



December 2020

I am delighted to provide below the first in a series of regular updates on the activities, outputs and impacts of the NanoMedicines Innovation Network (NMN)—one of Canada's national Networks of Centres of Excellence (NCE).

Established in early 2019, NMN's vision is to advance research, innovation and training in nano-medicines to maintain and accelerate Canada's position as the world leader in this emerging field.

Thanks in part to Canadian scientists, nanomedicine approaches are proving their worth in the form of novel vaccines that provide protection against COVID-19.

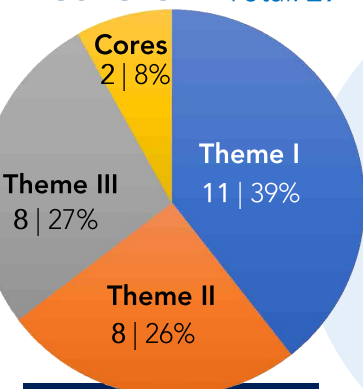
NMN's strategic investments in research and innovation are already generating results in the form of new knowledge, related publications and presentations, and potential spin-off companies.

Dr. Diana Royce, Ed.D.
Executive Director, NMN

NMN's Research Program

PROJECTS Total: 29

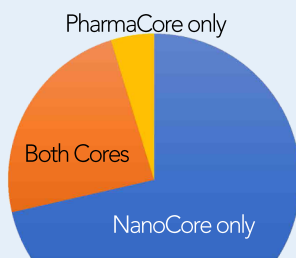
[NMN's project database](#)



Distribution of research investments by Theme

NMN non-Core projects working with Core Facilities

22 out of 27 | 81%



[About the Core Facilities](#)

Total NMN research investments **\$6,255,585**

NMN project funding: [First round](#) | [Second round](#)

Canadian technology enables Pfizer's COVID vaccine

Pfizer's vaccine uses an LNP delivery system originating from research undertaken by NMN investigators and others at UBC.



Pfizer and BioNTech's COVID-19 vaccine has received emergency authorization for use by the Canadian government and the US FDA. The vaccine is entering mass production and may soon help end the pandemic—thanks in part to Canadian technology, Canadian researchers, and Acuitas, a Vancouver-based biotech company.

[READ MORE](#)

RESEARCHERS

Investigators **44** | PIs **23**

Collaborators

42

Project roles **113** | Avg. roles/researcher **1.31**

TOTAL RESEARCHERS **86**

[Meet NMN's researchers](#)

PUBLICATIONS

from NMN-funded research
1 April 2019—31 December 2020

Peer-reviewed articles in refereed journals	3
Other published contributions including editorials, commentary, review articles, webinars...	122
Specialized publications including scientific meeting presentations, abstracts, academic theses...	97
Posters	21
TOTAL PUBLICATIONS	243

PARTNERS

Total partner organizations: 79

By country

Canada 61 | 77.2%
USA 11 | 13.9%
Germany 2 | 2.5%
Belgium 1 | 1.3%
Denmark 1 | 1.3%
Ireland 1 | 1.3%
Switzerland 1 | 1.3%
United Kingdom 1 | 1.3%

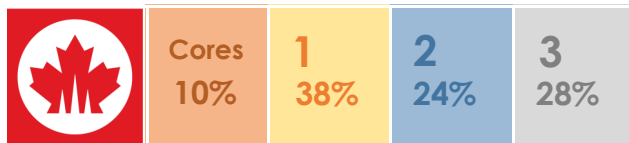
By sector

Federal Agencies 3 | 4%
Hospitals etc. 6 | 7.5%
Other 8 | 10%
Non-Profits 8 | 10%
University 17 | 21.5%
Industry 37 | 47%



NSERC HQP Supplement

NMIN thanks the tri-agencies for the Grant Supplement to support HQP in light of COVID-related funding delays. The \$593,024 received for 2020 has been committed across NMIN's themes as follows:



RESEARCH PROGRESS

Congratulations to NMIN PIs who are progressing toward their project milestones despite the impacts of COVID.

Five year-one Progress Reports have been received already.

