

The Biotech Growth Trust

Strong performance continues

The Biotech Growth Trust (BIOG) has continued its strong track record of outperformance during the past 12 months. Share price and NAV total returns have been 56.2% and 55.9% respectively, which are both appreciably ahead of its benchmark, the NASDAQ Biotechnology Index (sterling adjusted) over the same period at 48.9%. Recent price gains have moved ahead of earnings growth so that average P/E ratios have moved up during the last two years, having fallen for the previous 10 years. However, the manager believes valuations remain attractive in a historical context, he reports that attractive opportunities remain and that, in their view, there is still strong growth potential for the sector.

| 12 months ending | Total share price return* (%) | Total NAV return* (%) | Total return NASBIOT Index* (%) | Total return RGUHSBTG Index* (%) | Total return DS World Pharma & Biotech Index* (%) |
|------------------|-------------------------------------|-----------------------------|---------------------------------------|--|---|
| 24/04/10 | 40.3 | 38.1 | 35.6 | 42.7 | 27.7 |
| 24/04/11 | 3.0 | 4.8 | 5.8 | 3.0 | 3.8 |
| 24/04/12 | 45.3 | 31.1 | 19.2 | (2.0) | 12.1 |
| 24/04/13 | 56.2 | 55.9 | 48.9 | 32.0 | 42.5 |

Note: *Twelve-month rolling discrete performance.

Investment strategy: Major and emerging biotech

Biotechnology investments in companies at the early stage of development can provide the highest returns over time but also carry substantial risk if drug developments prove unsuccessful. BIOG focuses on these early stage, emerging biotech companies (around two-thirds of the portfolio, with the balance invested in generally larger, established, and profitable companies). For the emerging part of the portfolio, OrbiMed will typically invest during the development process, two to three years before development success (product approval or launch) is likely to produce sales and sustainable profitability. The key to success in early-stage investments is to be able to manage the risk of development failure and in this respect OrbiMed is well resourced with a good track record.

Sector outlook: Fuller valuations

The biotech sector has provided a very strong performance during the past 18 months, when the sector has experienced a significant rerating. Initial price gains were broadly matched by earnings increases, keeping valuations near historic lows. Recently, valuations have expanded, making a correction more likely on any set back. The manager is comfortable with current valuations and continues to see attractive opportunities in the space. In addition, the longer term stories of favourable demographics and innovation remain intact.

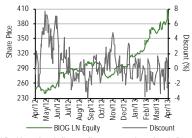
Valuation: Currently trading at a mild premium

BIOG's discount has narrowed substantially during the past 18 months and the trust is currently trading at a 1.4% premium (three- and five-year discount averages are 4.7% and 5.5% respectively). However, the premium rating arguably reflects both strong performance and its clear discount maintenance policy. BIOG has been issuing new shares. This should benefit existing holders by stimulating liquidity and reduce ongoing charges by spreading fixed costs over a larger asset base.

Investment trusts

| | 26 April 2013 |
|---------------------------------|---------------------------|
| Price | 390.5 p |
| Market cap* | £257 m |
| AUM | £253m |
| NAV* | 385.24p |
| Premium to NAV | 1.4% |
| Yield | 0.0% |
| *Including and excluding income | e, as at 24 April 2013. |
| Ordinary shares in issue | 65.9m |
| Code | BIOG.GB |
| Primary exchange | LSE |
| AIC sector | SS: Biotech/Life Sciences |

Share price/discount performance



* Positive values indicate a discount; negative values indicate a premium.



The Biotech Growth Trust is a research client of Edison Investment Research Limited



