UK biotech financing in 2021

January 2022
Long-term growth in UK biotech financing

- £4.5bn raised in 2021
- £2.5bn venture capital investment
- £1.3bn raised by IPO

13 investment deals worth over £100m each
- £50m won in grants
- £350m on the London Stock Exchange

UK companies secured half of all European biotech venture capital

5 IPOs on Nasdaq
3 IPOs on AIM

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- £4.5bn

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I have been blown away by the determination and vitality of the UK’s life sciences and biotech community showcased during the pandemic. Many companies turned their scientific firepower to the international fight against COVID-19, with impressive results, while others stoically continued their vital work addressing other great health and societal challenges. It has been heartening to see their efforts backed so resolutely by investors in the UK and abroad.

‘Record-breaking’ has almost become an old trope for the BIA as we tracked and announced quarterly UK biotech fundraising throughout 2021. The £2.8 billion raised in 2020 marked a new high for the sector as investors in the UK and overseas looked to the UK sector for market-beating returns during the pandemic-induced economic downturn. We did not expect to see that record smashed so emphatically.

The first quarter of 2021 matched Q1 2020. Then, between March and May, an astonishing £1.6 billion was raised. Things slowed a little after that but by the end of August the sector had broken through the £3 billion mark for the first time, surpassing the 2020 annual total. The final three months covered by this report saw Oxford Nanopore’s watershed listing on the London Stock Exchange and further large private capital raises by other UK leaders. It is an absolute pleasure to say that as a result, a record-breaking £4.5 billion has been invested in UK-headquartered life sciences and biotech companies in 2021.

Private financings and Initial Public Offerings (IPOs) have increased in number and size. UK companies are no longer being drip-fed capital, meaning their leadership teams have more time to focus on what matters – their value-creating R&D programmes. The welcome influx of foreign capital, largely from the US, is driving this, allowing the UK to really begin to challenge the life sciences clusters of Boston Massachusetts and the San Francisco Bay Area. This report also showcases M&A and licensing deals that demonstrate the real value, for both investors and patients, that is being generated from the UK innovation ecosystem.

The UK has everything it needs and is uniquely placed to be the global hub for life sciences. This was recognised by the UK Government in the Life Sciences Vision, which is delivering crucial policy and fiscal support to ensure we capitalise on our competitive advantage. The Life Sciences Scale-Up Taskforce, on which I sat alongside life science specialists and leading figures from the City, was also convened in 2021 to analyse the remaining barriers to growing the sector and make recommendations to the Government, which I look forward to seeing implemented in 2022.

As I look to the future for the UK’s financing environment, there is an obvious gap that we must plug. History has handed the UK two world-leading sectors: life sciences and finance. A symbiosis should exist between these two but it doesn’t, yet. The large fundraises showcased in this report are largely the result of overseas investment, meaning the value creation will also be offshored. There is great opportunity to turbo-charge the UK’s life sciences and biotech sector and capture more of its economic value for the UK by building better connections between our financial institutions and innovative scaling businesses. I invite anyone interested in seizing this opportunity to get in touch.
With the whole world continuing to focus on how to tackle the COVID-19 pandemic which started in 2020, the global biopharma industry not only gained in public prominence but had one of its best years ever. Venture and private backing for biotechs hit a new record as did the total sums raised by the sector through initial public offerings, although lacklustre support for follow-on financing meant the global total for the year was some 12% lower than the 2020 record. Biopharma licensing and joint venture deal value, where the financial details were provided, were up about 8% on 2020, the previous record, but the total value of merger and acquisitions that completed in 2021 were down 32% on the previous year, as any appetite for mega-mergers was replaced by one for bolt-on acquisitions.

In 2021, the U.S. Food and Drug Administration approved 50 new molecular entities and while this was not a record for a single year, it was in line with the growth trajectory we have seen in biopharma R&D productivity since the start of the century.

More significant, however, was both the increasing diversity in the types of molecules associated with these new medicines and in the diseases addressed. In the class of 2021 FDA approvals, which was still dominated by small molecule drugs (46%), there were 12 different classes including monoclonal antibodies, antibody-drug combinations and bispecific antibodies among others.

On the financing front, Massachusetts maintained pole position in venture financing, with biotechs in the San Francisco Bay area cluster, holding on to second place in the global ranking. Biotechs in mainland China raised the third highest amount, reinforcing its claim of being a sustainably world class biocluster. A strong performance by British biotechs propelled the United Kingdom into fourth place, overtaking the San Diego cluster. On the IPO front, these five leading clusters maintained the same rankings. With biotech stocks retreating from the highs of 2020 – the NASDAQ Biotech Index was down 0.63% at the end of 2021, compared with being up 34% at the end of 2020 – there was less of an appetite for follow-on and private placement financing for the sector.

