FRANKLIN TEMPLETON

Franklin Biotechnology Discovery Fund

Franklin Templeton Investment Funds

A (acc) USD
31 May 2019

Fund Commentary

Performance Review

- In May, deteriorating trade relations between the United States and some of its major partners drove heightened market volatility. Concerns that escalating tariffs were already dampening global economic growth also affected investor sentiment. Health care stocks posted smaller-than-average declines and performed better than eight out of 10 other major equity sectors, though biotechnology and pharmaceutical industry stocks suffered larger and more widespread selloffs than the sector as a whole.
- For the month, the fund's A (acc) USD shares returned -2.51%, and its benchmark, the NASDAQ Biotechnology Index, returned -6.10%.

ONE-MONTH KEY PERFORMANCE DRIVERS

	Stocks	Industries
HELPED	Iovance Biotherapeutics (Significant Overweight)	Biotechnology (Stock Selection)
	Array BioPharma (Significant Overweight)	Pharmaceuticals (Stock Selection)
	Fate Therapeutics (Significant Overweight)	—
HURT	Heron Therapeutics (Off-Benchmark Exposure)	Health Care Equipment (Lack of Exposure)
	Alexion Pharmaceuticals (Overweight)	—
	TherapeuticsMD (Overweight)	—

- Several of our overweighted or off-index holdings in the biotech and pharmaceuticals industries rallied after positive company-specific news, none more so than Iovance Biotherapeutics. Iovance's share price soared in May when it reported promising interim data from clinical studies on two of its experimental cancer immunotherapies; both are based on the company's tumour-infiltrating lymphocyte (TIL) technology. One trial showed a higher objective response rate in advanced cervical cancer patients than a major competitor's blockbuster drug, while the other showed promising results in patients with advanced melanoma.
- Array BioPharma's approved skin cancer-drug combo—Braftovi plus Mektovi—showed promising results when it was added to standard chemotherapy in colorectal cancer patients. Array plans to send a fresh application on this treatment to the US Food & Drug Administration (FDA) by year-end. The Braftovi-Mektovi combo is slated to add more than US$150 million to Array's revenues in 2019, and the label expansion holds the potential to eventually push annual sales to US$500 million.
- Middle-capitalisation biotech firm Heron Therapeutics faced adversity, at least temporarily, in regard to an FDA-issued Complete Response Letter (CRL) on Heron's experimental post-operative pain medication HTX-011. The FDA requested additional chemistry, manufacturing and controls data, as well as other nonclinical information, thereby delaying a widely expected approval. Since the CRL, we have spoken with the CEO twice, as well as others who are close to the situation; as a result of this follow-up work and our own analysis, we still believe an eventual approval of HTX-011 and successful launch—possibly in early 2020—is in the offing as the FDA had no issues with the drug's safety or efficacy.

Outlook & Strategy

- We expect merger and acquisition activity to increase during the remainder of 2019, as many large-capitalisation biopharma companies still need to backfill their product pipelines, while middle-capitalisation biotech valuations have become more reasonable compared to previous years. We already saw several acquisitions in the first quarter of this year, the majority of which occurred in gene therapy, orphan diseases and oncology. We expect those three therapeutic areas to remain in favour as acquisition targets throughout 2019 and beyond.
- Biotechnology firms, particularly those in the early stages of research and development, have significant risk associated with specific factors, including trial results, regulatory approvals, competitor developments and others. We attempt to address these risks in two ways: (1) through our disciplined, bottom-up research and analytical process; and (2) by using position size as a risk management strategy, investing less in developmental-stage companies with few products and more in commercial-grade companies with multiple products. This helps us in seeking to minimise the downside impact to the overall portfolio of a single binary event such as a trial disappointment or regulatory disapproval.
- Looking ahead, rapid advances in life sciences, a surge in medical breakthroughs, improved efficacy in health care treatments and an increase in FDA drug approvals are revitalising the biotechnology industry, which we believe continues to offer tremendous opportunities to long-term investors. As innovation within the biotechnology and pharmaceuticals industries has reached unprecedented levels, in our view, we are particularly interested in companies working on significant advancements in gene therapy, orphan diseases, immuno-oncology, and targeted approaches for cancer therapy. We are also encouraged by companies that have focused their efforts on new drug discovery platforms and novel compounds.
- According to data from Dealogic, biotechnology initial public offerings (IPOs) had their second-biggest year on record in 2018 (with 2014 taking the top spot), and we have been investing in several of them along the way. Driven by advances in medical science and an FDA that is increasingly willing to accelerate approval of innovative drugs, biotech companies are tapping public markets at early stages of development these days—some even before they have a drug in a clinical trial. Some 269 biotech companies went public over the 2014-2018 time frame, nearly as many as total biotech IPOs from 1995 through 2007.
- While cutting-edge developments are exciting, we remain very selective in our investment approach, which focuses on high-quality companies that are at the forefront of producing first-in-class, best-in-class and only-in-class drugs and therapies.