Exhibit 1: Trust at a glance

Investment objective and fund background

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

Recent developments

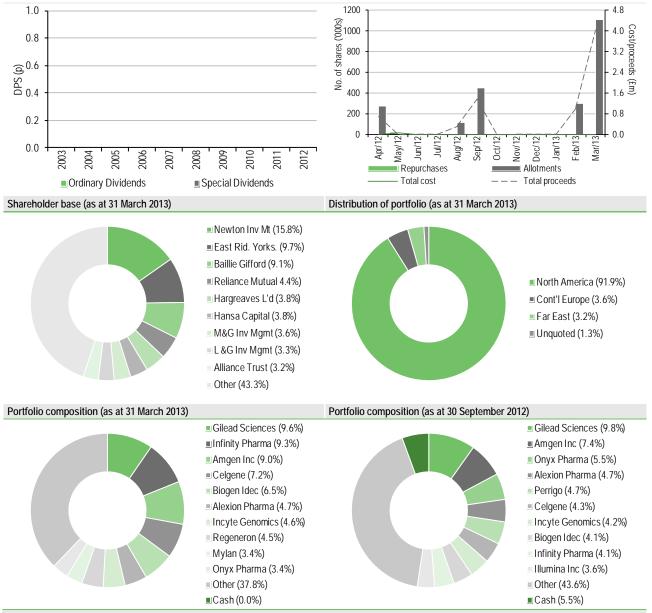
March 2013: BIOG allotted 1.1m shares raising £4.0m 5 March 2013: Dr. John Gordon (Chairman) purchased 10,000k shares.

| Forthcoming | | Capital structure | | Fund detail | Fund details | | |
|-----------------------|--------------------|---------------------|-----------------|-------------------|---------------------------|--|--|
| AGM | July 2013 | Total expense ratio | 1.2% | Group | Frostrow Capital LLP | | |
| Preliminary results | June 2013 | Net gearing | 6.3% | Manager | OrbiMed Capital | | |
| Year end | 31 March | Annual mgmt fee | See Page 7 | Address | 25 Southampton Buildings, | | |
| Dividend paid | N/A | Performance fee | See Page 7 | | London, WC2A 1AL, UK | | |
| Launch date | June 1997 | Trust life | Indefinite | Phone | +44 (0)20 3008 4910 | | |
| Continuation vote | Vote every 5 years | Loan facilities | See Page 7 | Website | www.biotechgt.com | | |
| Dividend policy and l | history | | Share buyback p | olicy and history | | | |

Dividend policy and history

Reflecting the capital appreciation objective, dividends are paid only as required to maintain BIOG's investment trust status. Dividends, if any, are expected to be small (last dividend of 0.2p paid in 2001).

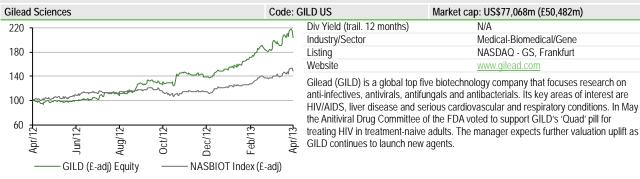
Renewed annually, the trust has authority to purchase up to 14.99% and allot up to 10% of issued share capital.

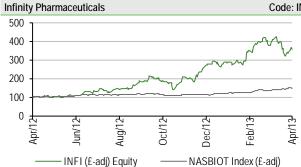


Source: The Biotech Growth Trust, Edison Investment Research.



Exhibit 2: Top five holdings at a glance





| INFI US | Market cap: US\$2,080m (£1,363m) |
|------------------------------|----------------------------------|
| Div Yield (trail. 12 months) | N/A |
| Industry/Sector | Pharmaceuticals/Medical-Drugs |
| Listing | NASDAQ - GS, Frankfurt |
| Website | <u>www.infi.com</u> |
| | |

Infinity Pharmaceuticals (INFI) is a US-based biotech company focused on oncology. In December, INFI announced data from an ongoing phase I trial for its IPI-145 oral inhibitor for PI3K-delta and PI3k-gamma for patients with advanced hematalogic malignancies. The data was well received by the market and INFI was the top contributor to BIOG's performance during the month. Despite this uplift, the manager remains very bullish on its prospects and is encouraged by the results and the size of the addressable market.



