

The Biotech Growth Trust

Onwards and upwards for performance recovery

The Biotech Growth Trust's (BIOG's) two co-managers, Geoff Hsu and Josh Golomb, at global healthcare specialist OrbiMed, believe that now could be an opportune time to consider the biotech sector as it is recovering from the longest and largest absolute and relative drawdown since 2006. The sector was negatively affected by sharply rising interest rates rather than a deterioration in industry fundamentals; indeed, the managers continue to refer to a 'golden era' of innovation within the biotech sector. BIOG's relative performance has been through a difficult period given its high weighting in emerging (smaller-cap) biotech stocks, which performed significantly worse than the shares of large-cap biotech businesses during the sector sell-off.

BIOG presentation with Geoff Hsu and Josh Golomb (March 2024)



Source: BIOG

Why consider BIOG?

Having experienced a period of very difficult performance, in both absolute and relative terms, starting in early 2021, BIOG's results look to be solidly back on track. There is a high level of innovation within the biotech sector, led by emerging biotech companies, due to the development of a range of new technologies addressing multiple therapeutic areas. The regulatory environment remains supportive, and industry M&A is robust as pharma companies take advantage of attractive biotech company valuations to bolster their pipelines ahead of a major patent cliff, with the majority of patent expirations occurring in H224.

BIOG's managers are very excited about the trust's prospects and encouraged that investors are once again rewarding biotech companies that deliver positive outcomes. For example, Janux Therapeutics recently reported positive Phase I data for its product for the treatment of prostate cancer and its shares appreciated by more than 200%. This move has catapulted the company into BIOG's list of 10 largest holdings.

In keeping with many other investment companies, the trust's discount is wider than its historical averages. This offers scope for BIOG to be afforded a higher valuation now that its performance is back on track, and there is potential for an improvement in investor sentiment in a less uncertain economic environment.

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Investment trusts Biotech equities

20 March 2024

Price	966.0p
Market cap	£327m
Total assets	£384m

NAV*	1,036.3p
Discount to NAV	6.8%

*Including income. At 18 March 2024.

Yield	0.0%
Ordinary shares in issue	33.8m
Code/ISIN	BIOG/GB0000385517
Primary exchange	LSE
AIC sector	Biotechnology & Healthcare
Financial year end	31 March
52-week high/low	1,010.0p 718.0p
NAV* high/low	1,125.6p 777.2p

*Including income.

Net gearing*	9.7%
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*At 29 February 2024.

Fund objective

The Biotech Growth Trust seeks capital appreciation through investing in the worldwide biotechnology industry. Performance is measured against its benchmark index, the NASDAQ Biotechnology Index (sterling adjusted).

Bull points

- The biotech sector has delivered above-average returns for shareholders over the long term.
- Positive industry fundamentals and valuations, but the sector has been out of favour with investors.
- OrbiMed is a global leader in healthcare research and investment, with c \$17bn of assets under management.

Bear points

- The focus on emerging biotech stocks was detrimental to the trust's performance during the latest sector drawdown.
- Biotech stocks can be volatile.
- Periodic political pressure.

Analyst

Mel Jenner +44 (0)20 3077 5700

investmenttrusts@edisongroup.com

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BIOG: Sticking with the emerging biotech bias

BIOG's portfolio contains major biotech companies, which are large, profitable businesses that can be valued on traditional metrics such as P/E multiples and earnings growth, and emerging biotech companies, which do not generate sustainable profits and may have no revenues. The trust's portfolio has a structural bias towards emerging biotech companies as, although they are inherently riskier, the managers consider that this is outweighed by their potential positive prospects. These companies represent two-thirds of the biotech industry's research and development pipeline and 2021 data showed that 53% of new product launches were from emerging biotech companies.

Risk management is embedded into the investment process. There is comprehensive review and analysis of companies that have significant binary catalysts, with the managers aiming to limit negative outcomes to 100bp. For large-cap stocks the portfolio position size is 5–10%, while emerging biotech holdings are generally 1–3%. Annual portfolio turnover of 90% is relatively high as the managers add to or reduce the holdings to ensure they are appropriately sized, especially for companies with binary events.

Performance of the biotech sector

Exhibit 1 clearly shows BIOG's preference for emerging biotech stocks.

