

## Direxion mRNA ETF (MSGR)

*Consider the Health of Your Portfolio*

### RNA TECH OVERVIEW:

For many years RNA was believed to have only three major roles in the cell:

- 1) as a DNA photocopy (mRNA),
- 2) as a coupler between the genetic code and the protein building blocks (tRNA), and
- 3) as a structural component of ribosomes (rRNA).

In recent years, however, we have begun to realize the roles adopted by RNA are much broader and much more interesting. We now know RNA can also act as enzymes, called ribozymes, to speed chemical reactions.

In a number of clinically important viruses, RNA (rather than DNA) carries the viral genetic information. RNA also plays an important role in regulating cellular processes – from cell division, differentiation and growth, to cell aging and death. Defects in certain RNAs, or the regulation of RNAs, have been implicated in a number of important human diseases, including heart disease, some cancers, stroke and many others.

### mRNA VACCINES:

Traditional vaccines against viruses, such as influenza, inject inactivated virus proteins called antigens. The antigens stimulate the body's immune system to recognize the specific virus and produce antibodies in response, with the hope these antibodies will fight against future virus infection.

RNA-based vaccines do NOT introduce an antigen, but instead inject a short sequence of synthetic messenger RNA (mRNA) that is enclosed in a specially engineered lipid nanoparticle. This mRNA provides cells with instructions to produce the virus antigen themselves. Once the mRNA from a vaccine is in our body, for example, it "instructs" the protein synthesis machinery in our cells, which normally generates proteins from the mRNAs that derive from our genes, to produce a piece of the protein.

An RNA-based vaccine therefore acts as a code to instruct the body to make many copies of the virus protein – and the resulting antibodies – itself, resulting in an immune response. Unlike more traditional vaccines, RNA-based vaccines are also beneficial in that they eliminate the need to work with the actual virus.

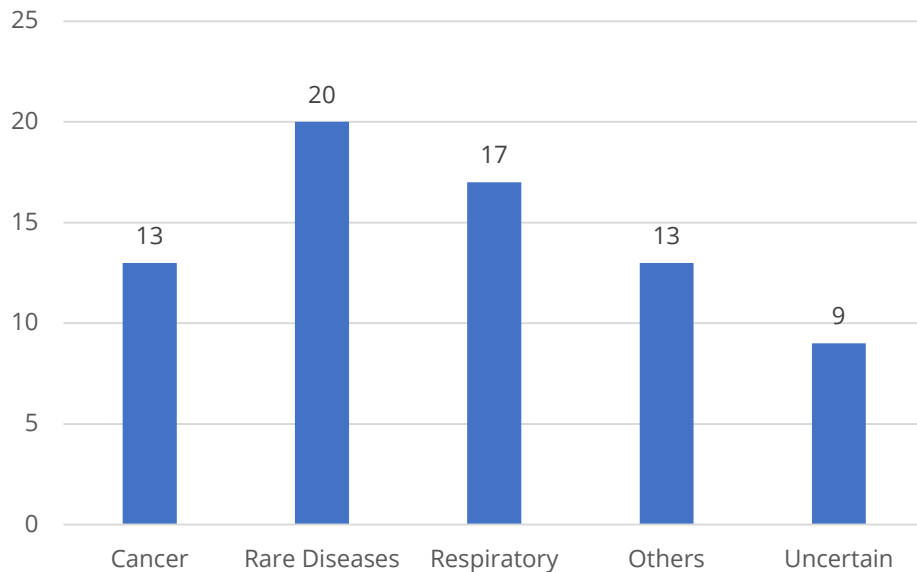
### mRNA TECHNOLOGY FUTURE USAGE:

While mRNA technology has recently garnered warranted attention for its use in COVID-19 vaccines, the areas of future application range from individualized cancer therapies, to highly effective vaccinations against malaria, flu, hepatitis, HIV and Lyme disease, to mRNA therapeutics against fatal hereditary diseases such as cystic fibrosis.

### FUND FACTS

Symbol	MSGR
CUSIP	25460G427
Inception Date	12/09/2021
Rebalance	Quarterly
Benchmark Index	BITA Messenger RNA Technology Index (BMRNAIN)

## CLINICAL PIPELINE OF mRNA THERAPEUTICS WORLDWIDE BY THERAPY AREA 2021



Source: Nature; Expert(s) (W. Xie et al.); September, 2021

### INDEX: BITA MESSENGER RNA TECHNOLOGY INDEX

**RNA Technology Index Initial Universe Criteria**—Companies must satisfy at least one of the below conditions:

- Be involved in the commercialization of products and therapies based on Messenger RNA technology, or sister RNA technologies (Small Interfering RNA, Micro RNA)
- Be classified as a clinical stage biotechnology company, with focus in the development of products and therapies that leverage the messenger RNA technology
- Have a portfolio of active, approved, mRNA technology-focused clinical trials
- Have any granted, active patents, with demonstrated involvement of the messenger RNA technology

**RNA Technology Index Final Universe Criteria**—Companies must then satisfy a minimum thematic exposure of 50% based on revenue exposure: For this index, in order to calculate the thematic exposure score, the following criteria is applied (if a company satisfies more than one criteria, the largest exposure score applies):

- Companies deriving at least 50% of their revenue from the commercialization of products and therapies based on Messenger RNA technology, or sister RNA technologies (Small Interfering RNA, Micro RNA), are attributed a thematic exposure score of 100%
- Companies with a declared (evidenced on company headline communication) focus on the development and commercialization of mRNA technology based products and therapies are attributed a thematic exposure score of 80%
- Companies with a portfolio of active, approved, mRNA technology-focused clinical trials, representing at least 50% of the total number of active clinical trials launched by the company, are attributed a thematic exposure score of 80%
- Clinical-stage companies, with at least one active, approved, mRNA technology-focused clinical trial, are attributed a thematic exposure score of 50%.