COVID-19-focused deals account for just over 10% of all concluded biopharma deals, while emerging technologies such as gene and cell therapies, next generation RNA technologies, CRISPR and other gene-editing modalities, and the potential of artificial intelligence and machine learning on drug discovery attracted the attention of dealmakers.

Indeed, breakthroughs in scientific approaches can be expected to underpin future developments. In the past decade, mining the Web of Science from Clarivate, we have seen rapid rises in scientific publications associated with potential therapeutic uses of cell and gene therapies, CRISPR and other gene-editing approaches, and artificial intelligence and machine learning. Moreover, this increased research activity has translated in a rapid rise in the number of clinical trials underpinned by these technologies.

The growing influence of biopharma emanating from mainland China is unlikely to abate any time soon driven by the increasing impact of research conducted in mainland China. For example, Chinese institutions hold the top five places in a global ranking of gene therapy publications, while mainland China is now the country with the most CAR T therapy clinical trials.
Overall trends

The UK life sciences and biotech sector reached new heights in 2021, securing £4.5 billion in public and private financings, £1.7 billion more than in 2020.

Venture capital financings totalled £2,518 million, Initial Public Offerings (IPOs) netted £1,304 million, and all other public financings raised £684 million. By percentage, the split was 56% VC, 29% from IPOs, and 15% from all other public financings.

Although venture capital made up a greater proportion of the total raised, it is the number and scale of IPOs that mark out the year as distinctly different to what the UK has seen before. Listings of UK companies on markets on both sides of the Atlantic suggest an ecosystem reaching maturity, and the record-breaking levels of venture investment shows a strong pipeline of companies coming through.

* The dataset in this report covers the period from 1 December 2020 to 30 November 2021. It provides fundraising data based on the headquarters location of the company. Where fundraises weren’t in pound sterling, the relevant exchange rate of the time was used. The data is provided by Clarivate and BioWorld, with additional data sourced from the London Stock Exchange, Beauhurst and Pitchbook.
The UK life sciences sector is genuinely one of the jewels of the UK economy and continues to demonstrate its capacity for growth based on the extraordinary innovation created here.

With a remarkable £4.5 billion raised by UK-based companies in 2021 through public and private financings, global investors as well as many within these shores also recognise the great potential of British science and entrepreneurialism. This country has incredible R&D assets underpinning our life sciences sector, from the NHS’ cradle-to-grave datasets to the world-leading genomics capabilities that have proved so vital for fighting COVID-19.

The UK Government has recognised this too and I was delighted to work with Sir John Bell, Lord Prior of NHS England, and the Secretaries of State for Health and Business to produce the Life Sciences Vision in 2021. This established a ten-year plan with strong government support for growing this outstanding sector and delivering meaningful improvements for patients’ care and treatment. The Government backed our conclusions in the Spending Review and now we move to implementation and realisation of the ambition.

Increasing capital flows to scaling-up businesses in the UK is one of four preconditions for the success of the Vision, which we identified early on in its development. Despite great milestones signalling a golden age for the sector, such as Oxford Nanopore’s £350m listing on the London Stock Exchange in September 2021 and a record-breaking £2.5 billion raised in venture capital alone throughout the year, we remain massively behind the United States in total raised and round size per company. This means there is real untapped potential to grow life sciences companies in in the UK. We must not be an exporter of wealth.

Following publication of the Vision, the Secretary of State for Business Kwasi Kwarteng, Sir John Bell and I set up the Life Sciences Scale-Up Taskforce. With the BIA working in partnership with TheCityUK and other representatives from the financial and life sciences industries, the Taskforce has worked at speed to analyse, test and develop solutions to the issues that inhibit scale-up and growth in the UK. We believe these can and must unlock new sources of capital, such as pension funds, which could be better utilised to create value for savers, investors, and the UK economy.

Our world-leading life sciences and financial sectors are twin engines of value creation in the UK. It is time to combine them to create the critical mass that – as we see in the US – means the UK can better capture the massive growth opportunity in global healthcare, to the benefit of investors and patients alike.
Venture capital

A record £2,518 million was invested into private UK biotechs in 2021 as both domestic and a growing cohort of international investors raced to access growth opportunities in the UK’s booming sector.

Despite the ongoing disruption caused by the pandemic, investors proved more willing than ever to make seed commitments to fledgling companies, with £128 million invested, over four-times more than we have seen in previous years.