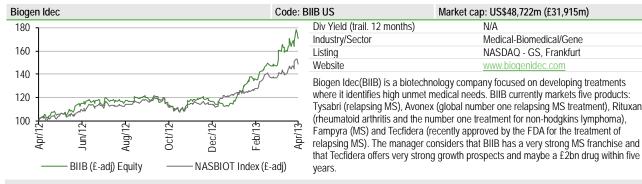
| AMGN US | Market cap: US\$78,626m (£51,503m) |
|------------------------------|------------------------------------|
| Div Yield (trail. 12 months) | 1.79% |
| Industry/Sector | Medical-Biomedical/Gene |
| Listing | NASDAQ - GS, Frankfurt |
| Website | www.amgen.com |
| | |

Amgen is a biotechnology company that discovers, develops and commercialises human therapeutics. It markets eight principal products: Aranesp, Enbrel, Epogen, Neulasta, Neupogen, Nplate, Sensipar and Vectibix. Amgen is expecting eight phase III results during the next three years, for which the manager considers that the current consensus attributes little value. The manager believes the downside is limited, given Amgen's established product base, and that a positive result could lead to a substantial price appreciation.



| e: C | ELG US | Market cap: US\$49,528m (£32,442m) | |
|------|------------------------------|------------------------------------|--|
| - | Div Yield (trail. 12 months) | N/A | |
| J | Industry/Sector | Medical-Biomedical/Gene | |
| ٦ | Listing | NASDAQ - GS, Frankfurt | |
| - | Website | www.celgene.com | |
| | | | |

Celgene (CELG) is a biopharmaceutical company that discovers, develops and commercialises therapies designed to treat cancer and immune-inflammatory related diseases. It markets three products, Evlimid, Thalomid and Vidaza, and provides placental and cord blood banking services via its LifebankUSA division. The manager considers recent guidance (to 2017) was very positive, reflecting both its dominant cancer franchise and promising development programmes.



Source: The Biotech Growth Trust, Thomson Datastream, Edison Investment Research



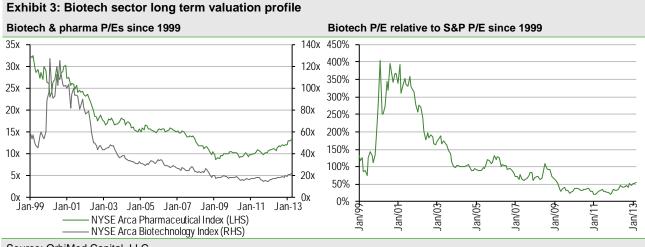
Fund profile: Focused biotechnology portfolio

BIOG was launched in June 1997. However, from May 2005 a new mandate was adopted, shifting the focus to global emerging biotechnology companies, and OrbiMed Capital was appointed as investment adviser. OrbiMed Capital, established in 1989 and based in New York, is the largest independent specialist investor in the biotechnology and pharmaceutical sectors. It employs over 62 experienced investment professionals globally and has assets under management of c \$6bn.

Equity outlook: Growing market

Healthcare and biotech benefit from supportive fundamentals from a demographic backdrop of increasing demand from growing and ageing populations, particularly in the western world and from growth in emerging markets, with the sector typically being a disproportionate beneficiary of such income growth. While big pharma excels at sales and marketing it has frequently struggled to replace revenue as drugs have gone off-patent, despite spending large sums on R&D. Biotech companies are frequently smaller, nimbler, more focused and so have attracted some of the best R&D talent. The rewards for discovering effective treatments are high, making the biotech sector an attractive place to invest, but the associated risks also remain high. Biotechs have often struggled to finance themselves through to profitability and while increasing numbers are reaching maturity, many fail to reach that point. The high risk and the need to understand the complex science that will often determine the success or failure of these companies are strong arguments for investing in the sector via a portfolio managed by an expert or experts.

The fund managers: Richard Klemm and Geoffrey Hsu



The manager's view: Confident on market momentum

Source: OrbiMed Capital, LLC

The biotech sector has performed strongly during the past five years, particularly during the last 18 months, when the sector has experienced a rerating. Initial price gains were broadly matched by earnings increases, keeping valuations near historic lows. Recently, valuations have expanded, making the sector more vulnerable to correction on any set back. Our analysis shows that there have been five broad corrections, during the past five years, which on average have seen the NASBIOT fall 19%. However, in each case the sector has recovered very well. The manager reports being comfortable with valuations, arguing that for mature biotech (42.4% of the portfolio as



at 31 March 2013), market P/E's remain below longer term averages, and for emerging biotech (57.6% of the portfolio) with little or no revenue or profit there is more reliance on estimations of future cash flows. Ultimately the manager considers that, despite the valuation uplift, attractive opportunities are still available and the longer term stories of favourable demographics and innovation remain intact. In terms of key product areas, the manager continues to see substantial opportunities from developments in cancer immunotherapy, multiple sclerosis and obesity.

