# NMIN's Highly Qualified Personnel (HQP) Program

## Meet the 2023-24 Executive Committee of the NMIN HQP Network (NHN)



### Top, L to R:

- Jennyfer Zapata-Farfan (President)
- Michael Valic (Vice-President)
- Dr. Noorjahan Aibani (Events Director)
- Amélie Baron (Regional Director - Quebec/Atlantic)
- Ariadne Tuckmantel Bido (Member-at-large)

### Bottom, L to R:

- Dr. Alexander Baker (Member-at-large)
- Norman Chow (Communications Director)
- Talita de Francesco (Member-at-large)
- Tavonga Mandava (Regional Director – West-Central)
- Liza Silverman (Regional Director – Pacific)
- Nashmia Zia (Regional Director – Ontario)

[Read the full profiles of the 2023-24 NHN Executive Committee members.](#)

## HQP Research Presentations

The 14th round of the HQP Research Presentation series took place on 29 June 2023, encompassing the use of lasers, gold-LNPs, and other nanotechnologies to enhance the efficacy of chemotherapy and radiotherapy for cancer.



### VIDEOS & POSTERS

Check the [NMIN website](#) for information about up-coming rounds of HQP Research Presentations.

For a searchable list of presentations featured in this series, with links to posters and video recordings, see the [HQP Research Presentations Database](#) on NMIN's website.

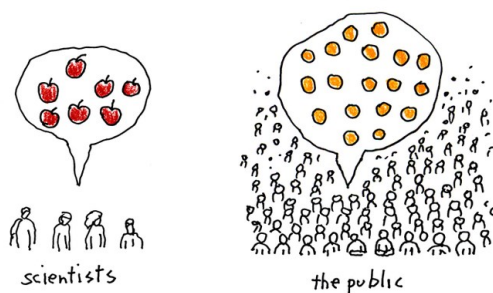
# Mitacs

## FUNDING SUPPORT REMINDER

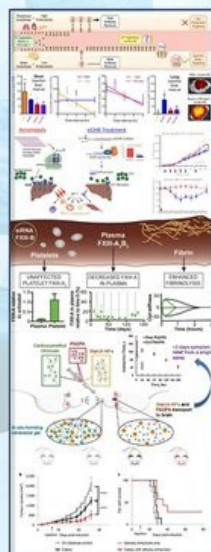
Mitacs Internships and Fellowships are available, earmarked for NMIN HQP to work with non-academic partner organizations on nanomedicine research.

See the FAQs & application information on the [NMIN website](#).

## Science communication



Visit the [NMIN website](#) for more information about *NanoMedicines Translated*, including eligibility requirements, benefits of participation, and how to apply.



## NANOMEDICINES TRANSLATED

**NMIN**  
NANOMEDICINES INNOVATION NETWORK  
RESEAU D'INNOVATION NANOMÉDECINES

**NMIN's NanoMedicines Translated Program** engages NMIN HQP in a hands-on learning process to produce clear-language summaries of their NMIN-supported, peer-reviewed research publications.

Participants in the program produce a communications tool by which to disseminate their research to the broader public and acquire knowledge translation skills.



# Funding Opportunities for NMIN HQP

See the [NMIN HQP Program Factsheet](#) for an overview of all current opportunities



Doctoral & Master's Level  
Graduate Awards

Undergraduate Studentships  
for equity deserving students

Lab Exchange & Research Skills  
Development Awards



## NMIN Lab Exchange & Research Skills Development Awards

2023-24 Competition

[MORE INFO](#)

- The Lab Exchange Program supports NMIN trainees spending between six weeks and six months working on research projects with national or international investigators and their teams. Research visits must contribute to the mission and vision of NMIN and provide a unique training opportunity not currently available to the trainee.
- The Research Skills Development Award Program provides support for training opportunities to cultivate the next generation of nanomedicine scientists and entrepreneurs in Canada. Applications are evaluated based on the potential contribution to research and the capacity-building benefits for the applicant.