Later-stage financings were also more numerous and netting more than in previous years, reflecting the maturing sector but also the participation of more international investors willing to make larger commitments.
There has never been a better time to start a new life sciences company in the UK. 2021 challenged all of us in different ways, but through these challenges rose a new wave of entrepreneurs, scientific founders and data driven health technologies. We have learned that we can disrupt the old ways of working, the healthcare status quo, and be ambitious in the way we capitalise British companies as they grow. It is very exciting to see talented first time entrepreneurs start new companies, and venture funds raising fresh capital; further enhancing the dynamic nature of this sector.

The UK life sciences sector is taking its place on the global stage, the evidence of which is seen in UK based companies attracting global capital at an unprecedented scale. The private market funding environment is strong, and this is helping companies to capitalize themselves to compete globally. However, to capture the early stage opportunities emerging in the sector, the UK still needs to bolster the levels of investment in UK based companies both at the seed stage, where risk and failure rates are high, as well as venture funding for these companies at the growth stages.

The BIA’s figures indicate that £2.5bn was raised by private life sciences companies in 2021, with a four-fold increase in seed funding and a doubling of Series B growth capital in the year. At LifeArc, we have launched a seed and early ventures investment strategy which has a dual mandate of patient impact and financial returns. LifeArc Ventures focuses on investing in early translational research, just as it emerges from the academic setting, and we have the ability to scale these investments into series A rounds and beyond. 2022 will be busy for everyone in life sciences and despite the uncertainties, we look forward to another year of change and increasing entrepreneurship in our sector.
Top UK venture deals

Super-sized funding rounds are becoming much more common for UK biotech companies. Eight companies achieved funding rounds of over £100 million in 2021, compared to just three in 2020, and a further 27 raised more than £20 million each, compared to 12 in the previous year.

Oxford Nanopore topped our leaders board for the second year running with a £195 million fundraise prior to their London IPO. Vaccitech, the Oxford University spin-out commercialising the technology platform behind the Oxford/AstraZeneca COVID-19 vaccine, also raised a large round prior to IPO, notably bringing in UK-based institutional investor M&G alongside new international investors. M&G is taking a welcome greater interest in the sector, having also backed Nanopore.

Elsewhere, Exscientia capitalised on the well-placed hopes of AI-driven drug discovery to secure the fourth largest private fundraise ever recorded by the BIA, but more-traditional drug discovery and development biotechs still dominate the fundraising league table from seed to later-stage.

Top ten venture deals

<table>
<thead>
<tr>
<th>Company</th>
<th>Deal date</th>
<th>Round</th>
<th>Value (£m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oxford Nanopore</td>
<td>04/05/21</td>
<td>ND</td>
<td>195</td>
</tr>
<tr>
<td>Exscientia</td>
<td>28/04/21</td>
<td>D</td>
<td>158</td>
</tr>
<tr>
<td>Vaccitech</td>
<td>17/03/21</td>
<td>B</td>
<td>118</td>
</tr>
<tr>
<td>Quell Therapeutics</td>
<td>29/11/21</td>
<td>B</td>
<td>117</td>
</tr>
<tr>
<td>Artios Pharma</td>
<td>27/07/21</td>
<td>C</td>
<td>110</td>
</tr>
<tr>
<td>Apollo Therapeutics</td>
<td>17/06/21</td>
<td>ND</td>
<td>104</td>
</tr>
<tr>
<td>Gyroscope Therapeutics</td>
<td>26/03/21</td>
<td>C</td>
<td>104</td>
</tr>
<tr>
<td>bit.bio</td>
<td>05/11/21</td>
<td>B</td>
<td>103</td>
</tr>
<tr>
<td>Cambridge Epigenetix</td>
<td>03/11/21</td>
<td>D</td>
<td>65</td>
</tr>
<tr>
<td>Pulmocide</td>
<td>27/05/21</td>
<td>C</td>
<td>64</td>
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</table>
What we do at Oxford Nanopore is best defined by the simple, bold mission that has always driven us forward: to enable the analysis of anything, by anyone, anywhere.

We have created a new generation of nanopore-based sensing technology. Our products, which range from portable pocket-sized devices to ultra-high throughput benchtop machines, enable the real-time, high-performance, scalable analysis of DNA and RNA.

Our disruptive approach is designed to make biological analysis more accessible, in turn broadening how it can be used and amplifying the positive impact it can make on society.

Our technology enables our customers to perform scientific research in a range of high-impact areas, including human genetics, cancer research, viral outbreak surveillance, environmental analysis, pathogens/antimicrobial resistance, microbiome analysis and crop science. The technology is in the early stages of use beyond scientific research, in ‘applied market’ uses where biological insights can potentially enable rapid decision-making across areas including health, food, the environment and industry.

