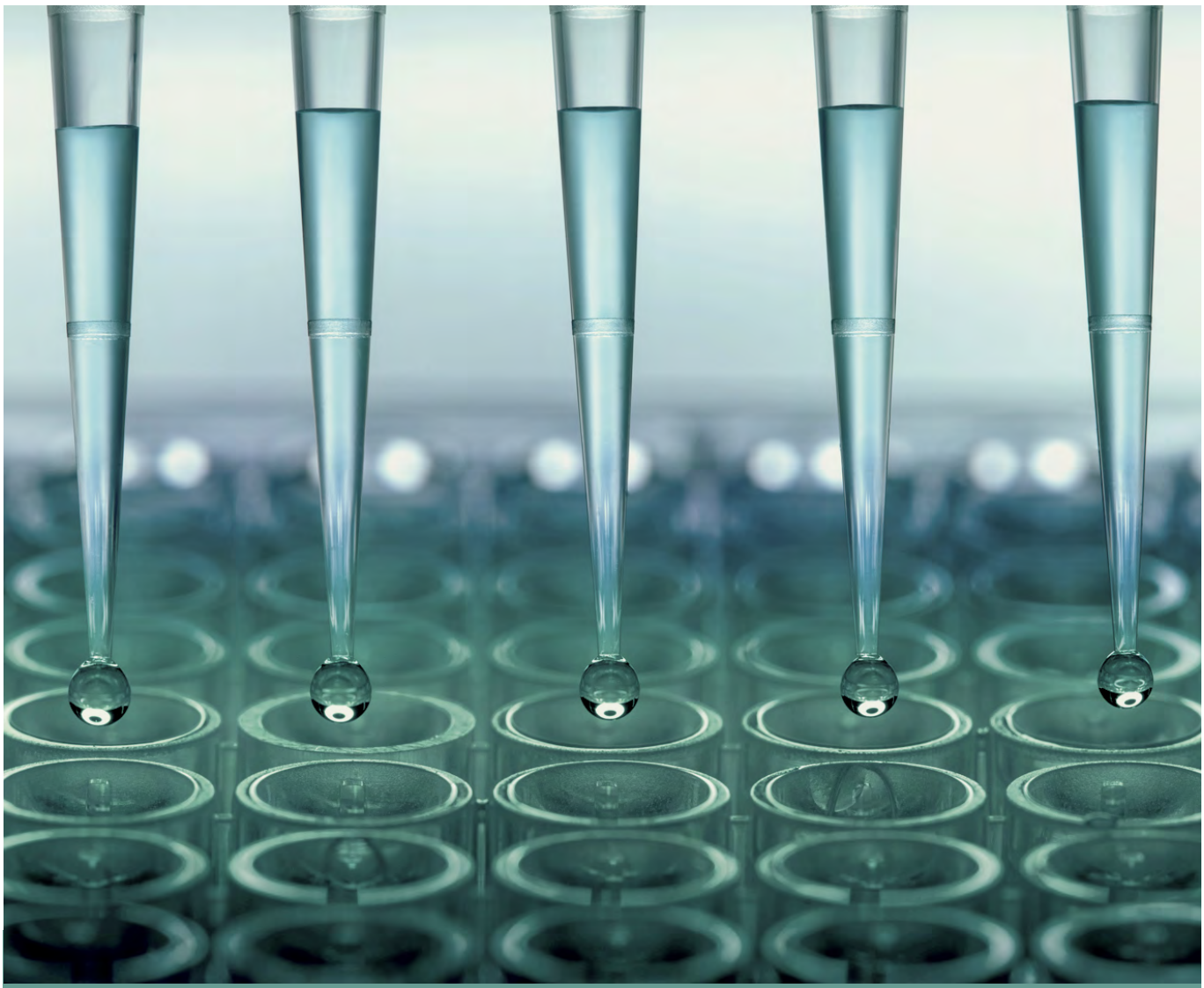
EDISON

BRILLIANT KNOWLEDGE



EDISON HEALTHCARE INSIGHT

July 2021

Published by Edison Investment Research

The Edison healthcare team

www.edisongroup.com

Maxim Jacobs

Max joined Edison's healthcare team in December 2014. Prior to this he worked as a senior analyst at Guidepoint Global. Max has also previously worked as a senior analyst at Ridgemark Capital, a sector head at Broadfin Capital and as a senior analyst at Mehta Partners. He is a CFA charter holder.

Pooya Hemami

Pooya joined Edison's healthcare team in November 2012 and took on additional duties as a supervisory analyst in early 2019. He is a licensed optometrist with several years of clinical practice and regulatory experience. Prior to joining Edison, he covered the Canadian healthcare sector as a research analyst at Desjardins Capital Markets. Pooya holds a Doctor of Optometry degree from the University of Montreal, and an MBA (finance concentration) from McGill University. He received his CFA charter in 2011.

Dr Susie Jana

Susie joined the team in September 2015 and has 16 years' experience in the healthcare sector. She is a qualified medical doctor, having studied medicine at UCL. She also holds an intercalated BSc in psychology. After a few years working as a junior doctor in the NHS, Susie joined the investment banking industry for six years on the sell-side covering biotechnology stocks, then mid- to large-cap pharmaceuticals at Société Générale. Most recently she worked as a buy-side analyst, covering European biotech, pharma and medtech stocks at F&C Investments for five years.

Dr John Savin

John is an analyst working on biotech, pharma, medical device and diagnostics companies. As founder CEO of Physiomics, he devised the strategy, raised funds and took the company to AIM in 2004. At Greig Middleton, John was director in charge of the pharma and biotech analyst team and worked with corporate finance on fund-raising, IPOs and corporate restructuring. He has an industry background in sales and marketing with GE Healthcare and AstraZeneca and is a co-author on a number of scientific publications.

Dr John Priestner

John joined the healthcare team in March 2020. Prior to this he worked at GlaxoSmithKline for four years, where he completed a PhD in medicinal chemistry with a focus on oncology. He holds an integrated master's degree in chemistry from Durham University and is currently studying for the Investment Management Certificate (CFA UK).

Dr Jonas Peciulis

Jonas joined Edison in November 2015. He is a qualified medical doctor with several years of clinical practice. He then moved into equity research as a healthcare analyst at Norne Securities, focused on Norwegian companies, and received two StarMine awards for stock picking in 2013. Most recently, he worked for a London-based life sciences venture capital company before completing his MBA degree.

Sean Conroy

Sean joined Edison's healthcare team in October 2020. He previously worked on the sell-side covering European large-cap pharmaceuticals and biotech stocks at Jefferies. Prior to moving into equity research, Sean worked at Charles River Laboratories performing drug discovery services. He holds a PhD in medicinal chemistry from the University of Nottingham.

Jyoti Prakash

Jyoti joined Edison's healthcare team in December 2020. She has over 12 years' experience in equities including more than seven years as a sell-side analyst covering European healthcare stocks. Prior to joining Edison, Jyoti covered the European mid-cap healthcare sector for AlphaValue, a France-based independent equity research provider. She holds an MBA (finance concentration) and is a CFA charter holder.

Carol Werther

Carol joined Edison's healthcare team in June 2021 and has been involved with institutionally focused healthcare research both on the sell-side and buy-side for over 20 years. She has most recently worked at Midtown Partners and Dawson James as a senior life sciences analyst. In 2016, she was included in the Tip Ranks as one of the top 25 analysts in biotechnology. Carol has an MBA from Stern School of Business and an MS and BS in nutrition sciences from the University of Alabama in Birmingham and Cornell University respectively. She is also a registered dietitian.

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Prices at 12 July 2021

Published 15 July 2021

Welcome to the July edition of the Edison Healthcare Insight. In this edition we have profiled 47 of our healthcare companies under coverage.

Readers wishing more detail should visit our website, where reports are freely available for download (www.edisongroup.com). All profit and earnings figures shown are normalised, excluding amortisation of acquired intangibles, exceptional items and share-based payments.

Edison is an investment research and advisory company, with offices in North America, Europe, the Middle East and AsiaPac. The heart of Edison is our world renowned equity research platform and deep multi-sector expertise. At Edison Investment Research, our research is widely read by international investors, advisors and stakeholders. Edison Advisors leverages our core research platform to provide differentiated services including investor relations and strategic consulting.

We welcome any comments/suggestions our readers may have.

Neil Shah and Maxim Jacobs

Healthcare research

Company profiles

Prices at 12 July 2021

US$/£ exchange rate: 0.7201
€/£ exchange rate: 0.8573
C$/£ exchange rate: 0.5822
A$/£ exchange rate: 0.5427
NZ$/£ exchange rate: 0.5053
SEK/£ exchange rate: 0.0844
DKK/£ exchange rate: 0.1153
NOK/£ exchange rate: 0.0838
JPY/£ exchange rate: 0.0065
CHF/£ exchange rate: 0.7849
PLN/£ exchange rate: 0.1892

Sector: Pharma & healthcare

Price:	SEK0.68
Market cap:	SEK275m
Market	NASDAQ OTCQX

Share price graph (SEK)

Company description

Abliva is a Swedish biotech with deep expertise in mitochondrial medicine. Its lead assets are KL1333, an NAD+ modulator (Phase II/III ready) and NV354, a succinate prodrug (preclinical). Abliva plans to start a pivotal Phase II/III trial with KL1333 in selected PMDs later this year.

Price performance

%	1m	3m	12m
Actual	(7.3)	(9.1)	(32.6)
Relative*	(10.5)	(15.3)	(53.4)

* % Relative to local index

Analyst

Dr Jonas Peciulis

Abliva (ABLI)

INVESTMENT SUMMARY

Abliva is focused on primary mitochondrial diseases (PMD). The core portfolio consists of KL1333 and NV354. KL1333, a small molecule NAD+ modulator used to restore intracellular energy balance, is being developed for PMD, including patients with m.3243 A>G mutations (eg MELAS-MIDD spectrum disorders). Abliva completed a Phase Ia/b study and a drug-drug interaction study for KL1333 in March 2021 and it intends to start a single pivotal Phase II/III efficacy study in H221. In March, Abliva also completed a directed share issue raising SEK80m gross proceeds, c SEK64m of which will be used for KL1333. Abliva intends to continue developing its other core asset NV354 as a systemic treatment for Leigh syndrome and is expecting to prepare a clinical trial application in 2021.

INDUSTRY OUTLOOK

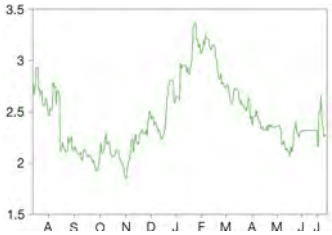
Abliva has a diversified portfolio, with all assets aimed at improving mitochondrial metabolism and function. We believe this puts Abliva among the very few experts in mitochondrial medicine.

Y/E Dec	Revenue (SEKm)	EBITDA (SEKm)	PBT (SEKm)	EPS (fd) (öre)	P/E (x)	P/CF (x)
2019	3.6	(72.3)	(74.6)	(43.50)	N/A	N/A
2020	1.9	(55.0)	(57.4)	(23.00)	N/A	N/A
2021e	1.9	(70.2)	(72.7)	(20.81)	N/A	N/A
2022e	1.9	(95.0)	(97.5)	(24.21)	N/A	N/A

Sector: Pharma & healthcare

Price:	€2.27
Market cap:	€226m
Market	Euronext Brussels

Share price graph (€)



Company description

Acacia Pharma is a biopharmaceutical company focused on commercialising novel products to improve the care of patients undergoing serious medical treatments such as surgery, invasive procedures or chemotherapy. Its two assets are launched in the United States: BARHEMSYS for PONV and in-licensed BYFAVO for PS.

Price performance

%	1m	3m	12m
Actual	5.6	(2.8)	(19.9)
Relative*	5.1	(9.3)	(34.5)

* % Relative to local index

Analyst

Dr Susie Jana

Acacia Pharma (ACPH)

INVESTMENT SUMMARY

Acacia Pharma is focused on commercialising its two approved hospital-based products in the United States. BARHEMSYS (reformulated amisulpride) is approved with a broad label for the management of post-operative nausea and vomiting (PONV) and BYFAVO (remimazolam) is approved for procedural sedation (PS). Both assets have now been launched, BARHEMSYS in August 2020 and BYFAVO in January 2021, and initial focus is on gaining wide formulary access. At 30 June 2021, BARHEMSYS was listed on formulary at 201 institutions, significantly ahead of schedule to meet guidance for 300 by year end and representing a mid-80% win rate. BYFAVO was listed on 47 accounts and is also on track to meet its FY21 target of 150. Acacia is funded into 2022 and at 31 December 2020 had net cash of $10.0m. A share placing in February that raised €27m gross plus access to a €25m loan facility from Cosmo will continue to fund the commercial roll-out of both products.

INDUSTRY OUTLOOK

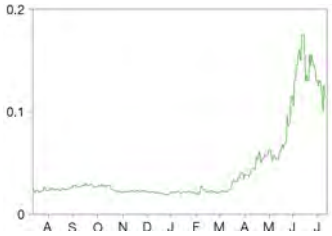
Inadequately treated PONV leads to prolonged stays in post-anaesthesia care unit recovery rooms. Use of BARHEMSYS could reduce patient hospitalisation time and the associated costs. Likewise, BYFAVO can reduce the time required for invasive medical procedures, enabling increased patient throughput for hospitals and surgical centres.

Y/E Dec	Revenue (US$m)	EBITDA (US$m)	PBT (US$m)	EPS (c)	P/E (x)	P/CF (x)
2019	0.0	(22.3)	(21.1)	(0.38)	N/A	N/A
2020	0.2	(27.8)	(28.5)	(0.38)	N/A	N/A
2021e	8.0	(36.0)	(39.9)	(0.40)	N/A	N/A
2022e	39.7	(31.2)	(34.1)	(0.33)	N/A	N/A

Sector: Pharma & healthcare

Price:	A$0.12
Market cap:	A$191m
Market	ASX

Share price graph (A$)



Company description

Actinogen Medical is an ASX-listed Australian biotech developing lead asset Xanamem, a specific 11beta-HSD1 inhibitor designed to treat cognitive impairment that occurs in chronic neurological diseases.

Price performance

%	1m	3m	12m
Actual	(34.3)	161.4	369.4
Relative*	(34.5)	148.3	272.6

* % Relative to local index

Analyst

Dr Jonas Peciulis

Actinogen Medical (ACW)

INVESTMENT SUMMARY

Actinogen is about to start enrolling subjects to the XanaMIA study (n=105), which will be conducted in two parts: Part A – dose ranging study; Part B – efficacy of Xanamem in patients with MCI due to Alzheimer's disease (AD). The second Phase II trial in Fragile X syndrome (XanaFX study) is underway as well and the company received positive feedback from the FDA in June. The XanaFX study is a randomised, placebo-controlled 12-week trial that will be conducted in Australia and is expected to commence in Q421. The ongoing Phase II trials were designed after the latest Phase I XanaHES trial (Xanamem in healthy elderly subjects) reported a clinically significant, positive improvement in three of six domains in the Cogstate Neuropsychological Test Battery.

INDUSTRY OUTLOOK

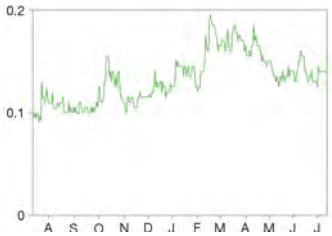
The unmet need in chronic neurological and neuropsychiatric disorders is high due to limited available treatment options. While orphan indications like Fragile X syndrome provide a potentially faster route to market and higher drug pricing, mild cognitive impairment due to AD is a potentially large, unmet medical need. The recent FDA approval of Aduhelm (7 June) provides a fresh tailwind for drug developers in the field, given this is the first new drug for AD in 20 years.

Y/E Jun	Revenue (A$m)	EBITDA (A$m)	PBT (A$m)	EPS (c)	P/E (x)	P/CF (x)
2019	5.1	(9.5)	(9.4)	(0.86)	N/A	N/A
2020	3.6	(4.9)	(4.9)	(0.44)	N/A	N/A
2021e	N/A	N/A	N/A	N/A	N/A	N/A
2022e	N/A	N/A	N/A	N/A	N/A	N/A

Sector: Pharma & healthcare

Price:	A$0.14
Market cap:	A$34m
Market	ASX

Share price graph (A$)



Company description

AdAlta is an Australian healthcare company focused on using its proprietary i-body discovery platform to target diseases, with an initial focus on IPF. AdAlta has also licensed its platform to GE Healthcare for the purpose of diagnostic imaging.

Price performance

%	1m	3m	12m
Actual	(9.7)	(24.3)	37.9
Relative*	(10.0)	(28.1)	9.5

* % Relative to local index

Analyst

Maxim Jacobs

AdAlta (1AD)

INVESTMENT SUMMARY

AdAlta is a clinical-stage company that uses its proprietary i-body discovery platform to target diseases, with an initial focus on conditions involving fibrosis. Its lead programme is AD-214, a C-X-C chemokine receptor type 4 (CXCR4) inhibitor for the treatment of idiopathic pulmonary fibrosis (IPF), which is in the healthy volunteer portion of a 84-subject Phase I programme with multiple doses recently initiated. IPF is an orphan progressive lung disease that remains a significant unmet medical need, despite two approved blockbuster therapies. Beyond AD-214, AdAlta licensed the i-body platform to GE Healthcare for diagnostic imaging, which recently advanced into preclinical testing.