Funding use is restricted to eligible travel-related expenses, and tuition/workshop/research costs (if applicable), for NMIN trainees and NHN members.

**Deadline: first-come, first-serve, subject to funding**

## NMIN Doctoral & Master's-level Graduate Awards

2023-24 Competition

[MORE INFO](#)

- Five Doctoral awards are available providing a stipend of \$35,000 a year for one year
- Five Master's awards are available providing a stipend of \$17,500 for one year.

Applicants must be full-time graduate students in good academic standing pursuing a PhD or master's degree at a Canadian university or Canadian partner institution, and must be supervised by an NMIN Investigator and/or an NMIN committee member.

**Deadline: 15 September 2023**

## NMIN Undergraduate Studentships in NanoMedicines Research

2023-24 Competition

[MORE INFO](#)

- Five awards of \$1,500 a month for up to four months are available for undergraduate students from equity deserving groups in nanomedicine research.

Applicants must be equity deserving undergraduates enrolled in, and having completed at least one year of study in, an undergraduate degree program at a Canadian university; and be supervised by an investigator named on a currently-funded NMIN project.

**Deadline: 15 September 2023**

A thumbnail image of the NMIN HQP Program Factsheet document. The document is titled "NMIN HQP Program Factsheet" and "Updated: 29 June 2023". It contains a table with two main sections: "1. NMIN Undergraduate Studentships in NanoMedicines Research 2023-24" and "2. NMIN Graduate Awards Doctoral & Master's-level 2023-24". Each section includes details about the program, eligibility, and application process.

## Welcome aboard!

Dr. Azita Haddadi joined NMIN's HQP Advisory Committee on 16 May 2023.

We are grateful for her input into planning NMIN's HQP training & programming opportunities!

Dr. Haddadi is Associate Professor of Pharmacy and a member of the Drug Discovery and Development Research Group at the University of Saskatchewan.

## Recent NMN Lecture



LECTURE SERIES

### Next-Generation RNA Vaccines & Therapies



**Dr. Anna Blakney**

Co-Leader, Grand Challenges Thrust;  
Assistant Professor, Michael Smith Laboratories & School of Biomedical Engineering  
The University of British Columbia



## Recent NMN webinars



NMN

### Early-stage IP in rare diseases: Setting the stage for growth

**Cynthia Shippam**  
NRC-IRAP



31 May 2023 | 3 - 4 pm EDT

Canada National Research Council Canada Conseil national de recherches Canada



Canada

NMN Capacity-Building Webinar

NMN

### BUSINESS OF SCIENCE:

Transferable skills that straddle academia, entrepreneurship & industry



**Dr. Sarah Lubik**

Executive Director, Chang Institute for Entrepreneurship  
Director of Entrepreneurship, Simon Fraser University



**Dr. Azadeh (Azi) Goudarzi**

Director of Business Development and Innovation,  
Integrated Nanotherapeutics Inc.

i2I  
invention to  
innovation

## Up-coming NMN Lectures



**Dr. John Lewis**

18 July 2023

11 am PT | 2 pm ET



**Dr. Aaron Wheeler**

28 September 2023

11 am PT | 2 pm ET

## NMN 2024 Research Conference

### Preliminary Program

The event's speaker and panel line-up is taking shape. Keep up-to-date [here](#).

### Sponsorship Opportunities

Be a part of this major national nanomedicine event; connect with the leaders of the field: NMN offers various levels of sponsorship to ensure the best fit with your organization's marketing, outreach and networking objectives. Review the options [here](#).

### Early-bird Registration

Registration is open! Register by 15 October 2023 and benefit from discounted early-bird rates. Act soon as space is limited. Details are available [here](#).

### Book Early

Book your room in the event venue early to ensure a spot; get the preferred rate. More information [here](#).

### Support available for NMN researchers & HQP

NMN Conference Travel Grants & Poster Presentation Travel Awards can be applied towards travel, accommodation, and registration costs. Details, including eligibility, are available [here](#).