We were founded in 2005 and we are very proud of the progress we’ve made so far, from building a substantial portfolio of patented innovations to the high-tech manufacturing facility we opened in Oxford in 2019. But we believe that we are only in the foothills of what is possible.
Venture capital financing in Europe, US and China

Innovation in healthcare continues to be seen as a sound investment around the world. £28.1 billion in venture capital was raised for biotech globally, up 10% from £25.7 billion in 2020.

Despite this overall rise, not all life sciences hotspots enjoyed the same fundraising surge seen in the UK. Venture investments increased 79% in the UK, ahead of Boston Massachusetts where the still-impressive figure was 49%. However, of the other US clusters, San Francisco saw a 21% fall between 2020 and 2021, while San Diego only kept pace with the global average. The UK also raised more venture capital than San Diego. Overall, the US totalled £18.8 billion, up 11%.

Investment across the rest of Europe fell 12%, reaching a total of just over £5 billion. China also saw a 12% fall to £3.4 billion.

Switzerland and Germany had been buoyed in 2020 by a handful of very large fundraises that their pipeline did not sustain this year. As a result, the UK accounted for approximately half of the European continent’s total.
UK biotech financing in 2021

- **£0–£5,000m**
  - **£1,360m**

- **£5,001–£10,000m**
  - **£2,518m**

- **£10,001m+**
  - **£2,873m**
  - **£18,801m***

- **Other**
  - **£4,611m**
  - **£1,360m**
  - **£3,605m**
  - **£3,362m**

* Including Israel

**Europe***
- **£5,060m**
  - **£538m**
  - **£310m**
  - **£360m**

**US**
- **£18,801m**
  - **£2,139m**
  - **£3,605m**
  - **£8,446m**

**San Diego**
- **£2,139m**

**San Francisco**
- **£3,605m**

**Massachusetts**
- **£8,446m**

**China**
- **£3,362m**

**UK**
- **£2,518m**
Public Markets

UK IPOs

UK biotech companies raised a massive £1.3 billion through IPOs in 2021. The figure accounts for 42.8% of all the money raised by UK biotechs at IPO in the past decade and is a remarkable leap from the £244 million raised in 2020.

Topping the IPO charts was Oxford Nanopore, which also represented the largest amount raised in a listing on the London Stock Exchange by a biotech company. The listing generated a great deal of interest, including from retail investors. Three UK therapeutic companies also launched on London’s Alternative Investment Market (AIM), as did a handful of foreign biotechs, hinting at improving conditions for the UK sector on its home market.

However, overall, more money was collected by companies choosing to list on NASDAQ, which accounted for two thirds of the total raised. The deals achieved were also considerably larger than those seen in 2020, where £119 million was the largest raise.

UK biotech listings by market

<table>
<thead>
<tr>
<th>Company Name</th>
<th>Date</th>
<th>Market</th>
<th>Value (£m)</th>
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<tbody>
<tr>
<td>Oxford Nanopore</td>
<td>01/10/2021</td>
<td>LSE</td>
<td>350</td>
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<tr>
<td>Exscientia</td>
<td>30/09/2021</td>
<td>NASDAQ</td>
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<tr>
<td>Centessa Pharmaceuticals</td>
<td>28/05/2021</td>
<td>NASDAQ</td>
<td>231</td>
</tr>
<tr>
<td>Immunocore</td>
<td>09/02/2021</td>
<td>NASDAQ</td>
<td>215</td>
</tr>
<tr>
<td>Achilles Therapeutics</td>
<td>31/03/2021</td>
<td>NASDAQ</td>
<td>123</td>
</tr>
<tr>
<td>Vaccitech</td>
<td>30/04/2021</td>
<td>NASDAQ</td>
<td>77</td>
</tr>
<tr>
<td>Poolbeg Pharma</td>
<td>19/07/2021</td>
<td>AIM</td>
<td>25</td>
</tr>
<tr>
<td>Arecor Therapeutics</td>
<td>03/06/2021</td>
<td>AIM</td>
<td>20</td>
</tr>
<tr>
<td>BiVictriX Therapeutics</td>
<td>11/08/2021</td>
<td>AIM</td>
<td>7.5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td><strong>1,304</strong></td>
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Arecor Therapeutics is a globally focused biopharmaceutical company transforming patient care by bringing innovative medicines to market through the enhancement of existing therapeutic products. By applying our innovative proprietary formulation technology platform, Arestat™, we are developing an internal portfolio of proprietary products in diabetes and other indications, as well as working with leading pharmaceutical and biotechnology companies to deliver enhanced formulations of their therapies.