INDUSTRY OUTLOOK

It is estimated that over 100,000 people in the United States and a similar number in Europe have IPF. It is a progressive disease where median survival after diagnosis is three to five years and the two approved medications for the condition (US$2.9bn in sales in 2019) have limited efficacy and toxicity issues.

Y/E Jun	Revenue (A$m)	EBITDA (A$m)	PBT (A$m)	EPS (c)	P/E (x)	P/CF (x)
2019	3.5	(6.0)	(5.9)	(5.02)	N/A	N/A
2020	3.8	(5.8)	(5.9)	(3.62)	N/A	N/A
2021e	3.2	(5.9)	(6.1)	(2.42)	N/A	N/A
2022e	3.3	(6.0)	(6.2)	(2.44)	N/A	N/A

Sector: Pharma & healthcare

Price:	NZ$4.55
Market cap:	NZ$476m
Market	NZSX

Share price graph (NZ$)

Company description

AFT Pharmaceuticals is a specialty pharmaceutical company that operates primarily in Australasia but has product distribution agreements across the globe. The company's product portfolio includes prescription and over-the-counter (OTC) drugs to treat a range of conditions and a proprietary nebuliser.

Price performance

%	1m	3m	12m
Actual	(0.7)	6.3	7.8
Relative*	(2.2)	4.8	(1.6)

* % Relative to local index

Analyst

Maxim Jacobs

AFT Pharmaceuticals (AFT)

INVESTMENT SUMMARY

AFT Pharmaceuticals is a profitable New Zealand-based specialty pharmaceutical company that sells 130 prescription specialty generics and OTC products through its own sales force in New Zealand, Australia and SE Asia, and has been expanding its geographic footprint. In FY21, operating revenue grew strongly by 7% year-on-year to NZ$113.1m, driven mainly by 11% growth in Australia, despite the impact of COVID-19 across the business (especially lower licensing income and higher costs, including freight). Reported group operating profit was NZ$10.7m. Importantly, AFT is guiding to operating profit of NZ$18–23m in FY22. The company recently licensed the US rights for Maxigesic IV to Hikma Pharmaceuticals for US$18.8m in upfront payments and milestones as well as a profit share.

INDUSTRY OUTLOOK

AFT is a multi-product company targeting pharmacy prescription, OTC and hospital markets. Data for Maxigesic offer it a competitive advantage in a fragmented industry.

Y/E Mar	Revenue (NZ$m)	EBITDA (NZ$m)	PBT (NZ$m)	EPS (c)	P/E (x)	P/CF (x)
2020	105.6	12.5	3.4	3.3	137.9	20.1
2021	113.1	11.8	8.2	7.1	64.1	109.5
2022e	130.9	23.6	20.3	16.7	27.2	18.7
2023e	151.0	36.2	33.2	22.9	19.9	14.8

Sector: Pharma & healthcare

Price:	SEK0.90
Market cap:	SEK327m
Market	NASDAQ OMX First North

Share price graph (SEK)

Company description

Denmark-based biopharmaceutical company Allarity Therapeutics' patent-protected mRNA-based DRP platform enables the identification of patients with gene expression highly likely to respond to treatment. It is advancing the PARP inhibitor stenoparib (2X-121), the TKI dovitinib and microtubule inhibitor Ixempra.

Price performance

%	1m	3m	12m
Actual	(1.5)	(4.3)	(37.3)
Relative*	(5.0)	(10.8)	(56.6)

* % Relative to local index

Analyst

Carol Werther

Allarity Therapeutics (ALLR)

INVESTMENT SUMMARY

Allarity Therapeutics holds the worldwide drug development rights to the drug response predictor (DRP), a microarray technology that examines the expression of a panel of genes to discover potential responders to cancer therapies. Allarity's goal is to then develop its portfolio of drugs that are active within populations that the DRP can identify. The company recently focused its strategy on three lead assets: the tyrosine kinase inhibitor (TKI) dovitinib, the poly-ADP-ribose polymerase (PARP) inhibitor stenoparib, and the microtubule inhibitor agent Ixempra. In Q2 CY21 the company filed a PMA for the Dovitinib companion diagnostic agent and expects to file an NDA in H2 CY21.

INDUSTRY OUTLOOK

Allarity Therapeutics and the DRP system have the potential to identify the value in drug assets that have otherwise been discontinued by identifying patient populations where these drugs are active. This allows the company to in-license these assets at low cost; it may then out-license them after clinical validation.

Y/E Dec	Revenue (DKKm)	EBITDA (DKKm)	PBT (DKKm)	EPS (ore)	P/E (x)	P/CF (x)
2019	0.8	(66.5)	(174.9)	(208.11)	N/A	N/A
2020	0.0	(59.0)	(59.1)	(29.22)	N/A	N/A
2021e	0.0	(69.9)	(70.9)	(30.59)	N/A	N/A
2022	0.0	(247.2)	(248.2)	(97.04)	N/A	N/A

Sector: Pharma & healthcare

Price: SEK9.18
Market cap: SEK347m
Market Nasdaq FN Premier

Share price graph (SEK)

Company description

AlzeCure Pharma is a clinical-stage biotech company based in Sweden focused on developing small molecule drugs for the treatment of Alzheimer's disease (symptomatic and disease modifying) and pain (neuropathic and osteoarthritic).

Price performance

%	1m	3m	12m
Actual	12.0	31.1	26.1
Relative*	8.0	22.2	(12.7)

* % Relative to local index

Analyst

Dr Jonas Peciulis

AlzeCure Pharma (ALZCUR)

INVESTMENT SUMMARY

AlzeCure is a pure play biotech focused on neurological disorders. The pipeline consists of three small-molecule platforms targeting Alzheimer's disease (AD) and pain. The NeuroRestore platform is focused on novel symptomatic treatment of AD and lead compound ACD856 is currently in Phase I, with SAD data expected mid-2021. The Alzstatin platform (preclinical) is specifically aimed at modifying the course of AD and we expect an update on progress later in 2021. We find the strategy to target both settings in AD, symptomatic and disease modifying treatments, to be a rational approach given the complex history of drug development in this vast indication. The third Painless platform consists of two non-opioid pain assets: ACD440, a topical treatment for neuropathic pain (Phase Ib data presented, planning to file for Phase II by year end); and preclinical project TrkA-NAM for osteoarthritic and other severe pain (latest data update in June 2021).

INDUSTRY OUTLOOK

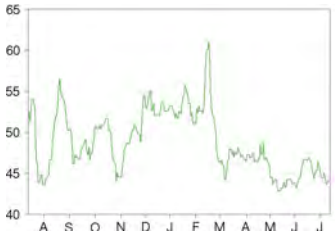
Treatments for progressive neurodegenerative disorders, such as AD, remain a significant focus for the industry despite few treatment options being successfully developed available. Mild cognitive impairment due to AD is a large, unmet medical need. Likewise, non-opioid based analgesics for the treatment of pain are of growing interest.

Y/E Dec	Revenue (SEKm)	EBITDA (SEKm)	PBT (SEKm)	EPS (öre)	P/E (x)	P/CF (x)
2019	0.0	(50.6)	(50.9)	(135.0)	N/A	N/A
2020	0.0	(71.1)	(71.4)	(189.0)	N/A	N/A
2021e	0.0	(81.5)	(81.9)	(217.0)	N/A	N/A
2022e	0.0	(85.6)	(86.1)	(228.0)	N/A	N/A

Sector: Pharma & healthcare

Price: CHF43.82
Market cap: CHF567m
Market Swiss Stock Exchange

Share price graph (CHF)



Company description

Basilea is focused on oncology and infectious diseases. Its marketed products are Cresemba (an antifungal) and Zevtera (an anti-MRSA broad-spectrum antibiotic). The oncology R&D pipeline includes two clinical-stage assets, derazantinib and lisavanbulin.

Price performance

%	1m	3m	12m
Actual	(6.1)	(5.6)	(14.9)
Relative*	(8.0)	(12.6)	(28.0)

* % Relative to local index

Analyst

Dr Susie Jana

Basilea Pharmaceutica (BSLN)

INVESTMENT SUMMARY

Basilea has two approved hospital-based products: Cresemba (severe mould infections) and Zevtera (bacterial infections). Multiple licensing/distribution agreements are in place for Cresemba and Zevtera and should drive top-line growth. Partners include Pfizer and Astellas, which market Cresemba in Europe (ex Nordics) and the United States respectively. In August 2019, Basilea reported positive top-line data for Zevtera in the first cross-supportive Phase III study TARGET; top-line data from the ERADICATE study are expected in H122 and both are required for a US NDA submission. Basilea's oncology pipeline is spearheaded by derazantinib (FGFR inhibitor), which is currently in a Phase II potential registration study for intrahepatic cholangiocarcinoma and two Phase I/II studies in patients with advanced urothelial cancer and advanced gastric cancer. Lisavanbulin (tumour checkpoint controller) is in the expansion phase of a biomarker-driven Phase I/II study for glioblastoma.

INDUSTRY OUTLOOK

There is an ever-increasing need for therapeutic agents that are efficacious against drug-resistant strains of bacteria (eg MRSA), fungus or cancer. Hence, the opportunities for Cresemba, Zevtera and Basilea's oncology pipeline could be significant.

Y/E Dec	Revenue (CHFm)	EBITDA (CHFm)	PBT (CHFm)	EPS (CHFc)	P/E (x)	P/CF (x)
2019	134.4	(15.5)	(22.3)	(207.54)	N/A	N/A
2020	127.6	(22.0)	(29.6)	(288.45)	N/A	N/A
2021e	135.1	(17.0)	(26.8)	(209.90)	N/A	N/A
2022e	140.1	10.6	1.5	11.90	368.2	62.9

Sector: Pharma & healthcare

Price:	NOK23.70
Market cap:	NOK2085m
Market	Oslo

Share price graph (NOK)

Company description

BerGenBio is a clinical stage biopharmaceutical company developing innovative drugs for aggressive diseases, including immune-evasive, drug-resistant and metastatic cancers. It focuses on AXL inhibitors bemcentinib (small molecule) and tilvestamab (mAb).

Price performance

%	1m	3m	12m
Actual	(7.9)	(24.8)	(39.8)
Relative*	(9.0)	(29.9)	(55.8)

* % Relative to local index

Analyst

Dr Susie Jana

BerGenBio (BGBIO)

INVESTMENT SUMMARY

BerGenBio (BGBIO) is a pioneer in AXL biology and the development of AXL inhibitors and has two clinical stage assets: selective tyrosine kinase inhibitor bemcentinib and functional blocking monoclonal antibody tilvestamab. AXL expression is a negative prognostic marker in most cancers. Its upregulation drives aggressive disease including drug-resistant, immune-evasive and metastatic cancers, as well as fibrosis and viral infection. Selective AXL inhibition can prevent and reverse acquired drug resistance and stop immune suppression, potentially augmenting the efficacy of other cancer drug classes. BGBIO's strategy in oncology is to establish bemcentinib's efficacy in proof-of-concept studies to identify opportunities for rapid regulatory approval (relapse AML in combination with LDAC) and develop line extensions (2L NSCLC in combination with Keytruda). Discussions with regulators are ongoing following top-line data from two Phase II trials in COVID-19.

INDUSTRY OUTLOOK

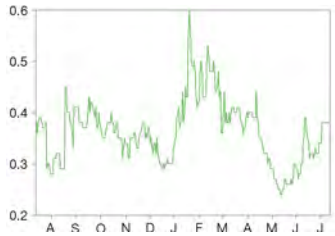
Understanding the tumour microenvironment and why even with initial positive response to treatment, cancers often exhibit tumour proliferation, metastasis and treatment resistance is becoming an ever-more critical focus area. The role of AXL is becoming increasingly defined in tumorigenesis, propagation and treatment resistance.

Y/E Dec	Revenue (NOKm)	EBITDA (NOKm)	PBT (NOKm)	EPS (öre)	P/E (x)	P/CF (x)
2019	8.9	(203.6)	(199.3)	(343.4)	N/A	N/A
2020	0.6	(260.4)	(257.0)	(343.1)	N/A	N/A
2021e	0.0	(305.1)	(300.3)	(342.6)	N/A	N/A
2022e	0.0	(319.6)	(317.6)	(361.6)	N/A	N/A

Sector: Pharma & healthcare

Price:	C$0.38
Market cap:	C$27m
Market	TSX-V

Share price graph (C$)



Company description

Bioasis Technologies is a biopharma company developing the xB3 platform to aid in the delivery of molecules to the brain using receptor mediated transcytosis. The company's lead program is xB3-001, which is in preclinical development for brain metastases in HER2+ metastatic breast cancer patients.

Price performance

%	1m	3m	12m
Actual	(2.6)	(13.6)	0.0
Relative*	(3.0)	(18.0)	(22.3)

* % Relative to local index

Analyst

Carol Werther

Bioasis Technologies (BTI)

INVESTMENT SUMMARY

Bioasis has a proprietary platform for developing drugs that can pass the blood-brain barrier (BBB) that can be used on small molecules, antibodies, enzymes and other proteins as well as siRNAs. The company has licensed this platform to Prothena, Chiesi and Aposense, as well as advancing its internal development project xB3-001 for the treatment of breast cancer brain metastases.

INDUSTRY OUTLOOK

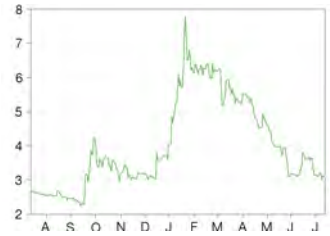
Developing a drug to pass the BBB has historically been difficult and limited to small molecules. By developing a modular platform to solve this problem Bioasis is expanding the potential diseases that can be targeted as well as providing a means to re-purpose previously developed drugs to target the brain.

Y/E Feb	Revenue (C$m)	EBITDA (C$m)	PBT (C$m)	EPS (c)	P/E (x)	P/CF (x)
2020	0.6	(4.0)	(3.4)	(5.50)	N/A	N/A
2021	4.1	0.3	0.2	0.01	3800.0	N/A
2022e	3.7	(8.3)	(8.3)	(11.31)	N/A	N/A
2023e	N/A	N/A	N/A	N/A	N/A	N/A

Sector: Pharma & healthcare

Price: DKK3.10
Market cap: DKK830m
Market NASDAQ OMX (CPH)

Share price graph (DKK)



Company description

BioPorto Diagnostics is a diagnostic company focused on the development and commercialisation of biomarker-based assays. The company's portfolio includes The NGAL Test, for the prediction of acute kidney injury, and an extensive antibody library.

Price performance

%	1m	3m	12m
Actual	(5.5)	(42.3)	37.7
Relative*	(10.8)	(49.8)	2.4

* % Relative to local index

Analyst

Jyoti Prakash

BioPorto Diagnostics (BIOPOR)

INVESTMENT SUMMARY

BioPorto's lead strategic goal is development of a test for acute kidney injury (AKI) using the biomarker NGAL. The company is gathering more data for its paediatric urine NGAL 510(k). For adults using plasma NGAL, the 510(k) will be submitted to the FDA after the submission for paediatric. The NGAL Test is commercially available for research purposes in the United States and has been CE marked in Europe. BioPorto also sells a series of other antibodies, ELISA kits and related biologics.

INDUSTRY OUTLOOK

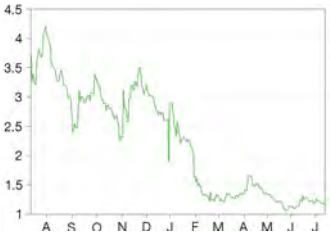
The current standard of care for detecting AKI is serum creatinine, which can take 24 hours or more to detect AKI and can only do so after significant kidney damage. NGAL promises to provide a quicker and more reliable test, allowing early intervention to preserve kidney function.

Y/E Dec	Revenue (DKKm)	EBITDA (DKKm)	PBT (DKKm)	EPS (ore)	P/E (x)	P/CF (x)
2019	26.6	(68.3)	(71.1)	(39.16)	N/A	N/A
2020	23.2	(54.3)	(61.5)	(28.10)	N/A	N/A
2021e	32.2	(71.4)	(74.5)	(25.21)	N/A	N/A
2022e	179.3	68.3	65.2	21.00	14.8	N/A

Sector: Pharma & healthcare

Price: SEK1.21
Market cap: SEK420m
Market NASDAQ OMX First North

Share price graph (SEK)



Company description

Brighter is a Swedish healthtech company addressing common welfare challenges of modern society through a group of innovation companies. Its lead solution, Actiste, currently being commercialised, is aimed at helping people with diabetes adhere to care guidelines and achieve treatment goals.

