



July 2022

### Thank You to Christine Allen

#### NMIN's Scientific Director recruited to AdMare Bio

NMIN's Scientific Director Dr. Christine Allen stepped down from her leadership of the Network on 30 June 2022 to join adMare Bioinnovations in a new senior management role as Vice President, Ecosystem Development.

adMare uses its scientific and commercial expertise, specialized R&D infrastructure, and investment capital to build investable Canadian companies, robust ecosystems and industry-ready talent.

As NMIN Scientific Director, a role she assumed on 1 July 2021, Dr. Allen guided the strategic focusing of the Network's final rounds of research investments, most particularly for the Grand Challenges and Round 5: Themes 1- and 3-led call for research programs. She took a keen interest in the formation of young professionals in the Network, spearheading the Scientific Integrity Speaker Series that became a core component of NMIN's capacity-building program.

She also brought to the position her dedication to the principles of Equity, Diversity, and Inclusion (EDI), which she applied to the distribution of HQP opportunities, resulting in an increase in the number of training awards during her tenure.

"Throughout her time as Scientific Director, Dr. Allen demonstrated exceptional leadership and vision in building NMIN-partnered research collaborations across Canada and facilitating networking and leadership skills among our trainees," comments NMIN Board Chair Dr. Inès Holzbaur.

"I am very pleased that Dr. Allen will remain an NMIN investigator and role model for NMIN trainees. Please join me in thanking her for her service to NMIN, and in wishing her success in her new leadership position at adMare Bioinnovations."

In accordance with the Network's Succession Plan, NMIN's Associate Scientific Director, Dr. Gilbert Walker, is serving as Interim Scientific Director until the Board appoints a permanent replacement.

### MESSAGE FROM THE EXECUTIVE DIRECTOR

The Network continues to evolve and grow in a fast-paced environment characterized by constant change. NMIN has successfully navigated the COVID lockdown phase and emerges more focused and networked, proving its resiliency and commitment to productivity.

In addition, NMIN is embracing the return of in-person gatherings, legacy planning is proceeding apace, and its final funding calls are underway.

The current transition in Scientific Director was preceded by a change in NMIN's Board Directorship, as inaugural Board Chair Don Enns stepped down on 8 April 2022, after serving since NMIN's founding in 2019, to join NanoVation Therapeutics, an NMIN spin-off company. Mr. Enns brought to the role over 30 years of experience as a senior executive and leader in the life sciences industry, as well as significant company-building experience. His leadership was indispensable to NMIN's successful launch and growth to date.

Dr. Inès Holzbaur was appointed as NMIN Board Chair on 9 May 2022, and Dr. Leslie Esford, Chair of the Board Finance and Audit Committee, assumed Dr. Holzbaur's former role of Board Vice-Chair.

Both Mr. Enns and Dr. Christine Allen were duly recognized for their contributions to the Network at an in-person celebration on 15 June 2022 in Vancouver, followed by a half-day NMIN legacy planning retreat.

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Board Chair Dr. Inès Holzbaur (L) & outgoing Scientific Director Dr. Christine Allen (R) flank former Board Chair Mr. Don Enns.



These NMIN Board and legacy-planning gatherings immediately followed the major in-person conference [Liposome Research Days 2022](#), of which NMIN was a leading sponsor and where NMIN researchers and its spin-off company NanoVation Therapeutics were centrally featured, together with a stellar array of other world-leading nanomedicine experts.

Organized by NMIN's Founding Scientific Director, Dr. Pieter Cullis, and the Chair of NMIN's Research Management Committee, Dr. Terry Allen, LRD 2022 drew a capacity crowd at this historic moment when—thanks to their role in COVID-19 vaccines—the revolutionary potential of nanomedicines is attracting increasing attention, interest and investment.



NMIN's Drs Terry Allen and Pieter Cullis pose on the UBC campus with some of the other liposome luminaries at LRD 2022.

NMIN now looks forward to hosting its next in-person event, its 2022 Scientific Meeting and inaugural Trainee Symposium, planned for 17-19 November 2022 in Toronto. A celebration of the Network's founding Scientific Director, Dr. Cullis, whose COVID-vaccine-related accolades continue to accumulate, will be on the program.

Finally, NMIN's research program is keeping pace with the Network's maturation: Round 3 of NMIN research investment (Grand Challenges) has been awarded and will support an ambitious, network-wide effort focused on gene therapies. The call for Round 4 (Project Impact Support) has been issued, to provide follow-on funding to Round 1 and 2 projects with high potential for impact. The call for Round 5 (Integrated Programs) is in the works, toward supporting highly networked and ambitious efforts to be led by Themes 1 (Targeted Drug Delivery) and 3 (Diagnostics).

