RNABioPrecision: Reprogramming disease networks with synthetic RNA molecules inspired by natural microRNAs

ONCOLOGY
FIBROTIC & NEURODEGENERATIVE DISEASES
INMMUNE DISORDERS

$468K CAD
Research funds obtained

$2.3M CAD
Research funds pending

TRL 3

Pre-clinical stage
Software validation complete; in vitro validation ongoing

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Performance
- Up to 20 targets with a single syncRNA
- Wide variety of optimization endpoints

Software copyrights & trade secrets
Asset patents upcoming

incorporation: Q1 2026

Business Opportunity:
Co-development, Pre-seed investment, In-licensing

Market Opportunity:
Global market: $9.4B USD (2025) for RNA therapeutics
CAGR: 17.6% for RNA therapeutics

Q1-Q2 2026	Q3 2026	Q4 2026	Q4 2026 - Q1 2027	Q1-Q2 2027	Q3 2027
In vitro validation of KRAS-network core genes (PDAC, NSCLC, CRC)	PK/PD, biodistribution, and toxicology	Preliminary efficacy and validation	Seed fundraising	Pharma collaborations	Pre-IND and regulatory consultations

THE PROBLEM

In many diseases, particularly cancer, cells abnormally proliferate not because a single gene is dysregulated, but because multiple pathways converge to support the same essential function – often with redundancy.

Many tumors rely on networks of growth factor receptors, transcription factors, and survival signals that overlap in function. Inhibiting one component rarely collapses the network; instead, cells rewire their signaling to maintain growth. This adaptability is a major reason why single-target therapeutics (small molecules, monoclonal antibodies, or traditional RNAi) often produce initial responses followed by relapse.

OUR SOLUTION

RNABioPrecision's syncRNA platform introduces a new therapeutic category built on natural microRNA principles, enabling programmable modulation of multi-gene disease networks rather than isolated targets.

This stands in clear contrast to existing RNA design platforms, which rely on perfect complementarity and are limited to single-gene silencing. Our syncRNAs instead leverage partial complementarity, the mechanism used by endogenous microRNAs to regulate complex post-transcriptional circuits. We uniquely consider essential features such as transcript structure, target site accessibility, local interaction context, dissociation constant (KD), GC content, and off-target propensity, each of which contributes to specificity, stability, and efficacy. This yields a physiologically grounded and inherently flexible intervention, allowing a single molecule to reshape an entire oncogenic network.

MARKET

While dominant players in the RNA therapeutics space have developed clinically validated therapies for monogenic and hepatic diseases, these approaches fail to address the combinatorial complexity of polygenic diseases such as cancer or fibrosis. Attempts to move beyond single-gene strategies include multi-target siRNAs (Sirnaomics), miRNA mimics and anti-miRNAs (miRagen, Regulus), and AI-assisted siRNA design platforms (Deep Genomics, Verge Genomics, Profluent Bio). While promising, these efforts are often constrained by limited structural modeling, black-box designs, or platform-specific delivery – all adressed by the syncRNA platform.

RNABioPrecision is adopting a diversified business architecture that integrates software-driven platform licensing, strategic pharmaceutical collaborations, and proprietary therapeutic development.

TEAM

Elham Dianati, PhD: Cofounder, CEO
IRIC, Université de Montréal
Research Officer

François Major, PhD: Cofounder, CSO
IRIC, Université de Montréal
Full Professor of Computer Science

Claude Larose, MSc: Cofounder, CBO
IRICoR, Université de Montréal
VP Business Development

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