Exhibit 1: Biotech market cap performance from 31 March 2021 to 29 February 2024				
% unless stated	BIOG portfolio weight at 31 March 2021	NASDAQ Biotech Index weight at 31 Mar 2021	Delta (pp)	Performance Mar 21 to Feb 24
Large cap (> \$10bn)	26	59	(33)	(7.0)
Mid cap (\$2–10bn)	22	29	(7)	(27.6)
Small cap (< \$2bn)	51	13	38	(25.6)
Total	100	100		

Source: BIOG, Edison Investment Research. Note: Numbers subject to rounding. Excludes private companies.

The NASDAQ Biotech Index bottomed in late-October 2023, and since then smaller-cap biotech shares have significantly outperformed large-cap biotech stocks. However, it is interesting to note that in the broader market, smaller-cap stocks are not yet playing catch-up. The managers believe that once this does occur it should fuel further momentum in the shares of smaller-cap biotech companies.

Using the XBI Index (the equal weighted SPDR S&P Biotech ETF) as a proxy for small- and mid-cap biotech stocks shows that versus the US bellwether S&P 500 Index, biotech sector drawdowns are followed by periods of outperformance. The latest drawdown was the longest, and the largest, in absolute and relative terms since the XBI Index was launched in 2006; between 8 February 2021 and 7 February 2024, the XBI Index underperformed the S&P 500 Index by 77pp.

Sector weakness led to depressed biotech company valuations. For those with a market cap greater than \$10m, the median market cap versus net cash on the balance sheet was at a record low – so below levels seen during the period of Clinton drug price reform, the bursting of the dot.com bubble and the global financial crisis. There was a record number of biotech companies trading below the amount of net cash on their balance sheets, and while the sector has moved off its low point, using history as a guide, there appears to be significant further upside in biotech stocks.

Biotech industry fundamentals

The latest biotech sector drawdown seems disconnected from strong industry fundamentals, with a pipeline as full as it has ever been. Between 2016 and 2022 the number of Phase I candidates increased by 70% across all therapeutic areas. What the managers refer to as a 'golden era' of

innovation is being driven by novel/next-generation technologies including gene editing/therapy, cell therapy and RNA therapeutics. There have also been notable new drug approvals to address large markets, some of which have mega-blockbuster consensus peak sales estimates of more than \$10bn. These include Biogen and Eisai's Leqembi for the treatment of Alzheimer's disease and Vertex Pharmaceuticals' Trikafta for the treatment of cystic fibrosis.

The regulatory environment remains supportive as in 2023 the US Food and Drug Administration approved a further 55 novel drugs (new molecular entities and therapeutic biological products). Within these approved drugs were several 'firsts', including Biogen and Sage Therapeutics' Zuruvae, which is the first and only treatment for postpartum depression.

M&A has historically been positive for the performance of biotech stocks. Activity was robust in 2023 and has continued so far in 2024. The managers expect this to continue, supported by attractive biotech company valuations and pharma companies having to bolster their product pipelines ahead of an unprecedented patent cliff. Between 2025 and 2030, an estimated \$250bn of branded drugs are going off patent, the bulk of which occurs in 2027 to 2029. As an example, Merck had \$25bn in Keytruda sales in 2023, which is used in the treatment of cancers, and is going off patent in 2028, so the company requires external as well as internal developments to plug its upcoming sales gap.

The managers' playbook

Hsu and Golomb will continue to favour emerging over large-cap biotech stocks, aiming to capture their full rebound from a significant period of underperformance. The managers believe that emerging biotech stocks are coming off unprecedented low valuations, which offers significant upside from current levels, especially considering the positive fundamental features of the biotech sector. In addition, ongoing robust levels of M&A should continue given the looming patent cliff. As a result of this constructive backdrop, the managers are very bullish on the prospects for BIOG.

Portfolio breakdown

At end-February 2024, BIOG's top 10 holdings made up 43.1% of the fund, which was a higher concentration compared with 41.5% a year before; two names were common to both periods. The portfolio had 62 positions, which was very similar to 61 at end-February 2023. Over the 12 months to the end of February 2024, the trust's active share fell from 82.4% to 70.5% (this is a measure of how the fund compares with its benchmark, with 0% representing full index replication and 100% no commonality). The lower active share is unsurprising given how well large-cap biotech stocks have performed versus smaller biotech companies.

