# BMO ARK Genomic Revolution Fund ETF Series - ARKG

# **DNA Sequencing is Restructuring Health Care**

- The global economy is undergoing one of the largest technological transformations in history<sup>1</sup> displacing industry incumbents and creating new leaders, enablers, and beneficiaries of disruptive innovation.
- ARK focuses solely on offering investment solutions to capture disruptive innovation that span market capitalization and sectors with low overlap to broad-market indices.
- Invests in ARK's investment theme of genomic revolution, including gene sequencing, gene editing, and living therapies, which are changing the way diseases are treated and enhancing quality of life.

# Why Innovation?



## **Invest In The Future Today**

Innovation could displace industry incumbents, increase efficiencies, and gain majority market share. This technologically enabled change offers long-term opportunities for companies and investors alike.



## **Take Advantage Of Market Inefficiencies**

Market inefficiencies, such as short-term time horizions, siloed investment styles, closed off research mentality, or backwards looking indices may cause investors to miss out on future growth driven by disruptive innovation.



#### Make The World More Innovative

Good innovation investing should focus on technologies and companies that are likely to have a positive impact on our society, and the world's ability to create further innovations.

# Reasons to Consider Utilizing ARKG **BMO ARK Genomic Revolution Fund ETF Series**

Cost Effective & Ease of Access	Provides a lower cost option with true active management in an ETF structure without the need for foreign currency exchange or US Estate tax considerations as it trades on the Toronto Stock Exchange
Exposure to Specific Innovation Theme	Invests in companies across sectors with exposure to DNA sequencing, including gene therapy bio-informatics, bio-inspired computing, molecular medicine and pharmaceutical innovations with the potential for long-term growth
Growth Potential	Aims to capture long-term growth with low correlation of relative returns to traditional growth strategies and negative correlation to value strategies.
Tool for Diversification	Adds diversification to portfolios with negative correlation to traditional value strategies and low correlation to core asset classes and traditional growth strategies <sup>2</sup> .
Grounded in Research	Combines top-down and bottom-up research in its portfolio management to identify innovative companies and convergence across markets.

ARK aims for negative correlation of relative returns to traditional value strategies...



...and low correlation of relative returns to traditional growth strategies.



<sup>&</sup>lt;sup>1</sup> Source: ARK Investment Management LLC

<sup>&</sup>lt;sup>2</sup> Traditional value investing is an investment strategy where stocks are selected that trade for less than their intrinsic values. Traditional growth investing is an investment strategy that focuses on stocks, whose earnings are expected to grow at an above-average rate compared to its industry or the overall market. Correlation is the degree to which two strategies move in relation to each other.









# The ARK Difference

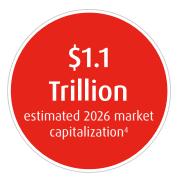
ARK Investment Management LLC (ARK) was founded in January 2014 by Catherine (Cathie) Wood and has \$23.1 billion³ in assets under management. It focuses solely on offering investment solutions to capture disruptive innovation in the public markets. As the Founder, CEO and CIO of ARK, Cathie appears regularly on CNBC, Bloomberg, and Fox Business, among other broadcast news, and has been featured and quoted in The Wall Street Journal, Forbes, Fortune, Barron's, New York Times, and numerous other media outlets. As a thought leader for investing in disruptive innovation, Cathie has been widely recognized for her vision and impact in the financial industry.

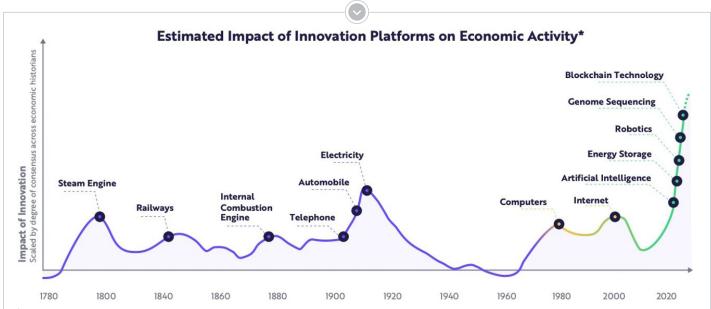
DNA Sequencing is Restructuring Health Care

DNA sequencing is changing the way biological information is collected, processed, and applied. In doing so, it is increasing precision, restructuring health care, agriculture, pharmaceuticals, and enhancing quality of life. Given potential cures for diseases, the share of research and development (R&D) funding for gene therapy innovations should continue to rise. By 2026, the share of total R&D spending devoted to gene editing and therapy companies could grow from 3% to 17% and the market capitalization could scale from roughly \$130 billion to \$1.1 trillion by 2026<sup>4</sup>.

"Innovation should displace industry incumbents, increase efficiencies, and gain majority market share. More Importantly, disruptive innovation impact and concerns all of our lives."

Catherine Wood, Founder, CEO and CIO of ARK Investment Management LLC





Source: ARK Investment Management LLC, based on the relative impact of an innovation scaled by the degree of consensus between economic historians that a particular innovation should be considered an innovation platform. The underlying data assumes that all innovation platforms follow a characteristic investment and realization cycle of similar duration.