Asset allocation

Investment process: Extensive fundamental research

Overall, OrbiMed has a preference for emerging biotech reflecting its view that attaining profitability acts as a significant catalyst for share price improvement. Such early stage investment often provides the highest returns over time but also carries substantial risk if drug developments prove unsuccessful. Successful investment requires the ability to manage this risk of development failure and, in this respect, OrbiMed is well resourced with a good track record. It has a team of 62 investment professionals with strong backgrounds in science, medicine, life sciences, finance and law. The investment process is driven by extensive fundamental research that includes a detailed look at a company's fundamentals and the science underpinning a company's investment thesis. Team members are specialists in either public or private equity investing. Within these broad areas, analysts further specialise in disease areas, industry sub-sectors and geographic regions. OrbiMed seeks to apply its scientific expertise to predicting a favourable balance of outcomes with respect to clinical studies, drug trial results and the commercial success of product introductions. For the emerging part of the portfolio (57.6%), OrbiMed will typically invest during the development process, two to three years before development success (product approval or launch) is likely to produce sales and sustainable profitability. Profitability usually coincides with product approval and launch. Exits often occur once the market starts to become more confident of the future prospects for investee companies, and begins to value them accordingly. Within the major biotech part of the portfolio, OrbiMed looks for companies with healthy growth from existing products and strong pipelines to provide future growth.

Overview

BIOG has 37 equity investments, with the top 10 holdings accounting for 59.3% of the portfolio, as at 31 March 2013. Most of the portfolio (91.9%) is invested in US stocks and BIOG therefore has a significant exposure to the dollar. Its policy is to invest in emerging biotech companies. These are expected to have a market cap less than \$3bn, to have undergone an IPO but not yet be profitable, and to be focused on drug research and development. They typically offer superior growth prospects, but with a higher degree of risk. Valuations are expected to be driven by developments in the company's drug pipelines, results of clinical trials and partnership agreements. The biotech sector contains a significant proportion of unquoted companies and, to allow shareholders to benefit from these, BIOG is permitted to invest in up to 10% of the portfolio at the time of investment in pre-IPO unquoted companies to not more than 15% of gross assets; limiting investment in any one stock to 15% of the portfolio at the time of investment; and requiring the largest 30 quoted stocks to represent at least 50% of the quoted portfolio. In addition, BIOG is permitted to invest up to \$15m in private equity funds managed by OrbiMed or an affiliate.

Current portfolio positioning

While the manager looks to employ geographical diversification as part of BIOG's risk control strategies, the dominance of the US biotech industry ensures that US biotech stocks are the largest



element of BIOG's portfolio at 91.9%, with Continental Europe, the Far East and unquoted holdings accounting for 3.6%, 3.2% and 1.3% respectively. The split between major and emerging biotech, currently 42.4% vs 57.6% (34.3% vs 65.7% as at the end of June 2012), is also used to manage risk within the portfolio. It is noteworthy that exposure to emerging biotech has been reduced during the last six months and that the proportion of cash in the portfolios has also increased from 0.0% to 6.3%. While BIOG's dollar exposure is understandably high, this has seen a small uptick during the past 12 months. The allocation to US stocks at 31 March 2012 was 89.6%.

Performance: Strong record of outperformance

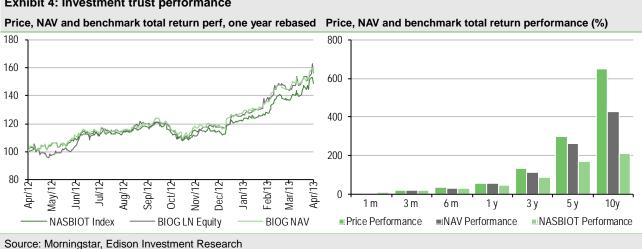


Exhibit 4: Investment trust performance

Exhibit 5: Share price and NAV total return performance (sterling adjusted), relative to benchmarks