Exhibit 2: Top 10 holdings (at 29 February 2024)

Company	Country	Sector	Portfolio weight %	
			29 February 2024	28 February 2023*
Amgen	US	Major biotech	6.8	N/A
Biogen	US	Major biotech	5.8	5.4
Janux Therapeutics	US	Emerging biotech	5.6	N/A
Regeneron Pharmaceuticals	US	Major biotech	4.3	N/A
Sarepta Therapeutics	US	Emerging biotech	4.0	5.2
Neurocrine Biosciences	US	Emerging biotech	3.9	N/A
Vaxcyte	US	Emerging biotech	3.3	N/A
Apellis Pharmaceuticals	US	Emerging biotech	3.2	N/A
Argenx	Europe	Emerging biotech	3.2	N/A
Scholar Rock Holding	US	Emerging biotech	3.0	N/A
Top 10 (% of portfolio)			43.1	41.5

Source: BIOG, Edison Investment Research. Note *N/A where not in end-February 2023 top 10.

Exhibit 3 shows that BIOG's exposure to the dominant North American biotech market increased by 8.9pp to 88.0% in the 12 months to the end of February 2024. There was also a notable 5.5pp decline in the trust's exposure to unquoted companies.

At 29 February 2024, BIOG's total Chinese exposure was 6.9% (3.9% listed and 3.0% unquoted), which was considerably lower than 13.2% a year before (8.4% unquoted and 4.8% listed).

Exhibit 3: Portfolio geographic breakdown (%)

Sector	End-February 2024	End-February 2023	Change (pp)
North America	88.0	79.1	8.9
Continental Europe	4.8	6.0	(1.2)
China (quoted)	3.9	4.8	(0.9)
Unquoted*	3.3	8.8	(5.5)
UK	0.0	1.3	(1.3)
Total	100.0	100.0	

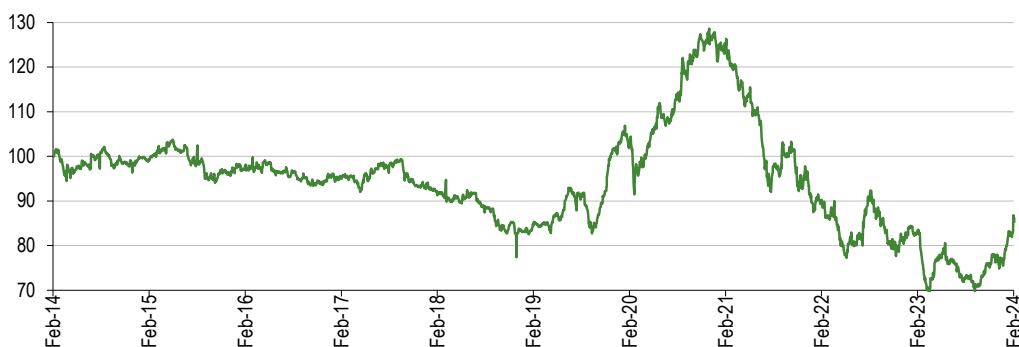
Source: BIOG, Edison Investment Research. Note: Adjusted for gearing. *Of the 3.3% unquoted investments at end-February 2024, 3.0% was in China and 0.3% was in Asia.

Performance: Back on the right track

To provide a long-term perspective, from BIOG's inception in May 2005 to the end February 2024, the trust's NAV total return of +983.5% compared with the NASDAQ Biotech Index's +843.0% and the UK market's +228.7% total return.

Exhibit 4 shows that BIOG's performance is solidly back on track following a prolonged period of underperformance starting in Q121, as emerging biotech stocks significantly underperformed the shares of large-cap biotech companies.

