VISION:
to establish and mobilize a network drawn from academia, industry, and not-for-profit research enterprises to maintain and improve Canada’s position as a global leader in developing next generation nanomedicines.

MISSION:
to develop novel therapeutics to cure high-burden human diseases and new diagnostics to detect disease more precisely; to commercialize these products to bring health and economic benefits to Canadians; and to train the skilled workforce required by the growing nanomedicines industry.

FUNDING: NMIN was awarded $19,125,024 in funding over 5 years (2019-2024) by the Government of Canada through the Networks of Centres of Excellence (NCE) Program.

RESEARCH INVESTMENTS & NETWORK MEMBERS

NMIN’s 37 projects span 10 member institutions across 5 provinces:
- The University of British Columbia; University of Victoria (BC)
- University of Alberta (AB)
- University of Saskatchewan (SK)
- University of Toronto; University Health Network; Queen’s University; University of Waterloo (ON)
- Polytechnique Montréal; Université Laval (QC)

Total NMIN researchers: 104 | Total PIs: 27
Total collaborators: 68

$8,095,085

RESEARCH THEMES:

Targeted Drug Delivery (Theme I)
Leaders: Drs. Marcel Bally & Shyh-Dar Li
University of British Columbia

Enabling Gene Therapies (Theme II)
Leaders: Drs. Pieter Cullis & Christian Kastrup
University of British Columbia

Diagnostics (Theme III)
Leaders: Drs. Warren Chan & Gilbert Walker
University of Toronto

IMPACTS & OUTPUTS (2019-2022):

248 trainees engaged
53 peer-reviewed publications
25 jobs created
24 pre-clinical technology dossiers
8 IP outputs
6 spin-off companies
5 patents filed
3 invention disclosures
PARTNERS 2022
Total partner organizations: 99

By country
Canada 71 72%
USA 18 18%
Belgium 1 | 1%
China 1 | 1%
Denmark 1 | 1%
Germany 1 | 1%
Ireland 1 | 1%
New Zealand 1 | 1%
Sweden 1 | 1%
Singapore 1 | 1%
Switzerland 1 | 1%
United Kingdom 1 | 1%

By sector
Hospitals etc. 6 6.1%
Federal 7 7.1%
Other 8 8.1%
NFPs 12 12.1%
University 21 21.2%
Industry 45 45.4%

HQP 2022
Total HQP engaged in NMIN research: 191

By level
New professionals 10%
Postdoctoral Fellows 17%
Research staff 25%
UnderGrad 9%
Masters 11%
PhD 28%

By gender
M 57%
F 43%

By nationality
MD/PhD 1%

PUBLICATIONS
from NMIN-funded research
1 April 2019—31 March 2022

Peer-reviewed articles in refereed journals 53
Other published contributions including posters, editorials, commentary, review articles, webinars... 341
Specialized publications including scientific meeting presentations, abstracts, academic theses... 234

TOTAL 628

NOMICORE
Nanomedicines Formulation and Characterization Core Facility
Leaders: Drs. Pieter Cullis & Christian Kastrup, University of British Columbia

Mission: To develop high-quality, state-of-the-art lipid nanoparticles encapsulating small molecule or nucleic acid drugs that enable proof-of-concept (POC) animal studies
To standardize the physicochemical characterization in order to identify critical parameters
Formulation: High-quality, state-of-the-art nanoparticle formulations encapsulating small molecule, peptide or nucleic acid drugs that enable proof-of-concept (POC) animal studies.
Physicochemical characterization: Comprehensive portfolio of characterization assays including sizing & structure analyses that guarantee reliable interpretation of in vitro & in vivo studies & further optimization.

No nanoparticle formulation will enter animal studies in NMIN without being rigorously characterized.

PHARMACORE
Pharmacology/Toxicology and Scale-up Core Facility
Leaders: Drs. Marcel Bally & Shyh-Dar Li, University of British Columbia

Mission: To help research partners develop promising nanomedicines and provide capabilities to advance new treatments from the bench to the clinic.
Capabilities: Pre-clinical in vitro, pre-clinical pharmacology, GLP-guiding safety, manufacturing

eHTA
early Health Technology Assessment platform
Leader: Dr. Larry Lynd, University of British Columbia

Mission: To enhance the value propositions of NMIN-funded technologies to healthcare payers by conducting early evaluations of their cost-effectiveness.
Capabilities: Cost-effectiveness analysis; target product profile development; societal impact assessment; bottom-up market sizing for business plans; strengthening reimbursement dossiers

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