<sup>&</sup>lt;sup>3</sup> AUM as of September 30, 2022

<sup>&</sup>lt;sup>4</sup> Source: ARK Investment Management LLC, 2021

# Investment Process: Combining Top-Down & Bottom-Up Research



## **Top-Down Research**



### **Bottom-Up Research**



#### **Ideation**

Identify Disruptive Innovations

→ ARK Open Research Ecosystem



#### **Stock Selection And Valuation**

Aim To Select The Best Positioned Companies

→ Investment Briefs, Company Scores, Valuation Models



#### Sizing The Opportunity

Identify The Potential Universe

→ Research Models (Wright's Law)



#### **Portfolio And Risk Management**

Adjust For Changes In Conviction And Trade Around Market Volatility

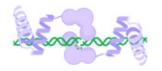
→ Portfolio Tracker / Stock Meetings

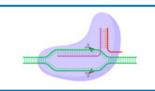
# Case Study: Clustered Regularly Interspaced Short Palindromic Repeats (CRISPR)<sup>5</sup>

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Gene editing breakthroughs are creating more effective therapies at a faster rate than historically has been the case. Compared to Zinc Finger nucleases (ZFNs), which moved from discovery to the first human dose in roughly eight years, CRISPR took less than half the time, three years, and can address 48% of known diseases, nearly twice ZFNs' 28%. Prime and Base editing, CRISPR derivatives, address even more diseases, 79% and 59% respectively.







	<b>ZFNs</b> (zinc finger nucleases)	<b>TALENS</b> (transcription activator-like effector nucleases)	<b>CRISPR</b> (Clustered Regularly Interspaced Short Palindromic Repeats)
Cost	High	Low	Very Low
Time	Months	Weeks	Days
Technical Difficulty	High	Medium	Low
Targeting Mechanism	Protein-DNA interaction	Protein-DNA interaction	RNA/DNA interaction
Delivery	Two proteins around the target	Two proteins around the target	Guide RNA and Cas protein
Multiplex Editing	Very Difficult	Difficult	Not Difficult
Method	Use engineered ZF repeat domains to target specific sites in host DNA and induce double stranded breaks (DSBs) with the nuclease.	Targets host DNA using unique modular proteins and induce DSBs with the nuclease.	Uses a protein-RNA complex to guide its nuclease to the target site.

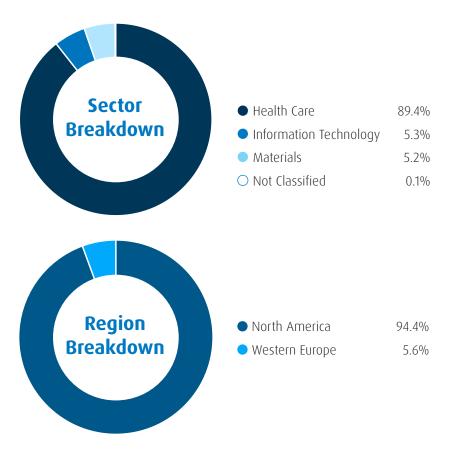


## ETF Series at a Glance

Invests in	Actively managed equity strategy that invests in companies that represent ARK's investment theme of genomic revolution. They are focused on extending and enhancing the quality of human and other life by incorporating technological and scientific developments and advancements in genomics into their business.	
Investment process	Top-down and bottom-up; benchmark agnostic portfolio construction	
Typical holdings	40-60 positions	
Weighted avg. market cap	\$11 billion	
Benchmark Index	MSCI ACWI Health Care Index (C\$)	

#### **TOP 10 HOLDINGS**

- Ionis Pharmaceuticals Inc
- · Exact Sciences Corp
- · Crispr Therapeutics AG
- · Ginkgo Bioworks Holdings Inc
- · Intellia Therapeutics Inc
- · Teladoc Health Inc
- Caredx Inc
- Beam Therapeutics Inc
- Fate Therapeutics Inc
- · Schrodinger Inc/United States



Target allocation of the Fund's Top 10 Holdings, Sector and Region Breakdown and Weighted avg. market cap as of September 30, 2022. For illustrative purposes only and may change due to the Fund's ongoing portfolio transactions without notice.

#### **Fund Codes & Fees**

**ETF Ticker:** ARKKG **MER\*:** 0.85%

\*Also available in Mutual Fund Series. Management Expense Ration (MER) is estimated as ETF is less than one year old.



This article is for information purposes. The information contained herein is not, and should not be construed as, investment, tax or legal advice to any party. Particular investments and/or trading strategies should be evaluated relative to the individual's investment objectives and professional advice should be obtained with respect to any circumstance.

Risk tolerance measures the degree of uncertainty that an investor can handle regarding fluctuations in the value of their portfolio. The amount of risk associated with any particular investment depends largely on your own personal circumstances including your time horizon, liquidity needs, portfolio size, income, investment knowledge and attitude toward price fluctuations. Investors should consult their financial advisor before making a decision as to whether this Fund is a suitable investment for them.

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Commissions, management fees and expenses (if applicable) all may be associated with investments in mutual funds. Trailing commissions may be associated with investments in certain series of securities of mutual funds. Please read the fund facts, ETF facts or prospectus of the relevant mutual fund before investing. Mutual funds are not guaranteed, their values change frequently and past performance may not be repeated. Distributions are not guaranteed and are subject to change and/or elimination.

For a summary of the risks of an investment in the BMO Mutual Funds, please see the specific risks set out in the prospectus. ETF Series of the BMO Mutual Funds trade like stocks, fluctuate in market value and may trade at a discount to their net asset value, which may increase the risk of loss. Distributions are not guaranteed and are subject to change and/or elimination.

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