Price performance

%	1m	3m	12m
Actual	(2.4)	(23.9)	(66.1)
Relative*	(5.9)	(29.1)	(76.5)

* % Relative to local index

Analyst

Maxim Jacobs

Brighter (BRIG)

INVESTMENT SUMMARY

Brighter is a healthtech company developing solutions for chronic diseases. Its initial strategy is the market introduction of Actiste, a remote monitoring and treatment service for diabetes which received two CE marks (Actiste is regulated under both the EU Medical Devices Directive and the In Vitro Diagnostics Directive) as well as regulatory approvals in Saudi Arabia, the United Arab Emirates and Thailand). The service includes a unique patented device that integrates all the essential features for daily diabetes management, a blood glucose meter, a lancer and an insulin injection pen, into a single unit with built-in mobile connection, and a digital platform for analysing and sharing data with family and friends, healthcare providers and other relevant stakeholders.

INDUSTRY OUTLOOK

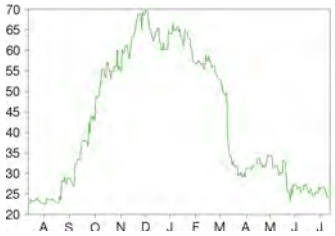
In 2019, it is estimated that US$760bn (10% of total global healthcare expenditure) was spent on diabetes.

Y/E Dec	Revenue (SEKm)	EBITDA (SEKm)	PBT (SEKm)	EPS (öre)	P/E (x)	P/CF (x)
2019	3.3	(73.7)	(88.7)	(105.85)	N/A	N/A
2020	14.1	(158.6)	(240.6)	(117.74)	N/A	N/A
2021e	41.0	(119.3)	(170.7)	(51.68)	N/A	N/A
2022e	218.0	25.3	(27.0)	(7.54)	N/A	22.8

Sector: Pharma & healthcare

Price: SEK24.12
Market cap: SEK2417m
Market NASDAQ OMX First North

Share price graph (SEK)



Company description

Cantargia is a clinical-stage biotechnology company based in Sweden. It is developing two assets against IL1RAP, CAN04 and CAN10. CAN04 is being studied in several solid tumours with a main focus on NSCLC and pancreatic cancer. The most advanced trial is in Phase II.

Price performance

%	1m	3m	12m
Actual	(11.1)	(24.0)	4.4
Relative*	(14.2)	(29.2)	(27.7)

* % Relative to local index

Analyst

Dr Jonas Peciulis

Cantargia (CANT)

INVESTMENT SUMMARY

Cantargia is developing antibodies against IL1RAP. Interim data from its Phase IIa CANFOUR trial, investigating CAN04 (anti-IL1RAP) in first-line non-small cell lung cancer (NSCLC) and pancreatic ductal adenocarcinoma (PDAC), continue to support the hypothesis that CAN04 has a synergistic benefit with chemotherapy, in our view. In May, Cantargia reported positive efficacy data from the PDAC arm of CANFOUR which look promising in our view. With these data, Cantargia is preparing to engage with regulators to discuss Phase III development plans for CAN04 in PDAC. Its clinical footprint is expanding beyond CANFOUR and the company is preparing to initiate several new Phase I/II trials for CAN04 in additional indications including TNBC, colorectal, biliary tract cancer and second-line NSCLC.

INDUSTRY OUTLOOK

Increasing the understanding of inflammation in malignant processes now includes findings that cytokines are not only produced by the immune cells, but that cancer itself can produce certain cytokines and the associated receptors to escape from the immune response. Therefore, cytokines represent a potentially promising class of targets in oncology.

Y/E Dec	Revenue (SEKm)	EBITDA (SEKm)	PBT (SEKm)	EPS (öre)	P/E (x)	P/CF (x)
2019	0.0	(111.6)	(110.8)	(156.0)	N/A	N/A
2020	0.0	(170.7)	(173.1)	(194.0)	N/A	N/A
2021e	0.0	(276.3)	(276.3)	(276.0)	N/A	N/A
2022e	0.0	(297.1)	(297.1)	(297.0)	N/A	N/A

Sector: Pharma & healthcare

Price: €22.30
Market cap: €342m
Market Euronext Growth

Share price graph (€)

Company description

Carmat is developing a biocompatible, artificial heart to satisfy the lack of donor hearts available for terminal heart failure patients. It expects to initiate an early feasibility study in the United States in Q121 and recently received a CE Mark in the EU.

Price performance

%	1m	3m	12m
Actual	(13.1)	(9.9)	20.5
Relative*	(12.5)	(14.9)	(8.1)

* % Relative to local index

Analyst

Maxim Jacobs

Carmat (ALCAR)

INVESTMENT SUMMARY

Carmat continues to make progress in the development of its physiologic heart replacement therapy (PHRT). The company received a CE Mark for the PHRT at the end of 2020 and expects to launch in Q221. The approved indication is a bridge to transplantation therapy, although over time we expect approval as a destination therapy, which will enable commercialisation to a larger number of patients. The initial commercial focus will be on France and Germany, estimated at 55% of the EU mechanical circulatory support market. In the United States, Carmat should start implanting patients in the early feasibility study shortly.

INDUSTRY OUTLOOK

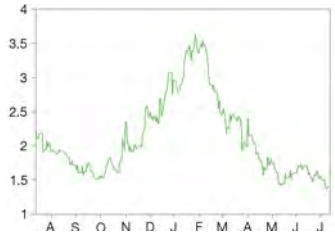
The Carmat artificial heart is being developed as a permanent replacement or destination therapy for chronic biventricular heart failure or acute myocardial infarction patients who do not have access to a human donor heart. Despite the high prevalence of stage IV heart failure in the EU and the United States (c 500,000 patients).

Y/E Dec	Revenue (€m)	EBITDA (€m)	PBT (€m)	EPS (fd) (c)	P/E (x)	P/CF (x)
2018	0.7	(41.8)	(43.7)	(454.0)	N/A	N/A
2019	0.7	(41.2)	(44.2)	(388.0)	N/A	N/A
2020e	0.5	(42.4)	(44.4)	(352.0)	N/A	N/A
2021e	14.3	(40.7)	(44.0)	(346.0)	N/A	N/A

Sector: Pharma & healthcare

Price:	US$1.39
Market cap:	US$194m
Market	NASDAQ

Share price graph (US$)



Company description

CASI Pharmaceuticals is building a portfolio of drugs it intends to produce for Chinese and worldwide markets including Evomela launched in China, an anti-CD19 CAR-T therapy CNCT19, and the anti-CD38 drug CID-103, among others. The goal is to seek approval through new pathways that have opened in the quickly changing Chinese regulatory environment.

Price performance

%	1m	3m	12m
Actual	(18.2)	(26.1)	(40.3)
Relative*	(20.8)	(30.4)	(56.7)

* % Relative to local index

Analyst

Jyoti Prakash

CASI Pharmaceuticals (CASI)

INVESTMENT SUMMARY

CASI has a multipronged approach to the entrance into the Chinese pharmaceutical market. In August 2019 it launched Evomela (melphalan) in China via the priority review pathway because it was the first approval in the country for any melphalan product. It is also expanding its development pipeline through collaborations, with the recent licensing of an anti-CD38 drug (CID-103), anti-CD19 CAR-T therapy (CNCT19), the novel checkpoint inhibitor BI-1206 and CB-5339, a broad spectrum antineopastic.

INDUSTRY OUTLOOK

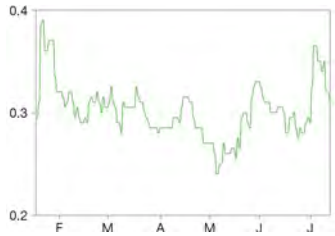
The Chinese regulatory authorities have made a series of substantial changes to their process for drug approval in recent years to improve the availability of new drugs. The Chinese National Medical Products Administration (NMPA, formerly the CFDA) has established new classes of applications for drugs that are previously approved outside of China. Additionally, there is a set of criteria for priority review, which can significantly reduce review times.

Y/E Dec	Revenue (US$m)	EBITDA (US$m)	PBT (US$m)	EPS (fd) (c)	P/E (x)	P/CF (x)
2019	4.1	(37.5)	(36.5)	(38.74)	N/A	N/A
2020	15.1	(41.4)	(37.9)	(35.04)	N/A	N/A
2021e	25.8	(23.1)	(23.2)	(16.96)	N/A	N/A
2022e	28.8	(22.8)	(23.8)	(16.54)	N/A	N/A

Sector: Pharma & healthcare

Price:	A$0.31
Market cap:	A$61m
Market	ASX

Share price graph (A$)



Company description

Chimeric Therapeutics, which is based in Australia and focused on oncology, recently went public on the ASX. Lead programme CLTX-CAR T is in Phase I for the treatment of GBM. This is an innovative approach for an unmet medical need. Beyond GBM, the technology may have applicability for other tumours such as melanoma.

Price performance

%	1m	3m	12m
Actual	1.6	5.1	N/A
Relative*	1.3	(0.2)	N/A

* % Relative to local index

Analyst

Maxim Jacobs

Chimeric Therapeutics (CHM)

INVESTMENT SUMMARY

Chimeric Therapeutics is a newly formed Australia-based biotechnology company with a focus on oncology that has recently gone public on the ASX. In September, Chimeric announced that it in-licensed CLTX-CAR T, currently in Phase I. The study dosed its first patient in September 2020 (five patients in total have been dosed so far) and expects to enrol approximately 18–36 patients with recurrent/progressive glioblastoma (GBM). The goal of the study will be to determine a maximum tolerated dose schedule and a recommended dosing plan for the Phase II trial as well as to get initial evidence of efficacy and assess safety.

INDUSTRY OUTLOOK

GBM accounts for 60% of brain tumours in adults and continues to have a poor prognosis with five-year survival of only 5.1%. Surgery, radiation and temozolomide are the current standards of care but patients typically recur due to the infiltrative nature of the GBM tumours.

Y/E Jun	Revenue (A$m)	EBITDA (A$m)	PBT (A$m)	EPS (c)	P/E (x)	P/CF (x)
2019	N/A	N/A	N/A	N/A	N/A	N/A
2020	0.0	(0.1)	(0.1)	(6200.80)	N/A	N/A
2021e	0.0	(16.3)	(16.3)	(4.85)	N/A	N/A
2022e	0.0	(11.3)	(11.3)	(3.32)	N/A	N/A

Sector: Pharma & healthcare

Price:	63.5p
Market cap:	£107m
Market	AIM

Share price graph (p)

Company description

Diurnal is a specialty pharmaceutical company developing new formulations of hormones to treat endocrine disorders. It has approval in Europe and the United States for Alkindi, for pediatric adrenal insufficiency and is seeking approval in Europe for Efmody for adult CAH. DITEST, an oral formulation of testosterone, is in clinical development.

Price performance

%	1m	3m	12m
Actual	(4.5)	(15.9)	108.4
Relative*	(4.6)	(18.7)	73.1

* % Relative to local index

Analyst

Carol Werther

Diurnal Group (DNL)

INVESTMENT SUMMARY

Diurnal's strategy is to develop useful new medications that address some of the limitations in existing hormone treatments. For instance its Efmody product is designed to provide a hydrocortisone release profile that avoids the chronic over- and underdosing associated with immediate release products and provides better control of symptoms and sequelae as a result. The product was recently approved in Europe and a US Phase III is planned for 2021.

INDUSTRY OUTLOOK

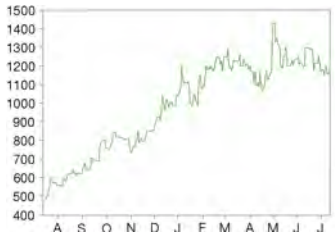
The company's lead products Alkindi and Efmody are treatments for deficiencies in the hormone cortisol (aka hydrocortisone). Adrenal insufficiency affects 250–400 per million individuals in the United States and Europe. A smaller fraction (1/10,000 to 1/18,000 live births) are born with congenital adrenal hyperplasia (CAH), which Efmody is currently recommended for approval in Europe.

Y/E Jun	Revenue (£m)	EBITDA (£m)	PBT (£m)	EPS (p)	P/E (x)	P/CF (x)
2019	1.0	(13.7)	(13.6)	(18.6)	N/A	N/A
2020	6.3	(5.2)	(5.1)	(4.1)	N/A	N/A
2021e	5.0	(11.6)	(11.5)	(7.0)	N/A	N/A
2022e	7.9	(17.8)	(17.8)	(9.9)	N/A	N/A

Sector: Pharma & healthcare

Price:	1200.0p
Market cap:	£586m
Market	AIM

Share price graph (p)



Company description

Ergomed is a global full-service CRO business with a core focus on the United States and the EU. It provides Phase I–III clinical services in addition to post-marketing pharmacovigilance (Phase IV) services and is predominantly focused on oncology, orphan drugs, rare diseases and pharmacovigilance.

Price performance

%	1m	3m	12m
Actual	(7.7)	8.1	152.6
Relative*	(7.7)	4.5	109.8

* % Relative to local index

Analyst

Dr Jonas Peciulis

Ergomed (ERGO)

INVESTMENT SUMMARY

Ergomed proved to be a resilient business in the challenging environment of 2020, which we attribute to a diversified and well-balanced pharma services offering (contract research outsourcing (CRO) and pharmacovigilance). Organic growth and the acquisitions of Ashfield PV and MedSource resulted in a strong order book at end-2020 (£193m, up 55.5% from end-2019), which provides high growth visibility and should allow Ergomed to successfully navigate the pandemic. Likewise, £19m cash (end-2020) and access to £30m of unutilised credit facilities provide Ergomed with firepower for additional strategic acquisitions, as well as enabling continued investment into organic growth. At the AGM in June Ergomed guided FY21e revenues in line with market expectations, with the FY21e EBITDA 'materially ahead' of consensus.

INDUSTRY OUTLOOK

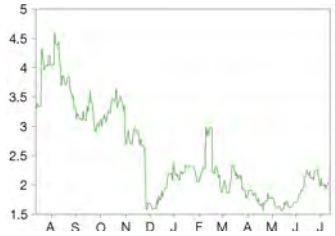
Innovation in healthcare is driving sales and growth in the number of clinical trials being initiated, as pharmaceutical and biotechnology companies continue to invest substantially. Tight operational control and execution will enable Ergomed to drive market share in high-growth orphan drug trials as well as in larger indications.

Y/E Dec	Revenue (£m)	EBITDA (£m)	PBT (£m)	EPS (p)	P/E (x)	P/CF (x)
2019	68.3	12.5	8.6	19.8	60.6	47.4
2020	86.4	19.4	14.4	23.7	50.6	32.2
2021e	119.6	21.7	18.0	30.4	39.5	41.6
2022e	136.8	23.2	19.4	32.9	36.5	28.0

Sector: Pharma & healthcare

Price:	US$2.03
Market cap:	US$155m
Market	NASDAQ

Share price graph (US$)



Company description

Hepion Pharmaceuticals is a clinical stage biopharmaceutical company focused on developing therapeutics for chronic liver disease. The company's lead asset is CRV431, a cyclophilin inhibitor being developed for the treatment of non-alcoholic steatohepatitis (NASH).

Price performance

%	1m	3m	12m
Actual	(5.1)	16.7	(45.9)
Relative*	(8.1)	9.8	(60.7)

* % Relative to local index

Analyst

Carol Werther

Hepion Pharmaceuticals (HEPA)

INVESTMENT SUMMARY

CRV431 is a non-immunosuppressive cyclosporine derivative that inhibits a class of proteins called cyclophilins. Cyclophilins have been implicated in liver disease specifically stemming from inflammation and fibrosis. Hepion claims that by inhibiting cyclophilins, CRV431 may stall or reverse the progressive deterioration of liver function seen in late stage NASH patients presenting with fibrosis. CRV431 is in Phase II development.

INDUSTRY OUTLOOK

There currently are no approved medications for NASH, but a large number of programs in development. Fatty liver disease affects 20% of US and European populations and 20% of these are expected to progress to NASH. We expect CRV431 to be marketed for severe cases (F2 and F4), which we estimate has a market of 1.4 million in the United States and Europe.

Y/E Dec	Revenue (US$m)	EBITDA (US$m)	PBT (US$m)	EPS (c)	P/E (x)	P/CF (x)
2019	0.0	(7.7)	(7.9)	(341.55)	N/A	N/A
2020	0.0	(17.7)	(17.9)	(185.69)	N/A	N/A
2021e	0.0	(19.6)	(19.6)	(25.69)	N/A	N/A
2022e	0.0	(17.0)	(17.0)	(21.26)	N/A	N/A

Sector: Pharma & healthcare

Price:	US$37.46
Market cap:	US$6474m
Market	AIM, HKSE, NASDAQ

Share price graph (US$)

Company description

HUTCHMED (previously Hutchison China MediTech) is an innovative China-based biopharmaceutical company targeting the global market for novel, highly selective oral oncology and immunology drugs. Its established commercial platform business continues to expand its outreach.