It is an exciting time for the Network and for the field of nanomedicines, with much still to come before the end of NMIN's NCE mandate in 2024.

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

Enquiries or comments  
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## RESEARCHER NEWS

NMIN Investigator Dr. Anna Blakney was profiled in UBC's [Pathways](#) and by [Research2-Reality](#) for her "cool, out-of-the-box approaches" to biomedical engineering.



[READ MORE](#)

NMIN investigator Dr. Christian Kastrup's start-up and NMIN's spin-off company SeraGene, spun out of NMIN, received a 2022 "Amgen Golden Ticket" at the UBC-based SBME Innovates incubation hub.



[READ MORE](#)

NMIN Research Leader Dr. Pieter Cullis and colleagues most recently received the [2022 Gairdner International Award](#), the [Governor General's Innovation Award](#), and the [2022 Tang Prize](#) for their contributions to mRNA vaccines. Dr. Cullis was also featured in [Science](#) magazine and awarded BC Life Science's 2022 [Global Impact Award](#).

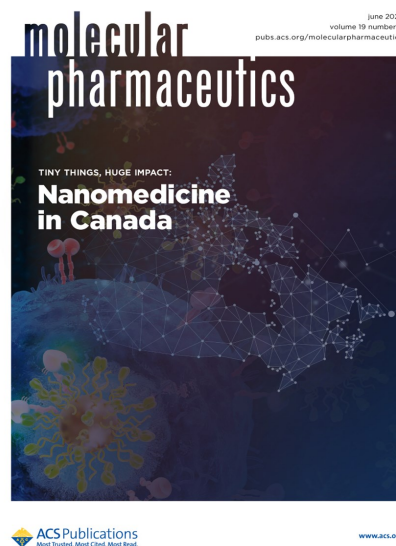


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## Canadian Nanomedicine in the Spotlight NMIN researchers edit special journal issue.

Highlighting Canada's world-leading role in nanomedicine research, the American Chemical Society journal *Molecular Pharmaceutics* has published a [special issue](#) (6 June 2022) titled "Tiny Things, Huge Impact: Nanomedicine in Canada."

The issue was edited by NMIN researchers Drs Shyh-Dar Li, Ellen Wasan, Marcel Bally, and Sarah Hedtrich.



It features contributions by NMIN researchers Drs Pieter Cullis, Dominik Witzigmann, Miffy Cheng, Gang Zheng, Noorjahan Aibani, Kishor Wasan, Robert Hancock, Afsaneh Lavasanifar, Lisa Silverman, Po-Han Chao, Anna Blakney, and Warren Chan.

[Read the issue's editorial.](#)



# NMIN's Highly Qualified Personnel (HQP) Program

Eight more highly-engaged HQP receive NMIN's Advanced Training Certification (ATC)



In January 2022, eight more recipients of NMIN Advanced Training Certification (ATC) were recognized in an online ceremony. [Learn more about ATC and these recipients.](#)

## 2022 NMIN Undergraduate Studentships awarded



In May 2022, NMIN granted *Undergraduate Studentships* in NanoMedicines Research awards to eight young researchers. [Read about the award recipients & their projects.](#)

## HQP Research Presentations

The ninth round of this series highlighting NMIN HQP's research and presentation skills took place on 26 May 2022; the eighth round took place on 21 March 2022.

**Round 9**  
NMIN HQP Research Presentations

Irene Chen  
University of Alberta

Elisabet Rodriguez Llorian  
University of British Columbia

Fariba Saadati  
University of British Columbia

Lucy Wang  
University of Toronto

VIDEOS & POSTERS

**Round 8**  
NMIN HQP Research Presentations

Gold Nanoparticles Encapsulation into Polymeric Micelles for Cancer Theranostics

Talita de Francesco  
University of Victoria

Single-Particle Measurements of Size & Loading for Drug-delivery Lipid Nanoparticles

Yifei Gu  
University of British Columbia

X-Ray Triggered Drug Release of Hybrid Protein-Gold Nanoparticle

Courtney van Ballegooie  
University of British Columbia

VIDEOS & POSTERS

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.

## NMIN Travel Awards

are available to NMIN Highly Qualified Personnel (HQP) to support their participation in events aligned with NMIN's mission and scope of research

Don't miss that conference!



NMIN will fund 50% of total eligible expenses associated with attending an approved event, up to \$1,000 for events in Canada and \$1,500 for international events.