| | One month | Three months | Six months | One year | Three years | Five years | OrbiMed* |
|---|-----------|-----------------|------------|----------|-------------|------------|----------|
| Price relative to NASBIOT | (0.6) | 2.0 | 3.7 | 7.3 | 45.9 | 124.3 | 119.3 |
| NAV relative to NASBIOT | (0.7) | 0.0 | 3.0 | 7.0 | 26.4 | 89.9 | 93.2 |
| Price relative to Russell 2000 Biotech Growth | 4.4 | 9.3 | 12.5 | 24.2 | 100.6 | 195.7 | 247.6 |
| NAV relative to Russell 2000 Biotech Growth | 4.3 | 7.4 | 11.8 | 23.8 | 81.0 | 161.4 | 221.5 |
| Price relative to DS World Pharma & Biotech | 1.9 | 6.3 | 7.5 | 13.7 | 68.1 | 170.7 | 173.7 |
| NAV relative to DS World Pharma & Biotech | 1.8 | 4.3 | 6.9 | 13.4 | 48.5 | 136.3 | 147.5 |
| Price relative to FTSE All-Share | 7.2 | 19.0 | 21.0 | 37.6 | 106.2 | 265.3 | 233.5 |
| NAV relative to FTSE All-Share | 7.1 | 17.0 | 20.3 | 37.2 | 86.6 | 231.0 | 207.4 |

Source: The Biotech Growth Trust, Thomson Datastream, Edison Investment Research. Note: * OrbiMed measurement period is from 19 May 2005 when OrbiMed Capital was appointed as BIOG's manager.

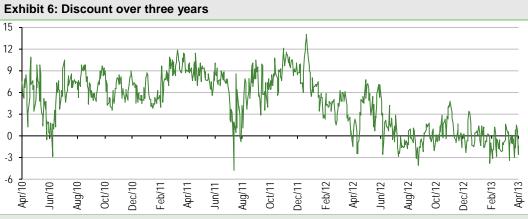
> As Exhibits 4 and 5 illustrate, BIOG has provided a significant long-term outperformance against the NASBIOT, other biotech benchmarks provided and the FTSE All-Share. The manager reports that the portfolio has avoided the large blow ups in the sector, which is reflected in the trusts performance. Infinity pharmaceutical has been a strong contributor, benefitting from positive trial data as have Celgene and Gilead. The manager's cite their decision to fully exit Affymax early in 2013 on valuation grounds, (a constituent of BIOG's portfolio that performed well during 2012) and concerns over its ability to secure a contract for the provision of dialysis services in the US, benefitted the trust as it managed to sidestep its recent fall.

Discount: Significant narrowing during last 18 months

With a view to making the company's shares more attractive to new investors and generating a sustained improvement in the rating of its shares, a policy of actively managing the discount to broadly maintain it within 6.0% of the NAV was introduced in 2005. This policy has been effective



with BIOG trading at an average discount, since OrbiMed's appointment in August 2005 of 4.9%. Exhibit 6 shows the discount of the trust over the past three years, BIOG's discount has closed substantially during the last 18 months and has frequently traded at a premium during the last nine months. Under these conditions, repurchase activity has been limited to just 19k shares, in May 2012, at a cost of £47k. With the trust trading at a premium, this has allowed 1.4m shares to be issued, during the past 12 months, raising £3.4m. This should hopefully have the twin benefits to existing holders of increasing the liquidity of the trusts shares and reducing its ongoing charges, as fixed costs are spread over a larger asset base. The current premium of 1.4% compares to BIOG's discount averages over one, three and five years of 0.6%, 4.7% and 5.5% respectively.



Source: Thomson Datastream, Edison Investment Research; *Note: Positive values indicate a discount; negative values indicate a premium.

Capital structure: Conventional, currently ungeared

BIOG is a conventional trust, having only one class of share in issue – 25p ords. BIOG can borrow up to a maximum of £15m and it has a loan facility with Goldman Sachs & Co, repayable on demand, which is drawn down at the discretion of the investment manager. As at 31 March 2013 BIOG had gross and net gearing of 2.0%.