Price performance

%	1m	3m	12m
Actual	22.6	27.8	31.6
Relative*	18.8	20.4	(4.4)

* % Relative to local index

Analyst

Dr Susie Jana

HUTCHMED (HCM)

INVESTMENT SUMMARY

HUTCHMED is capitalising on years of investment in its substantial pipeline of oncology and immunology drugs and now has three marketed assets in China. Elunate's (fruquintinib) inclusion in China's NRDL significantly increases its accessibility and Sulanda (surufatinib), its first unpartnered asset brought to market, was launched for non-pancreatic NET in January and was recently approved for pancreatic NET. Orphathys (savolitinib) received first-in-class approval for MET exon 14 skipping NSCLC in June and is being commercialised by partner AstraZeneca. HCM expects oncology revenues to grow to $110–130m in FY21 ($30.2m in FY20). Multiple global launches are on the horizon. The US FDA has accepted the NDA for surufatinib in NET (PDUFA date 30 April 2022). With several additional assets moving swiftly through the clinic we expect a series of global launches from the rest of the pipeline between 2023 and 2025. Our forecasts are under review.

INDUSTRY OUTLOOK

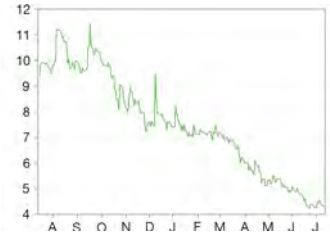
HUTCHMED is leveraging its established Chinese healthcare business to launch its innovation pipeline products. The clinical, regulatory and technological environments are highly conducive to novel drug development in China. Medium term, investment in global clinical trials should enable it to become a major oncology company globally.

Y/E Dec	Revenue (US$m)	EBITDA (US$m)	PBT (US$m)	EPS (c)	P/E (x)	P/CF (x)
2019	204.9	(141.3)	(141.1)	(15.9)	N/A	N/A
2020	228.0	(190.6)	(189.7)	(18.0)	N/A	N/A
2021e	N/A	N/A	N/A	N/A	N/A	N/A
2022e	N/A	N/A	N/A	N/A	N/A	N/A

Sector: Pharma & healthcare

Price:	SEK4.35
Market cap:	SEK867m
Market	OMX

Share price graph (SEK)



Company description

Immunicum is a clinical-stage immunoncology (IO) company based. It is developing dendritic cell (DC) based therapeutics with two lead therapies in several Phase II trials in multiple cancer indications.

Price performance

%	1m	3m	12m
Actual	(8.6)	(22.5)	(53.2)
Relative*	(11.8)	(27.8)	(67.6)

* % Relative to local index

Analyst

Dr Jonas Peciulis

Immunicum (IMMU)

INVESTMENT SUMMARY

Immunicum is progressing with its renewed strategy to become a commercially oriented, global leader in dendritic cell (DC) based therapeutics. The completed merger with complementary biotech company DCprime is evidence of this, and has added an allogeneic DC relapse vaccine DCP-001 to its pipeline. DCP-001 is currently in two clinical trials: Phase II in AML (ADVANCE-II) with top-line efficacy data expected in Q421; and Phase I in ovarian cancer (ALISON) with the first patient recruited in June 2021. The Phase Ib/II multi-indication trial (ILIAD) investigating ilixadencel in combination with checkpoint inhibitors (CPIs) and top-line data (safety and dosing) are expected in Q321. In renal cell carcinoma Immunicum will pursue ilixadencel in a triple combination with PD-1 and CTLA4 CPIs. In June 2021, the company successfully raised SEK141m.

INDUSTRY OUTLOOK

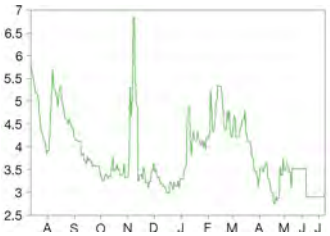
IO is a frenetic pharmaceutical development area with many clinical combination studies being conducted by pharmaceutical and biotech companies. Investors should expect relatively rich newsflow from this subsector over the next few years.

Y/E Dec	Revenue (SEKm)	EBITDA (SEKm)	PBT (SEKm)	EPS (öre)	P/E (x)	P/CF (x)
2019	0.0	(0.1)	(134.0)	(149.4)	N/A	N/A
2020	0.0	(0.1)	(106.3)	(119.1)	N/A	N/A
2021e	N/A	N/A	N/A	N/A	N/A	N/A
2022e	N/A	N/A	N/A	N/A	N/A	N/A

Sector: Pharma & healthcare

Price:	US$2.96
Market cap:	US$24m
Market	NASDAQ, TSX

Share price graph (US$)



Company description

InMed is a pharmaceutical company focused on developing and manufacturing cannabinoids. Its main pipeline product is INM-755 for epidermolysis bullosa, a serious, debilitating orphan indication.

Price performance

%	1m	3m	12m
Actual	4.2	(10.3)	(42.3)
Relative*	1.0	(15.6)	(58.1)

* % Relative to local index

Analyst

Maxim Jacobs

InMed Pharmaceuticals (INM)

INVESTMENT SUMMARY

Following the safety and tolerability data from the two Phase I trials in healthy volunteers, INM-755 is moving forward into a Phase II (755-201-EB) trial in up to 20 epidermolysis bullosa (EB) patients with an anticipated treatment duration of 28 days. Regulatory applications have been filed in several countries with enrolment to begin in the third quarter of the calendar year. Also, the formulation for INM-088 has been finalized with IND-enabling toxicology studies expected to begin in CY21 and filings for human clinical trials to begin in H1 CY22. Additionally, InMed recently announced a non-binding letter of intent to acquire BayMedica, a company that is also involved with biosynthesis, is revenue-stage and has its own cannabinoid assets.

INDUSTRY OUTLOOK

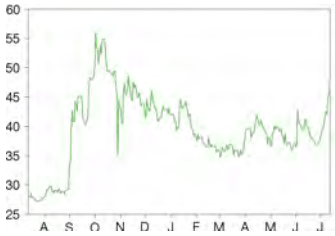
The market for cannabinoids, whether FDA-approved, medical or recreational, is growing at a fantastic rate. Legal cannabis sales in the United States alone were around US$7.5bn in 2017 and we expect them to grow to US$28bn by 2023.

Y/E Jun	Revenue (US$m)	EBITDA (US$m)	PBT (US$m)	EPS (c)	P/E (x)	P/CF (x)
2019	0.0	(9.4)	(9.2)	(177.47)	N/A	N/A
2020	0.0	(9.0)	(9.0)	(172.80)	N/A	N/A
2021e	0.0	(8.7)	(9.1)	(132.97)	N/A	N/A
2022e	0.0	(9.5)	(10.5)	(123.74)	N/A	N/A

Sector: Pharma & healthcare

Price: SEK48.10
Market cap: SEK2485m
Market NASDAQ OMX First North

Share price graph (SEK)



Company description

Based in Scandinavia, IRLAB Therapeutics is focused on developing novel drugs for the treatment of neurodegenerative diseases utilising its ISP technology platform. Its two lead assets are in late-stage clinical trials for the symptomatic treatment of PD: mesdopetam (D3 antagonist) and pirepemat (PFC enhancer).

Price performance

%	1m	3m	12m
Actual	17.0	20.0	71.5
Relative*	12.9	11.7	18.7

* % Relative to local index

Analyst

Dr Susie Jana

IRLAB Therapeutics (IRLABA)

INVESTMENT SUMMARY

IRLAB Therapeutics is focused on developing novel, potential first-in-class treatments for the symptoms of Parkinson's disease (PD), a complex and progressive neurodegenerative condition with huge unmet need. IRLAB's proprietary in-house developed ISP research platform is at the heart of its drug discovery engine and has been validated by the progress of its two lead assets mesdopetam and pirepemat, both of which have novel mechanisms of action. Mesdopetam, an oral D3 antagonist, is currently in a global Phase IIb/III study for levodopa-induced dyskinesias (PD-LIDs). Top-line data expected in H122 will define the pivotal trials required for approval. Pirepemat is an oral prefrontal cortex (PFC) enhancer currently in development for the treatment of impaired balance and falls in PD (PD-Falls). A global Phase IIb study is expected to start shortly. IRLAB is funded to key inflection points in 2022 of proof-of-concept data for both assets. After this we expect partnering deals to facilitate Phase III development and potential commercialisation strategies.

INDUSTRY OUTLOOK

PD is characterised by a triad of cardinal motor symptoms, although non-motor symptoms are as debilitating and remain undertreated. Despite substantial efforts to develop disease-modifying approaches in PD, symptomatic treatment remains the mainstay.

Y/E Dec	Revenue (SEKm)	EBITDA (SEKm)	PBT (SEKm)	EPS (öre)	P/E (x)	P/CF (x)
2019	0.4	(92.9)	(95.1)	(234.0)	N/A	N/A
2020	0.4	(89.2)	(91.4)	(192.0)	N/A	N/A
2021e	0.4	(104.1)	(107.6)	(208.0)	N/A	N/A
2022e	0.4	(154.5)	(158.5)	(306.0)	N/A	N/A

Sector: Pharma & healthcare

Price: A$1.29
Market cap: A$171m
Market ASX

Share price graph (A$)

Company description

Kazia Therapeutics' lead asset is paxalisib, a PI3K inhibitor licensed from Genentech that can cross the BBB. It is entering a pivotal study for GBM and is being investigated for other brain cancers such as breast cancer brain metastases.

Price performance

%	1m	3m	12m
Actual	(1.5)	(27.7)	158.9
Relative*	(1.9)	(31.3)	105.5

* % Relative to local index

Analyst

Carol Werther

Kazia Therapeutics (KZA)

INVESTMENT SUMMARY

Kazia is developing the anti-cancer compound paxalisib (GDC-0084) for glioblastoma (GBM) multiforme. Paxalisib is a PI3K inhibitor, a well understood class with activity across a wide range of tumor types and multiple previously approved drugs. Paxalisib, unlike other drugs of this class, can cross the blood brain barrier (BBB), opening the potential to treat cancers of the brain. It is enrolling its first patients in the pivotal GBM AGILE study as of Q1 CY21. The second product candidate is EVT801, a novel small molecule inhibitor VEGFR3, a known growth factor for cancer. An IND is planned for H2 CY21.

INDUSTRY OUTLOOK

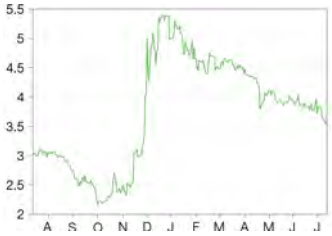
GBM is the most common primary cancer of the brain with 11,500 new cases reported in the United States per year. There are very limited treatment options for GBM and there is a very low survival rate. Paxalisib is currently being developed for use in the adjuvant setting after initial resection and radiation treatment. EVT801 will target the multi billion angiogenesis cancer market.

Y/E Jun	Revenue (A$m)	EBITDA (A$m)	PBT (A$m)	EPS (fd) (c)	P/E (x)	P/CF (x)
2019	1.6	(7.4)	(7.4)	(12.81)	N/A	N/A
2020	1.1	(10.8)	(10.8)	(14.19)	N/A	N/A
2021e	16.8	1.5	1.5	1.22	105.7	N/A
2022e	1.6	(19.3)	(19.3)	(13.63)	N/A	N/A

Sector: Pharma & healthcare

Price:	€3.73
Market cap:	€110m
Market	Scale

Share price graph (€)



Company description

MagForce has the first Europe-approved, nanotechnology-based therapy to treat brain tumours. NanoTherm therapy consists of nanoparticle instillation into the tumour, activated by an alternating magnetic field, producing heat and thermally destroying or sensitising tumours.

Price performance

%	1m	3m	12m
Actual	(2.9)	(13.9)	21.9
Relative*	(3.5)	(17.0)	(2.5)

* % Relative to local index

Analyst

Dr Susie Jana

MagForce (MF6)

INVESTMENT SUMMARY

MagForce is progressing its strategy to drive uptake and acceptance (in the United States and Europe) of its nanoparticle-based therapy NanoTherm, for the treatment of cancerous tumours. It has recently expanded from Germany into Poland and now has four centres in Europe that are commercially capable of treating glioblastoma patients. A share placing in December that raised €4.7m gross plus a loan of up to €35m from the European Investment Bank, and access to €15m growth funding via zero interest bearing convertible notes, will continue to fund the roll-out. A registrational clinical trial for prostate cancer is ongoing in the United States using an FDA-approved one-day protocol. Approval and launch are expected in H122. The US opportunity will become a significant driver for growth in the long term. Our forecasts are under review.

INDUSTRY OUTLOOK

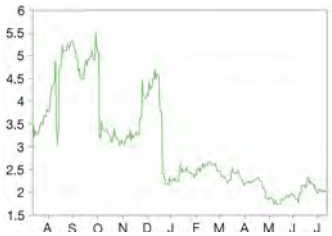
MagForce's NanoTherm therapy is designed to directly target cancerous tissue while sparing surrounding healthy tissue. Magnetic nanoparticles are directly instilled into a tumour or a resection cavity and activated by specialist equipment (NanoActivator). This can either thermally ablate tumours or sensitise them to other treatments (chemotherapy or radiotherapy).

Y/E Dec	Revenue (€m)	EBITDA (€m)	PBT (€m)	EPS (c)	P/E (x)	P/CF (x)
2018	0.1	(6.5)	(8.7)	(32.8)	N/A	N/A
2019	0.8	(5.6)	(7.6)	(28.2)	N/A	N/A
2020e	0.8	(6.6)	(8.2)	(29.6)	N/A	N/A
2021e	2.4	(5.2)	(7.2)	(24.5)	N/A	N/A

Sector: Pharma & healthcare

Price:	A$2.07
Market cap:	A$1343m
Market	ASX

Share price graph (A$)



Company description

Mesoblast is developing adult stem-cell therapies based on its proprietary MPC and MSC platforms. Its lead programs are in pediatric aGvHD, heart failure, ARDS and lower back pain, all of which are in Phase III or later.

Price performance

%	1m	3m	12m
Actual	(3.7)	(7.2)	(43.6)
Relative*	(4.1)	(11.8)	(55.2)

* % Relative to local index

Analyst

Maxim Jacobs

Mesoblast (MSB)

INVESTMENT SUMMARY

Mesoblast is an Australia-headquartered biotechnology company focused on adult stem cell therapies. The company's pipeline is based on its proprietary mesenchymal precursor cells (MPC) and culture-expanded mesenchymal stem cells (MSC) technologies. Novartis recently signed a partnership with the company to develop remestemcel-L for acute respiratory distress syndrome (ARDS), whether or not the ARDS was caused by COVID-19. The company recently announced data from its MPC-06-ID back pain trial. Rexlemestrocel-L in combination with hyaluronic acid (HA) significantly reduced pain and reduced the need for opioids. In the heart failure trial, Revascor had a significant impact on major adverse cardiovascular events such as cardiovascular death and ischemic events.

INDUSTRY OUTLOOK

Mesoblast is a leading MSC company based in Australia. It is targeting large indications such as ARDS, congestive heart failure and back pain.

Y/E Jun	Revenue (US$m)	EBITDA (US$m)	PBT (US$m)	EPS (fd) (c)	P/E (x)	P/CF (x)
2019	16.0	(75.4)	(86.5)	(15.69)	N/A	N/A
2020	31.6	(64.8)	(79.6)	(13.28)	N/A	N/A
2021e	72.9	(46.3)	(55.7)	(9.06)	N/A	N/A
2022e	8.6	(83.2)	(92.6)	(14.29)	N/A	N/A

Newron Pharmaceuticals (NWRN)

Sector: Pharma & healthcare

Price:	CHF2.55
Market cap:	CHF46m
Market	Swiss Stock Exchange

Share price graph (CHF)

Company description

Newron Pharmaceuticals is focused on the central nervous system. Xadago for Parkinson's disease (PD) is sold in Europe, Japan and the United States. Evenamide, a novel schizophrenia therapy, may start Phase III trials in 2022.

Price performance

%	1m	3m	12m
Actual	(1.0)	(1.9)	54.4
Relative*	(2.9)	(9.2)	30.7

* % Relative to local index

Analyst

Dr John Savin

INVESTMENT SUMMARY

Newron is developing evenamide as an add-on to existing anti-psychotic therapies to treat poorly managed and refractory schizophrenia. Two recently completed safety studies showed no brain or heart safety issues. Newron will now complete the requested safety work using the intended therapeutic dose of 30mg bid. This continuation study (008A) will take until H221 to complete. If Study 008A shows safety and efficacy, evenamide can enter Phase III with sales possible from 2025. There is funding and anticipated cash flows to support development until at least late 2022; this may be extended as Phase III costs are delayed.

INDUSTRY OUTLOOK

Xadago is marketed as an add-on to levodopa therapy in PD. It is sold by Zambon in Europe and by Supernus in the United States. A study on a dyskinesia indication should start in Q421. A generic manufacturer has notified the FDA of its intention to file a generic Xadago formulation. Xadago tablets are protected by three patents, which expire no earlier than 2027.

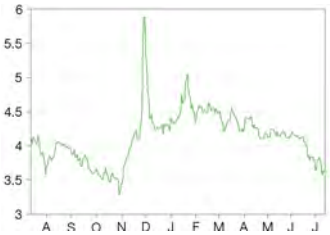
Y/E Dec	Revenue (€m)	EBITDA (€m)	PBT (€m)	EPS (c)	P/E (x)	P/CF (x)
2019	7.0	(18.6)	(18.0)	(101.0)	N/A	N/A
2020	5.3	(16.4)	(18.2)	(109.0)	N/A	N/A
2021e	6.7	(16.7)	(18.1)	(101.0)	N/A	N/A
2022e	7.7	(25.8)	(27.2)	(153.0)	N/A	N/A

Nicox (COX)

Sector: Pharma & healthcare

Price:	€3.58
Market cap:	€133m
Market	Euronext Paris

Share price graph (€)



Company description

Based in France, Nicox develops therapeutics for the treatment of ocular conditions. Lead development candidate NCX-470 is in Phase III studies for the treatment of glaucoma. Nicox also receives licence revenue from its partners for its FDA-approved drugs Vyzulta and Zerviate.

