Translate BIO — Corporate Fact Sheet

We are a clinical-stage, leading mRNA therapeutics company developing a new class of potentially transformative medicines to treat diseases caused by protein or gene dysfunction. Using our proprietary mRNA therapeutic platform (MRT), we create mRNA carrying instructions to produce proteins for therapeutic benefit.

1st *to clinic*
pan-mutational mRNA therapeutic for **cystic fibrosis**

Pulmonary Focus
Expanding on our robust lung delivery platform

Powerful Platform
to fuel additional targets

10+ Years of mRNA R&D

Industry-leading Manufacturing
Unique, highly scalable process supported by strategic agreement with global CMO

Broad Patent Portfolio
130+ issued
450+ pending

Partnership with world leader in vaccine R&D
Sanofi Pasteur

Leadership who can execute, involved in development of
6 *approved products*

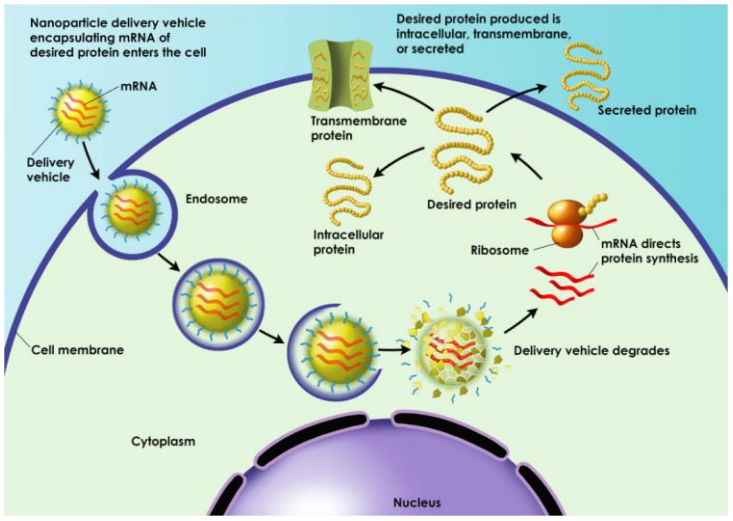
"Our goal is to deliver innovative medicines to patients using our proprietary MRT platform, that has been under development for more than 10 years and has potential applicability to a broad range of diseases."

— Ron Renaud
Chief Executive Officer

Our Goal: Develop mRNA Medicines to Restore Protein Function

Using our proprietary MRT platform, we create mRNA that encodes fully functional proteins. When our mRNA is delivered to the target cell, the cell's own machinery recognizes and translates it, restoring or augmenting protein function to treat or prevent disease.

We are primarily focused on developing mRNA therapeutics to treat genetic diseases of the lung where there is high unmet need. Additionally, our MRT platform is potentially applicable to a wide range of diseases in which the production of a desirable protein can have a therapeutic effect, including diseases that affect the liver, eye, and central nervous system. MRT may also be applied to produce therapeutic antibodies and vaccines in areas such as infectious disease and oncology.



Key Leadership: Collectively Participated in Developing 6 Approved Medicines

Ronald C. Renaud, Jr.
Chief Executive Officer
Idenix, Amgen, Keryx

Ann Barbier
Chief Medical Officer
Agios, Shire

Michael Heartlein
Chief Scientific Officer
Shire, TKT

Paula Cloghessy
Chief HR Officer
Joule, Interleukin

Frank DeRosa
SVP, Research
Shire, Enzon

Richard Wooster
Chief Scientific Officer
Tarveda, GlaxoSmithKline

John Schroer
Chief Financial Officer
Allianz, Healthcor

Brian Fenton
Chief Business Officer
Shire, Idenix

Paul Burgess
Chief Legal Officer
Civitas, BIND

Pat Sacco
SVP, Technical Operations
Shire, Biokinetics

Quick Facts
(12.06.19)

TICKER	EXCHANGE	IPO DATE	EMPLOYEES	HEADQUARTERS
TBIO	NASDAQ	JUNE 2018	90+	LEXINGTON, MA

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Our Current Areas of Focus

Cystic Fibrosis

Cystic fibrosis (CF) is the most common fatal inherited disease in the United States, resulting in mucus buildup in the lungs, pancreas and other organs, and mortality is primarily driven by a progressive decline in lung function. There is no cure for CF. According to the NIH, individuals with CF have a lifespan of approximately 30 years. More than 30,000 patients in the United States and more than 70,000 patients worldwide are living with CF. CF is caused by dysfunctional or missing CFTR protein.

MRT5005 is designed to address the underlying cause of cystic fibrosis (CF), regardless of genetic mutation by delivering mRNA encoding fully functional cystic fibrosis transmembrane conductance regulator (CFTR) protein to cells in the lung through nebulization.

Additional Pulmonary Diseases

Beyond our CF clinical program, the primary focus of our research efforts is the evaluation of targets in additional pulmonary diseases utilizing our proprietary lung delivery platform. Preclinical research efforts include discovery-stage programs in primary ciliary dyskinesia (PCD), pulmonary arterial hypertension (PAH) and idiopathic pulmonary fibrosis (IPF).

Other Diseases

We believe that our MRT™ platform may be applied across a broad array of diseases and target tissues via multiple routes of administration. We have an ongoing collaboration with Sanofi Pasteur Inc. to develop infectious disease vaccines using our mRNA technology. Additionally, we are conducting early-stage discovery activities to identify additional potential mRNA therapeutics.