OrbiMed receives an investment management fee of 0.65% of net assets per year. Frostrow's management fee is equal to a fixed amount of £50,000 per year plus 0.30% per year of the company's market capitalisation. The trust also pays a performance fee of 16.5% of any outperformance of the NAV over the benchmark index, the NASDAQ Biotechnology Index (sterling adjusted). The performance fee, calculated quarterly, is based on the lower of the cumulative outperformance of the investment portfolio against the benchmark since June 2005, or the cumulative outperformance of the investment portfolio against the benchmark over the previous 12 months. Where a performance fee is payable, OrbiMed receives 15.0% and Frostrow Capital receives 1.5% of the outperformance. BIOG's ongoing charges were 1.2% for the year ending 31 March 2012 (1.2% for the year ending 31 March 2011). These fees are not unreasonable given BIOG's specialist nature and, as Exhibit 6 shows, BIOG's ongoing charges are comparable to those of its peers. The management contract can be terminated at one year's notice by either party.

The life of the trust is indefinite. However, from July 2010 and then every fifth AGM, a continuation vote will be put to shareholders. If the resolution is not passed, proposals for the voluntary liquidation, unitisation or other reorganisation of the company will be put before shareholders at an EGM, not more than three months after the previous AGM. If these proposals are rejected, the company will continue as an investment trust. The next vote is due at the 2015 AGM.



Dividend policy and record: None, capital growth focus

BIOG's investment objective is to achieve capital growth by investing in the global biotechnology industry and primarily in emerging biotechnology companies. Such companies will, if successful, be at a growth stage in their development and will typically retain earnings in full for reinvestment. As such, BIOG's dividend income is small in relation to movements in the capital reserve and is more than offset by expenses that are charged against it. BIOG only declares dividends to the extent required to maintain its investment trust status and BIOG has not paid a dividend for over 10 years.

Peer group comparison

As Exhibit 7 illustrates, the AIC biotechnology/life sciences specialist sector is a relatively small peer group. There are four constituents and, while they all invest in biotechnology companies, their investment objectives are markedly different. Within this peer group BIOG ranks second over one year (1st for the UK listed peers), and first over three and five years when considering share price total return. BIOG also has the largest one year Sharpe ratios for both price and NAV amongst its peer group.

| Exhibit 7: European | emallar | companies | soctor | as at $24 \text{ Anril} 2013$ |
|---------------------|---------|-----------|--------|---|
| | Sinanei | companies | 366101 | $a_3 a_1 \Delta + A p_1 n \Delta v_1 J$ |

| Company | Share price | total return | on £100 | Ongoing | (Disc)/ | Net | 5-year | Div. yield | Sharpe | Sharpe |
|-----------------------------------|-------------|----------------|---------------|----------------|---------|--------------------------------|---------------------------|------------|-----------------------|-------------------------|
| | One year | Three years | Five years | charges (%) | prem. | gearing (100=no gearing) | dividend growth (%) | | ratio NAV One Year | ratio Price One Year |
| Sector average | 156.0 | 194.8 | 263.9 | 1.1 | (12.6) | 97.9 | 25.8 | 1.7 | 2.1 | 1.7 |
| Biotech Growth Trust | 156.2 | 233.8 | 397.5 | 1.3 | 1.9 | 102.0 | 0.0 | | 2.5 | 2.3 |
| International Biotechnology Trust | 139.1 | 176.6 | 214.7 | 1.9 | (12.7) | 100.0 | 0.0 | | 2.1 | 1.4 |
| Polar Capital Global Healthcare | 132.8 | | | 1.1 | 3.3 | 100.0 | 0.0 | | 2.3 | 1.3 |
| Worldwide Healthcare Trust | 141.3 | 163.7 | 250.5 | 1.1 | (4.3) | 109.0 | 25.8 | 1.5 | 2.0 | 2.2 |
| BB Biotech AG | 168.8 | 202.1 | 243.5 | 0.9 | (22.7) | 91.0 | 0.0 | 0.0 | 2.0 | 1.4 |

Source: Morningstar

The board

All directors are non-executive and all, excluding Sven Borho, are independent of the investment manager. Sven Borho is a founding partner of OrbiMed. Board members are The Rt Hon Lord Waldegrave of North Hill (independent non-exec chairman), Dr John Gordon (senior independent non-exec director), Professor Dame Kay Davies, Andrew Joy, Peter Keen, (independent non-exec directors), Paul Gaunt and Sven Borho (non-exec directors). Average length of service is 8.9 years.

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