Price performance

%	1m	3m	12m
Actual	(12.8)	(16.7)	(11.3)
Relative*	(12.2)	(21.3)	(32.4)

* % Relative to local index

Analyst

Pooya Hemami

INVESTMENT SUMMARY

Nicox develops drugs for eye diseases, with lead candidate NCX-470 in Phase III trials targeting the topical ocular treatment of glaucoma. NCX-470 combines an NO-donating molecule with an analogue of established prostaglandin F2a drug, bimatoprost. NCX-470 0.065% has shown up to 1.4mmHg additional lowering of intraocular pressure (IOP) compared to latanoprost in the Phase II study, and the Phase III programme is testing a higher 0.1% concentration of NCX-470. Nicox is also advancing NCX-4251 in acute exacerbations of blepharitis, having recently completed all dosing and follow-up in a Phase IIb study, with results expected in September 2021.

INDUSTRY OUTLOOK

NCX-470, if approved, could become the most efficacious single-agent glaucoma drug on the market in terms of IOP lowering activity. Top-line data from Mont Blanc, the first of two Phase III NCX-470 studies that recently reached 50% enrolment, are expected in Q222. We expect a 2024 launch and sales of over €450m in 2030 in the United States and major markets. Nicox had €24.2m net cash in Q121, which we model should last into H222, beyond the Mont Blanc inflection point.

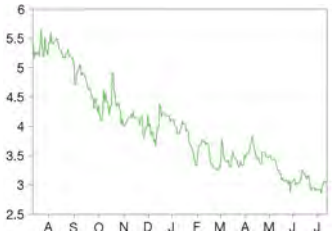
Y/E Dec	Revenue (€m)	EBITDA (€m)	PBT (€m)	EPS (c)	P/E (x)	P/CF (x)
2019	8.3	(17.2)	(16.0)	(40.1)	N/A	N/A
2020	14.4	(5.3)	(10.2)	(30.3)	N/A	N/A
2021e	10.2	(14.8)	(16.1)	(43.2)	N/A	N/A
2022e	12.0	(14.5)	(16.0)	(42.6)	N/A	N/A

Oasmia Pharmaceutical (OASM)

Sector: Pharma & healthcare

Price:	SEK3.00
Market cap:	SEK1345m
Market	Nasdaq FN Premier

Share price graph (SEK)



Company description

Oasmia Pharmaceutical is a Swedish speciality pharma company focusing on its proprietary XR-17 technology platform to develop novel formulations of well-established cytostatic oncology treatments for human and animal health. Key assets include Apealea (partnered with Elevar), docetaxel micellar and Cantrixil.

Price performance

%	1m	3m	12m
Actual	(7.7)	(18.3)	(42.6)
Relative*	(10.9)	(23.9)	(60.3)

* % Relative to local index

Analyst

Dr Susie Jana

INVESTMENT SUMMARY

Oasmia is focused on developing improved formulations of well-established cancer drugs through the application of its proprietary XR-17 platform. This solubility enhancing technology has received validation though a global partnership deal for lead asset Apealea (Cremophor-free paclitaxel) with Elevar Therapeutics across a variety of cancers. Apealea is approved in Europe for second-line ovarian cancer and Elevar is required to complete two additional studies before an NDA filing in the United States. Oasmia is working on additional nanoparticle formulations, including docetaxel micellar (Phase Ib prostate cancer) and the development of innovative drugs (preclinical stage). Recently in-licensed asset Cantrixil is expected to start Phase II development in ovarian cancer in 2022. Oasmia's animal health pipeline has two clinical stage assets, Paccal Vet and Doxophos Vet. At 31 March 2021, Oasmia had net cash of SEK219.5m, giving a cash runaway into FY23.

INDUSTRY OUTLOOK

Despite a slew of novel cancer drugs transforming care for many oncology indications, established chemotherapy regimens remain a cornerstone of treatment. Oasmia's XR-17 technology is applicable to any solubility limited drug, which includes 10–15 different cytostatic agents, and can potentially provide an improved formulation and profile.

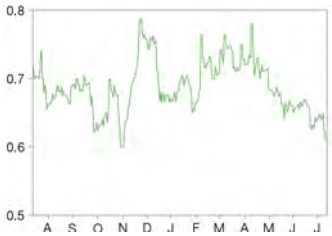
Y/E Apr / Dec	Revenue (SEKm)	EBITDA (SEKm)	PBT (SEKm)	EPS (öre)	P/E (x)	P/CF (x)
2019	2.0	(119.2)	(168.5)	(68.5)	N/A	N/A
2020	201.8	(10.1)	(43.4)	0.2	1500.0	N/A
2021e	21.0	(129.6)	(160.5)	(31.3)	N/A	N/A
2022e	46.8	(106.5)	(139.0)	(26.5)	N/A	N/A

Onxeo (ONXEO)

Sector: Pharma & healthcare

Price:	€0.63
Market cap:	€58m
Market	Euronext Paris

Share price graph (€)



Company description

Onxeo's proprietary platON platform is based on a unique decoy technology in the field of DNA damage repair inhibition. The compounds have been shown in preclinical studies to be synergistic with DNA breaking therapies and have an ability to reverse tumour resistance to PARP inhibitors and TKIs.

Price performance

%	1m	3m	12m
Actual	(5.2)	(15.4)	(9.2)
Relative*	(4.5)	(20.1)	(30.8)

* % Relative to local index

Analyst

Dr Jonas Peciulis

INVESTMENT SUMMARY

Onxeo's portfolio focuses on its novel platON platform with AsiDNA as the lead drug candidate. AsiDNA is the only oligonucleotide decoy agonist in development that disrupts and exhausts the tumour DNA damage response mechanism. To date, the only approved similar class of drugs are four commercially successful PARP inhibitors. AsiDNA is now being tested in the Phase Ib part of the DRIIV-1 trial in patients with advanced solid tumours in combination with chemotherapy (the latest interim update in November showed promising data). Another key Phase Ib/II trial, REVOCAN, is recruiting patients and will evaluate AsiDNA's potentially unique ability to reverse tumour resistance to the PARP inhibitor, niraparib. The outcomes of all these events will define AsiDNA's mid- to late-stage development. In January, Onxeo secured a €5m state guaranteed loan extending its cash runway to Q322. In April, Onxeo raised a further €9.7m and revealed a new Phase II trial with AsiDNA in combination with chemotherapy in NSCLC to start in 2021.

INDUSTRY OUTLOOK

Approval of the first PARP inhibitors has kick-started interest by the scientific community and large pharma in the DNA damage response field. Few biotechs are already positioned in this emerging field that has broad potential.

Y/E Dec	Revenue (€m)	EBITDA (€m)	PBT (€m)	EPS (fd) (c)	P/E (x)	P/CF (x)
2018	6.1	(3.4)	(4.2)	4.92	12.8	N/A
2019	4.3	(9.1)	(11.5)	(14.98)	N/A	N/A
2020e	1.1	1.0	0.4	(0.62)	N/A	N/A
2021e	0.0	(10.1)	(10.8)	(13.78)	N/A	N/A

Sector: Pharma & healthcare

Price:	US$2.27
Market cap:	US$87m
Market	NASDAQ

Share price graph (US$)

Company description

OpGen is focused on revolutionizing the identification and treatment of bacterial infections. Following the merger with Curetis, it has technology to detect pathogens and predict resistance. Importantly, the AMR Gene Panel and Unyvero platforms have the ability to provide results in hours instead of days.

Price performance

%	1m	3m	12m
Actual	4.6	(11.3)	5.6
Relative*	1.3	(16.5)	(23.3)

* % Relative to local index

Analyst

Maxim Jacobs

OpGen (OPGN)

INVESTMENT SUMMARY

OpGen is a diagnostic company focused on revolutionizing the identification and treatment of bacterial infections. It recently merged with Curetis, a Germany-based molecular diagnostics company with a complementary focus on infectious disease. Curetis has two main business lines: the Unyvero A50 high-plex polymerase chain reaction platform for the diagnosis of infectious disease in hospital patients and the ARES AMR database (ARESdb), which includes data on 55,000 sequenced strains with a focus on resistant pathogens, as well as data on over 100 antibiotics.

INDUSTRY OUTLOOK

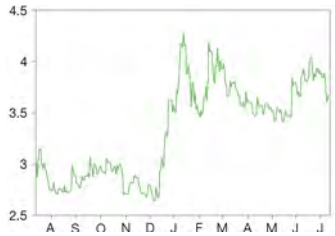
It currently takes days to test a patient sample to find out if they have an infection, what they are infected with and to which drugs that infection might be susceptible. This can lead to a delay in treatment or the wrong treatment being prescribed. According to the Centers for Disease Control and Prevention, there are over two million cases of drug-resistant bacterial infections every year.

Y/E Dec	Revenue (US$m)	EBITDA (US$m)	PBT (US$m)	EPS (c)	P/E (x)	P/CF (x)
2019	3.5	(11.7)	(11.9)	(737.57)	N/A	N/A
2020	4.2	(22.0)	(25.3)	(157.41)	N/A	N/A
2021e	10.5	(20.9)	(25.5)	(70.43)	N/A	N/A
2022e	26.4	(11.8)	(14.1)	(34.69)	N/A	N/A

Sector: Pharma & healthcare

Price:	€3.63
Market cap:	€193m
Market	Madrid Stock Exchange

Share price graph (€)



Company description

Spanish biotech Oryzon Genomics is focused on epigenetics. Iadademstat (Phase IIa) is being explored for acute leukaemias and SCLC; its CNS product vafidemstat has completed several Phase IIa trials and a Phase IIb trial in borderline personality disorder is ongoing. ORY-3001 is being developed for certain orphan indications.

Price performance

%	1m	3m	12m
Actual	(4.7)	4.3	22.2
Relative*	(0.5)	0.9	1.5

* % Relative to local index

Analyst

Dr Jonas Peciulis

Oryzon Genomics (ORY)

INVESTMENT SUMMARY

Oryzon develops small molecule inhibitors for epigenetic targets. It has completed five Phase II and has three ongoing Phase II trials with two assets: iadademstat and vafidemstat. Oryzon reported data in March 2021 from its two Phase IIa trials focusing on AD (ETHERAL and REIMAGINE-AD) that confirm vafidemstat is safe and effective in controlling aggression and agitation, a key focus area for Oryzon. To this end, in July 2020 results from the Phase IIa REIMAGINE trial with vafidemstat for aggressiveness in psychiatric diseases showed improvement in all cohorts (BPD, ADHD and ASD). Oryzon is conducting the Phase IIb trial for vafidemstat in BPD (PORTICO) and announced a new Phase IIb trial for schizophrenia (EVOLUTION). Oryzon is also developing a precision medicine approach for vafidemstat in genetically defined patient subpopulations of certain CNS disorders. In June 2021, Oryzon presented an update from the Phase II ALICE trial (iadademstat plus azacitidine) in AML, which continues to show a large response benefit.

INDUSTRY OUTLOOK

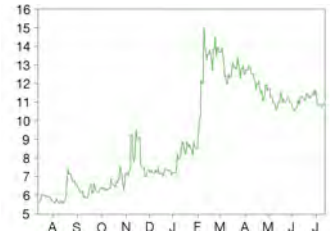
Oryzon is among the leading clinical stage drug developers with a second generation of epigenetic therapeutics, which have greater selectivity and potentially a favourable safety/efficacy profile than the first generation HDAC inhibitors.

Y/E Dec	Revenue (€m)	EBITDA (€m)	PBT (€m)	EPS (c)	P/E (x)	P/CF (x)
2019	10.3	(3.7)	(4.6)	(8.81)	N/A	N/A
2020	9.5	(4.1)	(4.8)	(6.88)	N/A	N/A
2021e	9.9	(4.1)	(4.2)	(5.51)	N/A	N/A
2022e	9.9	(4.1)	(4.2)	(5.12)	N/A	N/A

Sector: Pharma & healthcare

Price:	€11.04
Market cap:	€202m
Market	Euronext Paris

Share price graph (€)



Company description

OSE Immunotherapeutics is based in Nantes and Paris in France and is listed on the Euronext Paris exchange. It is developing immunotherapies for the treatment of solid tumours and autoimmune diseases and has established several partnerships with large pharma companies.

Price performance

%	1m	3m	12m
Actual	(2.0)	(12.0)	100.7
Relative*	(1.3)	(16.8)	53.0

* % Relative to local index

Analyst

Dr Jonas Peciulis

OSE Immunotherapeutics (OSE)

INVESTMENT SUMMARY

OSE focuses on both oncology and immune disorders. Long-term collaborations with top research institutions enable it to identify novel targets in a cost-effective manner, which was particularly evident from the stream of announcements recently when the R&D pipeline expanded significantly. One of the recent positives was the FR104 (a CD28 antagonist) licensing deal signed with Veloxis Pharmaceuticals in the organ transplantation setting for a total of up to €315m in milestones plus royalties. Initial, positive data from the Phase I study of BI 765063 (SIRPa antagonist) in solid tumours were presented at ASCO 2021. This asset is partnered with Boehringer Ingelheim (BI) in a deal worth €1.1bn plus royalties. CoVepiT is a multi-epitope COVID-19 vaccine that could provide protection against emergent variants of COVID-19; a Phase I trial started in May and an initial readout is expected in September 2021. Upcoming newsflow from many other projects in the pipeline should provide continued catalysts and hence support the share price.

INDUSTRY OUTLOOK

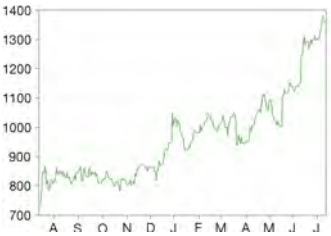
OSE has products in development for both immunological diseases and various cancer indications. As a results, the R&D pipeline is diversified and the outlook does not depend on developments in any specific subsector.

Y/E Dec	Revenue (€m)	EBITDA (€m)	PBT (€m)	EPS (c)	P/E (x)	P/CF (x)
2019	26.0	(0.9)	(1.2)	(29.55)	N/A	27.5
2020	10.4	(18.1)	(18.5)	(101.83)	N/A	N/A
2021e	16.0	(13.6)	(14.1)	(85.30)	N/A	N/A
2022e	0.0	(29.8)	(30.4)	(169.03)	N/A	N/A

Sector: Pharma & healthcare

Price:	1356.0p
Market cap:	£1120m
Market	LSE

Share price graph (p)



Company description

OXB's strategy is underpinned by its LentiVector technology. It generates significant revenue from a multitude of partners that use its technology and is manufacturing the COVID-19 vaccine Vaxzevria (AZD1222) for AstraZeneca. OXB is implementing significant capacity upgrades to enable more partnering/out-licensing agreements.

Price performance

%	1m	3m	12m
Actual	8.8	34.8	80.6
Relative*	8.8	30.3	49.9

* % Relative to local index

Analyst

Dr Susie Jana

Oxford Biomedica (OXB)

INVESTMENT SUMMARY

Oxford Biomedica (OXB) is a global leader in lentiviral development and manufacturing. It is expanding its manufacturing facilities through Oxbox, a 84,000 sq ft state-of-the-art bioprocessing facility, significantly increasing its production capacity to match increasing demand and to continue growing its platform revenues. In the near term, revenues will continue to be driven by Novartis and AstraZeneca as rollout of Kymriah and the COVID-19 vaccine continues, as well as new partner programmes such as those from Bristol Myers Squibb (BMS). OXB has several established development and manufacturing partnerships including Novartis, Juno Therapeutics (BMS), Sio Gene Therapies, Orchard Therapeutics, Boehringer Ingelheim, Santen, Beam Therapeutics and PhoreMost. OXB also has a supply agreement with AstraZeneca for the large-scale commercial manufacture of the adenovirus vector-based COVID-19 vaccine Vaxzevria (AZD1222).

INDUSTRY OUTLOOK

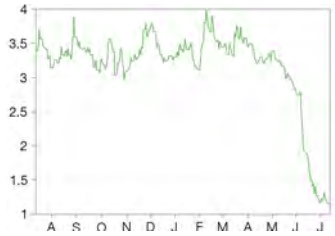
Cell and gene therapy is the focus of much industry attention as it can dramatically alter the outcomes of many diseases. OXB's proprietary LentiVector platform has demonstrated promise in many indications.