- Political pressure on drug-price legislation in the United States has been elevated for a couple years and has yet to wane, but the commercial landscape in health care remains favourable for innovative drugs that deliver value to patients. Beyond the regulatory front, higher rates of drug utilisation and health care spending due to the greying of the global population present a strong long-term demand backdrop for the biotech and pharmaceutical industries.

Fund Details

Inception Date	03/04/2000
Benchmark	NASDAQ Biotechnology Index

Fund Description

The fund aims to achieve capital appreciation by investing principally in equity securities of biotechnology companies and discovery research firms located mainly in the US.

Performance Data

Performance Net of Management Fees as at 31/05/2019 (Dividends Reinvested) (%)[1]

	1 Mth	3 Mths	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	Since Inception
A (acc) USD	-2.51	-7.92	9.85	-9.64	2.00	4.03	14.31	5.73
Net of Sales Charge - A (acc) USD	-7.39	-12.52	4.36	-14.15	0.27	2.97	13.72	5.45
A (acc) SGD	-1.49	-6.40	10.72	-7.26	1.94	5.96	13.74	9.65
Net of Sales Charge - A (acc) SGD	-6.41	-11.08	5.18	-11.90	0.21	4.88	13.15	9.17
NASDAQ Biotechnology Index USD	-6.10	-11.41	3.14	-7.87	2.40	4.64	16.34	5.80
NASDAQ Biotechnology Index SGD	-5.14	-9.98	3.96	-5.46	2.32	6.57	15.76	11.18

The Inception Date for the A (acc) USD share class and A (acc) SGD share class is 03/04/2000 and 25/10/2007 respectively.

Investment Team

Evan McCulloch, CFA
Years with Firm 26
Years Experience 27

Wendy Lam, Ph.D.
Years with Firm 3
Years Experience 5

Steve Kornfeld, CFA
Years with Firm 18
Years Experience 30

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What Are the Key Risks?

The value of shares in the Fund and income received from it can go down as well as up and investors may not get back the full amount invested. Performance may also be affected by currency fluctuations. Currency fluctuations may affect the value of overseas investments. The Fund invests mainly in equity securities of biotechnology companies. Such securities have historically been subject to significant price movements that may occur suddenly due to market, sector or company-specific factors. As a result, the performance of the Fund can fluctuate significantly over relatively short time periods. Other significant risks include: liquidity risk. For full details of all of the risks applicable to this Fund, please refer to the "Risk Considerations" section of the Fund in the current prospectus of Franklin Templeton Investment Funds.

Important Legal Information

Franklin Biotechnology Discovery Fund is a sub-fund of the Luxembourg-domiciled Franklin Templeton Investment Funds (FTIF).

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Investors may wish to seek advice from a financial adviser before making a commitment to invest in shares of the Fund. In the event an investor chooses not to seek advice from a financial adviser, he/she should consider whether the Fund is suitable for him/her.

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1. Source for all information is Franklin Templeton Investments. Benchmark related data provided by FactSet. Fund performance computed in share class currency, on NAV-NAV basis and dividends reinvested. Net of Sales Charge figures are after 5% sales charge. Past performance is no guarantee of future results. Portfolio holdings are subject to change. Periods greater than one year are shown as average annual total returns. Other commissions, taxes and other relevant costs paid by investor are not included.

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