### IMPLEMENTATION

The [Direxion mRNA ETF \(MSGF\)](#) may be considered a satellite holding with exposure to companies believed to be at the forefront of the development and application of messenger RNA technology.

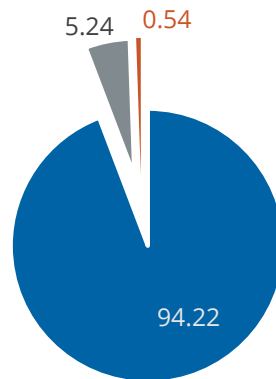
### mRNA ETF (MSGR) INDEX TOP 10 HOLDINGS

Name	Ticker	Weight (%)	Country
BioNTech SE	BNTX	9.41	Germany
Dicerna Pharmaceuticals Inc	DRNA	8.22	United States
Vertex Pharmaceuticals Inc	VRTX	7.07	United States
Moderna Inc	MRNA	7.04	United States
BeiGene Ltd	BGNE	6.64	China
Alnylam Pharmaceuticals Inc	ALNY	6.50	United States
Gritstone bio Inc	GRTS	5.34	United States
Arrowhead Pharmaceuticals Inc	ARWR	4.90	United States
Maravai LifeSciences Holdings Inc	MRVI	4.65	United States
CureVac NV	CVAC	4.54	Germany

Source: BITA. as of November 30, 2021

### SUB-INDUSTRY OVERVIEW

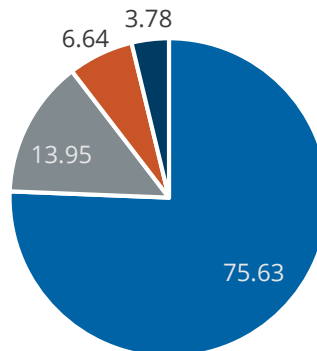
#### Sub-Industry Weight (%)



■ Biotechnology   ■ Life Sciences Tools & Services   ■ Pharmaceuticals

### COUNTRY OVERVIEW

#### Country Weight (%)



■ United States   ■ Germany   ■ China   ■ Netherlands

Source: BITA. as of November 30, 2021

FOR INFORMATION: 866-476-7523 | [INFO@DIREXION.COM](mailto:INFO@DIREXION.COM) | [DIREXION.COM](http://DIREXION.COM)

***An investor should carefully consider a Fund's investment objective, risks, charges, and expenses before investing. A Fund's prospectus and summary prospectus contain this and other information about the Direxion Shares. To obtain a Fund's prospectus and summary prospectus call 866-476-7523 or visit our website at [direxion.com](http://direxion.com). A Fund's prospectus and summary prospectus should be read carefully before investing.***

Shares of the Direxion Shares are bought and sold at market price (not NAV) and are not individually redeemed from a Fund. Market Price returns are based upon the midpoint of the bid/ask spread at 4:00 pm EST (when NAV is normally calculated) and do not represent the returns you would receive if you traded shares at other times. Brokerage commissions will reduce returns. Fund returns assume that dividends and capital gains distributions have been reinvested in the Fund at NAV. Some performance results reflect expense reimbursements or recoupments and fee waivers in effect during certain periods shown. Absent these reimbursements or recoupments and fee waivers, results would have been less favorable.

*BITA is not a sponsor of, or in any way affiliated with, the Direxion mRNA ETF.*

**Direxion Shares ETF Risks** - Investing involves risk including possible loss of principal. There is no guarantee the investment strategy will be successful. mRNA technology is a novel technology and the development of products or therapies based on mRNA technology has substantial clinical development and regulatory risks. mRNA technologies may also provide ineffective or may produce adverse effects. Negative perception of the efficacy, safety, or tolerability of such mRNA-based products or therapies could adversely affect a company and the general acceptance of mRNA technologies. Certain mRNA-based vaccines only have received Emergency Use Authorization from the U.S. Food and Drug Administration and other provisional, interim or conditional authorizations from regulatory authorities outside the United States, and there is no guarantee that such vaccines will receive full approval in the future.

Additional risks of the Fund include, but are not limited to, Non-Diversification Risk, Index Correlation/Tracking Risk, Index Strategy Risk, Biotechnology Industry Risk, Healthcare Sector Risk, Natural Disaster/Epidemic and Market Disruption Risk, Foreign Securities Risk and risks associated with the market capitalizations and sectors of the securities in which the Fund may invest. Please see the summary and full prospectuses for a more complete description of these and other risks of the Fund.

**Distributor:** Foreside Fund Services, LLC.