Y/E Dec	Revenue (£m)	EBITDA (£m)	PBT (£m)	EPS (p)	P/E (x)	P/CF (x)
2019	64.1	(4.6)	(16.8)	(16.4)	N/A	281.8
2020	87.7	8.3	(2.5)	(2.7)	N/A	68.7
2021e	159.1	28.6	18.6	20.3	66.8	N/A
2022e	173.4	39.2	28.0	30.6	44.3	347.7

Sector: Pharma & healthcare

Price:	€1.19
Market cap:	€25m
Market	Euronext Paris

Share price graph (€)



Company description

Pharnext is developing new therapies for neurological disorders using its proprietary Pleotherapy platform that unearths new therapeutic effects from drug combinations. Lead program PXT3003 for CMT1A recently entered Phase III. PXT864 for Alzheimer's disease has completed Phase IIa.

Price performance

%	1m	3m	12m
Actual	(37.8)	(63.1)	(64.8)
Relative*	(37.3)	(65.1)	(73.2)

* % Relative to local index

Analyst

Carol Werther

Pharnext (ALPHA)

INVESTMENT SUMMARY

Pharnext's pleotherapy platform uses a combination of in silico prediction of drug effects as well as in vitro screening to find drug combinations that have biochemical effects totally outside of their canonical activities. For instance, the company's lead program PXT3003 is a triple combination of an anti-opiate (naltrexone), a drug for spasms (baclofen), and the sweetener sorbitol, but the combination has shown positive results in Phase III for Charcot-Marie-Tooth type 1A (CMT1A) disease.

INDUSTRY OUTLOOK

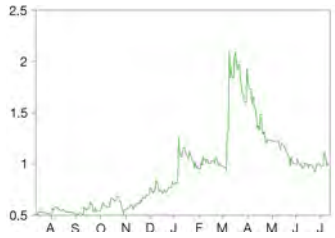
The power of the pleotherapy platform lies in its ability to predict gene expression patterns as a result of different drug combinations. This provides a way of addressing diseases of a genetic origin like CMT (and potentially other types of disease) that may not be amenable to other treatments like enzyme replacement therapy.

Y/E Dec	Revenue (€m)	EBITDA (€m)	PBT (€m)	EPS (fd) (c)	P/E (x)	P/CF (x)
2019	3.6	(19.5)	(23.4)	(161.08)	N/A	N/A
2020	2.8	(18.2)	(21.4)	(117.33)	N/A	N/A
2021e	2.6	(22.5)	(25.0)	(119.13)	N/A	N/A
2022e	3.1	(23.5)	(26.0)	(112.86)	N/A	N/A

Sector: Pharma & healthcare

Price:	€0.99
Market cap:	€49m
Market	Euronext Paris

Share price graph (€)



Company description

Pixium Vision develops bionic vision systems for patients with severe vision loss. Its lead product, Prima, is a wireless sub-retinal implant system designed for dry-AMD. The company recently started a European pivotal study.

Price performance

%	1m	3m	12m
Actual	(1.6)	(32.8)	89.6
Relative*	(0.9)	(36.5)	44.5

* % Relative to local index

Analyst

Pooya Hemami

Pixium Vision (PIX)

INVESTMENT SUMMARY

Pixium Vision is developing the Prima wireless photovoltaic sub-retinal implant, which transforms images into electrical signals to elicit a form of central visual perception in patients with severe retinal disease. Positive 18-month data from its EU feasibility study in patients with geographic atrophy associated with dry age-related macular degeneration (GA-AMD) showed improvements of between three and seven lines on the Landolt C visual acuity (VA) scale versus baseline. In Q121 a study showed that Prima-implanted patients can integrate their natural peripheral vision with the 'prosthetic vision' supplied by the system. Further, VA improvements from Prima were maintained at 24–30 months follow-up post-implantation, suggesting continued implant safety and stability.

INDUSTRY OUTLOOK

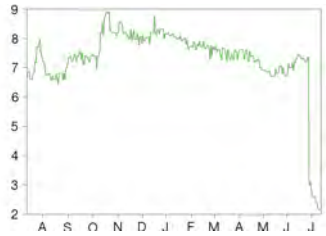
Pixium recently started the PRIMAvera pivotal study in Europe, which we believe could lead to potential CE Mark and EU market launch in H223. GA-AMD is a leading cause of blindness in older adults, affecting over 2.5 million persons in the United States and Europe, and there is no approved treatment.

Y/E Dec	Revenue (€m)	EBITDA (€m)	PBT (€m)	EPS (fd) (c)	P/E (x)	P/CF (x)
2019	1.8	(8.4)	(9.8)	(43.90)	N/A	N/A
2020	2.1	(7.6)	(8.7)	(25.63)	N/A	N/A
2021e	2.4	(9.8)	(10.7)	(22.58)	N/A	N/A
2022e	1.6	(13.1)	(15.5)	(31.59)	N/A	N/A

Sector: Pharma & healthcare

Price: CHF2.11
Market cap: CHF24m
Market Swiss Stock Exchange

Share price graph (CHF)



Company description

Polyphor is a development stage company focused on oncology and antibiotics. Lead programme balixafortide is a CXCR4 inhibitor in Phase III for breast cancer. Data are expected in 2021. It has approval to initiate its Phase I programme of inhaled murepavadin to treat P. aeruginosa infections in CF patients.

Price performance

%	1m	3m	12m
Actual	(71.1)	(70.9)	(68.0)
Relative*	(71.7)	(73.1)	(72.9)

* % Relative to local index

Analyst

Maxim Jacobs

Polyphor (POLN)

INVESTMENT SUMMARY

Polyphor is a development-stage company focused on oncology and antibiotics. Its lead programme is balixafortide, a C-X-C chemokine receptor type 4 (CXCR4) inhibitor currently in a randomised-controlled Phase III trial in 432 previously treated human epidermal growth factor receptor 2 (HER2) negative advanced breast cancer patients. The company announced in June that the co-primary endpoint of the study, objective response rate, was not met and Polyphor is reviewing the future of the programme. Additionally, it recently received approval to initiate the Phase I programme of inhaled murepavadin to treat P. aeruginosa infections in cystic fibrosis (CF) patients.

INDUSTRY OUTLOOK

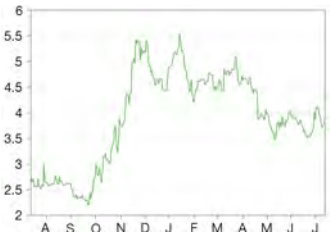
According to the National Cancer Institute, 78% of the estimated 276,480 new cases of breast cancer every year are HER2 negative. For those who are HER2 negative and hormone-receptor positive (68% of breast cancers), chemotherapy remains the standard of care in over 90% of cases once past front-line therapy.

Y/E Dec	Revenue (CHFm)	EBITDA (CHFm)	PBT (CHFm)	EPS (CHFc)	P/E (x)	P/CF (x)
2019	0.0	(64.9)	(64.2)	(581.19)	N/A	N/A
2020	14.3	(42.4)	(43.0)	(386.81)	N/A	N/A
2021e	0.0	(44.8)	(45.4)	(398.54)	N/A	N/A
2022e	0.0	(41.1)	(41.7)	(362.63)	N/A	N/A

Sector: Pharma & healthcare

Price: €3.90
Market cap: €104m
Market Euronext Paris

Share price graph (€)



Company description

Quantum Genomics is a biopharmaceutical company developing firibastat, a brain aminopeptidase A inhibitor for treating hypertension and heart failure. Its mechanism is implicated in the 25% of patients resistant to treatment.

Price performance

%	1m	3m	12m
Actual	1.7	(13.4)	45.1
Relative*	2.4	(18.2)	10.6

* % Relative to local index

Analyst

Maxim Jacobs

Quantum Genomics (ALQGC)

INVESTMENT SUMMARY

Quantum Genomics is investigating brain aminopeptidase A inhibitors, a new class of drug, for the treatment of hypertension and heart failure. Data from the Phase IIb NEW-HOPE trial strongly suggests that firibastat is an efficacious, safe drug. After eight weeks of treatment, patients saw a statistically significant reduction from baseline ($p<0.0001$) in systolic blood pressure of 9.7mmHg. Two pivotal Phase III trials have been initiated (one with 500 patients and the other with 750). Data from the Phase IIb of firibastat in 294 heart failure patients will be presented at the European Society of Cardiology (ESC) meeting in August 2021.

INDUSTRY OUTLOOK

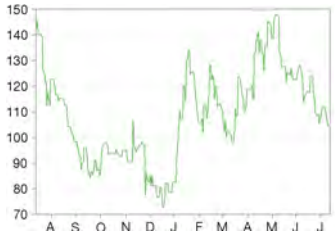
The angiotensin pathway is one of the primary methods of modulating blood pressure and is the target of many anti-hypertensive drugs, including ACEs and ARBs. However, there is a parallel pathway in the brain responsible for the secretion of vasopressin and heart rate that is unaddressed by current drugs and that is being targeted by Quantum Genomics.

Y/E Dec	Revenue (€m)	EBITDA (€m)	PBT (€m)	EPS (c)	P/E (x)	P/CF (x)
2019	0.0	(10.8)	(10.8)	(52.7)	N/A	N/A
2020	1.2	(13.9)	(13.9)	(49.9)	N/A	N/A
2021e	0.8	(20.8)	(20.8)	(65.1)	N/A	N/A
2022e	0.0	(22.5)	(22.5)	(67.6)	N/A	N/A

Sector: Pharma & healthcare

Price:	104.5p
Market cap:	£60m
Market	LSE

Share price graph (p)



Company description

ReNeuron Group is a UK biotech company developing allogeneic cell therapies. Human retinal progenitor cells are the lead Phase I/IIa project for retinitis pigmentosa. There is a strong preclinical technology base in exosomes.

Price performance

%	1m	3m	12m
Actual	(10.3)	(24.0)	(24.7)
Relative*	(10.3)	(26.6)	(37.5)

* % Relative to local index

Analyst

Dr John Savin

ReNeuron Group (RENE)

INVESTMENT SUMMARY

ReNeuron develops human retinal progenitor cell therapy (hRPC) for retinitis pigmentosa (RP). Phase IIa data at a 1m dose shows a stable one-year average gain in visual acuity. A nine-patient continuation Phase IIa study is underway at a 2m cell dose. Following a short safety halt in June after an eye infection, ReNeuron plans to announce some three-month data by the end of Q421. ReNeuron had £22.2m cash on 31 March 2021 and has at least 12 months' cash to complete the extension study and potentially close a partnering deal probably in H222. A 100-patient pivotal study is being planned to start in H222.

INDUSTRY OUTLOOK

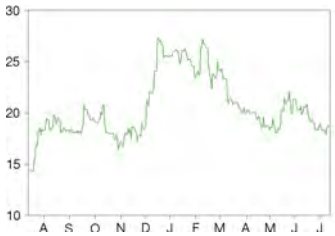
hRPC cell therapy could potentially treat any RP patient, giving a big potential commercial advantage; gene therapies treat specific mutations. The exosome platform has third-party commercial collaborators. ReNeuron's exosomes bind to target receptors in the brain to deliver siRNA and has a new peptide targeting technology. The clinical cell platform for diabetes looks promising.

Y/E Mar	Revenue (£m)	EBITDA (£m)	PBT (£m)	EPS (p)	P/E (x)	P/CF (x)
2019	2.7	(18.1)	(17.2)	(45.34)	N/A	N/A
2020	6.2	(14.0)	(13.9)	(35.85)	N/A	N/A
2021e	0.2	(13.8)	(14.4)	(32.85)	N/A	N/A
2022e	0.2	(12.9)	(13.3)	(20.55)	N/A	N/A

Sector: Pharma & healthcare

Price:	SEK18.42
Market cap:	SEK351m
Market	SE

Share price graph (SEK)



Company description

RhoVac is an immunotherapy company listed on the Spotlight stock market in Sweden, with a 100%-owned subsidiary in Denmark. It is developing a peptide-based immunotherapy, RV001, which aims to train the immune system to specifically target cancer cells with metastatic potential.

Price performance

%	1m	3m	12m
Actual	(10.6)	(7.9)	28.1
Relative*	(11.6)	(14.2)	(5.9)

* % Relative to local index

Analyst

Dr Jonas Peciulis

RhoVac (RHOVAC)

INVESTMENT SUMMARY

RhoVac is developing RV001, a cancer immunotherapy designed to prevent or limit progression to metastatic disease after curative intent therapy, by activating T-cells against cells with metastatic potential. RV001 contains a fragment of the target protein RhoC, which is overexpressed in cells with metastatic potential in various cancers. Funding should be sufficient to complete the Phase IIb BRaVac study for prostate cancer and exploratory preclinical studies in other cancers. RhoVac forecasts full enrolment by September with results during 2022, 9–12 months after the last patient is enrolled. The latest interim safety review in July 2021 found no issues. RhoVac aims to secure a partner for the late-stage development and global launch of RV001.

INDUSTRY OUTLOOK

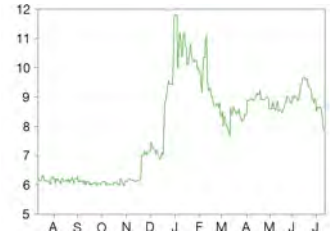
Metastatic cancer is the most advanced stage of cancer and forms the bulk of the current prostate cancer therapy market. RhoVac's target group is focused on non-metastatic patients with biochemical failure and are several times more prevalent than metastatic patients. Preventing or halting metastasis formation in this group of patients by inhibiting the metastatic cascade or killing cells with metastatic potential could reduce morbidity and improve survival.

Y/E Dec	Revenue (SEKm)	EBITDA (SEKm)	PBT (SEKm)	EPS (fd) (öre)	P/E (x)	P/CF (x)
2019	6.0	(36.5)	(36.1)	(233.0)	N/A	N/A
2020	6.0	(47.5)	(46.9)	(205.5)	N/A	N/A
2021e	7.9	(42.1)	(41.7)	(178.6)	N/A	N/A
2022e	5.9	(39.1)	(38.9)	(163.8)	N/A	N/A

Sector: Pharma & healthcare

Price:	€7.78
Market cap:	€145m
Market	Euronext Brussels

Share price graph (€)



Company description

Sequana Medical is a Belgian commercial stage medical device company using its proprietary alfapump and DSR technologies to develop innovative treatments for diuretic-resistant fluid overload in liver disease, malignant ascites and heart failure.

Price performance

%	1m	3m	12m
Actual	(17.4)	(12.8)	25.5
Relative*	(17.8)	(18.6)	2.6

* % Relative to local index

Analyst

Pooya Hemami

Sequana Medical (SEQUA)

INVESTMENT SUMMARY

Sequana's alfapump and Direct Sodium Removal (DSR) platforms are being advanced as long-term treatments for diuretic-resistant fluid overload related to liver disease, malignant ascites and heart failure (HF). The alfapump removes localised excess fluid build-up in the peritoneal cavity, and its initial commercial opportunity is for treating fluid overload (ascites) resulting from liver disease including non-alcoholic steatohepatitis. DSR technology adds a complementary method for removing excess fluid that is spread all over the body and the combined approach, alfapump DSR, is being advanced as a therapy for HF patients affected by congestion (fluid overload).

INDUSTRY OUTLOOK

The alfapump is undergoing a pivotal North American registration study (POSEIDON), with primary endpoint data expected in Q322, and is already commercialised in parts of Europe. The alfapump DSR system was shown in the RED DESERT study to sustainably improve diuretic response and cardio-renal status. Further studies of the DSR platform are planned.

Y/E Dec	Revenue (€m)	EBITDA (€m)	PBT (€m)	EPS (c)	P/E (x)	P/CF (x)
2019	1.0	(13.7)	(14.9)	(122.0)	N/A	N/A
2020	1.0	(17.5)	(19.0)	(125.1)	N/A	N/A
2021e	1.1	(17.3)	(17.9)	(96.2)	N/A	N/A
2022e	1.2	(16.5)	(17.7)	(94.9)	N/A	N/A

Sector: Pharma & healthcare

Price:	46.0p
Market cap:	£99m
Market	AIM

Share price graph (p)

Company description

Shield Therapeutics is a commercial-stage pharmaceutical company. Its proprietary product, Feraccru, is approved by the EMA and FDA for the treatment of iron deficiency. Outside of the United States Feraccru is marketed through partners Norgine, AOP Orphan and Ewopharma.

Price performance

%	1m	3m	12m
Actual	(19.3)	(2.7)	(45.9)
Relative*	(19.3)	(5.9)	(55.1)

* % Relative to local index

Analyst

Dr Susie Jana

Shield Therapeutics (STX)

INVESTMENT SUMMARY

Shield Therapeutics is a commercial-stage speciality pharmaceutical company based in the UK. Its primary focus is the commercialisation of Feraccru/Accrufer, approved by the EMA and FDA for the treatment of iron deficiency in adults, with or without anaemia. The commercialisation of Feraccru in Europe, Australia and New Zealand is in the hands of distribution partner Norgine, and the product has been licensed to ASK Pharm in China. Shield is commercialising Accrufer itself in the United States and launched the product in July 2021. At 31 March 2021 Shield had an unaudited cash balance of £28.2m. This is sufficient to enable it to establish and expand its US commercial infrastructure to include 30–60 sales reps to support the product launch.

INDUSTRY OUTLOOK

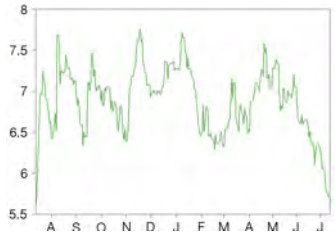
The market for iron deficiency is substantial and Feraccru is a unique oral formulation of iron developed to overcome the side-effect profile of salt-based oral iron therapies and provides an alternative treatment to intravenously administered iron.