Following several years of private funding from our supportive UK investors, and having had access to non-dilutive funding and R&D tax credits, we are proud to have successfully completed our IPO on London’s Alternative Investment Market (AIM) on 3rd June 2021. The £20 million proceeds will enable us to leverage our Arestat™ platform to advance the development of our diabetes and specialty hospital products portfolio, alongside driving further value through our technology licensing partnerships.

Overall, the UK biotech and health sciences sector continues to punch above its weight on the global stage and investor appetite for the sector in the UK has never been stronger. Looking specifically at AIM, the landscape has evolved significantly over the last several years, with investors demonstrating strong interest in high quality healthcare businesses with exciting technology. Throughout our IPO roadshow we found that investors appreciated the strong data to validate our platform, which is underpinned by robust IP and a balanced business model to mitigate risk.

I believe Arecor has the potential to become a significant international biopharmaceutical company, demonstrating the potential of UK-based and UK-backed companies on the global stage by delivering significant benefits to patients and healthcare systems.
IPOs in Europe, US and China

The number of companies choosing to go public in both Europe and the US soared in 2021. In America, 86 companies raised £9.7 billion between them and 29 European companies raised £3.3 billion. Globally, 133 companies raised £19 billion, up 30% from £14.6 billion in 2020.

The life science clusters of Boston Massachusetts and San Francisco made up the lion’s share of IPOs, with 25 and 18, respectively, each raising just shy of £2.7 billion. Despite 26 more US IPOs in 2021 compared to 2020, the country’s total capital raised remained steady at £9.7 billion as NASDAQ cooled significantly in the second half of the year.

Europe also had more IPOs in 2021 (29 vs 12) but also significantly more capital raised; there was a 218% increase from £841 million in 2020 to £3.3 billion in 2021. This was in large part driven by the UK’s success, which accounted for 31% of the European IPOs and 40% of the capital raised.

On the other side of the world, the number of Chinese companies listing remained steady at 14, as did the capital raised at £4.8 billion. However, the average Chinese IPO was three-times larger than that achieved by the average American or European listing.
UK Biotech Financing in 2021

- **US**: £9,722m
  - San Francisco: £2,674m
  - Massachusetts: £2,681m
  - San Diego: £1,043m
  - Washington: £884m
- **Europe**: £3,279m
  - Other: £184m
  - Switzerland: £1,473m
  - Germany: £174m
  - Ireland: £144m
- **China**: £4,845m
- **Other**: £2,440m

*including Israel*
Follow-on financing

Follow-on financing returned to normal levels in 2021. The vast majority of public UK biotechs raised follow-on financing in 2020 taking advantage of buoyant market conditions, with £1.18 billion raised. In 2021, the figure almost halved to £684 million but this is still good by historical standards.

The NASDAQ total was largely composed of Autolus’ £183 million investment from Blackstone, which will be used to advance the company’s CAR-T cell therapy, currently in Phase III clinical trials. Financings on AIM were dispersed across a number of companies. On the Main Market, Oxford Biomedica received a £50 million strategic investment from the Serum Institute of India, via a subsidiary. Both companies are involved in the production of the Oxford/AstraZeneca COVID-19 vaccine and the investment will be used to expand advanced therapy manufacturing facilities near Oxford.
Founded and headquartered in the UK, Autolus is delivering life-changing treatments for cancer patients.

Amongst the world leaders in cell re-programing technologies, we are developing best in class autologous T cell therapies. Our lead product, obe-cel, has the potential to become standard of care and transform outcomes, including offering the prospect of a cure for some patients suffering from adult Acute Lymphoblastic Leukemia.

As we near completion of the clinical development of obe-cel, we were delighted, late in 2021, to secure up to a $250 million in equity and product financing from Blackstone Life Sciences. The investment, one of the largest private financings of a UK biotech company, and the largest from a single source, is being used to support the development of the product in adult Acute Lymphoblastic Leukemia and the commercialization of obe-cel.

To meet potential global demand, we need to scale manufacturing for commercial supply for the company’s lead product, as well build additional capacity for our broader pipeline, so Autolus is investing in a new leased 70,000 square foot manufacturing facility in Stevenage, UK, which will allow for GMP capacity for approximately 2,000 batches a year initially, with scope to expand. Autolus is creating highly skilled job opportunities in the UK and with world-leading science alongside its entrepreneurial culture, continues to demonstrate that the UK is an ideal place for investment in advanced cell and gene therapies and a good place in which to build a globally competitive life sciences business.