<https://www.nanomedicines.ca/training/#travel>



## NANOMEDICINES TRANSLATED



**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.

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



## Recent NMNIN Events

**NMNIN**  
NANOMEDICINES INNOVATION NETWORK  
RESEAU D'INNOVATION NANOMEDICINES

An NMNIN Lecture

### Cancer nanomedicine

Using gold nanoparticles to overcome radiotherapy challenges

with  
**Dr. Devika Chithrani**  
University of Victoria

**Friday, 20 May 2022**  
11:00 am – 12:00 pm PDT | 2:00 – 3:00 pm EDT

**NMNIN**  
NANOMEDICINES INNOVATION NETWORK  
RESEAU D'INNOVATION NANOMEDICINES

An NMNIN Lecture

### Porphysomes and beyond

The path to clinical translation

with  
**Dr. Gang Zheng**  
University of Toronto

**Wednesday, 23 March 2022**  
10:00 – 11:00 am PDT | 1:00 – 2:00 pm EDT

## NMNIN Report compiles 2021-22 accomplishments

**NMNIN**  
NANOMEDICINES INNOVATION NETWORK  
RESEAU D'INNOVATION NANOMEDICINES

NCE ANNUAL PROGRESS REPORT  
2021-2022

**B1 - Excellence of the Research Program**

**OVERVIEW** In 2021-22, NMNIN ensured scientific excellence through rigorous internal and international peer review as it invested an additional \$100,000 in three new research initiatives. NMNIN established a third core facility and three new research funding programs. In addition, 104 of 201 (52%) previously funded research projects were completed, despite pandemic-related disruptions.

To date, NMNIN has invested \$8,095,000 (57.4% of total NCE funds) in direct support of research, and will invest an additional \$4M by March 2023 to ensure research project completion by Fall 2024. Total NMNIN research investments made and planned represent 45.8% or 70% of NMNIN's entire NCE budget. This is in addition to \$27,000 invested in nanoscale research from 2020-22, bringing the total proportion of NCE funding invested in research to 75%.

Program	Total Funding	Total projects completed and in progress	% Projects completed and in progress
Round 1	\$1,488,451.00	16	4
Round 2	\$2,153,519.00	11	0
Round 3	\$2,000,000.00	14	1
Total	\$5,641,970.00	41	5

**B1.1 NMNIN maintained the excellence, focus and coherence of its research program**

Guided by its RAC, NMNIN is strategically expanding its research portfolio in 2021-22 in terms of projects from 33 to 36 and researchers from 91 to 100 in over 30 disciplines. With expertise, resources, market access and knowledge gaps, NMNIN also focused its partnerships on the most productive and high-priority relationships established in Years 1-2, with 97 Canadian and international partners.

In 2021-22, NMNIN implemented three new programs to further advance achievement of its research objectives: 1) Round 3 Grand Challenges (GC) Program (GCM to GCR), to leverage network synergies into a broadly collaborative, high-impact research program; 2) Round 4

NMNIN submitted its third Annual Progress Report to the NCE on 20 June 2022, summarizing the Network's progress as of the end of 2021-22.

Among the accomplishments reported: to date NMNIN has invested \$8.1 million in 36 research projects involving 100 researchers, 168 HQP and 99 partners (45% from industry), resulting in 5 patents issued, 5 spin-off companies, 25 new jobs, and 628 publications (53 peer-reviewed).

In 2021-22, NMNIN established a third Core Facility (the eHTA); implemented the Grand Challenges and Round 4 programs; leveraged \$1.51 in non-NCE money for every NCE dollar invested in research; made 2 new IP disclosures; engaged 209 HQP in 20 learning opportunities, launched 22 HQP into employment, and issued 20 HQP awards. NMNIN's spin-off company [NanoVation Therapeutics](#) expanded its operations to the UK, hired 21 employees, and initiated the launch of two new subsidiary start-up companies.

Also in the fiscal, NMNIN partnered on 2 international events ([Vancouver Nanomedicine Day 2021](#) and an [Industry Workshop on LNPs and genetic therapies at CRS 2021](#)); organized 7 [webinars](#), 6 [lectures](#) and 7 [HQP research presentation sessions](#); and added 38 videos to its [YouTube channel](#), which accumulated over 2000 additional hours of viewing time.



<https://bit.ly/3aaEZRV>

NMNIN Capacity-Building Webinar

### Pitching your innovation: Pro tips for scientists

**Clay Braziller**  
Manager, Strategic Partnerships, Faculty of Science  
Visiting Lecturer, Beedies School of Business  
Simon Fraser University

**18 May 2022**

**NMNIN**  
NANOMEDICINES INNOVATION NETWORK  
RESEAU D'INNOVATION NANOMEDICINES

A Pieter Cullis Invitational Lecture

### Liposomes-Six Decades On

The Old Kid on the Cancer Nanomedicine Block

**Dr. Francis Szoka**  
University of California  
San Francisco

**20 April 2022** | 10-11:00 am PDT | 1-2:00 pm EDT



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