Y/E Dec	Revenue (£m)	EBITDA (£m)	PBT (£m)	EPS (p)	P/E (x)	P/CF (x)
2019	0.7	(6.4)	(9.1)	(7.5)	N/A	N/A
2020	10.4	0.6	(1.9)	(2.2)	N/A	N/A
2021e	6.7	(20.3)	(22.3)	(11.1)	N/A	N/A
2022e	27.1	(6.5)	(8.4)	(3.3)	N/A	N/A

Sector: Pharma & healthcare

Price:	US$5.79
Market cap:	US$440m
Market	NASDAQ

Share price graph (US$)



Company description

SIGA Technologies is a commercial-stage health security company focused on the treatment of smallpox and other orthopoxviruses. It has contracts with both the US and Canadian governments for TPOXX, its treatment for smallpox.

Price performance

%	1m	3m	12m
Actual	(12.9)	(18.2)	1.6
Relative*	(15.7)	(23.0)	(26.2)

* % Relative to local index

Analyst

Maxim Jacobs

SIGA Technologies (SIGA)

INVESTMENT SUMMARY

SIGA Technologies is a commercial-stage company focusing on health security. Its lead program is oral TPOXX (tecovirimat), which was approved by the FDA in 2018 for the treatment of smallpox and is active against all orthopoxviruses. Importantly, in 2018 SIGA was awarded a 60-month contract (with options to extend to 2028) of up to $602m from the US Biomedical Advanced Research and Development Authority (BARDA). The bulk of the BARDA contract is related to the oral version of TPOXX in people with smallpox. The company is looking to expand its franchise with an IV version (NDA was submitted in May), a liquid formulation mainly for use in small children and a label expansion for TPOXX for use in post-exposure prophylaxis.

INDUSTRY OUTLOOK

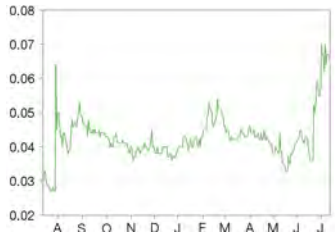
Smallpox is a very serious life-threatening disease caused by the variola virus. The literature suggests a death rate of up to 30% (compared to around 2% for COVID-19). According to CDC forecasts, over 50 million people could be infected in a smallpox outbreak.

Y/E Dec	Revenue (US$m)	EBITDA (US$m)	PBT (US$m)	EPS (c)	P/E (x)	P/CF (x)
2019	26.7	0.0	(15.3)	(15.22)	N/A	N/A
2020	125.0	84.5	82.0	81.82	7.1	6.4
2021e	119.2	75.1	75.2	74.65	7.8	8.0
2022e	124.5	78.9	79.4	79.34	7.3	7.1

Sector: Pharma & healthcare

Price:	A$0.06
Market cap:	A$31m
Market	ASX

Share price graph (A$)



Company description

SUDA Pharmaceuticals is a drug delivery company focusing on developing oro-mucosal spray versions of established medicines. It has the rights to ZolpiMist, the spray version of Ambien for insomnia, outside of North America.

Price performance

%	1m	3m	12m
Actual	48.8	45.5	113.3
Relative*	48.3	38.2	69.3

* % Relative to local index

Analyst

Maxim Jacobs

SUDA Pharmaceuticals (SUD)

INVESTMENT SUMMARY

SUDA Pharmaceuticals has historically focused on reformulating established drugs into oro-mucosal spray formulations for better bioavailability. Its lead commercial product is ZolpiMist, an oro-mucosal spray version of Ambien for the treatment of insomnia that is partnered in certain regions with Teva and Mitsubishi Tanabe. SUDA recently in-licensed an invariant natural killer T (iNKT) cell therapy platform that can be used in conjunction with chimeric antigen receptors to target blood cancers. There are a number of potential benefits of CAR-iNKT, including the prospect of being an allogeneic 'off-the-shelf' therapy, significantly simplifying the manufacture of the therapy and its delivery to patients. The therapy is expected to enter the clinic in 12–24 months and could be transformative for the company.

INDUSTRY OUTLOOK

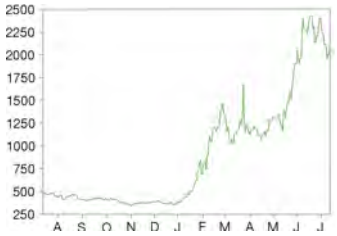
SUDA is targeting very large markets including insomnia (through ZolpiMist) and various cancers (through the CAR-iNKT programme as well as anagrelide).

Y/E Jun	Revenue (A$m)	EBITDA (A$m)	PBT (A$m)	EPS (c)	P/E (x)	P/CF (x)
2019	1.2	(1.9)	(2.4)	(1.54)	N/A	N/A
2020	0.5	(4.1)	(4.7)	(2.81)	N/A	N/A
2021e	0.5	(3.6)	(4.3)	(1.29)	N/A	N/A
2022e	1.0	(5.9)	(6.6)	(1.37)	N/A	N/A

Sector: Pharma & healthcare

Price:	¥2136.00
Market cap:	¥82067m
Market	Tokyo

Share price graph (¥)



Company description

SymBio Pharmaceuticals is a Japanese specialty pharma company focused on oncology and hematology. It markets Treakisym (bendamustine) in Japan and in-licensed two liquid formulations from Eagle Pharmaceuticals in 2017; brincidofovir was licensed from Chimerix in 2019.

Price performance

%	1m	3m	12m
Actual	(6.0)	93.3	351.6
Relative*	(6.0)	93.4	254.9

* % Relative to local index

Analyst

Jyoti Prakash

SymBio Pharmaceuticals (4582)

INVESTMENT SUMMARY

SymBio is a speciality pharma focused on Asia-Pacific markets and has the Japanese rights to multiple formulations of Treakisym (bendamustine). Treakisym iv was approved for r/r low-grade NHL/MCL in 2010 and in 2016 for CLL and first-line low-grade NHL/MCL. SymBio has in-licensed liquid formulations for injection that will give Treakisym patent protection to 2031; a clinical trial is underway of the rapid-infusion liquid formulation. The company recently received a label expansion to r/r diffuse large B-cell lymphoma. Finally, the company filed an IND in March 2021 to begin Phase II studies on brincidofovir.

INDUSTRY OUTLOOK

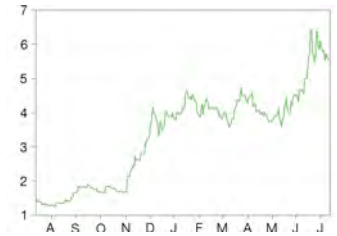
SymBio is focused on in-licensing niche opportunities in hard-to-treat indications often overlooked by big pharma. An in-house screening process to select additional pipeline candidates for development and commercialisation will be key to driving operational leverage.

Y/E Dec	Revenue (¥m)	EBITDA (¥m)	PBT (¥m)	EPS (¥)	P/E (x)	P/CF (x)
2019	2837.8	(4263.5)	(4249.5)	(183.72)	N/A	N/A
2020	2987.1	(4441.4)	(4513.5)	(137.10)	N/A	N/A
2021e	9227.8	1561.2	1508.4	27.02	79.1	N/A
2022e	11483.8	2069.6	2017.5	37.29	57.3	N/A

Sector: Pharma & healthcare

Price:	A$5.61
Market cap:	A$1580m
Market	ASX

Share price graph (A$)



Company description

Telix Pharmaceuticals is a Melbourne-headquartered global biopharmaceutical company focused on the development of diagnostic and therapeutic products based on targeted radiopharmaceuticals or molecularly targeted radiation (MTR).

Price performance

%	1m	3m	12m
Actual	12.2	37.8	261.9
Relative*	11.8	31.0	187.3

* % Relative to local index

Analyst

Carol Werther

Telix Pharmaceuticals (TLX)

INVESTMENT SUMMARY

Telix is developing diagnostic and therapeutic radiopharmaceuticals for kidney, prostate and brain cancers. It is commercialising TLX591-CDx (Illuccix) in the United States and Europe and last month announced it has a positive late-cycle for the prostate diagnostic Illuccix's NDA. Telix expects to fully enrol the ZIRCON Phase III for kidney cancer imaging agent TLX250-CDx in 2021.

INDUSTRY OUTLOOK

Big pharma has shown keen interest in MTR products. In 2017 Novartis acquired Advanced Accelerator Applications, the developer of the MTR therapeutic Lutathera, for US$3.9bn. In 2014 Bayer acquired Algeta for ~US$2.6bn; Algeta had developed Xofigo, a therapeutic radiopharmaceutical for prostate cancer. In December 2018 Novartis acquired prostate cancer radiopharmaceutical developer, Endocyte for US$2.1bn.

Y/E Dec	Revenue (A$m)	EBITDA (A$m)	PBT (A$m)	EPS (c)	P/E (x)	P/CF (x)
2019	15.2	(24.3)	(31.1)	(11.94)	N/A	N/A
2020	17.5	(39.3)	(47.9)	(17.45)	N/A	692.6
2021e	23.6	(41.4)	(45.9)	(15.74)	N/A	N/A
2022e	33.6	(41.1)	(46.0)	(15.17)	N/A	N/A

Sector: Pharma & healthcare

Price:	NOK73.40
Market cap:	NOK2349m
Market	Oslo

Share price graph (NOK)

Company description

Ultimovacs is developing novel immunotherapies against cancer. Lead product candidate, UV1, is a peptide-based vaccine against the universal cancer antigen telomerase (hTERT), which is expressed by c 85% of all cancer types. UV1 therefore has a broad potential in a variety of different settings and combinations.

Price performance

%	1m	3m	12m
Actual	(5.5)	16.7	79.0
Relative*	(6.6)	8.7	31.5

* % Relative to local index

Analyst

Dr Jonas Peciulis

Ultimovacs (ULTI)

INVESTMENT SUMMARY

Ultimovacs is a biotechnology company focused on developing a next generation cancer vaccine with virtually universal potential. Lead asset, UV1, activates the immune system to recognise cancer cells that express human telomerase reverse transcriptase (hTERT, or telomerase), which is present in over 85% of all cancer types. For this reason, UV1 has broad potential in a variety of cancers and in combination with other treatments. Ultimovacs' R&D strategy is to combine UV1 with checkpoint inhibitors due to an expected treatment synergy. The broad R&D programme includes four Phase II trials in different solid tumours, which will enrol more than 500 patients in total. Readouts are expected over 2022/2023, all within cash reach. In May 2021, the first results from a Phase I trial of UV1 in advanced melanoma in combination with Keytruda showed an impressive ORR.

INDUSTRY OUTLOOK

Novel drug projects in oncology comprise the lion's share of total R&D investments in the industry. Around 85% of all cancer types express high levels of hTERT, which means that UV1 has a broad potential in a variety of different settings, including combinations with other cancer treatments.

Y/E Dec	Revenue (NOKm)	EBITDA (NOKm)	PBT (NOKm)	EPS (öre)	P/E (x)	P/CF (x)
2019	0.0	(64.2)	(61.2)	(267.0)	N/A	N/A
2020	0.0	(121.4)	(120.6)	(398.0)	N/A	N/A
2021e	0.0	(153.7)	(152.5)	(477.0)	N/A	N/A
2022e	0.0	(159.9)	(159.0)	(497.0)	N/A	N/A

Company coverage

Company	Note	Date published
Abliva	Update; Update	26/06/20; 27/05/21
Acacia Pharma	Update; Update	01/04/21; 02/07/21
Actinogen Medical	Flash; Update	08/05/19; 15/10/19
AdAlta	Update; Update	15/03/21; 26/05/21
AFT Pharmaceuticals	Update; Update	24/11/20; 26/05/21
Allarity Therapeutics	Update; Update	19/04/21; 08/06/21
AlzeCure Pharma	Flash; Update	21/04/21; 01/06/21
Basilea Pharmaceutica	Outlook; Update	04/03/21; 04/06/21
BerGenBio	Update; Update	20/04/21; 15/06/21
Bioasis Technologies	Update; Update	04/11/20; 09/04/21
BioPorto Diagnostics	Update; Update	22/03/21; 13/05/21
Brighter	Update; Update	08/03/21; 21/05/21
Cantargia	Flash; Update	10/03/21; 06/04/21
Carmat	Update; Update	04/12/20; 11/01/21
CASI Pharmaceuticals	Update; Update	06/04/21; 18/05/21
Chimeric Therapeutics	Initiation	19/01/21
Deinove	Update; Update	16/10/19; 21/02/20
Diurnal Group	Initiation; Update	12/03/21; 29/03/21
Ergomed	Outlook; Flash	01/06/21; 11/06/21
Exopharm	Spotlight initiation	28/05/21
Hepion Pharmaceuticals	Update; Update	13/01/21; 07/04/21
HUTCHMED	Update; ADR update	10/12/20; 10/12/20
Immunicum	Update; Update	03/09/20; 16/12/20
InMed Pharmaceuticals	Update; Update	11/01/21; 22/02/21
IRLAB Therapeutics	Initiation	02/06/21
Kazia Therapeutics	Update; ADR update	19/04/21; 20/04/21
MagForce	Update; Scale update	11/02/21; 14/07/21
Medlab Clinical	Initiation	12/07/21
Mesoblast	Update; Update	30/11/20; 15/03/21
Newron Pharmaceuticals	Update; Update	07/04/21; 18/05/21
Nicox	Update; Update	09/03/21; 23/04/21
Oasmia Pharmaceutical	Update; Update	17/12/20; 12/03/21
Onxeo	Update; Update	27/05/19; 18/11/20
OpGen	Update; Update	06/04/21; 19/05/21
Oryzon Genomics	Update; Update	11/12/20; 15/06/21
OSE Immunotherapeutics	Update; Update	28/09/20; 30/04/21
Oxford Biomedica	Outlook; Outlook	05/10/20; 27/05/21
Pacific Edge	Update; Update	20/07/20; 25/01/21
Pharnext	Update; Update	07/04/21; 04/05/21
Photocure	Update; Update	04/03/19; 13/05/20
Pixium Vision	Update; Update	07/04/21; 08/06/21
Polyphor	Initiation; Update	05/10/20; 09/03/21
Quantum Genomics	Update; Update	29/03/21; 12/07/21
ReNeuron Group	Update; Update	15/01/21; 18/06/21
RhoVac	Update; Update	27/11/20; 26/04/21

Ryvu Therapeutics	Update; Outlook	11/05/20; 24/02/21
Sareum Holdings	Spotlight initiation	04/05/21
Sequana Medical	Initiation; Update	21/06/21; 07/07/21
Shield Therapeutics	Update; Flash	04/05/21; 28/05/21
SIGA Technologies	Initiation; Update	05/03/21; 10/05/21
Silence Therapeutics	Update; Update	16/04/20; 17/09/20
SUDA Pharmaceuticals	Update; Update	11/03/21; 23/06/21
SymBio Pharmaceuticals	Update; Update	30/03/21; 27/05/21
Telix Pharmaceuticals	Update; Update	09/12/20; 11/03/21
Ultimovacs	QuickView; Initiation	20/01/21; 17/03/21
Xintela	Spotlight initiation	12/07/21

Glossary

AACR	American Association for Cancer Research
AAV	Adeno-associated virus
ABSSSI	Acute bacterial skin and skin structure infections
AC	Anterior chamber
Accelerated approval	Faster FDA approval based on a surrogate endpoint for drugs that fill an unmet medical need for serious conditions. Phase IV confirmatory trial required post-approval to demonstrate clinical benefit
ACEs	Angiotensin converting enzymes
AD	Alzheimer's disease
ADC	Antibody-drug conjugate
AdCom	FDA Advisory Committee meeting
ADHD	Attention deficit hyperactivity disorder
ADME	Absorption, distribution, metabolism and excretion
AdV	Adenovirus
AEs	Adverse events
AfDC	Affimer drug conjugates
AGvHD	Acute graft vs host disease
AH	Aqueous humour
AI	Adrenal insufficiency
AKI	Acute kidney injury
ALL	Acute lymphoblastic leukaemia
AM	Alpha-mannosidosis
AMF	Alternating magnetic field
AMI	Acute myocardial infarction
AML	Acute myeloid leukaemia
ANDA	Abbreviated new drug application
AOBP	Automated office blood pressure
APD	Atypical antipsychotic drugs
API	Active pharmaceutical ingredient
APPA	American Pet Products Association
AR	Augmented reality
ARBs	Angiotensin receptor blockers
ARDS	Acute respiratory distress syndrome
ASCO	American Society of Clinical Oncology
ASCT	Autologous stem cell transplantation
ASD	Autism spectrum disorder
AUC	Area under the curve (total drug exposure over time)
B-ALL	B-cell acute lymphoblastic leukaemia
BARDA	Biomedical Advanced Research and Development Authority (US agency that supports research into drugs, vaccines and other products that are considered priorities for national health security)
BBB	Blood-brain barrier
BC	Breast cancer
BCAL	Breast cancer-associated secondary lymphedema
BDNF	Brain-derived neurotrophic factor
BE	Bronchiectasis
BET	bromodomain and extraterminal domain proteins
bid	Twice daily (prescription)
BLA	Biologics License Application (FDA filing approval for biologic drugs)
BLC	Blue light cystoscopes
BM	Bone marrow
BMBC	Brain metastases from breast cancer
BMI	Body mass index
BMs	Brain metastases
BMT	Bone marrow transplantation
B-NHL	B-cell non-Hodgkin lymphoma
BOI	Burden of illness study
BPD	Borderline personality disorder
BTC	Biliary tract carcinoma
BTD	Breakthrough therapy designation (Expediates development and FDA review of drugs intended to treat a serious condition and may demonstrate substantial improvement on available therapies)
BTR	Bridge-to-recovery
BTT	Bridge-to-transplant
BVS	Bionic vision system
CABP	Community-acquired bacterial pneumonia
CAH	Congenital adrenal hyperplasia
Cancer stages	
I	The cancer or tumour is small and is still in the place that it started and hasn't spread to nearby tissue
II-III	The cancer or tumour is larger and may have spread to the surrounding tissue and/or lymph nodes
IV	The cancer has spread to one or more other organs of the body and is considered metastatic