Lucinda Crabtree
Senior Vice President, Finance, Autolus
M&A, licensing, debt and grant funding

Mergers and Acquisitions

Two high value exits of established UK biotech companies happened in 2021, returning capital to investors and securing commitments to continued development and manufacturing in the UK.

NASDAQ-listed GW Pharma, a leader in the science, development and commercialisation of cannabinoid-based epilepsy treatments, was acquired by Jazz Pharmaceuticals. The deal agreed in February delivered GW shareholders $220 per American depositary share – $200 in cash and $20 in Jazz shares, representing a 50% premium.

Another prominent UK biotech, Kymab, was acquired by Sanofi in the largest private UK biotech M&A deal on record. Kymab, with its platform technology for developing fully-human monoclonal antibodies, was bought for an upfront payment of approximately $1.1 billion (£1,073 million) and up to $350 million in milestone payments. Early investors in Kymab who exited in the deal include the Bill & Melinda Gates Foundation and Wellcome Trust, Malin Corporation and the Schroder UK Public Private trust, formally the Woodford Patient Capital Trust. However, investors through the Woodford Equity Income Fund missed out as its Kymab shares had been sold off following that fund’s liquidation to meet redemption requests.

Tobacco producer Philip Morris International also agreed an unconditional offer to acquire UK inhaler producer Vectura in September 2021, but the deal is not listed here as the acquisition of 100% of Vectura shares was not completed within the year.
In May 2021, Jazz Pharmaceuticals completed the acquisition of GW Pharmaceuticals, a world leader in the science, development and commercialisation of cannabinoid-based prescription medicines. Jazz Pharmaceuticals is a fast-growing, global biopharmaceutical company with a diverse portfolio of marketed medicines and novel product candidates, from early to late-stage development, in two key therapeutic areas: neuroscience and oncology. Jazz’s purpose is to innovate to transform the lives of patients and their families.

Through this acquisition, we are creating an innovative, high-growth, global biopharma leader with a strong global commercial and operational footprint, well positioned to maximise the value of our diversified portfolio. Together, as one company, GW and Jazz now employ more than 1,000 employees in the UK, and Jazz has committed to maintaining our presence and preserving and investing in our UK-based capabilities in R&D, innovation, growing and manufacturing.

The UK is home to GW’s worldwide growing and manufacturing operations, as well as our critical innovation and R&D capabilities. GW is proud of our longstanding commitment to the UK, established over the past two decades and recently recognised with the 2021 Queen’s Award for Enterprise in Innovation. We look forward to continuing to build on our presence in the UK as Jazz Pharmaceuticals.

**Chris Tovey**
Executive Vice President, Chief Operating Officer and Managing Director, Europe & International, Jazz Pharmaceuticals

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### Selected M&A deals involving UK biotech companies in 2021

<table>
<thead>
<tr>
<th>Acquirer (Domicile of acquirer)</th>
<th>Target (Domicile of target)</th>
<th>Date</th>
<th>Value (£m)</th>
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<tbody>
<tr>
<td>Jazz Pharmaceuticals (Ireland)</td>
<td>GW Pharma (UK)</td>
<td>05/05/2021</td>
<td>4,891*</td>
</tr>
<tr>
<td>Sanofi (France)</td>
<td>Kymab (UK)</td>
<td>09/04/2021</td>
<td>1,073</td>
</tr>
<tr>
<td>Juvanescence (Isle of Man)</td>
<td>Portage Biotech (Canada)</td>
<td>04/03/2021</td>
<td>181</td>
</tr>
</tbody>
</table>

*total consideration of $6.7 billion net of GW Pharma cash, translated to GBP at the exchange rate of 1.39045 at close, 5 May 2021.*
Licensing

As an important source of operating capital, licensing deals have been included in this report for the first time to provide a fuller picture of the financing of UK biotech companies.

Potentially the most valuable was struck between AstraZeneca and VaxEquity, to use the University College London spin-out’s saRNA platform. VaxEquity could receive development, approval and sales-based milestones totalling up to $195 million and royalties in the mid-single digits per programme. AstraZeneca has the option to collaborate with VaxEquity on up to 26 drug targets. An upfront payment was not reported.