Exhibit 4: NAV performance versus benchmark over 10 years



Source: LSEG, Edison Investment Research

Exhibit 5: AIC Biotechnology & Healthcare sector at 19 March 2024*

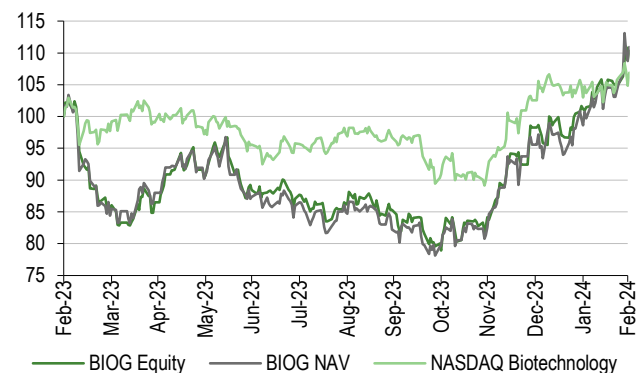
% unless stated	Market cap £m	NAV TR 1 year	NAV TR 3 year	NAV TR 5 year	NAV TR 10 year	Discount (cum-fair)	Ongoing charge	Perf. fee	Net gearing	Dividend yield
Biotech Growth Trust	326.5	15.9	(28.7)	30.8	83.6	(7.5)	1.1	Yes	110	0.0
Bellevue Healthcare Trust	678.6	0.5	(7.6)	32.4		(6.2)	1.0	No	100	4.1
International Biotechnology Trust	246.0	6.2	8.3	38.9	154.4	(11.6)	1.4	Yes	106	4.3
Polar Capital Global Healthcare Trust	446.3	17.3	47.4	78.1	177.4	(6.7)	0.9	Yes	107	0.6
RTW Biotech Opportunities	401.9	16.5	1.6			(31.7)	2.1	Yes	100	0.0
Syncona	853.3	(2.3)	(6.4)	(2.2)	81.2	(30.9)	0.9	No	100	0.0
Worldwide Healthcare Trust	1,773.7	10.9	6.2	41.0	184.5	(13.4)	0.8	Yes	101	1.0
Average (7 funds)	675.2	9.3	3.0	36.5	136.2	(15.5)	1.2		103	1.4
BIOG rank in peer group	6	3	7	5	4	3	5		1	5

Source: Morningstar, Edison Investment Research. Note: *Performance data to 18 March 2024 based on ex-par NAV. TR, total return. Net gearing is total assets less cash and equivalents as a percentage of net assets (100 = ungeared).

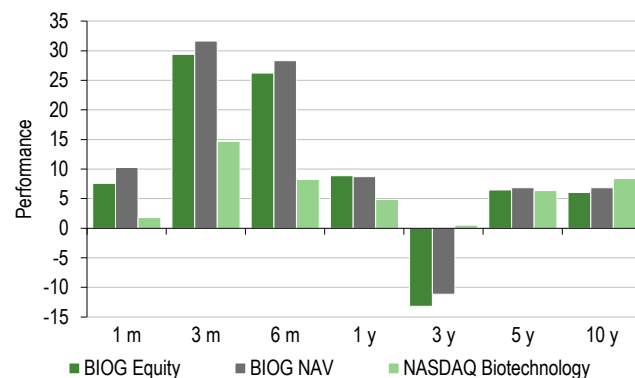
BIOG is one of the smaller funds of the seven members of the AIC Biotechnology & Healthcare sector. Reflecting the trust's improved recent performance, its NAV total return is above average over the last 12 months, ranking third. It has below average returns over the other periods shown. BIOG's has a lower-than-average discount in a sector where no funds are trading at a premium. It has a below-average ongoing charge and the highest level of gearing. The trust is one of three companies in the sector that does not pay a dividend.

Exhibit 6: Investment trust performance to end-February 2024

Price, NAV and benchmark total return performance, one-year rebased



Price, NAV and benchmark total return performance (%)



Source: LSEG, Edison Investment Research. Note: Three-, five- and 10-year performance figures annualised.