CAR-T	Chimeric antigen receptor T cell
CBD	Hemp-derived cannabidiol
CBN	Cannabinol
ccRCC	Clear cell renal cell carcinoma
CDC	Centers for Disease Control and Prevention (US agency that aims to protect public health through the control and prevention of disease, injury and disability)
CDK	cyclin-dependent kinase
CDMO	Contract development and manufacturing organisation
CDx	Companion diagnostic
CE mark	Notified body issued authorisation for medical devices that pass the conformity assessment (health, safety and environmental protection) and are sold in the European economic area
CEC	Circulating endothelial cells
CF	Cystic fibrosis
CGT	Cell and gene therapies
cGvHD	Chronic graft vs host disease
CHF	Congestive heart failure
CHMP	Committee for Medicinal Products for Human Use (a committee of the EMA)
CINV	Chemotherapy-induced nausea and vomiting
CKD	Chronic kidney disease
CLL	Chronic lymphocytic leukaemia
Cmax	Maximum concentration of drug exposure
CMO	Contract manufacturing organisation
CMS	Centers for Medicare & Medicaid Services (US federal agency that operates the Medicare program and works in partnership with state governments to operate the Medicaid program)
CMT	Charcot-Marie-Tooth disease
CNS	Central nervous system
COPD	Chronic obstructive pulmonary disease
CPI	Checkpoint inhibitor
CR	Complete response
CR	Complete remission
CRC	Colorectal cancer
CRE	Carbapenem-resistant Enterobacteriaceae
CRL	Complete response letter (reflects FDA's complete review of a new or generic drug application that has not been approved for marketing)
CRO	Contract research organisation
CsA	Cyclosporin A
CSF	Cerebrospinal fluid
CTA	Clinical trials application (EU version of an IND)
CTN	Clinical Trials Notification Scheme (Australian version of an IND)
CV	Cardiovascular
CXCR4	C-X-C chemokine receptor type 4
DC	Dendritic cell
DCR	Disease control rate
DEA	Drug Enforcement Administration (US agency focused on controlled substances)
DFS	Disease-free survival
DGF	Delayed graft function
DIPG	Diffuse intrinsic pontine glioma
DLBCL	Diffuse large B-cell lymphoma
DLT	Dose-limiting toxicity
DMF	Drug master file (submission to FDA to provide confidential, detailed information about facilities or processes used in the manufacturing, processing, packaging, and storing of human drug products)
DMPK	Drug metabolism and pharmacokinetics
DMT	Disease modifying therapy
DoR	Duration of response
DRG	Diagnosis-related group code
Dry-AMD	Dry age-related macular degeneration
DSMB	Data safety monitoring board
DT	Destination therapy
DTC	Direct to consumer
EB	Epidermolysis bullosa
EBT	External-beam radiation therapy
ECM	Extracellular matrix
EDL	Essential drug list (list of medicines that must be in stock at public hospitals and clinics in China)
EGFR	Epidermal growth factor receptor
EMA	European Medicines Agency (European regulator)
epNET	Non-pancreatic neuroendocrine tumour
ER	Estrogen receptor
ESMO	European Society for Medical Oncology
EUA	Emergency Use Authorization
FDA	Food and Drug Agency (US regulator)
FGFR	Fibroblast growth factor receptors
FISH	Fluorescence in situ hybridization

FL	Follicular lymphoma
FTD	Fast Track Designation (facilitates development and expediates FDA review of drugs to treat serious conditions and fill an unmet medical need)
GA	General anaesthesia
GA	Geographic atrophy
GA-AMD	Geographic atrophy associated with dry age-related macular degeneration
GBM	Glioblastoma
GC	Gastric cancer
G-CSF	Granulocyte colony-stimulating factor
GDI	Glaucoma drainage implant
GDUFA	Generic Drug User Fee Act date (when FDA is expected to approve/not approve ANDA)
GI	Gastrointestinal
GIST	Gastrointestinal stromal tumours
GMP	Good manufacturing practice
GPR	G-protein-coupled receptor
GvHD	Graft vs host disease
H2H	Head to head
HAIs	Hospital-acquired infections
HbV	Haemoglobin
HBV	Hepatitis B virus
HCC	Hepatocellular cancer
HDAC	Histone deacetylase
HDL	How-density lipoprotein (cholesterol)
HER	Human epidermal growth factor receptor
HF	Heart failure
HHT	Human heart transplantation
HHV	Human herpesvirus
HLA	Human leukocyte antigen
HMAs	Hypomethylating agents
HNSCC	Head and neck squamous cell carcinoma
hpSCs	Human parthenogenetic stem cells
HPV	Human papilloma virus
HR	Hazard ratio
HR-MDS	Higher-risk myelodysplastic syndrome
hRPC	Human retinal progenitor cell
HRQoL	Health-related quality-of-life
HSCT	Hematopoietic stem cell transplant
HSIL	High-grade squamous intraepithelial lesion
IBD	Inflammatory bowel disease
IBS-D	Irritable bowel syndrome with diarrhoea
iCCA	Intrahepatic cholangiocarcinoma
ICER	Institute for Clinical and Economical Review
ICU	Intensive care unit
ID	Iron deficiency
IDA	Iron deficiency anaemia
IDMC	Independent Data Monitoring Committee
IDN	Integrated delivery network
IHC	Immunohistochemistry
IIT	Investigator-initiated trials
ILD	Interstitial lung disease
IMP	Investigational medicinal product (Australia TGA terminology)
IND	Investigational New Drug Application (submission to FDA required to start clinical trials)
IO	Immuno-oncology
IOP	Intraocular pressure
IPF	Idiopathic pulmonary fibrosis
IR	Insulin receptor
ITP	Immune thrombocytopenia
ITT	Intention-to-treat (analysis includes all patients randomised in the clinical study)
iv, im, sc	Intravenous, intramuscular, subcutaneous
KOL	Key opinion leader
LAI	Long-acting injectable
LCD	Local coverage determination (MAC decision whether to cover a particular treatment in its jurisdiction)
LDAC	Low-dose cytarabine
LDL	Low-density lipoprotein (cholesterol)
LDTs	laboratory-developed tests
LHON	Leber's hereditary optic neuropathy
LMWH	Low molecular weight heparin
LPAD	Limited population pathway for antibacterial and antifungal drugs (FDA pathway to approval for antibacterial and antifungal drugs that treat serious infections in a small population of patients with unmet needs)
LPAD	Left pulmonary artery diameter

LSC	Leukaemia stem cells
LSIL	Low-grade squamous intraepithelial lesions
LT	Laser trabeculoplasty
LVEF	Left ventricular ejection fraction
LVESV	Left ventricle end systolic volume
LVV	Lentiviral vector
MAA	Marketing Authorisation Application (EMA regulatory filing for approval)
MAC	Medicare Administrative Contractor (private insurer that has been awarded geographic jurisdiction to process claims)
MAC	Mycobacterium avium complex
MACE	Major adverse cardiac event
MAD	Multiple ascending dose
mBC	Metastatic breast cancer
MC	Mast cell
mCDRPC	Metastatic castration and docetaxel resistant prostate cancer
MCI	Minimal cognitive impairment
MCL	Mantle cell lymphoma
mCRC	Metastatic colorectal cancer
mCRPC	Metastatic castration-resistant prostate cancer
MCS	Mechanical circulatory support
MDS	Myelodysplastic syndrome
MDSC	Myeloid-derived suppressor cell
MES	Molecular epidemiology study
MET	Mesenchymal epithelial transition factor
MFS	Metastasis-free survival
MHRA	Medicines and Healthcare Products Regulatory Agency (UK regulator)
MI	Myocardial infarctions
MIGS	Minimally invasive glaucoma surgeries
MM	Multiple myeloma
MMP-2	Matrix metalloproteinase-2
MoA	Mode of action
mOS	Median overall survival
MPC	Mesenchymal precursor cell
mPFS	Median progression-free survival
MRI	Magnetic resonance imaging
MRP	Mutual recognition procedure (one route of filing in the EU)
MRSA	Methicillin-resistant Staphylococcus aureus
MS	Multiple sclerosis
MSA	Medical savings account (allows owner to withdraw earmarked funds to pay for treatments)
MSC	Mesenchymal stem cell
MT	Monotherapy
MTD	Maximum tolerated dose
MTR	Molecularly targeted radiation
NAFLD	Nonalcoholic fatty liver disease
nAMD	Neovascular age-related macular degeneration
NASH	NASH activity score
NASH	Non-alcoholic steatohepatitis
NCI	National Cancer Institute (US agency for cancer research)
NDA	New Drug Application (FDA filing application for approval for chemical/small molecule drugs)
NET	Neuroendocrine tumour
NGF	Nerve growth factor
NGS	Next generation sequencing
NHL	Non-Hodgkin's lymphoma
NHP	Non-human primate
NHSA	National Healthcare Security Administration (agency in China that manages medical insurance schemes)
NIAID	National Institute of Allergy and Infectious Diseases (US agency for the research of infectious, immunologic and allergic diseases)
NICE	National Institute for Health and Clinical Excellence (develops clinical guidelines for NHS)
NK	Natural killer cell
NME	New molecule entity (FDA regulatory pathway)
NMIBC	Non-muscle invasive bladder cancer
NMPA	Chinese National Medical Products Administration (China regulator)
NO	Nitric oxide
NRDL	National reimbursement drug list (includes drugs reimbursable by public insurance schemes in China)
NSCLC	Non-small cell lung cancer
NTAP	New technology add-on payments (CMS provides additional payment to hospitals for new, high-cost medical services and technologies)
NTM	Pulmonary non-tuberculous mycobacteria
OAG	Open-angle glaucoma
OC	Ovarian cancer

ODAC	Oncologic Drugs Advisory Committee (makes recommendations to FDA about the safety and effectiveness of marketed and investigational oncology drugs)
ODD	Orphan drug designation (provides tax incentives and a period of market exclusivity to treatments targeting rare diseases or conditions)
OFP	Oral ferrous product
OIC	Opioid-induced constipation
OR	Odds ratio
ORR	Objective response rate
OS	Overall survival
OTC	Over-the-counter
PA	Passive avoidance
pALL	Paediatric acute lymphoblastic leukaemia
PARP	Poly-ADP-ribose polymerase
PCLS	Precision cut liver slices
PCR	Polymerase chain reaction
PD	Parkinson's disease
PD-(L)1	Programmed death-ligand 1
PD-1	Programmed cell death protein 1
PDAC	Pancreatic ductal adenocarcinoma
PDUFA date	Prescription Drug User Fee Act date (when FDA is expected to approve/not approve NDA or BLA)
PDX	Patient-derived xenograft
PEP	Post-exposure prophylaxis
PET	Positron emission tomography
PFAS	Perfluoroalkyl substances
PFS	Progression-free survival
PGA	Prostaglandin F2α
PGDGF	Platelet-derived growth factor
PGP	P-glycoprotein - multidrug resistance protein
Phase I	Testing of a new treatment in healthy volunteers (can also be in patients with the disease or condition) to assess safety and determine the RP2D dose. Less than 100 participants.
Phase Ia	Single ascending dose. Patients receive a single dose of the treatment, and if no adverse side effects are observed, the dose is increased for the next cohort of patients to determine the MTD.
Phase Ib	Multiple ascending dose. Patients receive multiple doses of the treatment at the same dose level, and if no adverse side effects are observed, the dose is increased for the next cohort of patients to determine the MTD. Provides preliminary efficacy data.
Phase II	Testing of a new treatment in patients with the disease or condition to assess efficacy and side effects. Up to several hundred participants.
Phase III	Testing of a new treatment in patients with the disease or condition to assess efficacy and clinical benefit, as well as monitoring adverse reactions (and long-term side effects). Up to several thousand participants.
Phase IV	Post-marketing surveillance to assess the safety (rare and long-term side effects) and efficacy of an approved treatment in patients that are prescribed it.
PICU	Paediatric intensive care unit
PK	Pharmacokinetics
PMA	Pre-market approval (FDA approval required for Class III medical devices that support or sustain human life before marketing)
PMC	Pseudomembranous colitis
PMDA	Pharmaceutical and Medical Device Agency (Japan regulator)
PMDs	Primary mitochondrial diseases
pNET	Pancreatic neuroendocrine tumour
PoC	Point-of-care
PONV	Post-operative nausea and vomiting
PP	Per protocol (analysis only includes patients that complied with the clinical study protocol)
PPE	Personal protective equipment
PR	Partial response
PR	Progesterone receptor
PRCC	Papillary renal cell carcinoma
Preclinical	Testing of drug in non-human subjects, to gather efficacy, toxicity and pharmacokinetic information
Priority review	FDA aims to take action on an application within 6 months (compared to 10 months under standard review)
PRRT	Peptide receptor radionuclide therapy
PRV	Priority review voucher
PS	Procedural sedation
PSA	Prostate-specific antigen
PSC	Pulmonary sarcomatoid carcinoma
Pt	Patient
PTCL	Peripheral T-cell lymphoma
PV	Pharmacovigilance
qd	Once daily
QIDP	Qualified infectious disease product designation
QoL	Quality-of-life
RBC	Red blood cell

RCC	Renal cell carcinoma
RCT	Randomised clinical trial
RECIST	Response evaluation criteria in solid tumours
RFS	Relapse free survival
RGC	Retinal ganglion cell
RI	Rapid infusion
RMAT	Regenerative medicine advanced therapy (FDA designation for regenerative medicine therapies that enables eligibility for expediated programs)
RP	Retinitis pigmentosa
RP2D	Recommended Phase II dose
RTD	Ready to dilute formulation
RTF	Refusal to file (allows FDA to inform sponsors of deficiencies in their NDA or BLA as soon as possible, instead of waiting to issue a CRL)
RTK	Receptor tyrosine kinase
RT-PCR	Reverse transcriptase polymerase chain reaction
Rx	Prescription
SAA	Severe aplastic anaemia
SAB	Staphylococcus aureus bacteraemia
SAD	Single ascending dose
SAE	Serious adverse event
SAP	Statistical analysis plan
SARS	Severe acute respiratory syndrome
SCCHN	Squamous cell carcinoma of the head and neck
SCLC	Small cell lung cancer
SD	Stable disease
SMA	Spinal muscular atrophy
SMC	Safety monitoring committee
SNS	Strategic National Stockpile
SoC	Standard of care
SPA	Special protocol assessment (FDA process to reach agreement with sponsors on the design and size of certain clinical trials)
SPECT	Single photon emission computed tomography
SPION	Super paramagnetic iron oxide nanoparticle
SRE	Skeletal-related event
T1D	Type 1 diabetes
T2D	Type 2 diabetes
TAAs	Tumour-associated antigens
TAH	Total artificial heart
TAM	Tumour-associated macrophage
TBI	Traumatic brain injury
TCM	Traditional Chinese medicine
TCR	T-cell receptor
TD	Travellers' diarrhoea
TEAE	Treatment-emergent adverse event
TfR	Transferrin receptor
TGA	Therapeutic Goods Administration (Australia regulator)
TGF	Transforming growth factor
Th cell	T helper cell
THC	Tetrahydrocannabinol
TKI	Tyrosine kinase inhibitor
TLR	Toll-like receptor
TM	Trabecular meshwork
TMAC	Tissue microenvironment-activated conjugates
TME	Tumour microenvironment
TNBC	Triple-negative breast cancer
TNK	Tumour necrosis factor
TPS	Tumour proportion score
TSAs	Tumour-specific antigens
TTFields	Tumour-treating fields
TTP	Time-to-progression
TURBT	Transurethral resection of the bladder tumour
Tx	Treatment
UBC	Umbilical cord blood
UC	Urothelial cancer
URD	Unrelated matched donor
VADs	Visual acuity
VADs	Ventricular assistance devices (L = left, R = right and Bi=biventricular)
VEGFR	Vascular endothelial growth factor receptors
vHC	Viral haemorrhagic cystitis
VMIC	Vaccines Manufacturing and Innovation Centre
WHO	World Health Organisation
WT	Wild type

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