Selected licensing deals involving UK biotech companies in 2021

<table>
<thead>
<tr>
<th>Principal company (Country)</th>
<th>Partner company (Country)</th>
<th>Upfront payment ($m)</th>
<th>Potential deal value* ($m)</th>
<th>Start date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vaxequity (UK)</td>
<td>AstraZeneca (UK)</td>
<td>N/A</td>
<td>5,070</td>
<td>22/09/2021</td>
</tr>
<tr>
<td>Adaptimmune Therapeutics (US)</td>
<td>Genentech (US)</td>
<td>$150</td>
<td>3,650</td>
<td>03/09/2021</td>
</tr>
<tr>
<td>Alector (US)</td>
<td>GSK (UK)</td>
<td>$700</td>
<td>2,200</td>
<td>02/07/2021</td>
</tr>
<tr>
<td>iTeos Therapeutics (US)</td>
<td>GSK (UK)</td>
<td>$625</td>
<td>2,075</td>
<td>11/06/2021</td>
</tr>
<tr>
<td>F-star Therapeutics (UK)</td>
<td>Janssen Biotech (US)</td>
<td>$17.5</td>
<td>1,368</td>
<td>20/10/2021</td>
</tr>
<tr>
<td>Artios Pharma (UK)</td>
<td>Novartis (Switzerland)</td>
<td>$20</td>
<td>1,320</td>
<td>07/04/2021</td>
</tr>
<tr>
<td>Silence Therapeutics (UK)</td>
<td>Jiangsu Hansoh Pharma Group (Mainland China)</td>
<td>$16</td>
<td>1,316</td>
<td>15/10/2021</td>
</tr>
<tr>
<td>Dunad Therapeutics (UK)</td>
<td>Novartis (Switzerland)</td>
<td>$24</td>
<td>1,300</td>
<td>02/11/2021</td>
</tr>
<tr>
<td>MiNA Therapeutics (UK)</td>
<td>Eli Lilly (US)</td>
<td>$25</td>
<td>1,250</td>
<td>11/05/2021</td>
</tr>
<tr>
<td>Exscientia (UK)</td>
<td>Bristol Myers Squibb (US)</td>
<td>$50</td>
<td>1,200</td>
<td>19/05/2021</td>
</tr>
</tbody>
</table>

* total proceeds if all milestones are met and programmes are successful
Debt

More-established life science companies raised significant capital in the form of debt throughout 2021, but not at higher levels than in previous years.

US companies and revenue-generating life science companies in Ireland accounted for the vast majority of debt raised, including Jazz Pharmaceuticals, which partly financed its acquisition of GW Pharmaceuticals using debt financing from BofA Securities and J.P. Morgan Securities LLC.

Debt financings were characteristically low in the UK, with just £98 million accessed. NASDAQ-listed Centessa Pharmaceuticals accounted for the lion’s share through its first draw-down of a $300 million debt facility agreed with Oberland Capital. Scancell, Bicycle Therapeutics, Acacia Pharma, Verona Pharma and Future Medical also accessed debt financing throughout the year.

Global debt financing deals in 2021 by region

<table>
<thead>
<tr>
<th>Region</th>
<th>Count</th>
<th>Average (£m)</th>
<th>Debt* total (£m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>San Francisco</td>
<td>11</td>
<td>205</td>
<td>2,252</td>
</tr>
<tr>
<td>Massachusetts</td>
<td>7</td>
<td>307</td>
<td>2,147</td>
</tr>
<tr>
<td>Ireland</td>
<td>2</td>
<td>1,034</td>
<td>2,068</td>
</tr>
<tr>
<td>New Jersey</td>
<td>8</td>
<td>182</td>
<td>1,453</td>
</tr>
<tr>
<td>San Diego</td>
<td>4</td>
<td>235</td>
<td>941</td>
</tr>
<tr>
<td>Colorado</td>
<td>2</td>
<td>381</td>
<td>762</td>
</tr>
<tr>
<td>Minnesota</td>
<td>1</td>
<td>5</td>
<td>547</td>
</tr>
<tr>
<td>Jersey</td>
<td>1</td>
<td>426</td>
<td>426</td>
</tr>
<tr>
<td>UK</td>
<td>6</td>
<td>16</td>
<td>98</td>
</tr>
<tr>
<td>Germany</td>
<td>1</td>
<td>80</td>
<td>80</td>
</tr>
</tbody>
</table>

* Debt, senior and convertible notes
Grant funding

UK biotech companies won over £50m in non-dilutive grant funding in 2021. This is a crucial support for early-stage businesses and allows highly innovative but risky research projects to go ahead. It also complements and leverages downstream private investment.

The figures represent a drop compared to previous years, but this is likely due to a lag in reporting by grant funders and/or recipients. This is the second time we have published this data and the figures have changed slightly compared to those released last year. We previously reported that in 2020 UK companies received £40m in grants but this year we have revised this figure up to £73m. Earlier years remain approximately the same and overall the trends have not changed. We are also not able to capture all funding sources (the US Government and its agencies being a major one we are unable to report) but the data here gives a strong indication of the financial support UK biotech companies are receiving alongside their equity finance investors.

