

NANOCORE

FAST FACTS

Translational Nanomedicines
Formulation & Characterization Core Facility

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NanoCore

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NMIN

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NMIN
NANOMEDICINES INNOVATION NETWORK
RESEAU D'INNOVATION NANOMÉDECINES

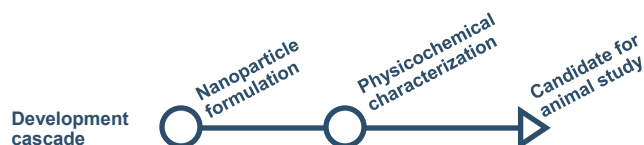
MISSION:

To develop high-quality, state-of-the-art lipid nanoparticles encapsulating nucleic acid, small molecule, or peptide drugs that enable proof-of-concept (POC) animal studies

To standardize physicochemical characterization & identify critical parameters

ADVANTAGES:

- Advanced know-how and technological infrastructure
- Integrated development cascade with standardized operating procedures
- Customized formulations adapted to specific projects
- Programs to modify small molecules, enabling efficient loading into nanoparticles
- Benchmark materials for comparative studies



SERVICES:

FORMULATION CORE SERVICES

- **Advanced nucleic acid encapsulation** (e.g. siRNA, mRNA, DNA vectors) into state-of-the-art lipid nanoparticles
- Development of lipid-based nanoparticles efficiently entrapping **small molecule drugs or peptides**
- **Small- and medium-scale production** of lipid nanoparticles for POC and preclinical testing prior to transfer to a contract research organization (CRO)
- Expert consultation on lipid **nanoparticle development** and design
- Expert consultation for **grant proposals** and manuscripts
- Consultation on **transfer to CROs** at completion of POC

PHYSICOCHEMICAL CHARACTERIZATION CORE SERVICES

- **Size and size distribution** (dynamic light scattering)
- **Zeta potential** (electrophoretic light scattering)
- **Morphological visualization** (cryogenic electron microscopy)
- Measurement of **lipid and payload concentration** (small molecule, nucleic acid)
- Determination of **drug-to-lipid** (small molecule) and **N/P** (nucleic acids) ratios
- Determination of **payload encapsulation efficiency**



Prices given here are approximate.

All projects are unique.

Actual pricing for any project is determined by its specific needs.

FORMULATION EXAMPLE PRICE LIST

High-quality, state-of-the-art nanoparticle formulations encapsulating small molecule, peptide or nucleic acid drugs that enable proof-of-concept (POC) animal studies.

- Customized LNP optimization services to improve gene therapy & genome editing for specific applications
- Programs to modify small molecules enabling efficient loading into nanoparticles
- Partnerships for ordering high-quality nucleic acid components

Item	QTY	Unit	PPU	Costs (CAD) Academic Non-NMIN	Costs (CAD) Academic NMIN Member
Research Consultation (optional)	3	hr	\$50.00	\$150.00	★Free for NMIN★
Formulation Supplies	1	ea	\$36.00	\$36.00	\$36.00
Technical Time	9	hr	\$50.00	\$450.00	★Free for NMIN★
LNP Materials (Lipids, Cholesterol, etc.)	1	ea	\$28.00	\$28.00	\$28.00
Standardized Particle Characterization	1	ea	\$26.00	\$26.00	\$26.00
Total LNP only*				\$690.00	★\$90.00★

* Example based on a typical 4 mL scale formulation. Each project is unique and may require additional tech time or specialized materials.

**Principle Investigators are expected to supply their own payload. siRNA can be purchased for a discounted price through the IDT NanoCore Portal if the Principle Investigators so choose.

PHYSICOCHEMICAL CHARACTERIZATION EXAMPLE PRICE LIST

CryoTEM®

Comprehensive portfolio of characterization assays including sizing & structure analyses that guarantee reliable interpretation of *in vitro* & *in vivo* studies & further optimization.

Item	QTY	PPU	Unit	Costs (CAD) Academic Non-NMIN	Academic NMIN Member
Initial Consultation	3	\$50.00	hr	\$150.00	★Free for NMIN★
Sample Preparation	11	\$35.00	ea	\$385.00	\$385.00
Technical Time	3	\$50.00	hr	\$150.00	★Free for NMIN★
Glacios CryoTEM Time	4	\$75.00	hr	\$300.00	\$300.00
Vitrobot Sample Freezing	1	\$50.00	hr	\$50.00	\$50.00
Data Collection	3	\$100.00	hr	\$300.00	\$300.00
Total 11 samples*				\$1,335.00	★1035.00★

* Price range based on one set of CryoTEM samples, which can fit 11 samples. Please note that investigators are responsible for all costs, even those that do not result in successful images.

NanoCore constantly refines & progressively implements additional assays. Standard operating procedures (SOPs) are implemented based on guidelines to facilitate regulatory approval.

Every project is unique; actual pricing will be determined by specific project requirements.