Progress Report due dates:

Round 1 projects: **1 March 2021**

Round 2 projects: **31 March 2021**

NMIN's Highly Qualified Personnel (HQP) Program

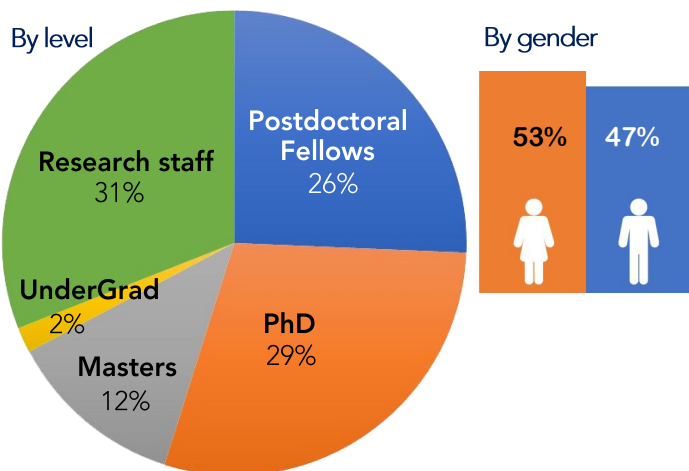
With the unforeseen spread of COVID-19, NMIN's HQP program was rapidly adapted to ensure that the anticipated benefits of networked, value-added capacity-building opportunities remain available to Network participants, despite pandemic-related restrictions on travel and public assembly.

NMIN's HQP programming focus has pivoted towards shorter, and more frequent, interactive virtual events.

I am pleased to announce that NMIN will launch its second online capacity-building workshop series: *Connect and Communicate with Confidence* (C3), a Poster Presentation series, and an online Lecture Series in early 2021.

Total NMIN HQP: 114

97 working on NMIN projects



HQP Network established

The NMIN HQP Network (NHN) is a student-led organization comprising NMIN research trainees and new professionals in all fields of nanomedicine research. It fosters networking, knowledge exchange and professional skill development among its members.

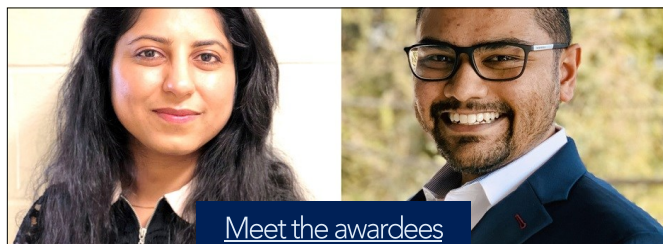
2 committees formed

The NHN Executive Committee plays a leadership role in the planning and realization of NMIN's HQP programs, activities and other opportunities. [Meet the committee.](#)

The HQP Program Advisory Committee (HPAC) advises NMIN on training and programming opportunities for HQP. [Meet the committee.](#)

HQP AWARDS

Two NMIN Postdoctoral Fellowships in Targeted Drug Delivery & in Gene Therapy awarded.



Call open for NMIN Postdoctoral Fellowship In Diagnostics. [See the call.](#)

2 MOUs Signed

Two Memoranda of Understanding (MOUs) have been developed and signed with Mitacs and PRiME (for joint HQP activities).



\$6.5 million earmarked
[in Mitacs funds for NMIN HQP internships](#)
3 NMIN HQP participating in Mitacs internships

One NMIN top up of Mitacs COVID-19 Internship awarded.

COMING UP NMIN capacity-building activities & HQP Program enhancements planned for early 2021

- NMIN Poster Presentation Series
- NMIN Lecture Series
- Pieter Cullis Invitational Lectures
- 2 webinars
- 4 workshops in the series: [Connect and Communicate with Confidence](#) (C3)
- NMIN's Advanced Training Certification program

CAPACITY-BUILDING OPPORTUNITIES

Four capacity-building webinars delivered:

- [rhAmpSeq™ CRISPR: Multiplexed Amplicon Sequencing & Analysis](#)
- [Mitacs Internship & Fellowship Opportunities](#)
- [Navigating Intellectual Property \(IP\) Risk](#)
- [Developing an Entrepreneurial Mindset](#)

Resources (slides, recording) available for each.

Four workshops delivered in 2020 series:

[Designing Effective Commercialization Plans for Grant Proposals](#)

with Christine Charette (Scientia Advisors Inc.)

This workshop series was designed for NMN participants to improve their ability to address commercially relevant evaluation criteria such as market size in their research planning and grant proposal writing, and to hone their skills in conducting competitive analysis.

The series was positively received. Fifty-four NMN participants registered. Two NMN research teams volunteered their projects for discussion. In post-event surveys, respondents rated the series at 4.7/5 on average for "overall usefulness." Participants commented on the "clear session content" and appreciated "applying the learnings to real-world examples."



EDI training provided

162 NMN participants completed online tutorials on Equity, Diversity & Inclusion, with 100% completion for committee members, staff, and primary investigators.