We expect the £50m figure for 2021 will be revised up in our subsequent report and we will continue to refine how we analyse and report this dataset.

Source: Beauhurst
As the UK’s leading property and innovation services provider dedicated to the growth of the science and technology sector, 2021 was a stellar year for Bruntwood SciTech. Highlights from last year include the acquisition of Melbourn Science Park in Cambridge, seeing Bruntwood SciTech establish a foothold in the ‘Golden Triangle’ for the first time and being named as development partner for Begbroke Science Park in Oxford. Ground was also broken at the £210m Birmingham Health Innovation Campus which will support 10,000 new jobs and provide a £400m boost to the West Midlands’ economy over the next 10 years.

Grants are an essential component of funding for businesses (particularly those at an early stage) to develop and commercialise their technologies into new products, processes and services. The Government’s vision for the UK as a global hub for innovation by 2035 requires a co-ordinated and sustained programme of grant support to de-risk investment from the private sector. We welcome the Government’s commitment to increase Innovate UK’s budget to over £1 billion by 2024, to enable the renewal of the Biomedical Catalyst, allowing UK entrepreneurs to crowd in private sector investment as they build the life science companies of the future.

The last two years has seen the UK life sciences sector step up to address the Covid pandemic, saving millions of lives through novel vaccines, new treatments to reduce fatalities and widespread testing. The sector has shown resilience and will form a crucial part of the country’s economic prosperity for years to come; underpinned by the 6,000+ SMEs which form the backbone of this sector.

The growth of the UK life sciences sector can be further bolstered by investment into the regions and life science clusters in the North, Midlands and Scotland providing a tool for levelling up. In the North for example, the Northern Health Science Alliance (NHSA) and NP11, a group of 11 Local Enterprise Partnerships (LEPs) from across the North of England, have clearly articulated the economic and societal value of the Northern Supercluster in anchoring the life science industry in the UK, predicting an increase in jobs over the next 20 years from 54,100 to 118,700 and productivity growth from £5.17bn to £16.52bn through further development of the academic, clinical and industrial ecosystem.

The innovation pipeline in the North is especially strong; Northern Gritstone was established in 2021 by the Universities of Leeds, Manchester and Sheffield to help boost the commercialisation of university spinouts and start-ups. Already on track to raise a £500m fund for northern universities, it is one of the largest dedicated investors into the commercialisation of university science and technology related IP in the UK.

Dr Kath Mackay
Director of Life Sciences, Bruntwood SciTech
About the BIA

Established over 25 years ago at the infancy of biotechnology, the BioIndustry Association (BIA) is the trade association for innovative life sciences in the UK. Our goal is to secure the UK’s position as a global hub and as the best location for innovative research and commercialisation, enabling our world-leading research base to deliver healthcare solutions that can truly make a difference to people’s lives.

Our members include:

• Start-ups, biotechnology and innovative life science companies
• Pharmaceutical and technological companies
• Universities, research centres, tech transfer offices, incubators and accelerators
• A wide range of life science service providers: investors, lawyers, IP consultants and IR agencies
We promote an ecosystem that enables innovative life science companies to start and grow successfully and sustainably, and we do this through Influence, Connect, Save.

**Influence**

The BIA represents the interests of its members to a broad section of stakeholders, from government and regulators, to patient groups and the media. We also work with organisations at an international level to ensure that UK biotech is represented on the global stage including Europabio, EFPIA and ICBA. BIA is the key thought leader for the sector – working across a wide range of related issues including policy, finance, science, regulatory, legal and talent.

**Connect**

The BIA provides many varied opportunities for life science leaders to connect with each other – to network, share and learn from experience, to access sector thought leadership and to take key issues forward. From the famed BIA Gala Dinner, to the CEO & Investor Forum, Women in Biotech networking evenings, quarterly committee meetings and our many regional events, to name but a few, the BIA provides access to a highly respected and diverse network. BIA also works to ensure that we provide opportunities and promotion for our members internationally – through panels and networking events at major events overseas, we are raising the profile of the UK as a global hub. We know that promoting what you do as an organisation is important, and we help organisations to raise their profile – at events and through our online presence and communications.

**Save**

For many of our emerging members (and a good number of well-established ones too) the BIA Business Solutions Scheme provides significant savings that are helping them to grow more cost-effectively. We believe this is the most competitive scheme of its kind in the UK.

For more information about the BIA and our finance work, please contact info@bioindustry.org.
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