	Focus Area	Indication	Route of Administration	Discovery	IND-Enabling	Phase 1 / 2 Clinical
Direct Therapeutics	LUNG	Cystic Fibrosis	Inhalation	MRT5005		
		Primary Ciliary Dyskinesia (PCD)	Inhalation			
		Pulmonary Arterial Hypertension (PAH)	Inhalation			
		Idiopathic Pulmonary Fibrosis (IPF)	Inhalation			
	LIVER	Undisclosed	Intravenous			
	OTHER RARE	Undisclosed	Various			
Vaccines	LYMPHATIC	Infectious Disease	Undisclosed	SANOFI PASTEUR		
		Immuno-oncology	Intramuscular			

SANOFI PASTEUR

In June 2018, we announced a collaboration and exclusive licensing agreement with Sanofi Pasteur to develop mRNA vaccines for up to five infectious disease pathogens which will bring together Sanofi Pasteur's leadership in vaccines and our mRNA research and development expertise.

Our Values **Act as One ▪ Put People First ▪ Be Approachable ▪ Be Tenacious ▪ Be Bold**

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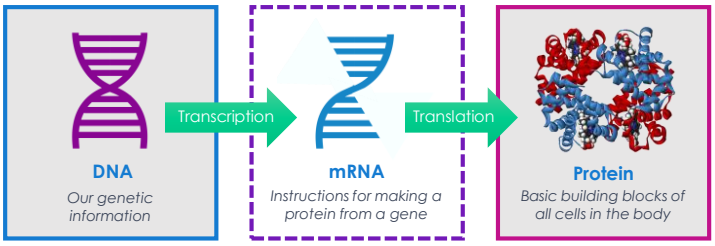
mRNA Fact Sheet

The Importance of mRNA

mRNA is a fundamental component of gene expression. It is the key link in the process of translating genetic information encoded in DNA into instructions that are used by cells to produce the proteins needed to carry out essential cellular functions. These instructions are processed through cellular mechanisms in two steps: transcription and translation.

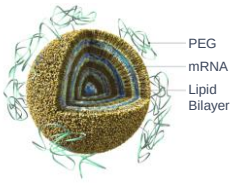


By addressing the central step in the production of proteins, our MRT product candidates are designed to give the body the instructions to **make its own** therapeutic protein

Our MRT Platform

mRNA

- ✓ Engineered for enhanced stability and optimal expression of desired proteins



Delivery Vehicle

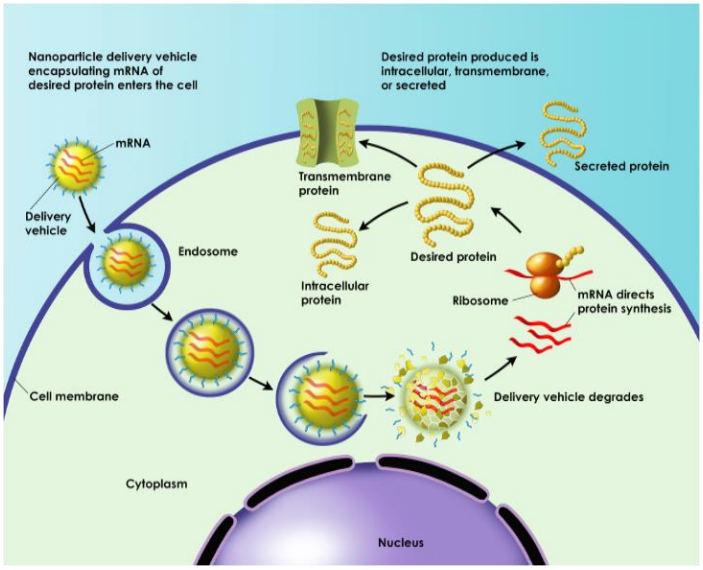
- ✓ Proprietary delivery vehicle optimized for specific tissue distribution

Our mRNA therapeutics platform (MRT) consists of two major components: the protein-coding mRNA and a delivery vehicle. Our platform is designed to be flexible and scalable by allowing for the development of product candidates that vary only in the mRNA sequence and the tissue-specific delivery vehicle. This modular nature of our platform may allow us to rapidly advance into new indications.

MRT has the potential treat the underlying cause of many diseases by restoring protein expression.

Using our proprietary MRT platform, we create mRNA that encodes functional proteins. When our mRNA is delivered to the target cell, the cell's own machinery recognizes and translates it, restoring or augmenting protein function to treat or prevent disease.

Our MRT platform is potentially broadly applicable across multiple diseases in which the production of a desirable protein can have a therapeutic effect. We have observed successful production of desired proteins through multiple routes of administration in preclinical studies, which may allow us to develop MRT product candidates for the treatment of a wide range of rare and non-rare diseases, including including diseases that affect the lung, liver, eye, central nervous system and lymphatic system. MRT may also be applied to produce therapeutic antibodies and vaccines in areas such as infectious disease and oncology.



Potential Advantages of mRNA Therapy

- *Restore gene expression without entering the cell nucleus or changing the genome*
- *Enable the treatment of diseases that were previously undruggable by using the cell's own machinery to produce natural and fully functional proteins*
- *Exhibit drug-like properties that are familiar to health care providers, including the potential to repeat and adjust dosing in a chronic setting*
- *Permit rapid development from target gene selection to product candidate*