Exhibit 7: Share price and NAV total return performance, relative to indices (%)

	One month	Three months	Six months	One year	Three years	Five years	10 years
Price relative to NASDAQ Biotechnology	5.7	12.9	16.6	3.8	(35.6)	0.5	(19.8)
NAV relative to NASDAQ Biotechnology	8.3	14.9	18.6	3.7	(30.9)	2.1	(13.7)
Price relative to World-DS Pharm & Bio	4.2	17.0	16.9	(3.4)	(51.7)	(16.8)	(34.7)
NAV relative to World-DS Pharm & Bio	6.7	19.1	18.9	(3.5)	(48.2)	(15.5)	(29.7)
Price relative to MSCI World	2.5	16.7	11.8	(9.4)	(54.5)	(26.8)	(45.9)
NAV relative to MSCI World	5.0	18.8	13.7	(9.5)	(51.2)	(25.7)	(41.8)
Price relative to CBOE UK All Companies	7.1	24.5	20.9	8.1	(48.6)	6.9	9.3
NAV relative to CBOE UK All Companies	9.8	26.7	22.9	7.9	(44.9)	8.6	17.5

Source: LSEG, Edison Investment Research. Note: Data to end-February 2024. Geometric calculation.

BIOG's relative performance is shown in Exhibit 7. The trust has certainly enjoyed a reversal in its fortunes in recent months with a near 20pp NAV outperformance versus its benchmark over the last six months. Biotech shares have started to perform better following a prolonged period of being out of favour with investors for both macroeconomic and company-specific reasons. During 'risk-off' episodes, emerging biotech stocks with their higher risk profiles tend to be disproportionately negatively affected compared with larger-cap more diversified biotech stocks.

Due to BIOG's recent improved performance, it is now ahead of its benchmark over the last one and five years. However, there is more work to be done to restore the trust's three-year record.

Exhibit 8: Five-year discrete performance data

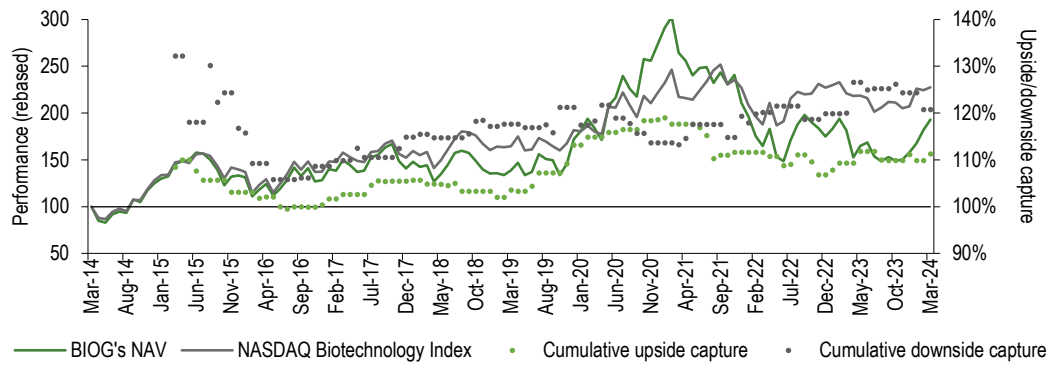
12 months ending	Share price (%)	NAV (%)	NASDAQ Biotech (%)	World-DS Pharm & Bio (%)	MSCI World (%)
29/02/20	23.8	29.7	6.0	9.2	9.6
28/02/21	69.2	52.8	26.6	11.3	18.8
28/02/22	(38.6)	(38.9)	(15.0)	7.4	15.9
28/02/23	(2.3)	5.7	14.0	11.8	3.2
29/02/24	8.9	8.7	4.9	12.7	20.2

Source: LSEG. Note: All % on a total return basis in pounds sterling.

BIOG's upside/downside analysis

In Exhibit 9, we highlight BIOG's performance versus its NASDAQ Biotechnology Index benchmark over the last 10 years. The trust's upside capture rate is 111%, suggesting that in months when biotech shares are rising, BIOG will outperform by a modest amount. It has a larger downside capture rate of 121%, which implies that in months when biotech shares are falling, the trust will underperform to a greater extent. This analysis is not surprising given BIOG's bias to emerging biotech stocks, which are inherently more risky than large-cap biotech stocks.

Exhibit 9: BIOG's upside/downside capture



Source: LSEG, Edison Investment Research. Note: Cumulative upside/downside capture calculated as the geometric average NAV total return (TR) of the fund during months with positive/negative reference index TRs, divided by the geometric average reference index TR during these months. A 100% upside/downside indicates that the fund's TR was in line with the reference index's during months with positive/negative returns. Data points for the initial 12 months have been omitted in the exhibit due to the limited number of observations used to calculate the cumulative upside/downside capture ratios.

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