3 partnered events

Integrated DNA Technologies Symposia:

- [Development of genetic drugs using nucleic acids and LNPs](#), February 6, 2020
- [Developing genetic tools using nanoparticles & functionalized nucleic acids](#), February 13, 2020

[Vancouver Nanomedicine Day 2020:](#)

- 28 HQP listed on submitted abstracts, 15 as first authors

OTHER NMN EVENTS

- [Research Strengthening Workshop](#)
- [2019 Scientific Meeting](#)

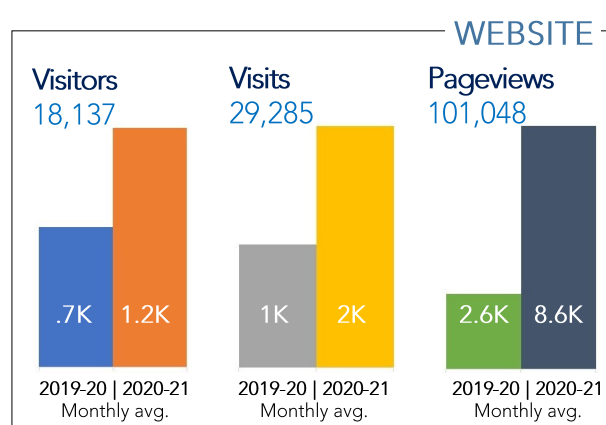
COMING UP



NMN Communications & Online Presence

COMMUNICATIONS

Press Releases	2	2000+ recipients
Newsletters	1 external 2 internal	1000+ recipients 80+ recipients
Blog postings	30 (1.5/mon)	2343 pageviews
Email bulletins	86 (4.5/mon)	750+ recipients



SOCIAL MEDIA

Twitter

Tweets	145
Followers	433
Profile visits	6,170
Impressions	210,712

LinkedIn

Members	142
Posts	60

YouTube

Videos	36
Views	918
Watch time	66.7 hrs



Network building

It truly takes a village to build a vibrant and impactful NCE; one with the multidisciplinary, collegiality and collaborative spirit that enables a disparate group of people from across sectors and areas of expertise to join forces and accomplish things together that would be impossible to achieve alone.

As 2020 draws to a close, I would like to express my appreciation to all of you who have invested yourselves in our shared NCE adventure: NMIN Board members led by Board

Chair Mr. Don Enns; NMIN Investigators, Collaborators and Research Leaders, led by our Scientific Director Dr. Pieter Cullis; advisory committee members serving on the Research Management Committee; the HQP Advisory Committee led by Dr. Nicolas Bertrand; the NMIN HQP Network Executive Committee led by Grace Choi; and to all NMIN's trainees and partner organizations.

Wishing everyone a safe and happy holiday season!

3 new Board members



NMIN welcomes to its Board of Directors:

- [Vanessa Grant](#), Partner, Norton Rose Fulbright Canada LLP
- [Inès Holzbaaur](#), Co-Founder & Managing Partner, AmorChem
- [David Martin](#), Managing Director & Head of Equity Research, Bloom Burton Securities

New NCE liaison



NMIN welcomes as liaison from the Government of Canada's NCE Secretariat:

Heather Mustoe
Monitoring and Evaluation Specialist at CIHR

New SAC Chair



NMIN welcomes the inaugural Chair of its Scientific Advisory Committee (SAC):

Dr. Francis Szoka
Professor, University of California San Francisco

New staff



There are some new faces on the NMIN Administrative Team.

[Meet the team](#)

Enquiries or comments

Dr. Diana Royce
NMIN Executive Director

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Network Members meeting

NMIN's first annual Network Members Meeting will be held on Thursday 17 December 2020. Welcome and thank you to the seven representatives of Network member institutions:

- University of British Columbia:
Mr. Greg Martyn
Director, Vice-President Research & Innovation Portfolio
- University of Alberta:
Dr. Randy Goebel
Associate VP Research & Innovation and Associate VP Academic
- University of Saskatchewan:
Dr. Dion Martens
Director, Research Excellence & Innovation
- University of Toronto:
Dr. Derek Newton
Assistant VP, Innovation, Partnerships & Entrepreneurship
- University Health Network:
Dr. Bradley G Wouters
Executive VP, Science & Research
- Polytechnique Montréal:
Mr. Olivier Grenier
Director of the Office of Research/Centre for Technological Development
- Queen's University:
Mr. Charles Sumbler
Executive Director, Office of the Vice-Principal Research